SECURITIES AND EXCHANGE COMMISSION

17 CFR Parts 240 and 242

[Release No. 34–96496; File No. S7–32–22]

RIN 3235–AN24

Regulation Best Execution

AGENCY: Securities and Exchange Commission.

ACTION: Proposed rule.

SUMMARY: The Securities and Exchange Commission (''Commission'') is proposing new rules under the Securities Exchange Act of 1934 (''Exchange Act'') relating to a broker-dealer's duty of best execution. Proposed Regulation Best Execution would enhance the existing regulatory framework concerning the duty of best execution by requiring detailed policies and procedures for all broker-dealers and more robust policies and procedures for broker-dealers engaging in certain conflicted transactions with retail customers, as well as related review and documentation requirements.

DATES: Comments should be received on or before March 31, 2023.

ADDRESSES: Comments may be submitted by any of the following methods:

Electronic Comments

- Use the Commission's internet comment form (*https://www.sec.gov/regulatory-actions/how-to-submit-comments*); or
- Send an email to *rule-comments@sec.gov*. Please include File Number S7–32–22 on the subject line.

Paper Comments

- Send paper comments to Secretary, Securities and Exchange Commission, 100 F Street NE, Washington, DC 20549–1090.

All submissions should refer to File Number S7–32–22. This file number should be included on the subject line if email is used. To help the Commission process and review your comments more efficiently, please use only one method of submission. The Commission will post all comments on the Commission's website (*https://www.sec.gov/rules/proposed.shtml*). Comments are also available for website viewing and printing in the Commission's Public Reference Room, 100 F Street NE, Washington, DC 20549, on official business days between the hours of 10 a.m. and 3 p.m. Operating conditions may limit access to the Commission's Public Reference Room. All comments received will be posted without change. Persons submitting comments are cautioned that the Commission does not redact or edit personal identifying information from comment submissions. You should submit only information that you wish to make available publicly.

Studies, memoranda, or other substantive items may be added by the Commission or staff to the comment file during this rulemaking. A notification of the inclusion in the comment file of any materials will be made available on the Commission's website. To ensure direct electronic receipt of such notifications, sign up through the ''Stay Connected'' option at *www.sec.gov* to receive notifications by email.

FOR FURTHER INFORMATION CONTACT: David Dimitrious, Senior Special Counsel and Arisa Tinaves Kettig, Special Counsel at (202) 551–5500, Office of Market Supervision, Division of Trading and Markets, Securities and Exchange Commission, 100 F Street NE, Washington, DC 20549.

SUPPLEMENTARY INFORMATION: The Commission is proposing to add the following new rules under the Exchange Act: (1) 17 CFR 242.1100 (Rule 1100 of Regulation Best Execution); (2) 17 CFR 242.1101 (Rule 1101 of Regulation Best Execution); and (3) 17 CFR 242.1102 (Rule 1102 of Regulation Best Execution). The Commission is also proposing to amend 17 CFR 240.17a–4 (Rule 17a–4 under the Exchange Act).

Table of Contents

I. Introduction
II. Duty of Best Execution
A. Current Regulatory Framework
B. Prior Commission Statements
C. FINRA and MSRB Best Execution Rules
III. Existing Order Handling Practices and Overview of Proposed Regulation Best Execution
A. Existing Order Handling Practices
1. General Broker-Dealer Practices
2. Order Handling Conflicts of Interest
3. Crypto Asset Securities
B. Overview of Proposed Regulation Best Execution
IV. Discussion of Proposed Regulation Best Execution
A. Proposed Rule 1100—The Best Execution Standard
B. Proposed Rule 1101(a)—Best Execution Policies and Procedures
1. Proposed Rule 1101(a)(1)—Framework for Compliance With the Best Execution Standard
2. Proposed Rule 1101(a)(2)—Best Market Determination
C. Proposed Rule 1101(b)—Policies and Procedures and Documentation for Conflicted Transactions
1. Proposed Rules 1101(b)(1) and (2)—Policies and Procedures for Conflicted Transactions
2. Proposed Rule 1101(b)(3)—Documentation for Conflicted Transactions
3. Application of Proposed Rule 1101(b) to NMS Stock Market Conflicts of Interest
4. Application of Proposed Rule 1101(b) to the Options Market
5. Application of Proposed Rule 1101(b) to the Corporate and Municipal Bond Markets and Government Securities Markets
D. Proposed Rule 1101(c)—Regular Review of Execution Quality
E. Proposed Rule 1101(d)—Introducing Brokers
1. Definition of Introducing Broker and Executing Broker
2. Review of Executing Broker's Execution Quality
F. Proposed Rule 1102—Annual Report
G. Recordkeeping Requirements Under Rule 17a–4
V. Economic Analysis
A. Introduction
B. Baseline
1. Current Legal and Regulatory Framework
2. Best Execution Review Processes
3. Description of Markets and Broker-Dealer Order Handling and Execution Practices
4. Broker-Dealer Services and Revenue
C. Economic Effects and Effects on Efficiency, Competition, and Capital Formation
1. Benefits
2. Costs
3. Efficiency, Competition, and Capital Formation
D. Reasonable Alternatives
1. SEC Adopts FINRA Rule 5310 and MSRB Rule G–18 Best Execution Rules
2. Require Order Execution Quality Disclosure for Other Asset Classes
3. Utilize FINRA and MSRB Approach to Introducing Broker
4. Ban or Restrict Off-Exchange PFOF
5. Require Broker-Dealers To Utilize Best Execution Committees
6. Require Order-by-Order Documentation for Conflicted or All Transactions
7. Staggered Compliance Dates
E. Request for Comments
VI. Paperwork Reduction Act
A. Summary of Collection of Information
1. Required Policies and Procedures and Related Obligations
2. Annual Report
B. Proposed Use of Information
1. Required Policies and Procedures and Related Obligations
2. Annual Report
C. Respondents
D. Total Initial and Annual Reporting and Recordkeeping Burdens
1. Required Policies and Procedures and Related Obligations
2. Annual Report
E. Total Paperwork Burden
F. Collection of Information Is Mandatory
G. Confidentiality of Responses to Collection of Information
H. Retention Period for Recordkeeping Requirements
I. Request for Comment
VII. Consideration of Impact on the Economy

VIII. Initial Regulatory Flexibility Act Analysis
A. Reasons for and Objectives of the Proposed Action
B. Legal Basis
C. Small Entities Subject to the Proposed Rule
D. Projected Compliance Requirements of the Proposed Rule for Small Entities
1. Required Policies and Procedures and Related Obligations
2. Annual Report
E. Duplicative, Overlapping, or Conflicting Federal Rules
F. Significant Alternatives
1. Adopt FINRA Rule 5310 and MSRB Rule G–18 Concerning Best Execution
2. Require Order Execution Quality Disclosure for Other Asset Classes
3. Define ''Introducing Broker'' To Include Those Entities That Qualify for Relief Under FINRA and MSRB Rules
4. Ban or Restrict Off-Exchange Payment for Order Flow
5. Require Broker-Dealers To Utilize Best Execution Committees
6. Require Order-by-Order Documentation for Conflicted or All Transactions
7. Staggered Compliance Dates
G. General Request for Comment
Statutory Authority and Text of the Proposed Rule

I. Introduction

The duty of best execution requires a broker-dealer to execute customers' trades at the most favorable terms reasonably available under the circumstances,[1] and customers benefit from broker-dealers' robust considerations of execution opportunities that may provide customers with the most favorable terms. Accordingly, promoting the best execution of customer orders is of fundamental importance to investors and the markets, and is an important aspect of investor protection. The Financial Industry Regulatory Authority, Inc. (''FINRA''), a national securities association, and the Municipal Securities Rulemaking Board (''MSRB'') currently have rules and guidance directly addressing the duty of best execution. The Commission has made statements concerning the duty over the years, but has never itself established a rule addressing best execution. While the Commission believes the existing regulatory framework concerning the duty of best execution has helped broker-dealers fulfill their duty to their customers, the Commission believes this regulatory framework can be made more effective. In particular, while FINRA and the MSRB have established best execution rules and provided guidance on how broker-dealers should achieve best execution in a variety of contexts, and generally require broker-dealers to have procedures for compliance with relevant laws and rules, the Commission believes it is appropriate to propose its own comprehensive and detailed best execution requirements. The Commission understands that, currently, broker-dealers' best execution policies and procedures, and the documentation relating to their best execution practices, may vary. However, as described in section III.A below, the Commission believes that customers would benefit from consistently robust best execution practices by broker-dealers, and the execution of retail customer orders by broker-dealers that have certain order handling conflicts of interest warrants heightened attention by those broker-dealers.[2]

The Commission believes that having Commission rules providing a policies and procedures-based best execution framework, along with regular reviews and related documentation, would help broker-dealers maintain consistently robust best execution practices and result in vigorous efforts by broker-dealers to achieve best execution, including in situations where broker-dealers have order handling conflicts of interest with retail customers. The Commission also believes that detailed policies and procedures, regular reviews, and related documentations would allow broker-dealers to effectively assess their best execution practices and assist the Commission and self-regulatory organizations (''SROs'') to effectively examine and enforce broker-dealers' compliance with the proposed rules.

Proposed Regulation Best Execution would establish through a Commission rule a best execution standard for broker-dealers.[3] Proposed Regulation Best Execution would also specifically require broker-dealers to establish, maintain, and enforce written policies and procedures reasonably designed to comply with that best execution standard. Those policies and procedures would be required to address: (1) how the broker-dealer will comply with the proposed standard of best execution, including by identifying material potential liquidity sources, incorporating material potential liquidity sources into its order handling practices, and ensuring that the broker-dealer can efficiently access each source, and (2) how the broker-dealer will determine the best market for customer orders received, including by assessing reasonably accessible and timely pricing information and opportunities for price improvement.

In addition, for retail customer transactions that present conflicts of interest, such as payment for order flow or internalization, that could create incentives for a broker-dealer to be less diligent in its search for better executions and potentially result in broker-dealers not providing best execution to customer orders, proposed Regulation Best Execution would require the broker-dealer's policies and procedures to address how it will comply with the best execution standard in light of such conflicts, including how it would assess a broader range of markets than it would for non-conflicted transactions. Proposed Regulation Best Execution would also require broker-dealers to document their compliance with the best execution standard and the basis for their determinations that best execution would be achieved through conflicted transactions.

Proposed Regulation Best Execution would also require broker-dealers to review the execution quality of their customer orders at least quarterly, compare it with the execution quality that might have been obtained from other markets, and revise their best execution policies and procedures accordingly.

Proposed Regulation Best Execution would exempt from specified requirements under the proposed rules an introducing broker (as defined in the proposed rules) that establishes, maintains, and enforces policies and procedures that require it to regularly review the execution quality obtained from its executing broker, compares that execution quality with the execution quality it might have obtained from other executing brokers, and revises its order handling practices accordingly.

Finally, proposed Regulation Best Execution would require broker-dealers to review and assess the overall effectiveness of their best execution policies and procedures, including their order handling practices, on at least an annual basis, and prepare a report detailing the results of such review and assessment that would be presented to the broker-dealer's board of directors (or equivalent governing body).

The Commission recognizes the importance of providing a broker-dealer flexibility to exercise its expertise and judgment when executing customer orders, and proposed Regulation Best Execution primarily would be a policies and procedures-based rule, similar to

[1] *See infra* note 21 and accompanying text.

[2] *See infra* Section V.A (describing the ''principal—agent'' problem that may exist between a broker-dealer and its customer and how that can be exacerbated by other conflicts of interest).

[3] The proposed best execution standard is consistent with the best execution standards set forth in FINRA and MSRB rules.

the Order Protection Rule,[4] the Risk Management Controls for Brokers or Dealers with Market Access Rule,[5] and Regulation Systems Compliance and Integrity.[6] Under proposed Regulation Best Execution, a broker-dealer's failure to achieve the most favorable price possible under prevailing market conditions (''most favorable price'') for customer orders would be part of the consideration of whether the broker-dealer's policies and procedures are reasonably designed and whether the broker-dealer is enforcing its policies and procedures. A broker-dealer's failure to achieve the most favorable price for customer orders would not necessarily be a violation of the proposed best execution standard, because it may not be the result of a failure by the broker-dealer to use reasonable diligence to ascertain the best market and to buy or sell in such market so that the customer receives the most favorable price.[7] However, a failure to establish and maintain reasonably designed policies and procedures applicable to all customer orders, or a failure to enforce those policies and procedures, would be a violation of the policies and procedures requirement under proposed Regulation Best Execution.

II. Duty of Best Execution

A. Current Regulatory Framework

A broker-dealer has a legal duty to seek best execution of customer orders. The duty of best execution predates the Federal securities laws and is derived from an implied representation that a broker-dealer makes to its customers.[8] The duty is established from ''common law agency obligations of undivided loyalty and reasonable care that an agent owes to [its] principal.'' [9] This obligation requires that a ''broker-dealer seek to obtain for its customer orders the most favorable terms reasonably available under the circumstances.'' [10] While there is no Commission rule or standard addressing a broker-dealer's duty of best execution, the duty is addressed in FINRA and MSRB rules, as described in sections II.C and IV below.[11]

The Commission is proposing Regulation Best Execution pursuant to, among other provisions, sections 11A and 15 of the Exchange Act.[12] In section 11A, Congress identified key national market system objectives, including the practicability of brokers executing investors' orders in the best market.[13] The Commission has rulemaking authority to further the section 11A objectives.[14] Separately, section 15 of the Exchange Act provides authority for rules that are reasonably designed to prevent fraudulent acts or practices. Specifically, section 15(c)(2)(A) provides that no broker or dealer may make use of the mails or any means or instrumentality of interstate commerce to effect any transaction in, or to induce or attempt to induce the purchase or sale of, any security (other than an exempted security [15] or commercial paper, bankers' acceptances, or commercial bills) otherwise than on a national securities exchange of which it is a member, in connection with which such broker or dealer engages in any fraudulent, deceptive, or manipulative act or practice, or makes any fictitious quotation.[16] Section 15(c)(2)(B) prohibits brokers, dealers, and municipal securities dealers from engaging in such activity in ''any municipal security.'' [17] Section 15(c)(2)(C) prohibits government securities brokers and government securities dealers from engaging in such activity in any ''government security.'' [18] Section 15(c)(2)(D) authorizes the Commission to adopt rules that define, and prescribe means reasonably designed to prevent, such acts and practices as are fraudulent, deceptive, or manipulative and such quotations as are fictitious.[19] When a broker-dealer violates its duty of best execution, it could be in violation of section 15(c) of the Exchange Act.[20]

B. Prior Commission Statements

The Commission has made statements concerning the duty of best execution in various contexts over the years. The following are some of the statements that the Commission has made with respect to the duty of best execution. The Commission solicits comment below, however, on whether any of these prior statements should be revised in light of the proposed rules.

The Commission has previously stated that the duty of best execution requires a broker-dealer to execute customers' trades at the most favorable terms reasonably available under the circumstances, *i.e.,* at the best reasonably available price.[21] The Commission has also recognized that price is a critical concern for investors.[22] In addition, the

[4] *See* 17 CFR 242.611.

[5] *See* 17 CFR 240.15c3–5.

[6] *See* 17 CFR 242.1001.

[7] *See also* MSRB Rule G–18.01 (''A failure to have actually obtained the most favorable price possible will not necessarily mean that the dealer failed to use reasonable diligence.''). Whether a broker-dealer has met the proposed best execution standard would turn on an objective assessment of the facts and circumstances at the time of the broker-dealer's transactions for or with the customer (and not in hindsight).

[8] *See, e.g., Newton* v. *Merrill, Lynch, Pierce, Fenner & Smith, Inc.,* 135 F.3d 266, 270 (3d Cir.), *cert. denied,* 525 U.S. 811 (1998).

[9] *See id.*

[10] *See id. See also* Securities Exchange Act Release No. 37619A (Sept. 6, 1996), 61 FR 48290 (Sept. 12, 1996) (''Order Execution Obligations Adopting Release''). A Report of the Special Study of Securities Markets stated that, according to an NASD District Business Conduct Committee in a 1952 proceeding, ''[t]he integrity of the industry can be maintained only if the fundamental principle that a customer should at all times get the best available price which can reasonably be obtained for him is followed.'' *See* SEC, Report of the Special Study of Securities Markets, H.R. Doc. No. 95, 88th Cong., 1st Sess. Pt. II, 624 (1963) (''Special Study''), *available at https://www.sechistorical.org/collection/papers/1960/1963_SSMkt_Chapter_07_2.pdf.*

[11] The Commission also oversees investment advisers, which have a similar duty. As part of its duty of care, an investment adviser has a duty to seek best execution of a client's transactions where the adviser has responsibility to select broker-dealers to execute client trades, and the Commission previously has described the contours of that duty. *See* Commission Interpretation Regarding Standard of Conduct for Investment Advisers, Advisers Act Release No. 5248 (June 5, 2019), 84 FR 33669, 33674–75 (July 12, 2019). In addition, the Commission has brought a variety of enforcement actions against registered investment advisers in connection with their alleged failure to satisfy their duty to seek best execution. *See, e.g., In the Matter of Aventura Capital Management, LLC,* Investment Advisers Act Release No. 6103 (Sept. 6, 2022) (settled action); *In the Matter of Madison Avenue Securities, LLC,* Investment Advisers Act Release No. 6036 (May 31, 2022) (settled action).

[12] 15 U.S.C. 78k–1; 15 U.S.C. 78*o*.

[13] 15 U.S.C. 78k–1(a)(1)(C).

[14] 15 U.S.C. 78k–1(a)(2).

[15] *See* 15 U.S.C. 78c(a)(12) (defining the term ''exempted security'' to include, among other things, government securities and municipal securities, as defined in sections 3(a)(42) and 3(a)(29) of the Exchange Act, respectively).

[16] 15 U.S.C. 78*o*(c)(2)(A).

[17] *See* 15 U.S.C. 78*o*(c)(2)(B). *See also* 15 U.S.C. 78c(a)(29) (defining municipal securities).

[18] *See* 15 U.S.C. 78*o*(c)(2)(C). *See also* 15 U.S.C. 78c(a)(42) (defining government securities).

[19] 15 U.S.C. 78*o*(c)(2)(D).

[20] *See, e.g., In the Matter of Knight Securities L.P.,* Securities Exchange Act Release No. 50867 (Dec. 16, 2004) (settled action) (finding that the broker-dealer defrauded its institutional customers by failing to provide best execution in violation of section 15(c) of the Exchange Act).

[21] Securities Exchange Act Release No. 51808 (June 9, 2005), 70 FR 37496, 37538 (June 29, 2005) (''Regulation NMS Adopting Release''). *See also Geman* v. *SEC,* 334 F.3d 1183, 1186 (10th Cir. 2003) (''[T]he duty of best execution requires that a broker-dealer seek to obtain for its customer orders the most favorable terms reasonably available under the circumstances.'') (quoting *Newton, supra* note 8, 135 F.3d at 270); *Kurz* v. *Fidelity Management & Research Co.,* 556 F.3d 639, 640 (7th Cir. 2009) (describing the ''duty of best execution'' as ''getting the optimal combination of price, speed, and liquidity for a securities trade'').

[22] *See* Securities Exchange Act Release No. 43590 (Nov. 17, 2000), 65 FR 75414, 75418 (Dec. 1, 2000) (''Order Execution and Routing Practice Release'') (''The Commission strongly believes, however, that most investors care a great deal about the quality of prices at which their orders are executed, and that an opportunity for more vigorous competition

Commission has described a non-exhaustive list of factors that may be relevant to broker-dealers' best execution analysis. These factors include the size of the order, speed of execution, clearing costs, the trading characteristics of the security involved, the availability of accurate information affecting choices as to the most favorable market center for execution and the availability of technological aids to process such information, and the cost and difficulty associated with achieving an execution in a particular market center.[23]

Over the years, the Commission has stated the need for broker-dealers to continue to modernize their best execution practices. For example, the Commission has stated that broker-dealer practices for achieving best execution, including the data, technology, and types of markets they access, must constantly be updated as markets evolve.[24] In particular, the Commission has stated that the scope of the duty of best execution must evolve as changes occur in the market that give rise to improved executions for customer orders, including opportunities to trade at more advantageous prices.[25] As these changes occur, a broker-dealer's procedures for seeking best execution for its customer orders also must be modified to consider price opportunities that become reasonably available.[26] In doing so, broker-dealers must take into account price improvement opportunities [27] and whether different markets may be more suitable for different types of orders or particular securities.[28]

In addition, the Commission has expressed concerns regarding interpositioning and the duty of best execution. Interpositioning can occur when a broker-dealer places a third party between itself and the best market for executing a customer trade in a manner that results in a customer not receiving the best available market price.[29] Interpositioning can violate the broker-dealer's duty of best execution when it results in unnecessary transaction costs at the expense of the customer.[30]

The Commission has also discussed its views with respect to the application of best execution to different order types. With regard to the handling of limit orders, broker-dealers must take into account material differences in execution quality, such as the likelihood of execution among the various markets or market centers to which limit orders may be routed.[31] Broker-dealers are also subject to the duty of best execution when executing customer orders at the beginning of regular trading hours and should take into account alternative methods when considering how to execute these orders.[32]

Moreover, the Commission has recognized practical challenges associated with the handling of a large volume of orders. In particular, the Commission acknowledged in 1994 that although it may be impractical for a broker-dealer that handles a heavy volume of orders to make an individual determination regarding where to route each order it receives, the broker-dealer must use due diligence to seek the best execution possible given all facts and circumstances.[33] At that time, the Commission reasoned that, in such circumstances, the duty of best execution requires a broker-dealer to periodically assess the quality of competing markets to ensure that order flow is directed to the markets providing the most beneficial terms for its customer orders.[34]

The Commission has further identified the types of data needed by broker-dealers to fulfill their duty of best execution. For example, quotation information contained in the public quotation system must be considered in seeking best execution of customer orders.[35] In adopting Rules 605 and 606 of Regulation NMS,[36] the Commission recognized that the reports required of market centers would provide statistical disclosures regarding certain factors, such as execution price and speed of execution, relevant to a broker-dealer's order routing decision and that these public disclosures of execution quality should help broker-dealers fulfill their duty of best execution.[37] More recently, the Commission stated that broker-dealers should consider the availability of consolidated market data, including the various elements of data content and the timeliness, accuracy, and reliability of the data in developing and maintaining their best execution

among market participants to provide the best quality of execution will enhance the efficiency of the national market system.'').

[23] *See id.,* at 75422; Regulation NMS Adopting Release, *supra* note 21, 70 FR 37538.

[24] *See* Regulation NMS Adopting Release, *supra* note 21, 70 FR at 37538; Order Execution Obligations Adopting Release, *supra* note 10, 61 FR at 48322–23.

[25] *See* Order Execution Obligations Adopting Release, *supra* note 10, 61 FR 48323.

[26] *See id.;* Regulation NMS Adopting Release, *supra* note 21, 70 FR 37516 (stating that broker-dealers must examine their procedures for seeking best execution in light of market and technology changes and modify those practices if necessary to enable their customers to obtain the best reasonably available prices).

[27] *See* Order Execution Obligations Adopting Release, *supra* note 10, 61 FR 48323 n.357 (stating that price improvement means the difference between execution price and the best quotes prevailing in the market at the time the order arrived at the market or market maker, and that any evaluation of price improvement opportunities would have to consider not only the extent to which orders are executed at prices better than the prevailing quotes, but also the extent to which orders are executed at inferior prices).

[28] *See id.*

[29] *See Edward Sinclair, et al.,* Securities Exchange Act Release No. 9115, 1971 WL 120487 (Mar. 24, 1971) (Comm'n op.), *aff'd,* 444 F2d. 399 (2d Cir. 1971) (order clerk in OTC department of broker-dealer interposed a broker-dealer between his firm and best available market price in return for split of profits with the interposed broker); *H.C. Keister & Co., et al.,* Securities Exchange Act Release No. 7988, 1966 WL 84120 (Nov. 1, 1966) (Comm'n op.) (in exchange for payments, trader for a large broker-dealer interpositioned a small broker-dealer between its customers' orders and the best available market prices); *Synovus Securities, Inc.,* Securities Exchange Act Release No. 34313, 1994 WL 323096 (July 5, 1994) (settled order) (broker-dealer and its president placed customer orders with person who was able to promptly sell the bonds to or buy the bonds from other brokers at a profit and customers did not get the best market price). *See also SEC* v. *Ridenour,* 913 F.2d 515 (8th Cir. 1990) (a bond salesman violated the antifraud provisions based on his secret interpositioning of his personal trading account between his customers' securities transactions and the fair market price of the trades).

[30] *See Thomson & McKinnon,* Securities Exchange Act Release No. 8310, 1968 WL 87637 (May 8, 1968) (Comm'n op.) (a National Association of Securities Dealers (''NASD'') member firm interposed broker-dealers between itself and the best available market, and the added transaction cost was borne by its customers; the Commission found that, ''[i]n view of the obligation of a broker to obtain the most favorable price for his customer, where he interposes another broker-dealer between himself and a third broker-dealer, he *prima facie* has not met that obligation and he has the burden of showing that the customer's total cost or proceeds of the transaction is the most favorable obtainable under the circumstances'').

[31] *See* Order Execution Obligations Adopting Release, *supra* note 10, 61 FR 48323.

[32] *See* Order Execution and Routing Practice Release, *supra* note 22, 65 FR 75422 (recognizing that customer orders in listed securities were executed at one opening price in an auction whereas customer orders in Nasdaq securities at the time traded at the quoted bids and offers resulting in a liquidity premium for a large number of orders that effectively cross each other at a single point in time).

[33] *See* Securities Exchange Act Release No. 34902 (Oct. 27, 1994), FR Document 94–27109 (Nov. 2, 1994) (''Payment for Order Flow Release'').

[34] *See id. See also* Regulation NMS Adopting Release, *supra* note 21, 70 FR 37516.

[35] *See* Order Execution Obligations Adopting Release, *supra* note 10, 61 FR 48324.

[36] *See* 17 CFR 242.605, 242.606.

[37] *See* Order Execution and Routing Practice Release, *supra* note 22, 65 FR 75413. The Commission further stated that the rules were designed to generate uniform, general purpose statistics that will prompt more vigorous competition on execution quality. The information provided by these reports is not, by itself, sufficient to support conclusions regarding the provision of best execution, and any such conclusions would require a more in-depth analysis of the broker-dealer's order routing practices than will be available from the disclosures required by the rules. *See id.* at 75420.

policies and procedures.[38] However, recognizing that best execution analysis varies depending upon the characteristics of customers and orders handled and the large array of potential scenarios, the Commission stated that it cannot specify the data elements that may be relevant to every specific situation.[39]

The Commission has also stated the importance of price improvement opportunities in the context of listed and over-the-counter (''OTC'') equities.[40] Simply routing customer order flow for automated executions or internalizing customer orders on an automated basis at the best bid or offer would not necessarily satisfy a broker-dealer's duty of best execution for small orders in listed and OTC equities.[41] Rather, broker-dealers handling small orders in listed and OTC equities should look for price improvement opportunities when executing these orders.[42] And the expectation of price improvement for customer orders is particularly important when broker-dealers receive payments in return for routing their customer orders.[43]

C. FINRA and MSRB Best Execution Rules

FINRA, an SRO,[44] has a best execution rule (Rule 5310) and has issued interpretive regulatory notices concerning its members' duty to provide best execution to customer orders.[45] FINRA Rule 5310 states that, ''[i]n any transaction for or with a customer or customer of another broker-dealer, a member and persons associated with a member must use reasonable diligence to ascertain the best market for the subject security and buy or sell in such market so that the resultant price to the customer is as favorable as possible under prevailing market conditions.'' Over the years, FINRA and its predecessor, the NASD, have modified the rule and issued interpretations to account for changes in market practices and market structure, and to account for new technologies and new data available to broker-dealers that handle and execute customer orders.[46]

Modeled on FINRA Rule 5310,[47] MSRB Rule G–18 is the best execution rule for transactions in municipal securities[48] and similarly requires broker-dealers to ''use reasonable diligence to ascertain the best market for the subject security and to buy or sell in that market so that the resultant price to the customer is as favorable as possible under prevailing market conditions.''

The Commission describes the elements in FINRA Rule 5310 and MSRB Rule G–18, as well as the differences between those rules and the proposed rules, in section IV below.

III. Existing Order Handling Practices and Overview of Proposed Regulation Best Execution

A. Existing Order Handling Practices

1. General Broker-Dealer Practices

In the past few decades, there has been a proliferation of markets and increasingly accessible prices across asset classes. For example, broker-dealers have numerous execution venues from which to choose in the NMS stock market. These include 16 registered equities exchanges, an increase from 11 registered equities exchanges approximately 12 years ago.[49] In the options markets, the number of options exchanges continues to increase, with 6 new options exchanges in the last 10 years and 16 registered options exchanges operating today. In the corporate and municipal bond markets and government securities markets, traditional OTC voice trading protocols and customer liquidity provision by principal trading desks of broker-dealers are being supplemented by other methods of execution that are both electronic and multilateral in nature. As of October 31, 2022, there are 21 corporate bond alternative trading systems (''ATSs''), 7 municipal securities ATSs, and 14 government securities ATSs, each operating pursuant to a Form ATS currently on file with the Commission.

The Commission believes that customers would benefit from broker-dealers' robust considerations of liquidity sources and price improvement opportunities, which may provide customers with the most favorable prices. In the NMS stock market, for example, broker-dealers that primarily service the accounts of individual investors (''retail broker-dealers'') route more than 90% of their customers' marketable orders to a small group of off-exchange dealers, known as wholesalers,[50] and the Commission

[38] *See* Securities Exchange Act Release No. 90610 (Dec. 9, 2020), 86 FR 18596, 18605–06 (Apr. 9, 2021) (''MDI Adopting Release''). The Commission stated that it was not establishing minimum data elements needed to achieve best execution nor mandating consumption of the expanded data content. The Commission also acknowledged that different market participants and different trading applications have different market data needs. *See id.* (citing Securities Exchange Act Release No. 88216 (Feb. 14, 2020), 85 FR 16726, 16734, 16755 (Mar. 24, 2020) (''Market Data Infrastructure Proposing Release'')).

[39] *See* MDI Adopting Release, *supra* note 38, 86 FR at 18606.

[40] *See* Order Execution Obligations Adopting Release, *supra* note 10, 61 FR at 48323. *See also id.* at 48323 n.357.

[41] *See id.* at 48323.

[42] *See id.*

[43] *See* Payment for Order Flow Release, *supra* note 33, 59 FR at 55008. *See also* 17 CFR 240.10b–10(d)(8) (defining ''payment for order flow'' as any monetary payment, service, property, or other benefit that results in remuneration, compensation, or consideration to a broker or dealer from any broker or dealer, national securities exchange, registered securities association, or exchange member in return for the routing of customer orders by such broker or dealer to any broker or dealer, national securities exchange, registered securities association, or exchange member for execution, including but not limited to: research, clearance, custody, products or services; reciprocal agreements for the provision of order flow; adjustment of a broker or dealer's unfavorable trading errors; offers to participate as underwriter in public offerings; stock loans or shared interest accrued thereon; discounts, rebates, or any other reductions of or credits against any fee to, or expense or other financial obligation of, the broker or dealer routing a customer order that exceeds that fee, expense or financial obligation). Retail broker-dealers receiving cash payments from wholesale market makers in return for routing their customers' orders to the market maker for execution is a common example of payment for order flow. *See* Memorandum to the SEC Equity Market Structure Advisory Committee from the SEC Division of Trading and Markets, Certain Issues Affecting Customers in the Current Equity Market Structure 5–6 (Jan. 26, 2016). Staff reports, Investor Bulletins, and other staff documents (including those cited herein) represent the views of Commission staff and are not a rule, regulation, or statement of the Commission. The Commission has neither approved nor disapproved the content of these staff documents and, like all staff statements, they have no legal force or effect, do not alter or amend applicable law, and create no new or additional obligations for any person.

[44] While the MSRB is an SRO for only certain purposes of the Exchange Act, *see* Exchange Act section 3(a)(26), 15 U.S.C. 78c(a)(26), MSRB rules are rules of an SRO, *see* Exchange Act section 3(a)(28), 15 U.S.C. 78c(a)(28). FINRA and the MSRB are both referred to herein as SROs.

[45] For ease of discussion and consistency, this release refers to FINRA members as broker-dealers when discussing the FINRA rules that are applicable to FINRA members.

[46] *See, e.g.,* FINRA Regulatory Notices 21–23 (June 23, 2021), 21–12 (Mar. 18, 2021), 18–29 (Sept. 12, 2018), 15–46 (Nov. 2015), and 09–58 (Oct. 2009); NASD Notices to Members 01–22 (Apr. 2001), 00–42 (June 2000), and 99–12 (Feb. 1999).

[47] In proposing Rule G–18, the MSRB stated that a best execution rule should be generally harmonized with FINRA Rule 5310 for purposes of regulatory efficiency, but appropriately tailored to the characteristics of the municipal securities markets. *See* Securities Exchange Act Release No. 73764 (Dec. 5, 2014), 79 FR 73658 (Dec. 11, 2014) (''MSRB Best Execution Approval Order''). While proposed Regulation Best Execution does not include different requirements for markets with different characteristics, proposed Regulation Best Execution is designed to enable broker-dealers to tailor their compliance based on the different characteristics of the markets.

[48] MSRB Rule G–18 applies to brokers, dealers, and municipal securities dealers. For ease of discussion and consistency, when discussing the MSRB rule, the release refers to these entities collectively as broker-dealers. Furthermore, the term ''municipal securities'' throughout this release is referred to as either ''municipal bonds'' or ''municipal securities.''

[49] *See* Securities Exchange Act Release No. 61358 (Jan. 14, 2010), 75 FR 3594 (Jan. 21, 2010) (''Concept Release on Equity Market Structure'').

[50] *See* Table 8, *infra* section V.B.3.(a).i.d..

believes that customers would benefit from considerations by these retail broker-dealers of whether other markets may provide customer orders, or a portion of those orders, with potentially better executions than wholesalers.

For NMS stock orders that receive price improvement from wholesalers, approximately 18.6% of those shares receive an amount of price improvement of less than 0.1 cent per share when executed by the wholesaler.[51] Moreover, for stocks priced higher than $30, between approximately 46–63% of shares executed by wholesalers received price improvement that was less favorable than the midpoint of the prevailing national best bid and offer (''NBBO'') at the time the wholesaler received the order.[52] For stocks priced higher than $30, it appears that for between 60–93% of the shares executed by the wholesaler in a principal capacity at a price less favorable than the NBBO midpoint there was midpoint liquidity that was available on exchanges and ATSs at the time the wholesaler executed the order.[53] Retail broker-dealers often do not route customer orders to execute against midpoint liquidity that may be present on other markets prior to routing for execution by wholesalers.[54] While a retail broker-dealer's decision to route orders to a wholesaler that provides price improvement may indeed be consistent with its duty of best execution in many cases,[55] the Commission believes that customers would benefit from robust considerations by retail broker-dealers regarding, for example, the possibility of available liquidity priced at the midpoint of the NBBO at other markets.

Similar considerations are present with the order handling and routing practices of wholesalers in the NMS stock market.[56] While the prices that wholesalers provide to a customer may often justify the determination by the wholesaler that it is the best market for the customer order, the specific amount of price improvement for orders that are executed internally is largely within the discretion of the wholesaler. The wholesaler typically first determines whether or not it desires to transact with a particular customer order in a principal capacity. Should it choose to do so, the wholesaler determines what amount of price improvement it will provide for the order, and the data described above shows that wholesalers often do not execute customer orders at the NBBO midpoint. When the wholesaler has determined that it does not want to transact with a customer order in a principal capacity, the wholesaler may attempt to route such order to other markets.

As discussed in section III.A.2, the Commission believes that customers would benefit from robust considerations by broker-dealers of liquidity sources and price improvement opportunities in the options market, particularly with respect to transactions that involve order handling conflicts of interest.

The corporate and municipal bond markets and the government securities markets are different from the NMS stock market in substantial ways that can impact how a broker-dealer fulfills its duty of best execution. For example, market participants do not have the same level of price transparency in these markets as they do in the NMS stock market. While the corporate and municipal bond markets disseminate post-trade price information, this information often is not available immediately upon execution of a bond transaction as FINRA and MSRB rules permit a trade to be reported within 15 minutes of the transaction.[57] In the government securities market, there is no real-time public dissemination of post-trade price information. Despite the increase in electronic trading and the use of ATSs, these markets are decentralized with most trading occurring through broker-dealers that make markets in securities they have underwritten or hold in inventory.[58] There is virtually no exchange trading of these bonds.[59] Generally, trades occur both by voice and through the use of electronic systems that provide trading facilities and communication protocols with varying degrees of execution functionality and access to pre-trade pricing information.[60] However, market participants in the corporate and municipal bond markets and the government securities markets are increasingly utilizing technology to trade these securities, and electronic trading is growing.[61] The lower level of price transparency in, and the decentralized nature of, the corporate and municipal bond and government securities markets make it more difficult for customers to evaluate their transactions and highlights the importance of robust best execution considerations by broker-dealers in these markets.

Commission analysis shows significant differences in the variability of execution prices among interdealer trades[62] compared to the variability of execution prices among customer trades in the same bonds on the same trading day. For example, in the corporate bond market, the dispersion, or standard deviation, of customer execution prices for transactions under $100,000 was almost 3 times more than that of interdealer execution prices.[63]

[51] *See* Table 8, *infra* section V.B.3.(a).i.d.

[52] The percentage ranges are based on stock prices, the liquidity of the stock, whether or not the stock was in the S&P 500 Index, and whether or not the stock is an exchange-traded fund (''ETF''). *See* Table 8, *infra* section V.B.3.(a).i.d (analysis showing that depending on the type of NMS stock, its price, and liquidity, between 46% and 73% of retail marketable order shares are internalized by a wholesaler at a price worse than the NBBO midpoint).

[53] *See* Table 8, *infra* section V.B.3.(a).i.d (analysis showing that, depending on the type of NMS stock, its price, and its liquidity, between 40% and 93% of the shares in marketable retail orders that wholesalers internalize at prices less favorable than the NBBO midpoint had midpoint liquidity available at a better price on an exchange or ATS).

[54] *See* Table 3, *infra* section V.B.3.(a).i.d (according to Table 3, retail brokers appear to outsource handling of over 87% of customer orders and over 90% of customer marketable orders to wholesalers).

[55] For example, wholesalers appear to provide customers with executions in NMS stocks at the midpoint or better (based on the NBBO at the time the wholesaler received the order) for almost 46% of the customer orders executed by the wholesaler in a principal capacity. *See* Table 7, *infra* section V.B.3.(a).i.d . *But see supra* note 53 and accompanying text (describing that for stocks priced higher than $30, it appears that between 60–93% of the shares executed by the wholesaler in a principal capacity at a price less favorable than the NBBO midpoint had liquidity available at the NBBO midpoint on an exchange or ATS).

[56] Wholesalers owe a duty of best execution to the customers of retail broker-dealers under FINRA Rule 5310. *See* FINRA Rule 5310(a) (applying its best execution requirements to any transaction for or with a customer or a customer of another broker-dealer).

[57] However, both FINRA and the MSRB recently solicited comment about shortening the applicable transaction reporting window to one minute. *See* FINRA Regulatory Notice 22–17 (Aug. 2, 2022); MSRB Notice 2022–07 (Aug. 2, 2022).

[58] *See, e.g.,* Maureen O'Hara & Xing (Alex) Zhou, *Anatomy of a Liquidity Crisis: Corporate Bonds in the COVID–19 Crisis,* 142 J. Fin. Econ. 46 (2021).

[59] A small percentage of corporate bonds are exchange-traded on trading systems such as NYSE Bonds and the Nasdaq Bond Exchange. *See generally, https://www.nyse.com/markets/bonds* and *https://www.nasdaq.com/solutions/nasdaq-bond-exchange.* Trading volume in exchange-traded bonds was reported to be around $19 billion as of January 2020. *See* Securities Exchange Act Release No. 94062 (Jan. 26, 2022), 87 FR 15496 (Mar. 18, 2022) (''Government Securities ATS Proposing Release''), at 15604 n.863 (citing Eric Uhlfelder, A Forgotten Investment Worth Considering: Exchange-Traded Bonds, Wall St. J. (Jan. 5, 2020), *https://www.wsj.com/articles/a-forgotten-investment-worth-considering-exchange-traded-bonds-11578279781*).

[60] *See* Government Securities ATS Proposing Release, *supra* note 59, 87 FR 15606.

[61] For example, according to one industry group, approximately 32% of investment-grade and 23% of high-yield corporate bond daily dollar volumes are executed electronically. *See id.,* at 15606 n.890.

[62] It is well-established that interdealer prices can reflect the prevailing market value for a bond. *See, e.g.,* FINRA Rule 2121.

[63] *See* Table 17, *infra* section V.B.3.b.i.

Similarly, in the municipal bond market, the dispersion of customer execution prices for transactions under $100,000 was more than 4 times greater than that of interdealer trades.[64] And in the government securities market, the dispersion of customer execution prices for transactions under $100,000 was almost 40 percent greater than that of interdealer trades.[65] The variability of prices for customer transactions suggests that some customers may be paying or receiving worse prices than other customers in the same security on the same day because their broker-dealers may not be evaluating as many markets for those transactions as other broker-dealers. While it is possible that some of the variability of prices paid by customers may be attributable to variations in broker-dealer compensation as reflected in the markups or markdowns charged by broker-dealers when they transact with customers in a principal capacity, the Commission does not believe that this is the only reason for customer price dispersion in the same bonds on the same day.[66] For example, Commission analysis shows that in the corporate bond market, for trades that were reported by the broker-dealer as not involving any collection of commissions, markups or markdowns, the dispersion of customer execution prices was still 65% greater than that of interdealer trades.[67] Because the variability in the customer execution prices suggests that some broker-dealers may not be exercising as much diligence in identifying the best market for customer orders, the Commission believes that customers would benefit from consistently robust best execution considerations by broker-dealers, including considerations of the various markets that may provide their customers with the most favorable prices.

2. Order Handling Conflicts of Interest

The Commission also believes that execution of retail customer orders by broker-dealers that have order handling conflicts of interest warrants heightened attention by those broker-dealers. These order handling conflicts of interest include payment for order flow, principal trading, and routing customer orders to affiliates.

Payment for order flow[68] creates a conflict of interest because it creates an incentive for a broker-dealer to send customer orders to a market, such as a wholesaler or an exchange, which agrees to pay the broker-dealer for sending its customer orders.[69] Payment for order flow may harm customers because the broker-dealer may be making order handling decisions to benefit itself at the expense of its customer.[70] Because payment for order flow is a form of economic inducement that has the potential to influence the way a broker-dealer handles customer orders, the Commission has stated that such arrangements must be considered as part of a broker-dealer's best execution assessment.[71]

While the Commission has stated that a broker-dealer's receipt of payment for order flow is not a violation of its duty of best execution as long as it periodically assesses the quality of the markets to which it routes order flow, a broker-dealer must not allow payment for order flow to interfere with its efforts to obtain best execution.[72] Likewise, FINRA has stated that broker-dealers may not negotiate the terms of order routing arrangements for customer orders in a manner that reduces the price improvement opportunities that, absent payment for order flow, otherwise would be available to those customer orders.[73] FINRA has also stated that obtaining price improvement is a heightened consideration when a broker-dealer receives payment for order flow and it is especially important to determine that customers are receiving the best price and execution quality opportunities notwithstanding the payment for order flow.[74] Accordingly, the Commission believes that the receipt of payment for customer order flow continues to warrant heightened attention by broker-dealers.[75]

A significant portion of retail orders in the NMS stock and listed options market is routed in return for payment

[64] *See* Table 17, *infra* section V.B.3.b.i and V.B.3.b.ii.

[65] *See* Table 17, *infra* section V.B.31.b.i and V.B.3.b.iii .

[66] *See, e.g.,* John M. Griffin, Nicholas Hirschey, and Samuel Kruger, *Do Municipal Bond Dealers Give their Customers 'Fair and Reasonable' Pricing?* J. Fin., Forthcoming (Aug. 4, 2022) (''Instead of delivering uniform pricing, dealer transactions with customers take place at highly variable markups relative to both reoffering prices and dealer costs. On the same day, customers frequently buy the same bond at different prices from different dealers, and prices even vary across different customers purchasing the same bond from the same dealer on the same day. These price differences are not explained by trade characteristics or by dealer costs. Some dealers provide customers with low and consistent markups, but this does not appear to be the industry norm. Pricing at quarter or eighth price or yield increments is common and is seemingly a method to deliver higher markups.'').

[67] *See infra* note 478.

[68] When discussing payment for order flow in the context of the proposed rules, the Commission uses the term as defined in Exchange Act Rule 10b–10(d)(8). This definition includes payment for order flow from wholesalers to retail broker-dealers, as well as exchange rebates that are paid to broker-dealers in return for sending orders to the exchange. *See* 17 CFR 240.10b–10 (defining payment for order flow and requiring a broker-dealer to disclose to the customer whether payment for order flow is received by the broker-dealer for the customer transaction and the fact that the source and nature of the compensation received in connection with the particular transaction will be furnished upon written request of the customer).

[69] *See, e.g.,* Payment for Order Flow Release, *supra* note 33, FR Doc No: 94–27109; FINRA Regulatory Notice 21–23; *Robinhood Financial, LLC,* Letter of Acceptance, Waiver and Consent (FINRA Case No. 2017056224001) (Dec. 2019) (''Robinhood FINRA'') (describing violations of FINRA's best execution rule where the firm routed its customers' orders to four broker-dealers that all paid for order flow and ''did not exercise reasonable diligence to ascertain whether these four broker-dealers provided the best market for the subject securities to ensure its customers received the best execution quality from these as compared to other execution venues''); *In the Matter of Robinhood Financial, LLC,* Securities Exchange Act Release No. 90694 (Dec. 17, 2020) (settled action) (''Robinhood SEC''). Broker-dealers that accept payment for order flow must disclose certain information concerning the payments publicly. *See* 17 CFR 242.606(a)(1)(iv) (requiring a description of any arrangement for payment for order flow and any profit-sharing relationship and a description of any terms of such arrangements, written or oral, that may influence a broker-dealer's order routing decision).

[70] *See, e.g.,* Robinhood FINRA, *supra* note 69; Robinhood SEC, *supra* note 69 (finding that the retail broker-dealer explicitly offered to accept less price improvement for its customers than what the wholesalers were offering, in exchange for receiving a higher rate of payment for order flow for itself).

[71] *See* Payment for Order Flow Release, *supra* note 33, FR Doc No: 94–27109.

[72] *See id.*

[73] *See* FINRA Regulatory Notice 21–23 (June 23, 2021).

[74] *See id.,* at 3–4. FINRA has also stated that ''inducements such as payment for order flow and internalization may not be taken into account in analyzing market quality.'' *See id.* at 4.

[75] Commission staff, in a recent report, stated that wholesaler payment for order flow to retail broker-dealers is ''individually negotiated prior to trading between the retail broker-dealer and the [wholesaler], and the rates and amounts can vary substantially depending on the broker-dealer and its customer order flow. [Wholesalers] may give the retail broker the choice of how to allocate those funds—either by applying some or all of that payment to improve the prices of its customers' orders or by allowing the retail broker-dealer to keep part of the payment for itself.'' Commission staff stated that these payments can create a conflict of interest for the retail broker-dealer. *See* Staff Report on Equity and Options Market Structure Conditions in Early 2021 (Oct. 14, 2021), *available at https://www.sec.gov/files/staff-report-equity-options-market-struction-conditions-early-2021.pdf.* Additionally, Rule 606(a) of Regulation NMS requires broker-dealers to make publicly available on a quarterly basis certain aggregated order routing disclosures for held orders that provide, among other things, detailed disclosure of payments received from or paid to certain trading centers, as well as a discussion of the material aspects of broker-dealers' relationships with those trading centers, including a description of any arrangements for payment for order flow and any profit-sharing relationships and a description of any terms of such arrangements, written or oral, that may influence broker-dealers' order routing decisions. *See* 17 CFR 242.606(a).

for order flow. In the first quarter of 2022, wholesalers paid more than $796 million dollars to retail broker-dealers for order flow in NMS stocks and listed options.[76] Listed options represented approximately 70% of the total payment for order flow with more than $561 million paid to retail broker-dealers by wholesalers.[77] Payment for order flow creates an incentive for the retail broker-dealer to adopt order handling and execution practices that may not result in best execution for their customers.[78] For example, as discussed more fully in section V, analysis in the NMS stock market appears to show that payment for order flow can harm customer execution quality. More specifically, the orders of broker-dealers that receive more payment for order flow from wholesalers are internalized by wholesalers with (1) higher effective spreads, (2) higher execution quality ratios, and (3) slightly smaller price improvement when compared with the orders of broker-dealers that do not receive payment for order flow and that are internalized by wholesalers.[79] In the context of exchange rebates in the options market, one study finds that some brokers seemingly route non-marketable orders to exchanges that offer large liquidity rebates to maximize the value of order flow and suggests that broker-dealers can enhance non-marketable limit order execution quality by routing those orders to exchanges that do not offer liquidity rebates to non-marketable limit orders.[80]

The Commission has also acknowledged that the opportunity for a broker-dealer to trade with a customer order as principal is an order routing inducement that could interfere with the broker-dealer's duty of best execution.[81] Internalizing customer orders may create a conflict of interest because broker-dealers do so for the opportunity to capture the spread,[82] and may thereby provide broker-dealers an incentive to trade with orders as principal. In the NMS stock market and listed options market, principal trading with retail customers is a common practice. As stated above in section III.A.1, a significant portion of retail customer orders are routed to wholesalers for handling and execution. Once the wholesaler receives retail customer orders for handling and execution, it often trades with those customer orders as principal. Wholesalers internalize over 90% of the dollar value of the marketable order flow retail broker-dealers send them.[83] The Commission believes that the incentive to trade in a principal capacity at a price most advantageous for the wholesaler itself rather than the customer warrants heightened attention by the wholesaler.

Principal trading in the listed options market is also common. Options exchange trading and priority rules, which must be filed with the Commission under section 19(b) of the Exchange Act[84] and Rule 19b–4 thereunder,[85] provide wholesalers with a number of methods to internalize customer orders. For example, the wholesaler or an affiliate is often either a specialist or directed market maker on one or more of the options exchanges. Exchange rules typically provide the specialist or directed market maker with the right to trade with a certain portion of incoming order flow regardless of whether other market participants may also be quoting at the same price as the specialist or directed market maker.[86] These ''allocation guarantees'' effectively allow the wholesaler to internalize a minimum amount of the customer orders by routing the customer orders to exchanges where the wholesaler or its affiliate is designated as a specialist or directed market maker. Similarly, many options exchanges provide small order guarantees that permit the specialist (which potentially can be an affiliate of the wholesaler) to trade with 100% of all orders sent to the exchange for five contracts or less.[87] Moreover, options exchanges' two-sided auctions (''price improvement auctions'') allow a wholesaler to internalize a customer order by submitting a proposed transaction between the wholesaler and a customer at a specified price.[88] Other market participants are permitted to compete with the wholesaler for the opportunity to trade with the customer order. These price improvement auctions, however, generally afford the wholesaler with certain advantages over other market participants that may be interested in competing for the right to trade with a customer order.[89] The Commission estimates that wholesalers in the listed options market generally internalize approximately 31% of the executed

[76] *See* Table 12, *infra* section V.B.3.(a).iii.a.

[77] *See id. See also* Thomas Ernst & Chester S. Spatt, *Payment for Order Flow and Asset Choice,* 40 (NBER Working Paper No. w29883, May 2022), *https://ssrn.com/abstract=4068065* (retrieved from Elsevier database) (finding that approximately 65% of all payment for order flow is attributable to the options market). In addition to payment for order flow paid by wholesalers to retail broker-dealers, some exchanges administer ''marketing fee'' programs pursuant to rules filed with the Commission, that result in payment for order flow directed by exchange market makers to order flow providers, which can include retail broker-dealers. *See, e.g.,* Nasdaq Phlx LLC Options 7, Section 4; Miami International Securities Exchange LLC Fee Schedule Section (1)(a)(xi); NYSE American LLC Options Fee Schedule Section I.A. Under these programs, the exchanges assess fees on market makers who then typically direct the disbursement of some or all of the marketing fees to selected market participants in return for retail order flow directed to the market makers from the broker-dealer recipients of the marketing fees. If the directed market maker is quoting at the NBBO when the order is received, exchange rules typically guarantee the market maker a certain allocation of the incoming directed order, typically determined by the number of other market makers quoting at the NBBO at the time the order is received. *See, e.g.,* PHLX Options 3, Section 10(a)(1)(C) (describing the directed market maker priority).

[78] The Commission and FINRA settled claims against a retail broker-dealer for, among other things, failing to provide best execution to customer orders for which it received payment for order flow. *See supra* note 69. The inherent trade-off between payment for order flow for a retail broker-dealer and price improvement for their customers was discussed in the Commission's settled enforcement action against the retail broker. *See* Robinhood SEC, *supra* note 69. The Commission found that the retail broker-dealer had negotiated with a number of wholesalers about potentially routing customer orders to those firms and that, in the course of those negotiations, certain of the wholesalers told the retail broker-dealer that there was a trade-off between payment for order flow on the one hand and price improvement on the other. *See id.* The Commission also found that the retail broker-dealer explicitly offered to accept less price improvement for its customers than what the wholesalers were offering, in exchange for receiving a higher rate of payment for order flow for itself. *See id.* Subsequently, the retail broker-dealer conducted a more extensive internal analysis, which showed that its execution quality and price improvement metrics were substantially worse than other retail broker-dealers in many respects, including the percentage of orders that received price improvement and the amount of price improvement, measured on a per order, per share, and per dollar traded basis. *See id.*

[79] *See* Table 16, *infra* section V.B.3.b..iii.b.

[80] *See* Robert Battalio et al., *Do (Should) Brokers Route Limit Orders to Options Exchanges That Purchase Order Flow?,* 56 J. Fin. & Quantitative Analysis 183 (2020).

[81] *See* Order Execution Obligations Adopting Release, *supra* note 10, 61 FR 48323.

[82] *See* Internalized/Affiliate Practices, Payment for Order Flow and Order Routing Practices, Securities Exchange Act Release No. 34903 (Oct. 27, 1994), 59 FR 55014, 55014 (Nov. 2, 1994) (recognizing several commenters who described this conflict of interest).

[83] *See* Table 7, *infra* Section V.B.3.a.i.d.

[84] 15 U.S.C. 78s(b).

[85] 17 CFR 240.19b–4.

[86] *See, e.g.,* BOX Exchange LLC Rule 7135(c); Miami International Securities Exchange LLC Rule 514(g)–(i); Nasdaq Phlx LLC Options 3, Section 10(a)(1); Nasdaq ISE, LLC Options 3, Section 10(c)(1); NYSE American LLC Rule 964NY(b)(2).

[87] *See, e.g.,* Nasdaq ISE, LLC Options 3, Section 10(c)(1)(D); Nasdaq Phlx LLC Options 3, Section 10(a)(1)(D); BOX Exchange LLC Rule 7135(c)(2)(iii); NYSE American LLC Rule 964NY(b)(2)(C)(iv).

[88] Customer orders that are submitted into price improvement auctions are guaranteed complete execution at a minimum execution price and are electronically auctioned for price improvement. *See, e.g.,* Nasdaq ISE, LLC Options 3, Section 13; Nasdaq Phlx LLC Options 3, Section 13; Miami International Securities Exchange LLC Rule 515A; BOX Exchange LLC Rule 7150; NYSE American LLC Rule 971.1NY; Cboe Exchange, Inc. Rule 5.37.

[89] *See infra* notes 137–140 and accompanying text.

orders routed to option exchanges, with approximately 73% of orders routed to price improvement auctions being internalized and approximately 17% of orders routed to the limit order book being internalized.[90] The Commission believes that the incentive to trade in a principal capacity at a price most advantageous for the wholesaler itself rather than the customer warrants heightened attention by the wholesaler.

Finally, the practice of routing customer orders to affiliates raises a conflict of interest for the broker-dealer. When a broker-dealer chooses to route customer orders to an affiliate, it may do so because of financial incentives, and these incentives can vary depending on the business model or business lines of the broker-dealer. For example, broker-dealers may have conflicts of interest to the extent that they operate or are affiliated with an entity that operates a trading venue, such as an ATS, because the broker-dealer or its affiliate receives financial benefits when the broker-dealer operator chooses to route customer orders to its ATS for execution (*e.g.,* by routing an order to its ATS, a broker-dealer operator that does not pass through trading fees to its customers may be able to avoid paying fees that it otherwise would have to pay when routing and executing orders on unaffiliated trading venues).[91] A broker-dealer operator also benefits by routing to its ATS because it creates higher volume on the ATS, which can attract additional order flow to the ATS, ultimately increasing the ATS' market share and associated revenue.[92] Another example of affiliate routing conflicts of interest relates to a financial services firm that may have an organizational structure that separates its retail facing business from its order handling and execution business. The retail broker-dealer that receives a customer order may have a financial incentive to send the customer order to its affiliated executing broker-dealer because the affiliated executing broker-dealer may wish to trade as principal with the customer order. While an affiliated executing broker-dealer could provide best execution for customer orders, the incentive to send customer orders to an affiliate may influence the broker-dealer to route the customer order in a manner that maximizes the broker-dealer's interest, rather than route the customer order to another market consistent with its duty of best execution.[93] Accordingly, the Commission believes that the impact of this practice on customer orders continues to warrant heightened attention by broker-dealers.

3. Crypto Asset Securities

As discussed in section II.A above, a broker-dealer has a legal duty to seek best execution of customer orders in securities. Proposed Regulation Best Execution would apply to all securities, including any digital asset that is a security or a government security under the Federal securities laws. The term ''digital asset'' refers to an asset that is issued and/or transferred using distributed ledger or blockchain technology (''distributed ledger technology''), including, but not limited to, so-called ''virtual currencies,'' ''coins,'' and ''tokens.''[94]

Unlike securities that are not issued or transferred using distributed ledger technology, the Commission has limited information about the order handling and best execution practices of broker-dealers that engage in transactions for or with customers in crypto asset securities.[95] This information limitation is, in part, due to the fact that only a small portion of crypto asset security trading activity is occurring within entities that are registered with the Commission and any of the SROs. For example, there are currently no special purpose broker-dealers authorized to maintain custody of crypto asset securities.[96] Similarly, only a limited

[90] *See infra* Section V.B.3.a.ii.

[91] *See* Amber Anand et al., *Institutional Order Handling and Broker-Affiliated Trading Venues,* 34 Rev. Fin. Stud. 3364, 3366 (July 2021) (''Anand'') (recognizing the conflict between obtaining the best outcome for the customer and maximizing the broker-dealer's revenue due to avoiding a fee that is typically borne by the broker-dealer). This study found that ''institutional brokers who route more orders to affiliated [ATSs] are associated with lower execution quality (*i.e.,* lower fill rates and higher implementation shortfall costs).'' *Id. See also* Regulation of NMS Stock Alternative Trading Systems, Securities Exchange Act Release No. 83663 (July 18, 2018), 83 FR 38768, 38775, 38834 (Aug. 7, 2018).

[92] *See* Anand, supra note 91, at 3366.

[93] Recently, FINRA has entered into settlements with broker-dealers for best execution violations of FINRA rules involving affiliated routing practices. In one case, FINRA found that the broker-dealer ''failed to consider whether alternate routing arrangements could have provided price improvement opportunities and better speed of execution'' for customer orders despite its consideration of certain execution quality factors for orders routed to an affiliated ATS. FINRA also stated that ''although [the firm] reviewed fill rates in [its affiliated ATS] during the relevant period, the firm failed to consider alternate routing arrangements when the firm showed that fill rates in [its affiliated ATS] were inferior to fill rates at some competing execution venues.'' FINRA found that this practice violated FINRA's best execution rule. *See* Barclays Capital Inc., Letter of Acceptance, Waiver, and Consent No. 2014041808601 (Oct. 4, 2022), *available at https://www.finra.org/sites/default/files/2022-10/Barclays-Capital-AWC-100522.pdf.* In another case, FINRA found that the broker-dealer routinely routed institutional customer orders to its affiliated ATS prior to routing such orders to exchanges or to other ATSs. According to FINRA's findings, the broker-dealer routed to its affiliated ATS despite having evidence that (1) orders that were sent to the affiliated ATS had lower fill rates as compared to orders sent directly to exchanges, and (2) other ATSs consistently ranked higher in the firm's rankings for execution quality than the affiliated ATS. FINRA found that this affiliated routing practice violated FINRA's best execution rule 5310. *See* Deutsche Bank Securities Inc., Letter of Acceptance, Waiver, and Consent No. 2014041813501 (Mar. 7, 2022), *available at https://www.finra.org/sites/default/files/2022-03/deutsche-bank-awc-030722.pdf.*

[94] *See* Custody of Digital Asset Securities by Special Purpose Broker-Dealers, Securities Exchange Act Release No. 90788 (Dec. 23, 2020), 86 FR 11627, 11627 n.1 (Feb. 26, 2021) (''Crypto Asset Securities Custody Release''). A digital asset may or may not meet the definition of a ''security'' under the Federal securities laws. *See, e.g.,* Report of Investigation Pursuant to Section 21(a) of the Securities Exchange Act of 1934: The DAO, Securities Exchange Act Release No. 81207 (July 25, 2017) (''DAO 21(a) Report''), *available at https://www.sec.gov/litigation/investreport/34-81207.pdf. See also SEC* v. *W.J. Howey Co.,* 328 U.S. 293 (1946). To the extent digital assets rely on cryptographic protocols, these types of assets also are commonly referred to as ''crypto assets'' and ''digital asset securities'' can be referred to as ''crypto asset securities.'' For purposes of this release, the Commission does not distinguish between the terms ''digital asset securities'' and ''crypto asset securities.''

[95] *See, e.g.,* Fin. Stability Oversight Council, Report on Digital Asset Financial Stability Risks and Regulation 119 (2022) (''FSOC Report''), *available at https://home.treasury.gov/system/files/261/FSOC-Digital-Assets-Report-2022.pdf* (''The crypto-asset ecosystem is characterized by opacity that creates challenges for the assessment of financial stability risks.''); U.S. Dep't of the Treasury, Crypto-Assets: Implications for Consumers, Investors, and Businesses 12 (Sept. 2022) (''Crypto-Assets Treasury Report''), *available at https://home.treasury.gov/system/files/136/CryptoAsset_EO5.pdf* (finding that data pertaining to ''off-chain activity'' is limited and subject to voluntary disclosure by trading platforms and protocols, with protocols either not complying with or not subject to obligations ''to report accurate trade information periodically to regulators or to ensure the quality, consistency, and reliability of their public trade data''); Fin. Stability Bd., Assessment of Risks to Financial Stability from Crypto-assets 18–19 (Feb. 16, 2022) (''FSB Report''), *available at https://www.fsb.org/wp-content/uploads/P160222.pdf* (finding that the difficulty in aggregating and analyzing available data in the digital asset space ''limits the amount of insight that can be gained with regard to the [digital asset] market structure and functioning,'' including who the market participants are and where the market's holdings are concentrated, which, among other things, limits regulators' ability to inform policy and supervision); Raphael Auer et al., *Banking in the Shadow of Bitcoin? The Institutional Adoption of Cryptocurrencies* 4, 9 (Bank for Int'l Settlements, Working Paper No. 1013, May 2022), *available at https://www.bis.org/publ/work1013.pdf* (stating that data gaps, which can be caused by limited disclosure requirements, risk undermining the ability for holistic oversight and regulation of cryptocurrencies); Int'l Monetary Fund, The Crypto Ecosystem and Financial Stability Challenges, in Global Financial Stability Report 41, 47 (Oct. 2021), *available at https://www.imf.org/-/media/Files/Publications/GFSR/2021/October/English/ch2.ashx* (finding that digital asset service providers provide limited, fragmented, and, in some cases, unreliable data, as the information is provided voluntarily without standardization and, in some cases, with an incentive to manipulate the data provided).

[96] For background on Rule 15c3–3, 17 CFR 240.15c3–3, as it relates to digital asset securities,

amount of crypto asset security volume is executed on trading venues under the Commission's ATS framework.[97] This information limitation is also, in part, due to the significant trading activity in crypto asset securities that may be occurring in non-compliance with the Federal securities laws.[98]

The Commission believes that it is appropriate for a broker-dealer that engages in transactions for or with customers or customers of another broker-dealer in crypto asset securities to be subject to proposed Regulation Best Execution. As discussed in section I above, the duty of best execution is of fundamental importance to investors and the markets, including investors in, and the market for, crypto asset securities. For example, a customer transacting in crypto asset securities should receive the protections afforded by the requirement that broker-dealers exercise reasonable diligence to ascertain the best market for the crypto asset securities and buy and sell in such market so that the price to the customer is as favorable as possible under prevailing market conditions. In doing so, broker-dealers should be taking steps to ensure that they are evaluating the range of markets that trade crypto asset securities and appropriately identifying those markets that may be likely to provide customers with the most favorable prices.

B. Overview of Proposed Regulation Best Execution

The Commission believes that proposed Regulation Best Execution would further the Congressional goal set forth in Exchange Act Section 11A(a)(1)(C)(iv) regarding executing investors' orders in the best market and reinforce broker-dealer obligations concerning the duty of best execution. In particular, proposed Regulation Best Execution would identify specific factors that must be addressed by a broker-dealer's policies and procedures on best execution, impose additional requirements for conflicted transactions, and impose best execution-specific review and documentation requirements, all of which should better protect investors by promoting consistently robust order handling and execution practices.[99]

Proposed Rule 1100 would set forth the standard of best execution, requiring a broker-dealer to use reasonable diligence to ascertain the best market for a security, and buy or sell in such market so that the resultant price to the customer is as favorable as possible under prevailing market conditions. Proposed Rule 1101 would require a broker-dealer to establish, maintain, and enforce written policies and procedures that address specific elements that are designed to promote the best execution of customer orders, and comply with certain execution quality review and documentation requirements.

More specifically, proposed Rule 1101(a)(1) would require that a broker-dealer's policies and procedures address how it will comply with the best execution standard in proposed Rule 1100. In particular, a broker-dealer's policies and procedures would be required to address how it will: (1) obtain and assess reasonably accessible information concerning the markets trading the relevant securities; (2) identify markets that may be reasonably likely to provide the most favorable prices for customer orders (''material potential liquidity sources''); and (3) incorporate the material potential liquidity sources into its order handling practices and ensure efficient access to each such material potential liquidity source. The Commission believes this aspect of the proposal would promote consistently robust order handling practices by requiring each broker-dealer to establish a detailed framework to achieve best execution, which involves an analysis of relevant information, an evaluation of the range of liquidity sources, and the identification of and ability to efficiently access liquidity sources.

Proposed Rule 1101(a)(2) would require a broker-dealer's policies and procedures to address how it will determine the best market and make routing and execution decisions for the customer orders that it receives. In particular, a broker-dealer's policies and procedures would be required to address how it will: (1) assess reasonably accessible and timely information, including information with respect to the best displayed prices, opportunities for price improvement, and order exposure opportunities that may result in the most favorable price; (2) assess the attributes of customer orders and consider the trading characteristics of the security, the size of the orders, the likelihood of execution, and the accessibility of the market, and any customer instructions in selecting the market most likely to provide the most favorable price; and (3) reasonably

see U.S. Sec. & Exch. Comm'n, Joint Staff Statement on Broker-Dealer Custody of Digital Asset Securities (July 8, 2019), *https://www.sec.gov/news/public-statement/joint-staff-statement-broker-dealer-custody-digital-asset-securities*; Fin. Indus. Regul. Auth., SEC Staff No-Action Letter, ATS Role in the Settlement of Digital Asset Security Trades (Sept. 25, 2020), *available at https://www.sec.gov/divisions/marketreg/mr-noaction/2020/finra-ats-role-in-settlement-of-digital-asset-security-trades-09252020.pdf*. To date, five offerings of crypto asset securities have been registered or qualified under the Securities Act of 1933, and five classes of crypto asset securities have been registered under the Exchange Act. The Commission issued a statement describing its position that, for a period of five years, special purpose broker-dealers operating under the circumstances set forth in the statement will not be subject to a Commission enforcement action on the basis that the broker-dealer deems itself to have obtained and maintained physical possession or control of customer fully paid and excess margin digital asset securities for purposes of Rule 15c3–3(b)(1) under the Exchange Act. *See* Crypto Asset Securities Custody Release, *supra* note 94. To date, no such special purpose broker-dealer registration applications have been granted by FINRA.

[97] ATSs that do not trade NMS stocks file with the Commission a Form ATS notice, which the Commission does not approve. Form ATS requires, among other things, that ATSs provide information about: classes of subscribers and differences in access to the services offered by the ATS to different groups or classes of subscribers; securities the ATS expects to trade; any entity other than the ATS involved in its operations; the manner in which the system operates; how subscribers access the trading system; procedures governing entry of trading interest and execution; and trade reporting, clearance, and settlement of trades on the ATS. In addition, all ATSs must file quarterly reports on Form ATS–R with the Commission. Form ATS–R requires, among other things, volume information for specified categories of securities, a list of all securities traded in the ATS during the quarter, and a list of all subscribers that were participants. To the extent that an ATS trades crypto asset securities, the ATS must disclose information regarding its crypto asset securities activities as required by Form ATS and Form ATS–R. Form ATS and Form ATS–R are deemed confidential when filed with the Commission. Based on information provided on these forms, a limited number of ATSs have noticed on Form ATS their intention to trade certain crypto asset securities and a subset of those ATSs have reported transactions in crypto asset securities on their Form ATS–R.

[98] *See also* FSOC Report, *supra* note 95, at 5, 87, 94, 97 (emphasizing the importance of the existing financial regulatory structure while stating that certain digital asset platforms may be listing securities while not in compliance with exchange, broker-dealer, or other registration requirements, which may impose additional risk on banks and investors and result in ''serious consumer and investor protection issues''); Crypto-Assets Treasury Report, *supra* note 95, at 26, 29, 39, 40 (stating that issuers and platforms in the digital asset ecosystem may be acting in non-compliance with statutes and regulations governing traditional capital markets, with market participants that actively dispute the application of existing laws and regulations, creating risks to investors from non-compliance with, in particular, extensive disclosure requirements and market conduct standards); FSB Report, *supra* note 95, at 4, 8, 18 (stating that some trading activity in crypto assets may be failing to comply with applicable laws and regulations, while failing to provide basic investor protections due to their operation outside of or in non-compliance with regulatory frameworks, thereby failing to provide the ''market integrity, investor protection or transparency seen in appropriately regulated and supervised financial markets'').

[99] *See* section IV for discussions of the differences between the proposed rules and the existing FINRA and MSRB rules on best execution. As discussed in detail in section IV, proposed Regulation Best Execution is consistent with the FINRA and MSRB best execution rules in some respects and, in some other respects, goes beyond those rules imposing additional and/or more specific requirements.

balance the likelihood of obtaining a better price with the risk that delay could result in a worse price when determining the number and sequencing of markets to be assessed. These considerations have been recognized as relevant for a broker-dealer's duty of best execution.[100]

As discussed in section IV.B below, the factors that must be included in a broker-dealer's policies and procedures under proposed Rule 1101(a) are generally consistent with the factors that FINRA and the MSRB have identified as relevant to a broker-dealer's best execution determinations. The Commission understands that, currently, some broker-dealers incorporate various best execution factors from the FINRA and MSRB best execution rules in their policies and procedures. However, by requiring broker-dealers' best execution policies and procedures to explicitly address these factors, proposed Rule 1101(a) would help ensure that broker-dealers have established processes in place for considering these factors and that broker-dealers follow these processes when transacting for or with customers, which should promote consistently robust order handling practices among broker-dealers.[101]

Proposed Rule 1101(b) would require broker-dealers that have certain conflicts of interest to establish additional policies and procedures to better position them to meet the best execution standard in these circumstances. In particular, a broker-dealer's policies and procedures for conflicted transactions would be required to address how it will: (1) obtain and assess information beyond that required by proposed Rule 1101(a)(1)(i) in identifying a broader range of markets beyond the material potential liquidity sources; and (2) evaluate a broader range of markets beyond the material potential liquidity sources. Proposed Rule 1101(b) would also require broker-dealers to document their compliance with the best execution standard for conflicted transactions, including all efforts taken to enforce their policies and procedures, and their basis and information relied on for determining that their conflicted transactions would comply with the proposed best execution standard. Such documentation would be required to be done in accordance with written procedures. Proposed Rule 1101(b) would also require broker-dealers to document any arrangements concerning payment for order flow.[102] These requirements for conflicted transactions would be in addition to the current FINRA and MSRB best execution rules, although the Commission understands that some broker-dealers currently preserve information that allows them to support their best execution determinations (*e.g.,* information to recreate the pricing information that was available at the time an order was received). The Commission believes that these requirements would encourage broker-dealers to exercise additional diligence with respect to conflicted transactions in light of the incentives to handle conflicted transactions in a manner that prioritizes their own interests over their customers' interests, and are part of the Commission's ongoing efforts to protect investors when conflicts of interest exist.

Proposed Rule 1101(c) would require broker-dealers to review the execution quality of customer orders at least quarterly, and how such execution quality compares with the execution quality that might have been obtained from other markets, and revise their best execution policies and procedures, including order handling practices, accordingly. The Commission understands that, currently, broker-dealers' reviews of execution quality vary in rigor,[103] and the Commission preliminarily believes that the proposed review requirement would further ensure that broker-dealers evaluate the effectiveness of their current order handling practices and enable broker-dealers to make informed judgments regarding whether their policies and procedures or practices need to be modified. This review requirement would also apply to a broader range of broker-dealers than FINRA's rule that governs the review of execution quality,[104] and would be in addition to the current MSRB best execution rule.

Proposed Rule 1101(d) would exempt an introducing broker that routes customer orders to an executing broker from separately complying with proposed Rules 1101(a), (b), and (c), so long as the introducing broker establishes, maintains, and enforces policies and procedures that require the introducing broker to regularly review the execution quality obtained from its executing broker, compare it with the execution quality it might have obtained from other executing brokers, and revise its routing practices accordingly. This provision would provide a tailored exemption from certain provisions of proposed Regulation Best Execution for broker-dealers that do not make decisions or exercise discretion regarding the manner in which their customer orders are handled and executed, beyond their determinations to engage the services of executing brokers. This exemption would be provided to a narrower group of broker-dealers than similar exemptions provided by FINRA and the MSRB, and would require additional specific policies and procedures that are not required under the FINRA and MSRB rules.[105]

Proposed Rule 1102 would require each broker-dealer to review and assess the design and overall effectiveness of their best execution policies and procedures, including their order handling practices, on at least an annual basis, and document such review and assessment in an annual report that would be provided to the broker-dealer's governing body. The Commission understands that, currently, broker-dealers periodically review their policies and procedures (including those related to best execution), although the frequency of review may vary.[106] However, proposed Rule 1102 would require the broker-dealer to review and assess the policies and procedures it established under proposed Regulation Best Execution, and the Commission believes that these requirements would help ensure the effectiveness of broker-dealers' best execution policies and procedures that are adopted pursuant to the proposed rules.

Finally, the Commission is proposing to amend Rule 17a–4 under the Exchange Act[107] to include record preservation requirements for records made under proposed Regulation Best Execution.

The Commission believes that proposed Regulation Best Execution would also enhance its oversight of

[100] *See, e.g., supra* notes 21–23 and accompanying text; FINRA Rules 5310(a)(1) and 5310.09(b)(1).

[101] Moreover, requiring broker-dealers' best execution policies and procedures to address factors similar to those that FINRA and the MSRB have already identified as relevant to best execution determinations would mitigate compliance costs associated with the proposed rules.

[102] *See infra* section IV.C.2 (discussing the proposed requirement to document payment for order flow arrangements).

[103] *See infra* note 210 (discussing FINRA exam findings relating to execution quality reviews).

[104] *See infra* section IV.D (discussing the proposed execution quality review requirement, including the scope of the proposed requirement).

[105] *See infra* section IV.E (describing the applicability of the proposed exemption under proposed Rule 1101(d)).

[106] *See infra* notes 222, 223, and 224 and accompanying text (describing the minimum frequency standards for review of execution quality under the FINRA and MSRB rules and how broker-dealers may need to review execution quality more frequently than the minimum requirements depending on the circumstances).

[107] 17 CFR 240.17a–4.

broker-dealers through the broker-dealers' best execution policies and procedures required by the proposal, as well as broker-dealers' documentation of their compliance with proposed Regulation Best Execution.[108]

Request for Comment

The Commission requests comment on its understanding of broker-dealers' current best execution practices, and in particular:

1. Do commenters agree with the Commission's understanding that some broker-dealers currently incorporate various best execution factors from the FINRA and MSRB best execution rules in their policies and procedures? Please explain whether, and the extent to which, broker-dealers currently incorporate those factors in their policies and procedures. For example, do broker-dealers currently incorporate all of the best execution factors from the FINRA and MSRB rules in their policies and procedures?

2. Do commenters agree with the Commission's understanding that some broker-dealers currently preserve information that allows them to support their best execution determinations, such as information to recreate the pricing information that was available at the time of an execution? Please explain whether broker-dealers currently preserve information that allows them to support their best execution determinations, and if so, the type of information that they preserve.

3. Do commenters agree with the Commission's understanding that, currently, broker-dealers' reviews of execution quality vary in rigor? Please explain how broker-dealers currently conduct execution quality reviews of customer orders.

4. Do commenters agree with the Commission's understanding that, currently, broker-dealers periodically review their best execution policies and procedures, but with varying frequency? Please describe how frequently broker-dealers currently review their best execution policies and procedures.

[108] The Commission believes that Proposed Regulation Best Execution will also provide certain investor protection benefits. As discussed in Section V below, by having its own rule, the Commission will be able to seek certain remedies and other sanctions for violations of the Commission rule best execution violations that are not necessarily available under the current regulatory framework. In general, a best execution rule promulgated pursuant to the Exchange Act will expand and enhance the Commission's flexibility when pursuing best execution violations and produce efficiencies resulting from that greater flexibility.

IV. Discussion of Proposed Regulation Best Execution

As discussed in this section IV below, the Commission is proposing Regulation Best Execution, which is consistent with the FINRA and MSRB best execution rules in many respects and is different from those rules in some respects. Proposed Regulation Best Execution would not affect a broker-dealer's obligation to comply with the FINRA or MSRB best execution rule. Accordingly, a broker-dealer would be required to comply with proposed Regulation Best Execution, in addition to their existing obligations to comply with the FINRA and MSRB best execution rules, as applicable.[109]

A. Proposed Rule 1100—The Best Execution Standard

Proposed Rule 1100 would set forth the best execution standard for broker-dealers.[110] Specifically, proposed Rule 1100 states that, in any transaction for or with a customer, or a customer of another broker-dealer, a broker-dealer, or a natural person who is an associated person of a broker-dealer,[111] must use reasonable diligence to ascertain the best market for the security, and buy or sell in such market so that the resultant price to the customer is as favorable as possible under prevailing market conditions.[112]

The proposed best execution standard would apply to securities transactions for or with a broker-dealer's own customers, as well as securities transactions for or with customers of another broker-dealer. A broker-dealer that initially receives customer orders may not necessarily be the broker-dealer that engages in transactions for or with those orders. Instead, the broker-dealer receiving the customer orders may utilize the services of another broker-dealer to engage in transactions for or with those orders (*e.g.,* a wholesaler, executing broker-dealer, or clearing firm that handles or executes those orders). Even though the other broker-dealer does not have a direct relationship with the customers of the receiving broker-dealer, the other broker-dealer (or natural persons who are associated persons of that broker-dealer) would be required to comply with the proposed best execution standard because it would be engaged in transactions for or with a customer.

In addition, the proposed best execution standard would apply to transactions for or with a customer, regardless of whether the broker-dealer is transacting for or with the customer on an agency basis or in a principal capacity.[113] For example, the proposed best execution standard would apply to broker-dealers that internalize their customers' orders, as well as to wholesalers or clearing firms that trade

[109] For example, where proposed Regulation Best Execution would impose additional or more specific requirements as compared to the FINRA or MSRB rules, a broker-dealer would be required to comply with the additional or more specific requirements under the proposed rules. *See, e.g., infra* section IV.A (discussing the application of proposed Rule 1100 to transactions with sophisticated municipal market professionals, which are exempted from the MSRB's best execution rule). Similarly, where FINRA or the MSRB impose more specific requirement than proposed Regulation Best Execution, a broker-dealer would be required to continue to comply with those requirements of FINRA and the MSRB. *See, e.g., infra* note 223 and accompanying text (discussing the requirement under FINRA Rule 5310 for broker-dealers to conduct at least a quarterly review of execution quality).

[110] For purposes of this release and proposed Regulation Best Execution, ''broker-dealer'' refers to a broker, dealer, government securities broker, government securities dealer, and municipal securities dealer, unless specifically indicated otherwise.

[111] Section 3(a)(18) of the Exchange Act defines ''person associated with a broker or dealer'' to mean any partner, officer, director, or branch manager of the broker or dealer (or any person occupying a similar status or performing similar functions), any person directly or indirectly controlling, controlled by, or under common control with the broker or dealer, or any employee of the broker or dealer. 15 U.S.C. 78c(a)(18). Any person associated with a broker or dealer whose functions are solely clerical or ministerial is not included in the meaning this term for purposes of section 15(b) the Exchange Act (other than paragraph 6 thereof). *See id.* Proposed Rule 1100 would apply to a natural person who is an associated person of a broker-dealer, and would avoid the application of proposed Rule 1100 to all associated persons of a broker-dealer, as all associated persons would capture affiliated entities of the broker-dealer and could extend the application of proposed Rule 1100 to entities that are not themselves broker-dealers.

[112] FINRA Rule 5310.09(a) states that ''[n]o member can transfer to another person its obligation to provide best execution to its customers' orders.'' The standard proposed by the Commission in Rule 1100 is consistent with the FINRA rule, and would not establish any exception to allow a broker-dealer to transfer its obligation to provide best execution to another person.

[113] The proposed application of the standard to both agency and principal trades is consistent with FINRA and MSRB rules. *See* FINRA Rule 5310(e) (stating that the best execution obligations in FINRA Rule 5310(a)–(d) exist not only where the broker-dealer acts as agent for the account of its customer but also where transactions are executed as principal); MSRB Rule G–18(c) (stating that the best execution obligations in MSRB Rule G–18(a)–(b) apply to transactions in which the broker-dealer is acting as agent and transactions in which the broker-dealer is acting as principal). In addition, the application of the existing duty of best execution in both agency and principal transactions is well-established in common law. *See, e.g., Newton,* 135 F.3d 266, 270 (3d Cir.), *cert. denied,* 525 U.S. 811 (1998); *E.F. Hutton & Co.,* Exchange Act Rel. No. 25887, 49 SEC. 829, 832 (1988) (''A broker-dealer's determination to execute an order as principal or agent cannot be 'a means by which the broker may elect whether or not the law will impose fiduciary standards upon him in the actual circumstances of any given relationship or transaction.' '') (citations omitted).

as principal with the customer orders routed to them from other broker-dealers.

Proposed Rule 1100 would provide exemptions from the best execution standard for a broker-dealer, or a natural person who is an associated person of a broker-dealer, when the broker-dealer is (i) quoting a price for a security where another broker-dealer routes a customer order for execution against that quote or (ii) an institutional customer, exercising independent judgment, executes its order against the broker-dealer's quotation.[114] These exemptions distinguish between a broker-dealer that is acting solely as the buyer or seller of securities (it would be exempt) from a broker-dealer that is accepting order flow from another broker-dealer or institutional customer for the purpose of facilitating the handling and execution of those orders (it would not be exempt).

Proposed Rule 1100 would also provide a third exemption from the best execution standard for a broker-dealer or a natural person who is an associated person of a broker-dealer, when the broker-dealer receives an unsolicited instruction from a customer to route that customer's order to a particular market for execution and the broker-dealer processes that customer's order promptly and in accordance with the terms of the order. In this scenario, the customer has determined the market where it wants to execute its order and is not relying on its broker-dealer to determine the best market for that order.[115]

Under proposed Rule 1100, the term ''market'' could include broker-dealers (*e.g.,* a broker-dealer's principal trading desk), exchange markets, markets other than exchange markets, and any other venues that emerge as markets evolve. The term ''market'' also could encompass the wide range of mechanisms operated by any given market that a broker-dealer may use to transact for or with customers. For example, markets may include different execution protocols, such as limit order books (some of which may provide for midpoint liquidity), floor auction facilities, or electronic auction mechanisms. This description of ''market'' is expansive and would require a broker-dealer to take into consideration a broad range of potential trading and market centers and venues that may provide the best market for customers' orders so that the resulting prices to the customers are as favorable as possible under prevailing market conditions.[116]

Proposed Rule 1100 would codify, in a Commission rule, a best execution standard that is consistent with how the Commission and the courts have described the duty of best execution over the years.[117] The proposed standard is also consistent with the best execution standards under FINRA Rule 5310[118] and MSRB Rule G–18.[119] However, with respect to municipal securities, while MSRB Rule G–48 exempts transactions with sophisticated municipal market participants (''SMMPs'')[120] from the MSRB best

[114] The first proposed exemption is consistent with FINRA Rule 5310.04, which states that a broker-dealer's duty to provide best execution does not apply in circumstances when another broker-dealer is simply executing a customer order against the broker-dealer's quote, and MSRB Rule G–18.05, which states that a broker-dealer's duty to provide best execution does not apply in circumstances when the other broker-dealer is simply executing a customer transaction against the broker-dealer's quote. The second proposed exemption is new. Like the first proposed exemption, the second would exempt a broker-dealer that is acting solely as a buyer or seller of a securities. However, under the second exemption, the broker-dealer would be acting solely as a buyer or seller of securities in transactions directly with an institutional customer. In the corporate and municipal bond and government securities markets, for example, institutional customers often handle and execute their own orders. Institutional customers in these markets commonly request prices from broker-dealers for particular securities (prices for any given security are often not quoted and made widely available) and exercise their own discretion concerning the execution of a particular transaction. In these instances, a broker-dealer is simply responding to the institutional customer's request (*e.g.,* through widely known request for quote (''RFQ'') mechanisms) and the institutional customer is exercising independent discretion over the handling and execution of its orders. Accordingly, the Commission believes that the broker-dealer in these circumstances should be exempted from the best execution standard under proposed Rule 1100. However, in these circumstances, the broker-dealer would still be subject, if applicable, to FINRA Rule 2121 and MSRB Rule G–30 concerning fair prices and the fairness and reasonableness of commission rates and markups or markdowns. *See* FINRA Rule 2121; MSRB Rule G–30.

[115] This exemption is consistent with FINRA and MSRB rules. *See* FINRA Rule 5310.08 (stating that if a member receives an unsolicited instruction from a customer to route that customer's order to a particular market for execution, the member is not required to make a best execution determination beyond the customer's specific instruction); MSRB Rule G–18.07 (stating that if a dealer receives an unsolicited instruction from a customer designating a particular market for the execution of the customer's transaction, the dealer is not required to make a best-execution determination beyond the customer's specific instruction).

[116] This expansive description of ''market'' is consistent with how FINRA and the MSRB describe the term in their rules, and therefore should be familiar to broker-dealers. In particular, FINRA and the MSRB also broadly construe the term ''market'' for purposes of their best execution rules. *See* FINRA Rule 5310.02 (stating that ''market'' encompasses a variety of different venues, including, but not limited to, market centers that are trading a particular security); MSRB Rule G–18.04 (stating that ''market'' encompasses a variety of different venues, including but not limited to broker's brokers, alternative trading systems or platforms, or other counterparties, which may include the dealer itself as principal). MSRB Rule G–18.04 also states that the term market ''is to be construed broadly, recognizing that municipal securities currently trade over the counter without a central exchange or platform. This expansive interpretation is meant both to inform dealers as to the breadth of the scope of venues that must be considered in the furtherance of their best-execution obligations and to promote fair competition among dealers (including broker's brokers), alternative trading systems and platforms, and any other venue that may emerge, by not mandating that certain trading venues have less relevance than others in the course of determining a dealer's best-execution obligations.'' Pursuant to FINRA guidance, broker-dealers are also expected to consider new markets that become available as venues to which the broker-dealer could potentially route customer orders for execution. *See* FINRA Regulatory Notice 15–46, at 5. In doing so, broker-dealers should consider the execution quality of venues to which they are not connected and determine whether they should connect to new markets. *See id.,* at 4.

[117] *See, e.g.,* Regulation NMS Adopting Release, *supra* note 21, 70 FR 37538 (stating that the duty of best execution requires, among other things, a broker-dealer to execute customers' trades at the most favorable terms reasonably available under the circumstances, *i.e.,* at the best reasonably available price); *Newton, supra* note 8, 135 F.3d at 270 (noting that a broker-dealer's duty of undivided loyalty to its customer requires that it ''seek to obtain for its customer orders the most favorable terms reasonably available under the circumstances''). As discussed below throughout this section IV, the Commission is also proposing requirements designed to help ensure compliance with the proposed best execution standard.

[118] FINRA Rule 5310(a)(1) provides that, in any transaction for or with a customer or a customer of another broker-dealer, a member and persons associated with a member shall use reasonable diligence to ascertain the best market for the subject security and buy or sell in such market so that the resultant price to the customer is as favorable as possible under prevailing market conditions. FINRA Rule 5310 applies to transactions by any FINRA member in government securities. *See* FINRA Rule 0150(c).

[119] MSRB Rule G–18(a) provides that, in any transaction in a municipal security for or with a customer or a customer of another broker, dealer, or municipal securities dealer (''dealer''), a dealer must use reasonable diligence to ascertain the best market for the subject security and buy or sell in that market so that the resultant price to the customer is as favorable as possible under prevailing market conditions.

[120] MSRB Rule D–15 defines SMMP by three requirements: the nature of the customer; a determination of sophistication by the dealer; and an affirmation by the customer. Specifically, the rule states that the customer must be: (i) a bank, savings and loan association, insurance company, or registered investment company; (ii) an investment adviser registered either with the Commission under section 203 of the Investment Adviser Act of 1940 or with a state securities commission; or (iii) any other person or entity with total assets of at least $50 million. To achieve a determination of customer sophistication, the broker-dealer must have a reasonable basis to believe that the customer is capable of evaluating investment risks and market value independently, both in general and with regard to particular transactions and investment strategies in municipal securities. Finally, the customer must affirmatively indicate that it is exercising independent judgment in evaluating: (a) the recommendations of the broker-dealer; (b) the quality of execution of the customer's transactions by the broker-dealer; and (c) the transaction price for non-recommended

execution rule, proposed Regulation Best Execution does not include a similar exemption for SMMPs from Rule 1100.[121] Unlike the MSRB rules, proposed Rule 1100 is designed to apply broadly to transactions in all securities and is not limited to transactions in municipal securities. The Commission also preliminary believes that customers that meet the MSRB's definition of SMMP would benefit from the protections offered by proposed Regulation Best Execution, just as customers that do not meet the definition of SMMP or customers that transact in securities other than municipal securities would.[122] At the same time, the Commission believes that proposed Regulation Best Execution contains several provisions that would mitigate the burdens on the broker-dealers that engage in transactions for or with customers that meet the MSRB's definition of SMMP, and proposed Regulation Best Execution would result in similar treatment as MSRB Rule G–18 and G–48 in many instances. For example, as discussed above in this section, a broker-dealer would be exempt from proposed Rule 1100 if an institutional customer is exercising independent judgment and executing its orders against a broker-dealer's quotation, and is not providing the broker-dealer with orders for handling and execution. Additionally, a broker-dealer would be exempt from proposed Rule 1100 if a customer gave the broker-dealer an unsolicited instruction to send its order to a particular market and the broker-dealer processes that customer's order promptly and in accordance with the terms of the order. Finally, as discussed in section IV.B.2 below, if a customer provides the broker-dealer with other instructions concerning the handling of its orders, the broker-dealer's compliance with the best execution standard would be informed by such customer instructions.

Request for Comment

The Commission requests comment on all aspects of proposed Rule 1100, and in particular:

5. Is the proposed best execution standard appropriate? Why or why not? Has the Commission identified all the differences between the proposed best execution standard and the standards under FINRA Rule 5310 and MSRB Rule G–18? If not, please explain any differences that the Commission has not identified and any potential issues resulting from those differences.

6. Are the differences between the proposed best execution standard and the standards under FINRA Rule 5310 and MSRB Rule G–18 appropriate? Why or why not?

7. Do commenters agree that proposed Rule 1100 is consistent with prior Commission statements, including those described in section II.B above? Why or why not? If not, should the Commission revise any of its statements in light of the proposal? Please explain.

8. Do commenters agree that the proposed best execution standard should apply to natural persons who are associated persons of a broker-dealer? Why or why not?

9. Are there alternative definitions of ''natural person who is an associated person'' that the Commission should use instead? Is the application of proposed Rule 1100 appropriately limited to ''a natural person who is an associated person'' of a broker-dealer? Please explain.

10. Would the proposed best execution standard pose any challenges or burdens for entities that are dually-registered broker-dealers and investment advisers? As discussed above,[123] an investment adviser has its own duty to seek best execution of a client's transactions where the adviser has the responsibility to select broker-dealers to execute client trades. What effect, if any, would the proposed best execution standard have on investment advisers and their duty to seek best execution?

11. Are there elements of an investment adviser's duty to seek best execution that are relevant in assessing the proposed best execution standard for a broker-dealer?

12. Is it appropriate to provide an exemption from the proposed best execution standard to a broker-dealer when another broker-dealer is executing a customer order against the first broker-dealer's quote? Why or why not?

13. Is it appropriate to provide an exemption from the proposed best execution standard to a broker-dealer when an institutional customer, exercising independent judgment, executes its order against the broker-dealer's quotations? Why or why not?

14. Should the Commission define ''institutional customer'' for purposes of proposed Rule 1100? If so, how should ''institutional customer'' be defined? For example, should the Commission define ''institutional customer'' as any person that is a qualified institutional buyer (''QIB'') as defined in Rule 144A under the Securities Act of 1933?[124] Why or why not?

15. Should the Commission define ''institutional customer'' to include a broader set of institutional customers than the QIB definition, such as those entities that are included in the FINRA definition of ''institutional account'' under FINRA Rule 4512(c)?[125] Please explain.

16. Should the exemption concerning institutional customers in proposed Rule 1100 be limited to situations where the broker-dealer seeking the exemption has a reasonable basis to believe that the institutional customer (i) has the capacity to evaluate independently the prices offered by the broker-dealer and (ii) is exercising independent judgment in deciding to enter into the transaction, such as is provided for in FINRA Rule 2121 concerning suitability for institutional customers? Please explain.

17. Should the Commission define ''institutional customer'' for purposes of

secondary market agency transactions as to which (i) the broker-dealer's services have been explicitly limited to providing anonymity, communication, order matching, and/or clearance function and (ii) the broker-dealer does not exercise discretion as to how or when the transactions are executed. The affirmation may be given orally or in writing, and may be given on a transaction-by-transaction basis, a type-of-municipal security basis, or an account-wide basis.

[121] Additionally, MSRB Rule G–18.09 states that Rule G–18 does not apply to municipal fund securities. While proposed Regulation Best Execution does not contain a similar exemption for municipal fund securities, the Commission believes that the Commission's proposal and MSRB Rule G–18 would result in similar treatment for municipal fund securities. Transactions in municipal fund securities must be executed directly with the issuer. For this reason, there is only one market that can be accessed to fill a customer order in this type of security and, therefore, only one way to comply with Rule 1100 with respect to the handling and execution of a customer order in a municipal fund security.

[122] When the Commission approved the MSRB's exemption for transactions with SMMPs from its best execution rule, the Commission stated that the exemption ''will facilitate transactions in municipal securities and help perfect the mechanism of a free and open market in municipal securities by avoiding the imposition of regulatory burdens if they are not needed.'' *See* MSRB Best Execution Approval Order, *supra* note 47, 79 FR 73664. For the reasons discussed in this section, the Commission believes that the proposed rules are designed to mitigate the regulatory burdens for broker-dealers that transact for or with SMMP customers, while providing the benefit of the protections offered by the proposed rules under appropriate circumstances.

[123] *See supra* note 11.

[124] 17 CFR 230.144A (defining ''QIB'' to mean a variety of entities such as insurance companies, investment companies registered under the Investment Company Act of 1940, and investment advisers registered under the Investment Advisers Act of 1940, among others, that in the aggregate own or invest on a discretionary basis at least $100 million).

[125] FINRA Rule 4512(c) defines ''institutional account'' as the account of: (1) a bank, savings and loan association, insurance company or registered investment company; (2) an investment adviser registered either with the Commission under section 203 of the Investment Advisers Act or with a state securities commission (or any agency or office performing like functions); or (3) any other person (whether a natural person, corporation, partnership, trust or otherwise) with total assets of at least $50 million.

the proposed exemption in Rule 1100 to be consistent with the MSRB's definition of SMMP? For example, should an institutional customer be required to make an affirmation to the broker-dealer concerning its exercise of independent judgment in evaluating the quality of execution of its transaction with the broker-dealer? Are there other affirmations relevant to best execution that should be required?[126] Please explain.

18. If an institutional customer affirmation should be required, how should such affirmation be provided? Should an institutional customer be permitted to provide the affirmation to the broker-dealer orally or in writing? Should an institutional customer be permitted to provide its affirmation on a trade-by-trade basis, a type-of-transaction basis, a type-of-security basis (*e.g.,* municipal security, including general obligation, revenue, variable rate municipal security; corporate bond, including investment grade and non-investment grade; OTC equity; NMS security), or an account-wide basis? Please explain.

19. Should a broker-dealer seeking the exemption in proposed Rule 1100 in transactions with institutional customers be required to disclose to the institutional customer that it is not required to comply with the best execution standard of proposed Rule 1100 for the relevant transactions? Should this disclosure be provided in lieu of or in addition to a customer affirmation, if such affirmation should be provided by the institutional customer? Please explain. If disclosure should be required, what standards should apply to the disclosure? For example, should a broker-dealer be required to make a disclosure to the institutional customer on a transaction-by-transaction basis? If not, what would be the appropriate manner for this disclosure? Please explain. Should the disclosure be in writing or should a broker-dealer be permitted to provide the disclosure orally to the institutional customer? Please explain.

20. Should the proposed exemption concerning institutional customers in Rule 1100 be limited to only certain types of securities or only certain types of trading protocols where the institutional customer is executing against the broker-dealer's quote? For example, should the exemption be limited only to transactions in fixed income securities? Should it be limited to transactions that occur through multilateral RFQ systems where the institutional customer is able to put multiple broker-dealers and other market participants in competition when soliciting quotes? Should the exemption be available to a broker-dealer that is responding to a request for quote by an institutional customer in a bilateral communication, whether over the phone or through another communication protocol? Please explain.

21. Should the Commission provide a broader exemption from the proposed best execution standard for a broker-dealer when it engages in any transaction for or with institutional customers, similar to the exemption provided to broker-dealers under MSRB Rule G–48(e) for SMMPs? Please explain why such exemption should or should not be provided.

22. If a broader exemption for transactions with institutional customers should be provided, how should the Commission define ''institutional customer''? Similar to the requests for comment above, should the Commission define institutional customer as ''QIB'' as defined in Rule 144A under the Securities Act of 1933, an ''institutional account'' as defined in FINRA Rule 4512(c), or an SMMP as defined in MSRB Rule D–15? Is there another definition that would be appropriate? Please explain. Should other conditions apply to the exemption, as requested above, such as broker-dealer disclosure to the institutional customer, broker-dealer assessment of the institutional customer's ability to evaluate the transaction, and institutional customer affirmations? Please explain.

23. What are the typical order handling practices of broker-dealers for the municipal bond orders of SMMPs? Do these order handling practices vary depending on the type of SMMP under MSRB Rule D–15(a)? Do SMMPs typically provide broker-dealers with orders to handle and execute, or do SMMPs typically handle and execute their own orders? Please explain. Do broker-dealers exercise any discretion in handling the orders of SMMPs, whether executing such order on an agency or principal basis? Please explain.

24. Do commenters agree that the proposed rules are designed to mitigate the regulatory burdens for broker-dealers that transact for or with SMMP customers, while providing the benefit of the protections offered by the proposed rules under appropriate circumstances? Why or why not?

25. Should the Commission provide an exemption from the proposed best execution standard for a broker-dealer that engages in transactions for or with sophisticated market professionals in asset classes other than municipal securities? Please explain why such exemption should or should not be provided.

26. Is it appropriate to provide an exemption from the proposed best execution standard to a broker-dealer that receives an unsolicited instruction from a customer to route that customer's order to a particular market for execution, where the broker-dealer processes that customer's order promptly and in accordance with the terms of the order? Why or why not?

27. Should the Commission provide an exemption from the proposed best execution standard for transactions in municipal fund securities (which include interests in 529 college savings plans)? Should such exemption only apply to municipal fund securities that are interests in 529 college savings plans? If the Commission were to provide an exemption, should it apply similarly or differently to direct-sold and advisor-sold municipal fund securities? Please explain why such exemption should or should not be provided.

28. Should the Commission provide an exemption for mutual fund securities, such as equity and corporate bond mutual funds? Should the Commission provide an exemption for any other type of security? Please explain why such exemption should or should not be provided.

29. Should the Commission provide any other exemptions from the proposed best execution standard? If so, please explain.

30. Should proposed Regulation Best Execution be the sole best execution rule applicable to broker-dealers? Why or why not?

B. Proposed Rule 1101(a)—Best Execution Policies and Procedures

Proposed Rule 1101(a) would require a broker-dealer that effects any transaction for or with a customer or a customer of another broker-dealer to establish, maintain, and enforce written policies and procedures reasonably designed to comply with the best execution standard under proposed Rule 1100 (''best execution policies and procedures''). As discussed in sections IV.B.1 and 2 below, a broker-dealer's best execution policies and procedures would be required to address: (1) how the broker-dealer would comply with the best execution standard; and (2) how the broker-dealer would determine the

[126] For example, the MSRB's definition of SMMP requires a variety of other affirmations (*e.g.,* relating to suitability, access to timely information, fair pricing for agency transactions) as broker-dealers are also exempt from other non-best execution related obligations in transactions with SMMPs pursuant to MSRB Rules G–48(a)–(d).

best market for the customer orders that it receives.

Proposed Rule 1101 does not include specific requirements regarding the manner in which broker-dealers would comply with the best execution standard. Rather, proposed Rule 1100 would require a broker-dealer to use reasonable diligence to ascertain the best market for a security, and buy or sell in such market so that the resultant price to the customer is as favorable as possible under prevailing market conditions, and proposed Rule 1101 would additionally require a broker-dealer to establish and maintain written policies and procedures reasonably designed to comply with the proposed standard. The policies and procedures would be required to reflect the elements specified in proposed Rule 1101(a) (*e.g.,* best displayed prices, opportunities for price improvement including midpoint executions, attributes of particular customer orders, the trading characteristics of the security). For example, a broker-dealer could have policies and procedures that are tailored for different types of customers (*e.g.,* retail customers, institutional customers) or for securities with different trading characteristics (*e.g.,* NMS stocks, municipal securities).[127] All customer orders must be covered by a broker-dealer's best execution policies and procedures, and the broker-dealer would be required to enforce such policies and procedures.

While FINRA's best execution rule does not require broker-dealers to have the same type of detailed best execution policies and procedures as proposed Rule 1101,[128] FINRA Rule 3110(b)(1)[129] requires broker-dealers to have procedures for compliance with FINRA rules and Federal securities laws and regulations. The MSRB's best execution rule reflects a requirement for broker-dealers to have policies and procedures for determining the best available market for the executions of their customers' transactions.[130] In addition, MSRB Rule G–28 requires broker-dealers to have procedures for compliance with MSRB rules and the Exchange Act and rules thereunder.[131] The Commission understands that broker-dealers currently have policies and procedures relating to their compliance with the FINRA and MSRB best execution rules, as applicable. However, unlike the FINRA and MSRB rules, proposed Rule 1101(a)(1) would require broker-dealers' best execution policies and procedures to include specific elements, as discussed in sections IV.B.1 and 2 below.

1. Proposed Rule 1101(a)(1)—Framework for Compliance With the Best Execution Standard

Proposed Rule 1101(a)(1) would require a broker-dealer's best execution policies and procedures to address how it will comply with the proposed best execution standard by: (i) obtaining and assessing reasonably accessible information, including information about price, volume, and execution quality, concerning the markets trading the relevant securities; (ii) identifying markets that may be reasonably likely to provide material potential liquidity sources (as defined above); and (iii) incorporating material potential liquidity sources into its order handling practices and ensuring that it can efficiently access each such material potential liquidity source.

Proposed Rule 1101(a)(1)(i) would require a broker-dealer to have policies and procedures for obtaining and assessing reasonably accessible information regarding the markets trading the relevant securities.[132] Market information is relevant to a broker-dealer's best execution analysis,[133] and the Commission has previously identified price and execution quality information as among the factors relevant to that analysis.[134] The Commission believes that the ability of markets to attract trading interest as measured by trading volume would also be relevant to a broker-dealer's best execution analysis, because trading volume can be an indicator of whether sufficient interest exists on a particular market to execute customer orders.[135]

[127] Similar to this proposal, FINRA and MSRB rules also recognize that broker-dealers' best execution practices would be tailored for securities with different characteristics. For example, FINRA Rule 5310 recognizes that the markets for different securities can vary and the standard of reasonable diligence must be assessed by examining specific factors, such as the character of the market for the security and the accessibility of the quotation. *See, e.g.,* FINRA Rules 5310.03 (Best Execution and Debt Securities); 5310.06 (Orders Involving Securities with Limited Quotations or Pricing Information); 5310.07 (Orders Involving Foreign Securities). *See also* MSRB Rule G–18.06 (Securities with Limited Quotations or Pricing Information) (recognizing that markets for municipal securities may differ dramatically and referring to heightened diligence with respect to customer transactions involving securities with limited pricing information or quotations).

[128] FINRA Rule 5310.

[129] FINRA Rule 3110(b)(1) requires a FINRA member to establish, maintain, and enforce written procedures to supervise the types of business in which it engages and the activities of its associated persons that are reasonably designed to achieve compliance with applicable securities laws and regulations, and with applicable FINRA rules. Separately, FINRA Rules 3130(b) and (c) require the chief executive officer (or equivalent officer) of a FINRA member to certify annually that the member has in place processes to establish, maintain, review, test and modify written compliance policies and written supervisory procedures reasonably designed to achieve compliance with applicable FINRA rules, MSRB rules, and Federal securities laws and regulations.

[130] MSRB Rule G–18.08 states that a broker-dealer must, at a minimum, conduct annual reviews of its policies and procedures for determining the best available market for the executions of its customers' transactions, including assessing whether its policies and procedures are reasonably designed to achieve best execution, taking into account the quality of the executions the broker-dealer is obtaining under its current policies and procedures, among other things.

[131] MSRB Rule G–28 requires broker-dealers to adopt, maintain and enforce written supervisory procedures reasonably designed to ensure that the conduct of the municipal securities activities of the broker-dealer and its associated persons are in compliance with MSRB rules and the applicable provisions of the Exchange Act and rules thereunder.

[132] Proposed Rule 1101 would not establish minimum data elements needed to comply with the proposed best execution standard. Rather, it would require broker-dealers to establish, maintain, and enforce policies and procedures reasonably designed to comply with the proposed best execution standard. In implementing its policies and procedures (both for non-conflicted and conflicted transactions), including policies and procedures that address how the broker-dealer would obtain and assess reasonably accessible information or how the broker-dealer would obtain and assess other information for conflicted transactions (as discussed in section IV.C below), a broker-dealer may determine that it is appropriate to purchase certain proprietary data. *See also supra* note 38 (describing the Commission's statements in the MDI Adopting Release that the Commission was not establishing minimum data elements needed to achieve best execution nor mandating consumption of certain data content, and acknowledging that different market participants and different trading applications have different market data needs).

[133] *See, e.g.,* Order Execution Obligations Adopting Release, *supra* note 10, 61 FR at 48322–23 (stating that a broker-dealer's practices for achieving best execution, including the data, technology, and types of markets it accesses, must constantly be updated as markets evolve); Order Execution and Routing Practice Release, *supra* note 22, 65 FR at 75418 (stating that quotation information contained in the public quotation system must be considered in seeking best execution of customer orders); MDI Adopting Release, *supra* note 38, 86 FR at 18605 (stating that broker-dealers should consider the availability of consolidated market data, including the various elements of data content and the timeliness, accuracy, and reliability of the data in developing and maintaining their best execution policies and procedures).

[134] *See, e.g.,* Order Execution Obligations Adopting Release, *supra* note 10, 61 FR 48323 (identifying price improvement and execution quality as among the relevant factors for a best execution analysis); MDI Adopting Release, *supra* note 38, 86 FR 18605 (identifying order size, trading characteristics of the security, speed of execution, clearing costs, and the cost and difficulty of executing an order in a particular market as relevant factors for a best execution analysis).

[135] FINRA Rule 5310(a)(1) and MSRB Rule G–18(a) set forth similar factors that are relevant to a best execution analysis, including the character of the market for the security (*e.g.,* price, volatility, relative liquidity, and pressure on available communications). However, unlike proposed Rule 1101(a), FINRA and MSRB rules do not explicitly require relevant factors to be included in a broker-

Continued

More specifically with respect to execution quality, the Commission believes that the level of competition within a market can impact the execution quality of that market and, therefore, broker-dealers should generally consider including the level of competition of a market as an element of its best execution policies and procedures.[136]

With respect to price improvement auctions offered by options exchanges, while the Commission believes that such auctions could provide better executions for customer orders than routing such orders to execute at the prevailing best bid or offer on an exchange, the selection of a particular price improvement auction could impact the execution quality of customer orders. A broker-dealer should generally consider addressing in its policies and procedures how it would assess the features of options price improvement auctions, how those features might affect the level of competition and the execution quality offered by the auctions, and whether those features would allow an auction to provide the most favorable prices under prevailing market conditions. For example, price improvement auctions have features, which have been implemented pursuant to proposed rule changes filed with the Commission, that allow a wholesaler to trade with much or all of the customer orders represented in an auction.[137] The current fee structures for price improvement auctions may also affect market participants' determination of whether to compete with a wholesaler for customer orders and provide more favorable prices.[138] As reflected in the table below, as of May 25, 2022, the vast majority of options exchanges charge market participants that may desire to compete for customer orders response fees of $0.50 per contract (for options classes priced in $0.01 increments (''penny classes'')) and $1.00 or more per contract (for options classes priced in $0.05 increments (''non-penny classes'')). These response fees are not charged to wholesalers that initiate the price improvement auctions.

Exchange	Fees for initiating orders	Auction market maker response fees (penny classes)	Auction market maker response fees (non-penny classes)
CBOE	0.07	0.50	1.05
EDGX	0.05	0.50	1.05
PHLX	0.07	0.25	0.40
MRX	0.02	0.50	1.10
ISE	0.10	0.50	1.10
GEMX	0.05	0.50	0.94
AMEX	0.05	0.50	1.05
MIAX	0.05	0.50	1.10
BOX	0.05	0.50	1.15

In addition, allocation guarantees, which permit the wholesaler to trade with a significant portion of the customer order, may affect competing market participants' determinations of whether and how to participate in price improvement auctions.[139] Likewise, ''auto-match'' features, which enable the wholesaler to automatically match the best prices submitted by competing market participants, may affect competing market participants' determinations of whether and how to participate in price improvement auctions.[140]

As another example, in considering RFQ systems as material potential liquidity sources for corporate and municipal bonds and government securities, a broker-dealer's policies and procedures could assess the filtering practices that may be applied by the RFQ system operator and the impact that those practices may have on the execution quality of those markets. If an RFQ system applies an automatic filter that prevents a broker-dealer that initiates the RFQ from sending that request to all participants on the RFQ system, a broker-dealer could evaluate the potential impact that may have on that market's execution quality. To the extent other RFQ systems do not apply such filters to the broker-dealer's request, a broker-dealer could evaluate whether these other RFQ systems would be a better alternative for executing customer orders, taking into consideration other relevant information that the broker-dealer may obtain concerning the RFQ systems.

dealer's best execution policies and procedures. The considerations in FINRA and MSRB rules concerning volatility, relative liquidity, and pressure on available communications could be included as part of the best market policies and procedures in proposed Rule 1101(a)(2), which requires consideration of the trading characteristics of a security. *See also* FINRA Rule 5310.09 (requiring a member to conduct regular and rigorous reviews of the quality of the executions of its customers' orders); MSRB Rule G–18.08 (requiring a dealer to conduct periodic reviews of its best execution policies and procedures, taking into account the quality of the executions the dealer is obtaining under its current policies and procedures, among other things).

[136] This could include considerations of auction features, such as allocation guarantees and fees, the types of market participants that can participate in an auction, the breadth of participation in an auction, and the accessibility of auction processes. This assessment of auction mechanisms would apply to a broker-dealer that is handling a customer order that is subject to the proposed requirements in the Order Competition Rule (known as a ''segmented order''). *See* Securities Exchange Act Release No. 34–96495 (Dec. 14, 2022). Were the Commission to adopt the proposed Order Competition Rule, a broker-dealer that desires to trade as principal with a segmented order would, absent an exception, be required to expose certain orders to competition through use of ''qualified auctions,'' as defined by the proposed Order Competition Rule. If the proposed Order Competition Rule were adopted, a broker-dealer when evaluating which qualified auction to use for segmented orders under proposed Regulation Best Execution (if adopted) would have to have policies and procedures addressing how the broker-dealer will assess the execution quality of different qualified auctions and identify those that are likely to result in the most favorable price for customer orders.

[137] *See, e.g.,* Nasdaq ISE, LLC Options 3, Section 13; Nasdaq Phlx LLC Options 3, Section 13; Miami International Securities Exchange LLC Rule 515A; BOX Exchange LLC Rule 7150; NYSE American LLC Rule 971.1NY; Cboe Exchange, Inc. Rule 5.37.

[138] *See* Nasdaq ISE LLC Options 7, Section 3; Nasdaq GEMX LLC Options 7, Section 3; Nasdaq MRX LLC Options 7, Section 3.A.; Nasdaq Phlx LLC Options 7, Section 6.A.; BOX Exchange LLC Fee Schedule Section IV.B.; Miami International Securities Exchange LLC Fee Schedule Section (1)(a)(v); NYSE American LLC Options Fee Schedule Section I.G.; Cboe Exchange, Inc. Fee Schedule; Cboe EDGX Exchange, Inc. Options Fee Schedule n.6.

[139] *See supra* note 137.

[140] *See, e.g.,* Nasdaq ISE, LLC Options 3, Section 13(d)(3); Nasdaq Phlx LLC Options 3, Section 13(b)(1); Miami International Securities Exchange LLC Rule 515A(a)(2)(i)(A); BOX Exchange LLC Rule 7150(f); NYSE American LLC Rule 971.1NY(c)(1); Cboe Exchange, Inc. Rule 5.37(b)(5).

Proposed Rule 1101(a)(1)(ii) would require a broker-dealer's policies and procedures to address how it will identify material potential liquidity sources, but it would not require a broker-dealer to include in its policies and procedures a minimum number of markets that it would need to identify as material potential liquidity sources. Rather, under proposed Rules 1101(a)(1)(i) and (ii), a broker-dealer would be required to follow its policies and procedures in assessing reasonably accessible information and determining material potential liquidity sources. The Commission believes a broker-dealer's identification of material potential liquidity sources could be influenced by the nature of the broker-dealer's business operation and customer order flow. For example, some broker-dealers focus on the handling and execution of institutional orders or large-size orders, while some broker-dealers handle and execute retail orders or small-size orders. These considerations may be relevant to the types of markets or market information that the broker-dealer assesses for purposes of identifying material potential liquidity sources. The Commission further believes a broker-dealer's assessment of market information and identification of material potential liquidity sources could vary depending on the trading characteristics of the relevant security, the level of transparency in the applicable market, and accessibility of a market, including the cost of maintaining connectivity, receiving market data, and transacting on the market. For example, if a market charges unreasonably high fees for connectivity, market data, or transactions, a broker-dealer could consider whether such market's information is reasonably accessible and whether such market should be identified as a material potential liquidity source.[141]

While proposed Rules 1101(a)(1)(i) and (ii) do not include an exhaustive list of the markets that might be considered material potential liquidity sources, or the potential sources of reasonably accessible information for different types of securities, some examples may be helpful. For the NMS stock market, material potential liquidity sources could include exchanges, ATSs, and broker-dealers, including market makers and wholesalers. It could also include trading protocols and auction mechanisms operated by these entities, including those that may provide price improvement opportunities, such as exchange limit order books, retail liquidity programs, midpoint liquidity, and wholesaler price improvement guarantees. Concerning potential sources of reasonably accessible information, the Commission has stated that quotation data made publicly available must be considered by a broker-dealer when seeking best execution of customer orders.[142] In addition, a broker-dealer generally should consider whether consolidated trade information, exchange proprietary data feeds, odd lot market data, and execution quality and order routing information contained in reports made pursuant to Rules 605 and 606 of Regulation NMS are readily accessible and needed in order for the broker-dealer to identify material potential liquidity sources for its customers' orders.[143]

In the OTC equities market, a broker-dealer could consider whether ATSs, wholesalers, and other OTC market makers may be potential material liquidity sources. With regard to reasonably accessible information, a broker-dealer could consider obtaining data from ATSs and OTC market makers, in addition to obtaining the data concerning transaction prices in OTC equities made publicly available through the FINRA Over-the-Counter Reporting Facility (''ORF'').

In the options market, material potential liquidity sources could include the options exchanges and the range of trading protocols and auction mechanisms made available by them. These could include quotes from market makers resting on exchange limit order books, price improvement auctions, liquidity resting between the best bid and offer that may be available on exchange limit order books, and floor trading facilities that may provide a broker-dealer with the opportunity to seek competitive prices from floor participants for larger or complex options orders. Other broker-dealers in the options market could also represent a type of market that generally should be considered when assessing material potential liquidity sources. Specifically, many options trades are arranged away from the exchanges by broker-dealers and are often brought to the exchanges for order exposure and potential price improvement prior to execution.[144] Because options trades may be arranged in this fashion, a broker-dealer would need to consider whether other broker-dealers may represent material potential liquidity sources for its customers' options orders. With regard to reasonably accessible information, a broker-dealer should consider whether proprietary data feeds and quarterly Rule 606 order routing reports are readily accessible and needed to identify material potential liquidity sources, in addition to consolidated trade and quotation data that is made publicly available.

In addition, a number of markets could be considered for purposes of identifying material potential liquidity sources in the corporate and municipal bond markets and government securities markets. These may include, for example, ATS and non-ATS electronic trading systems, RFQ systems, and other auction mechanisms. Material potential liquidity sources in these fixed income markets could also include interdealer brokers and other broker-dealers willing to be a counterparty upon request.[145] A broker-dealer's own principal trading desk could also be a market for purposes of identifying material potential liquidity sources.[146] With respect to reasonably accessible information, a broker-dealer could consider whether to obtain data from ATSs and other trading platforms, such as RFQ systems, interdealer brokers, and dealers that

[141] The Commission has previously described a non-exhaustive list of factors that may be relevant to broker-dealers' best execution analysis. These factors include the size of the order, speed of execution, clearing costs, the trading characteristics of the security involved, the availability of accurate information affecting choices as to the most favorable market center for execution and the availability of technological aids to process such information, and the cost and difficulty associated with achieving an execution in a particular market center. *See supra* note 23 and accompanying text.

[142] *See* Order Execution Obligations Adopting Release, *supra* note 10, 61 FR 48324.

[143] In a regulatory notice concerning its best execution rule, FINRA has provided guidance regarding the relevance of proprietary data feeds to a broker-dealer's best execution assessment. *See* FINRA Regulatory Notice 15–46, at 13 n.12 (''[A] firm that regularly accesses proprietary data feeds, in addition to consolidated data from the Securities Information Processors (SIPs), for its proprietary trading, would be expected to also use these data feeds to determine the best market under prevailing market conditions when handling customer orders.'').

[144] *See, e.g.,* Nasdaq ISE, LLC, Options 3, Section 11(b)–(e) (providing exchange functionality for facilitation and solicitation auctions, which permit an exchange member to attempt to execute large-sized orders it represents as agent against principal interest or contra-side orders it has solicited). *See also, e.g.,* Miami International Securities Exchange LLC Rule 515A(b); Cboe Exchange, Inc. Rule 5.39. The ability to attempt to execute an agency order against principal or solicited interest is also permitted in the options exchange price improvement auctions. *See supra* note 137.

[145] For example, for less widely-traded securities, broker-dealers that have previously traded such securities or that are otherwise known to trade in the securities can be markets for certain segments of the fixed income market. *See, e.g.,* MSRB Implementation Guidance on MSRB Rule G–18, on Best Execution at Item VI.1. (updated as of Feb. 7, 2019).

[146] Principal trading with a customer by a broker-dealer would be subject to more robust policies and procedures requirements under proposed Rule 1101(b).

handle and execute customer orders, in addition to obtaining consolidated trade data in the corporate bond and municipal bond markets made publicly available through FINRA's Trade Reporting and Compliance Engine (''TRACE'') and the MSRB's Real-time Transaction Reporting System (''RTRS'').[147] A broker-dealer could also consider obtaining relevant data from information sources that do not provide execution services, such as price aggregator services or evaluated pricing services.

Proposed Rule 1101(a)(1)(iii) would require a broker-dealer to have policies and procedures that address how the broker-dealer will incorporate material potential liquidity sources into its order handling practices and ensure that it can efficiently access each such material potential liquidity source. This requirement is designed to enhance a broker-dealer's ability meet the proposed best execution standard by helping to ensure that the broker-dealer incorporates the identified material potential liquidity sources into its order handling practices so that it can execute customer orders in those markets as appropriate.[148]

Efficient access to each material potential liquidity source, as specified by proposed Rule 1101(a)(1)(iii), may require different order handling processes and arrangements in different markets, and would not necessarily require that a broker-dealer directly connect to a market, as it may be efficient in some circumstances for a broker-dealer to use another broker-dealer to access a particular market for a customer order. However, interposing a third-party between the broker-dealer and the market reasonably likely to provide the most favorable price for its customer would not be consistent with the concept of ''efficient access,'' if the broker-dealer could access the market directly but chose instead to access the market indirectly resulting in a worse execution for the customer.[149] As stated above, interpositioning can violate the broker-dealer's duty of best execution when it results in unnecessary transaction costs at the expense of the customer.[150]

Request for Comment

The Commission requests comment on all aspects of proposed Rule 1101(a)(1), and in particular:

31. Do commenters believe that proposed Rule 1101(a)(1)(i) appropriately requires a broker-dealer's policies and procedures to reflect how it will obtain and assess reasonably accessible information, including information about price, volume, and execution quality, concerning the markets trading the relevant securities? Why or why not?

32. What factors would a broker-dealer consider in determining whether information is ''reasonably accessible'' for purposes of its best execution policies and procedures under the proposed rules? Please explain.

33. Should the Commission specify the types of information that would be ''reasonably accessible'' under proposed Rule 1101(a)(1)(i)? For example, should the Commission specify that consolidated market data distributed by the securities information processors is a type of ''reasonably accessible'' information under the proposed rule? Please explain.

34. Do commenters agree that proposed Rule 1101(a)(1) is consistent with prior Commission statements, including those described in section II.B above? Why or why not? If not, should the Commission revise any of its statements in light of the proposal? Please explain.

35. Do commenters believe that proposed Rule 1101(a)(1)(ii) appropriately requires a broker-dealer's policies and procedures to reflect how it will identify material potential liquidity sources? Why or why not?

36. Do commenters believe the Commission has appropriately defined material potential liquidity sources in proposed Rule 1101(a)(1)(ii)? Please explain.

37. What factors would a broker-dealer consider in identifying material potential liquidity sources under the proposed rules? Please explain.

38. In identifying material potential liquidity sources, do broker-dealers consider market connectivity fees and other access and transaction fees? Please explain.

39. Do commenters agree that proposed Rule 1101(a)(1)(ii) is consistent with prior Commission statements, including those described in section II.B above? Why or why not? If not, should the Commission revise any of its statements in light of the proposal? Please explain.

40. Do commenters believe that proposed Rule 1101(a)(1)(iii) appropriately requires a broker-dealer's policies and procedures to reflect how it will incorporate material potential liquidity sources into its order handling practices? Why or why not?

41. Do commenters believe that proposed Rule 1101(a)(1)(iii) appropriately requires a broker-dealer's policies and procedures to reflect how it will ensure efficient access to each material potential liquidity source? Why or why not?

42. What factors would a broker-dealer consider to ensure that it can efficiently access a material potential liquidity source under the proposed rules? Please explain.

43. Do commenters agree that proposed Rule 1101(a)(1)(iii) is consistent with prior Commission statements, including those described in section II.B above? Why or why not? If not, should the Commission revise any of its statements in light of the proposal? Please explain.

[147] *See, e.g., https://www.finra.org/filing-reporting/trace/data* and *https://emma.msrb.org/.*

[148] FINRA Rule 5310(c) provides that a failure to maintain or adequately staff an OTC order room or other department assigned to execute customers' orders is not a justification for a broker-dealer executing away from the best available market. The provision further states that channeling orders through a third party as reciprocation for service or business does not relieve a broker-dealer of its obligation under FINRA Rule 5310. FINRA Rule 5310(d) also provides that a broker-dealer through which orders are channeled and that knowingly is a party to an arrangement whereby the initiating member has not fulfilled its obligations under FINRA Rule 5310 will be deemed to have violated the rule. Similarly, MSRB Rule G–18.02 states that a broker-dealer's failure to maintain adequate resources is not a justification for executing away from the best available market. The proposed rules likewise would not exempt these scenarios from the proposed best execution standard. The Commission also believes that these provisions reflect the concept of efficient access to the best market so that the resulting price to a customer is as favorable as possible under prevailing market conditions, and therefore are consistent with the Commission's proposal to require a broker-dealer's best execution policies and procedures to address how the broker-dealer will efficiently access material potential liquidity sources.

[149] The proposed requirement that a broker-dealer's policies and procedures address how it will be able to efficiently access any material potential liquidity source is consistent with FINRA and MSRB rules concerning interpositioning. Specifically, FINRA Rule 5310(a)(2) states that no broker-dealer or person associated with a broker-dealer may interject a third party between the broker-dealer and the best market for the subject security in a manner that would be inconsistent with FINRA's best execution standard. FINRA Rule 5310(b) states that when a broker-dealer cannot execute directly with a market but must employ a broker's broker or some other means in order to ensure an execution advantageous to the customer, the burden of showing the acceptable circumstances for doing so is on the broker-dealer. And FINRA Rule 5310.05 states that examples of acceptable circumstances are where a customer's order is ''crossed'' with another firm that has a corresponding order on the other side, or where the identity of the firm, if known, would likely cause undue price movements adversely affecting the cost or proceeds to the customer. MSRB Rule G–18(b) similarly prohibits a broker-dealer from interjecting a third party between itself and the best market for the subject security in a manner inconsistent with the MSRB's best execution standard. However, unlike proposed Rule 1101(a), FINRA and MSRB rules do not require a broker-dealer's best execution policies and procedures to explicitly address the incorporation of liquidity sources into its order handling practices or the efficient access of liquidity sources.

[150] *See supra* notes 29–30 and accompanying text.

44. Do commenters agree with the Commission's understanding that broker-dealers currently have policies and procedures for how they comply with the FINRA and MSRB best execution rules, as applicable? Please describe the types of best execution policies and procedures that broker-dealers currently have. In particular, do broker-dealers' policies and procedures address how they obtain and assess reasonably accessible information, including information about price, volume, and execution quality, concerning the markets trading the relevant securities? Do broker-dealers' policies and procedures address how they identify material potential liquidity sources? Do broker-dealers' policies and procedures address how they incorporate material potential liquidity sources into their order handling practices, and how they ensure that they can efficiently access each such material potential liquidity source?

45. Do commenters believe that the Commission should provide staggered compliance dates for proposed Rule 1101(a)(1) for broker-dealers of different sizes, if the Commission adopts proposed Regulation Best Execution? For example, should the Commission provide longer compliance dates for smaller broker-dealers? If so, should the Commission define a smaller broker-dealer as a broker-dealer that qualifies as a ''small entity'' under the Regulatory Flexibility Act pursuant to 17 CFR 240.0–10(c) for this purpose? [151] Or should the Commission define a smaller broker-dealer in a different way? Please explain.

2. Proposed Rule 1101(a)(2)—Best Market Determination

Proposed Rule 1101(a)(2) would require a broker-dealer's best execution policies and procedures to address how it will determine the best market and make routing or execution decisions for customer orders that it receives by: (i) assessing reasonably accessible and timely information with respect to the best displayed prices, opportunities for price improvement, including midpoint executions, and order exposure opportunities that may result in the most favorable price; (ii) assessing the attributes of customer orders and considering the trading characteristics of the security, the size of the order, the likelihood of execution, the accessibility of the market, and any customer instructions in selecting the market most likely to provide the most favorable price; and (iii) in determining the number and sequencing of markets to be assessed, reasonably balancing the likelihood of obtaining better prices with the risk that delay could result in worse prices.

In determining the best market for customer orders, the assessment of reasonably accessible and timely information [152] with respect to the best displayed prices and opportunities for price improvement would vary depending on the trading characteristics of particular securities. Displayed prices can provide a useful reference price for a broker-dealer to consider when assessing the best market in which to execute customer orders, particularly in an asset class where there are consolidated displays of the best prices across the market, or for securities that are considered liquid and have firm prices that are accessible. Accordingly, under proposed Rule 1101(a)(2)(i), a broker-dealer's policies and procedures would be required to address how it will assess reasonably accessible and timely information with respect to the best displayed prices in any given market or security.[153] In addition, the Commission has previously stated that, when reviewing their procedures for seeking to obtain best execution, ''broker-dealers must take into account price improvement opportunities, and whether different markets may be more suitable for different types of orders or particular securities.'' [154] Accordingly, under proposed Rule 1101(a)(2)(i), a broker-dealer's policies and procedures would be required to specifically address how it will assess price improvement opportunities,[155] including midpoint execution opportunities.[156]

In addition to displayed prices and opportunities for price improvement, there may be other order exposure opportunities for customer orders (*e.g.,* order handling and execution protocols that may provide exposure to a competitive process for customer orders). For example, markets that operate limit order books and enable broker-dealers to post customer limit orders could represent a best market for customer orders. These markets may provide an opportunity for executions at the prevailing best bid for customer buy orders or at the prevailing best offer for customer sell orders, rather than executing customer orders by crossing the prevailing bid-offer spread. As another example, auctions may offer an opportunity to expose marketable customer orders to prices that are more favorable than prices that would be achieved by crossing the spread. Accordingly, under proposed Rule 1101(a)(2)(i), a broker-dealer's policies and procedures would be required to address how it will assess order exposure opportunities that may result in the most favorable price.

FINRA Rule 5310(a)(1) and MSRB Rule G–18(a) also identify price information as relevant when ascertaining the best market for a security.[157] MSRB Rule G–18(a) also includes as an additional factor: the information reviewed to determine the current market for the subject security

[151] 17 CFR 240.0–10(c) defines a smaller broker-dealer as one that: (1) had total capital (net worth plus subordinated liabilities) of less than $500,000 on the date in the prior fiscal year as of which its audited financial statements were prepared pursuant to Rule 17a–5(d) under the Exchange Act, or, if not required to file such statements, had total capital (net worth plus subordinated liabilities) of less than $500,000 on the last business day of the preceding fiscal year (or in the time that it has been in business, if shorter); and (2) is not affiliated with any person (other than a natural person) that is not a small business or small organization.

[152] *See supra* notes 132 and 141 and accompanying text.

[153] For fixed income securities, FINRA has also recognized that while a broker-dealer should consider using displayed prices on electronic trading platforms as part of its reasonable diligence in determining the best market for a security, executing a customer order at the displayed price may not necessarily fulfill the broker-dealer's best execution obligations. *See* FINRA Regulatory Notice 15–46, at 8 (stating that displayed prices on electronic trading platforms may not be the presumptive best prices, especially for securities that are illiquid or trade infrequently). Accordingly, the Commission believes that the concept of ''best displayed prices'' is applicable to the fixed income securities market.

[154] Regulation NMS Adopting Release, *supra* note 21, 70 FR 37538. *See also* Order Execution Obligations Adopting Release, *supra* note 10, 61 FR 48323 n.357 (stating that any evaluation of price improvement opportunities would have to consider not only the extent to which orders are executed at prices better than the prevailing quotes, but also the extent to which orders are executed at inferior prices).

[155] Price improvement is the execution of an order at a price that is better than the best displayed buy or sell prices in the market, and an execution between the best displayed bid and offer is a form of price improvement. *See, e.g.,* Order Execution Obligations Adopting Release, *supra* note 10, 61 FR 48323 n.357 (stating that price improvement means the difference between execution price and the best quotes prevailing in the market at the time the order arrived at the market or market maker); FINRA Rule 5310.09(b)(1) (describing price improvement opportunities to mean the difference between the execution price and the best quotes prevailing at the time the order is received by the market).

[156] These executions occur at the midpoint of the best displayed buy and sell prices and may represent a significant amount of price improvement as compared to executing at the best displayed prices for customers seeking to trade immediately.

[157] FINRA has also recognized the importance of considering midpoint liquidity. *See* FINRA Regulatory Notice 15–46 at 4 n.25 (''For example, if a firm obtains price improvement at one venue of $0.0005 per share, and it could obtain mid-point price improvement at another venue of $0.025 per share, the firm should consider the opportunity of such midpoint price improvement on that other venue as part of its best execution analysis.''). In addition, FINRA Rule 5310.09(b)(1) recognizes the relevance of price improvement opportunities.

or similar securities.[158] As described in section IV.B.1 above, FINRA and MSRB rules reflect requirements for broker-dealers to have policies and procedures for compliance with relevant laws and rules. However, FINRA and MSRB rules do not require a broker-dealer's policies and procedures to specifically address the elements that are relevant to its best market determinations. The Commission understands that broker-dealers currently generally have policies and procedures to ascertain the best market for a security, although such policies and procedures may need to be updated to address the elements specified in proposed Rule 1101(a)(2).

For a retail broker-dealer in NMS stocks, its policies and procedures for the best market determination could include assessments of any assurances from a wholesaler that certain orders routed by the retail broker-dealer to the wholesaler would be guaranteed midpoint executions by the wholesaler or otherwise exposed to opportunities for midpoint executions.[159] If midpoint executions were not guaranteed by a wholesaler, a retail broker-dealer's policies and procedures could provide for assessments of whether customer orders would best be executed with midpoint liquidity that may be available on an exchange, ATS, or other market. Following an assessment of the opportunities for midpoint executions, a broker-dealer's policies and procedures could provide for an assessment of whether other price improvement opportunities might be available, such as from wholesalers,[160] from resting liquidity between the best bid and offer on exchanges, through auctions, or otherwise.

With respect to listed options, the Commission recognizes that midpoint liquidity is not as commonly available on options exchanges as it is in the NMS stock market.[161] A broker-dealer's policies and procedures nevertheless would be required to address how it will assess potential midpoint executions, including to the extent additional midpoint liquidity emerges. Following an assessment of potential opportunities for midpoint executions, the Commission preliminarily believes that a broker-dealer's policies and procedures could provide for an assessment of other price improvement opportunities that might be available. These price improvement opportunities could include potential resting liquidity on exchange limit order books priced between the best bid and offer. Price improvement opportunities may also be available through exchange price improvement auctions.[162] A broker-dealer's policies and procedures could also address how it will assess price improvement opportunities that may be available from different wholesalers, including an assessment of guarantees for price improvement that might be provided by wholesalers and the performance of the wholesalers, including the execution quality that the retail broker-dealer's customers received from the wholesalers in the past. In doing so, a broker-dealer's policies and procedures could address how it will assess the exchanges and exchange mechanisms that wholesalers use, why they use those exchanges and mechanisms, and the relative competitiveness of those exchanges and mechanisms in light of fee differentials and functionality that can affect competitive responses and facilitate internalization.

The policies and procedures requirements under proposed Rule 1101(a)(2)(i) would also apply to wholesalers in the NMS stock and options markets. For customer orders that a wholesaler intends to execute at prices worse than the midpoint, its policies and procedures could provide for an assessment of whether those orders would best be executed with midpoint liquidity that may be available on an exchange, ATS, or other market. A wholesaler's policies and procedures would also need to address how it will consider other opportunities for price improvement, which could include liquidity available on exchanges or other markets priced between the best bid and offer. Finally, these policies and procedures would need to address how the wholesaler will assess order exposure opportunities for customer orders that may result in the most favorable price for those orders.

In the corporate and municipal bond markets and government securities markets, some broker-dealers display executable prices to customers through proprietary customer-facing systems that enable customers to transact at the displayed prices. Sometimes these prices represent securities that are available on other venues such as ATSs, interdealer brokers or otherwise, while other times these prices represent securities held in inventory by the broker-dealer. The policies and procedures of a broker-dealer in the corporate and municipal bond markets and government securities markets would need to address how it will assess reasonably accessible and timely information with respect to the best displayed prices.

Information with respect to the best displayed prices would be different between the corporate and municipal bond markets and government securities markets, and the equities and options markets. In particular, timely consolidated best prices are readily accessible in the equities and options markets, but there are no similar consolidated best prices in the corporate and municipal bond markets and government securities markets. A broker-dealer's policies and procedures generally should therefore be tailored to reflect best displayed price information that is ''reasonably accessible and timely'' in the corporate and municipal bond markets and government securities markets.[163]

[158] This factor is consistent with proposed Rule 1101(a)(2) because a broker-dealer's policies and procedures regarding the assessment of reasonably accessible and timely best displayed prices in the municipal bond market could include an assessment of information to determine the current market for the subject security or similar securities.

[159] If wholesalers do not have a practice of routinely seeking and accessing midpoint liquidity as appropriate, the retail broker-dealer's policies and procedures could address how it takes that into account when assessing whether a wholesaler is the best market for customer orders.

[160] In considering wholesalers, such policies and procedures could address how the retail broker-dealer assesses the price improvement opportunities that may be available from different wholesalers, including an assessment of guarantees for price improvement that might be provided by wholesalers and the performance of wholesalers, such as the execution quality that the retail broker-dealer's customers received from the wholesalers in the past.

[161] Given the lack of order types concerning midpoint liquidity, midpoint liquidity is not prevalent in the listed options market.

[162] Price improvement auctions currently available on options exchanges are two-sided and thus may not be directly accessible by many retail broker-dealers because they do not commit capital to trade with customers. Specifically, options price improvement auctions guarantee that a customer order will be executed by requiring the broker-dealer initiating the auction to commit to trade in a principal capacity with the customer order at a certain price, with exposure to potential price improvement from competitive responders. *See, e.g.,* Nasdaq ISE, LLC Options 3, Section 13; Nasdaq Phlx LLC Options 3, Section 13; Miami International Securities Exchange LLC Rule 515A; BOX Exchange LLC Rule 7150; NYSE American LLC Rule 971.1NY; Cboe Exchange, Inc. Rule 5.37. However, to the extent one-sided auctions (or other trading protocols providing a competitive process for exposing customer orders for the most favorable price) exist or emerge, a broker-dealer's policies and procedures generally should consider addressing whether such price improvement opportunities represent the best market for customer orders when making a routing or execution decision.

[163] FINRA Rule 5310 also states that ''when quotations are available, FINRA will consider the accessibility of such quotations when examining whether a member has used reasonable diligence.'' *See* FINRA Rule 5310.03. FINRA has also discussed the importance of a broker-dealer evaluating the quality of displayed prices in fixed income securities. *See* FINRA Regulatory Notice 15–46, at 8 (''FINRA also notes that prices of a fixed income security displayed on an electronic trading platform may not be the presumptive best price of that

The proposed rule requires policies and procedures of a broker-dealer in the corporate and municipal bond markets and government securities markets to also address how it will assess order exposure opportunities that may result in the most favorable price, which could include how it will assess RFQ mechanisms. These mechanisms may represent the best market for customer orders in light of the trading characteristics of these securities, where there may be limited quotation or transaction pricing information available. In the absence of reliable pricing information, such as bid, offer, or transaction data for a security, a competitive auction mechanism may result in the most favorable prices reasonably available.

The policies and procedures of a broker-dealer in the corporate and municipal bond markets and government securities markets could also assess how its use of RFQ systems may affect the opportunity to expose a customer order to the most favorable price. For example, when a customer wishes to buy or sell a bond, a broker-dealer may use an electronic RFQ system to solicit prices from other participants on the system.[164] In this scenario, a broker-dealer's policies and procedures could address how it will use ''filters'' and assess whether the use of filters would affect the exposure for customer orders. Specifically, a broker-dealer that submits an RFQ on behalf of a customer typically has the option of deciding which participants it wants to request prices from. While a broker-dealer may use filters in a way that is consistent with its duty of best execution, a broker-dealer could also potentially use filters to prevent certain market participants from receiving and participating in the RFQ in a way that prevents a customer order from being exposed to opportunities to receive the most favorable price (*e.g.,* the participants that might have been willing to provide that price may have been precluded from the RFQ by the broker-dealer).[165]

As another example, the policies and procedures of a broker-dealer in the corporate and municipal bond markets and government securities markets could address the use of ''last look'' functionalities. When a broker-dealer uses an RFQ system, it will often receive responses in the form of bids (most common) or offers, and it typically has a certain amount of time to decide whether or not it chooses to execute the transaction with the best price or to match or improve that price in a principal trade with the customer. One effect of this ''last look'' practice may be to deter market participants that might otherwise vigorously compete to trade with the customer's order from submitting their most favorable prices, in light of the possibility that the broker-dealer is simply using the RFQ system for price discovery and ultimately intends to trade with its customer in a principal capacity.[166] A broker-dealer's policies and procedures could address how the broker-dealer uses ''last look'' in connection with its RFQs and whether this practice affects the extent to which customer orders are exposed to opportunities to receive the most favorable price.[167]

As a third example, the policies and procedures of a broker-dealer in the corporate and municipal bond markets and government securities markets could address the response times that a broker-dealer may require for responses to an RFQ. Broker-dealers frequently request quotes and include a time limit by which all quotes must be received. This practice permits market participants time to consider the request and provide a price for the security, while establishing a time limit so that the broker-dealer can execute its customer order in a timely manner. The appropriate amount of time for responses can be influenced by important and variable considerations for different customer orders. Response times that are too short, however, can prevent market participants that may otherwise be interested in competing for the customer order from being able to submit prices in response to the request. A broker-dealer's policies and procedures could address how the broker-dealer uses response times in connection with its RFQs and how its use might impact the exposure of a customer order to opportunities to receive the most favorable price.

In addition to assessing reasonably accessible and timely information regarding displayed prices and price improvement and order exposure opportunities, proposed Rule 1101(a)(2)(ii) would require a broker-dealer's policies and procedures to address how it will assess the attributes of its customers' orders and consider the trading characteristics of the security, the size of the orders, the likelihood of execution, the accessibility of the market, and any customer instructions in selecting the market most likely to

security for best execution purposes, especially for securities that are illiquid or trade infrequently. Thus, although a firm should consider using this information as part of its reasonable diligence in determining the best market for the security, executing a customer order at the displayed price may not fulfill the firm's obligations, particularly if other sources of information indicate the displayed price may not be the best price available. For example, if . . . a firm regularly uses a reliable similar security analysis to establish prices, that firm may need to use particular care before executing a trade at a price that is displayed by a trading system if its similar security analysis suggests that the displayed price is not reflective of the market.'').

[164] It is the Commission's understanding that a broker-dealer typically uses RFQ systems to solicit prices when customers are selling bonds and that RFQ systems are used less for customers that are buying bonds.

[165] FINRA and the MSRB have recognized the potential misuse of filters as well. *See* FINRA Regulatory Notice 15–46, at 5 (''If a firm uses filters on counterparties or filters on specific securities intended to limit accessing bids and offers in those securities, they may be used only for a legitimate purpose consistent with obtaining the most favorable executions for customers, and should be reviewed on a periodic basis and adjusted as needed.''). *See* MSRB Interpretive Guidance Section III.1 (''Some dealers may employ 'filters,' which generally refer to automated tools that allow the dealer to limit its trading, with, for example, specific parties or parties with specified attributes with which it does not want to interact. If a dealer uses filters on counterparties or filters on specific securities intended to limit accessing bids or offers in those securities, they may be used only for a legitimate purpose consistent with obtaining the most favorable executions for non-SMMP customers, and should be reviewed on a periodic basis and adjusted as needed. The dealer, accordingly, should have policies and procedures in place that govern when and how to: reasonably use filters without negatively impacting the quality of execution of non-SMMP customer transactions; periodically reevaluate their use; and determine whether to lift them upon request.'').

[166] *See* Recommendation Regarding the Practice of Pennying in the Corporate and Municipal Bond Markets, SEC Fixed Income Market Structure Advisory Committee (June 11, 2019), *available at https://www.sec.gov/spotlight/fixed-income-advisory-committee/fimsac-pennying-recommendations.pdf* (describing that the abusive use of the last look practice ''harms competitiveness'' and ''deters aggressive pricing or participation in the auction process by other dealers who fear that the submitting dealer is going to 'step in front of' their winning prices or is otherwise using the auction process solely for price discovery purposes''). *See also* FINRA Regulatory Notice 20–29 (Aug. 17, 2020) (requesting comment on the impact of the broker-dealer practice of trading with a customer as principal by matching or slightly improving on the best auction responses without participating in the auction); MSRB Notice 2018–22 (Sept. 7, 2018) (requesting comment on the abusive practice of last look known as pennying and stating ''[i]n recent outreach to a broad range of market participants, it has been suggested that pennying is prevalent in the municipal market and that widespread pennying does indeed disincentivize participation in the bid-wanted process, discourages bidders from giving their best price in a bid-wanted and may impact the efficiency of the market'').

[167] Last look practices can also be beneficial to customers. For example, there could be situations where the responses received by the broker-dealer all reflect prices that the broker-dealer has reason to believe are not reflective of the most favorable price. In these cases, last look enables the broker-dealer to evaluate those prices, determine not to execute the customer order at those prices, and either internalize the order at a price the broker-dealer believes is the most favorable price or seek additional liquidity for the customer order.

provide the most favorable price for the order.

Not all customer orders have the same attributes or size and a broker-dealer's best market determination is affected by the attributes of customer orders and the size of customer orders.[168] For example, when a broker-dealer is handling and executing large orders, it may likely be more sensitive to the possibility of information leakage and price impact that could harm the execution quality of such orders. Therefore, the broker-dealer may make a best market determination designed to minimize the risk of information leakage and price impact concerns.[169] In contrast, a broker-dealer handling and executing small orders may not be as concerned with information leakage, resulting in a different best market determination for execution of such orders.[170] Other relevant customer order attributes could include whether or not the order is a market order or limit order. A broker-dealer's assessment of the best market to execute customer orders is different for customers interested in trading immediately [171] and customers willing to execute orders over a longer period of time. Moreover, the likelihood of execution is a relevant consideration for a broker-dealer, as the failure to receive an execution for orders from a particular market may negatively impact the ultimate execution quality received by customers.

A broker-dealer's best market determination is also affected by the trading characteristics of a security and the accessibility of a market. For example, some securities may not have readily available or accessible quotation data or may trade in OTC markets.[172] These characteristics affect how a broker-dealer would identify the best market for customer orders, and a broker-dealer may need to seek out pricing information that may not otherwise be available or accessible at the time it receives a customer order, such as by soliciting buy or sell interest from market participants through auction mechanisms, interdealer brokers, or otherwise.[173] Furthermore, extreme market conditions that result in heightened volatility or impact the liquidity for a security may affect a broker-dealer's best market determination for customer orders as trading in those conditions may merit different order handling than in more normal market conditions.[174]

Moreover, customer instructions are relevant for a broker-dealer's best market determination. Customers may provide a broker-dealer with specific instructions regarding how the broker-dealer should handle and execute their orders, including institutional customers that also owe their clients a duty to seek best execution. A broker-dealer's policies and procedures generally should address how the broker-dealer will assess the factors in proposed Rule 1101(a)(2) within the context of and consistent with customer instructions.[175] For example, some institutional customers may instruct their broker-dealer to handle and execute their orders with regard being given to the fees and rebates that may be charged or paid by a particular market,[176] and a broker-dealer's policies

[168] FINRA Rule 5310(a)(1) also recognizes the ''size and type'' of transactions as factors relevant to a broker-dealer's exercise of reasonable diligence to ascertain the best market, although FINRA rules do not require a broker-dealer's policies and procedures to explicitly address how it would assess these factors.

[169] It is the Commission's understanding that when an institutional customer gives a large order to be executed on behalf of one account (*e.g.,* a single mutual fund or pension fund), it expects the broker-dealer that handles and executes such large order to do so in a manner that ensures best execution is provided to the ''parent'' order. In other words, to the extent that a parent order is split into smaller ''child'' orders, the institutional customer expects the best execution analysis to evaluate whether the parent order was executed at the most favorable price possible under prevailing market conditions according to customer instructions. *See, e.g.,* Concept Release on Equity Market Structure, *supra* note 49, 75 FR at 3604–3605 (measuring the transaction costs of institutional investors ''can be extremely complex'' because their ''large orders often are broken up into smaller child orders and executed in a series of transactions'' and ''[m]etrics that apply to small order executions may miss how well or poorly the large order traded overall.'').

[170] While the Commission has long-acknowledged a range of factors relevant for a best execution analysis, it has recognized price as a critical concern. *See supra* note 22 and accompanying text. The Commission has stated, for example, that it ''strongly believes, however, that most investors care a great deal about the quality of prices at which their orders are executed . . . .'' *See* Order Execution and Routing Practice Release *supra* note 22, 65 FR at 75418. Additionally, the Commission has stated that broker-dealers handling small orders in listed and OTC equities should look for price improvement opportunities when executing these orders. *See* Order Execution Obligations Adopting Release, *supra* note 10, 61 FR 48323.

[171] FINRA Rule 5310.01 requires a broker-dealer to make every effort to execute marketable customer orders fully and promptly. Similarly, MSRB Rule G–18.03 requires a broker-dealer to make every effort to execute a customer transaction promptly, taking into account prevailing market conditions, and recognizes that in certain market conditions a broker-dealer may need more time to use reasonable diligence to ascertain the best market for the subject security. The MSRB has stated that while a broker-dealer must make every effort to execute a customer transaction promptly, the determination as to whether a firm exercised reasonable diligence necessarily involves a ''facts and circumstances'' analysis, and actions that in one instance may meet a broker-dealer's best-execution obligation may not satisfy that obligation under another set of circumstances. MSRB Interpretative Guidance, V1.1: Execution timing (Nov. 20, 2015). Similarly, when assessing the attributes of a customer order under proposed Rule 1101(a)(2), a broker-dealer would be required to assess how it will execute marketable customer orders fully and promptly, taking into account prevailing conditions, given that the customer expectation when submitting a market order is to have the order executed immediately at the prevailing market price or better.

[172] *See also* FINRA Rule 5310(a)(1) (recognizing the relevance of the pressure on available communications as relevant for a broker-dealer's best market determination). A broker-dealer's assessment of the accessibility of a market could vary depending on the cost of maintaining connectivity, receiving market data, and transacting on the market.

[173] These considerations are consistent with FINRA and MSRB rules concerning orders involving securities with limited quotations or pricing information. *See* FINRA Rule 5310.06 (providing that a broker-dealer must be especially diligent in ensuring that it has met its best execution obligations with respect to customer orders involving securities for which there is limited pricing information or quotations available; requiring each member to have written policies and procedures that address how it will determine the best inter-dealer market for such a security in the absence of pricing information or multiple quotations and document its compliance with those policies and procedures; providing as an example that a broker-dealer should analyze pricing information based on other data, such as previous trades in the security, to determine whether the resultant price to the customer is as favorable as possible under prevailing market conditions; and providing that a broker-dealer should generally seek out other sources of pricing information or potential liquidity, which may include obtaining quotations from other sources (*e.g.,* other firms with which the member previously has traded in the security)); MSRB Rule G–18.06 (providing that a broker-dealer must be especially diligent in ensuring that it has met its best-execution obligations with respect to customer transactions involving securities for which there is limited pricing information or quotations available; requiring each broker-dealer to have written policies and procedures in place to address how it will make its best execution determinations with respect to such a security in the absence of pricing information or multiple quotations and document its compliance with those policies and procedures; and providing as an example that a broker-dealer generally should seek out other sources of pricing information and potential liquidity for such a security, including other broker-dealers with which the broker-dealer previously has traded in the security; and providing that a broker-dealer generally should, in determining whether the resultant price to the customer is as favorable as possible under prevailing market conditions, analyze other data to which it reasonably has access).

[174] *See also* FINRA Regulatory Notice 21–12 (discussing the best execution obligations of broker-dealers handling and executing customer orders during extreme market conditions); FINRA Rule 5310(a)(1) (discussing the relevance of volatility and liquidity to a broker-dealer's best market determination).

[175] A broker-dealer that receives an unsolicited instruction from a customer to route that customer's order to a particular market for execution and otherwise qualifies for the exemption from the proposed best execution standard in Rule 1100(c) would not be subject to the requirements of proposed Rule 1101, including the requirement to have policies and procedures that address how the broker-dealer would consider customer instructions in selecting the market most likely to provide the most favorable price.

[176] The Commission understands that these customers often pay the broker-dealer a lower commission or service fee for handling their orders, and the fees and rebates that are charged or paid

and procedures generally should address how it would assess the relevant factors in proposed Rule 1101(a)(2) while taking into account the customer instructions in determining the best market for the customers' orders.[177]

Proposed Rule 1101(a)(2)(iii) would require a broker-dealer's policies and procedures to address how it will reasonably balance the likelihood of obtaining better prices with the risk that delay could result in worse prices in determining the number and sequencing of markets to be assessed for its customers' orders.[178] An undue delay in execution of customer orders may detrimentally impact the execution of those orders, if there was a change in the price or liquidity available at the time of execution that was not favorable to the customer. For example, in a volatile market, executing customer orders quickly may be necessary for the customer to receive the most favorable prices or to receive an execution at all. Doing so may require the broker-dealer to execute customer orders using fewer or different execution methods than it might otherwise use in a less volatile market. Similarly, a broker-dealer that is handling large customer orders may determine that preventing information leakage is necessary in order for the large orders to be executed at the most favorable prices, which may affect the number and sequencing of the markets that it assesses. Accordingly, the broker-dealer's best execution policies and procedures generally should be tailored for the different circumstances in order to reflect a reasonable balance between the likelihood of obtaining better prices with the risk that delay could result in worse prices.

FINRA Rule 5310(a)(1) and MSRB Rule G–18(a) set forth similar factors that are relevant to ascertaining the best market for customer orders, including the character of the market for the security (*e.g.,* price, volatility, relative liquidity, and pressure on available communications), the size and type of transaction, the number of markets checked, the accessibility of the quotation,[179] and the terms and conditions of the order that result in the transaction as communicated to the broker-dealer. As described in section IV.B.1 above, FINRA and MSRB rules require broker-dealers to have policies and procedures for compliance with relevant laws and rules. In addition, the FINRA and MSRB rules specifically require a broker-dealer to establish written policies and procedures that address how it will determine the best market for a security in the absence of pricing information or multiple quotations and document its compliance with those policies and procedures.[180] However, FINRA and MSRB rules do not require a broker-dealer's policies and procedures to specifically address the elements that are relevant to its best market determinations. The Commission understands that broker-dealers generally have policies and procedures to ascertain the best market for a security, although such policies and procedures may need to be updated to address the elements specified in proposed Rule 1101(a)(2).

Request for Comment

The Commission requests comment on all aspects of proposed Rule 1101(a)(2), and in particular:

46. Has the Commission appropriately identified the considerations for determining the best market for customer orders? Why or why not?

47. Do commenters believe that proposed Rule 1101(a)(2)(i) appropriately requires a broker-dealer's policies and procedures to reflect how it will assess reasonably accessible and timely information with respect to the best displayed prices, opportunities for price improvement, including midpoint executions, and order exposure opportunities that may result in the most favorable price? Why or why not?

48. Do commenters believe that proposed Rule 1101(a)(2)(ii) appropriately requires a broker-dealer's policies and procedures to reflect how it will assess the attributes of customer orders and consider the trading characteristics of the security, the size of the order, the likelihood of execution, the accessibility of the market, and any customer instructions in selecting the market most likely to provide the most favorable price? Why or why not?

49. Do commenters believe that proposed Rule 1101(a)(2)(iii) appropriately requires a broker-dealer's policies and procedures to reflect how it will reasonably balance the likelihood of obtaining better prices with the risk that delay could result in a worse price, in determining the number and sequencing of markets to be assessed? Why or why not?

50. Do commenters agree that proposed Rule 1101(a)(2) is consistent with prior Commission statements, including those described in section II.B above? Why or why not? If not, should the Commission revise any of its statements in light of the proposal? Please explain.

51. While the considerations for determining the best market included in proposed Rule 1101(a)(2) are non-exhaustive, should the Commission explicitly include other considerations in the rule? If so, please explain.

52. Is the list of considerations for determining the best market included in proposed Rule 1101(a)(2) consistent with the considerations included in FINRA Rule 5310 and MSRB Rule G–18? If not, please explain any differences and whether the considerations should be consistent.

53. Do commenters agree with the Commission's understanding that midpoint liquidity is not as commonly available in the options market as it is in the NMS stock market? Why or why not?

54. Should the Commission specify transaction fees in the rule text as considerations for determining the best market? If so, please explain how fees may be relevant to the best execution standard and a broker-dealer's best market determination. Do broker-dealers route and execute customer orders based on a favorable transaction fee and does that impact the execution quality of customer orders? Please explain.

55. What factors should a broker-dealer consider in determining the number and sequencing of markets to be assessed, in addition to the likelihood of obtaining better prices and the risk that a delay could result in a worse price? Please explain.

56. Do commenters agree with the Commission's understanding that institutional customers expect broker-dealers that handle and execute their large orders for a single account to do so in a manner that ensures best execution is provided to the ''parent'' order?

by a market are often passed through to the customers.

[177] To the extent rebates cause certain transactions to be ''conflicted transactions'' as defined in proposed Rule 1101(b), a broker-dealer's policies and procedures must also address how it would assess the relevant factors in proposed Rule 1101(b) while taking into account the customer instructions.

[178] For example, a broker-dealer could develop an automated process for determining the specific markets to which it routes orders and the sequence in which the orders are routed.

[179] FINRA Rule 5310.03 provides that, for purposes of debt securities, the term ''quotation'' refers to either dollar (or other currency) pricing or yield pricing. It also states that accessibility is only one of the non-exhaustive reasonable diligence factors, and in the absence of accessibility, members are not relieved from taking reasonable steps and employing their market expertise in achieving the best execution of customer orders. Proposed Rule 1101(a) similarly provides a list of non-exhaustive reasonable diligence factors that would be addressed in a broker-dealer's best execution policies and procedures.

[180] *See supra* note 173.

57. Do commenters agree with the Commission's understanding that broker-dealers currently generally have policies and procedures to ascertain the best market for a security? Please describe the types of best market policies and procedures that broker-dealers currently have. In particular, do broker-dealers' policies and procedures address how they assess reasonably accessible and timely information with respect to the best displayed prices, opportunities for price improvement, including midpoint executions, and order exposure opportunities that may result in the most favorable price? Do broker-dealers' policies and procedures address how they assess the attributes of customer orders and consider the trading characteristics of the security, the size of the order, the likelihood of execution, the accessibility of the market, and any customer instructions in selecting the market most likely to provide the most favorable price? Do broker-dealers' policies and procedures address how they reasonably balance the likelihood of obtaining better prices with the risk that delay could result in a worse price, in determining the number and sequencing of markets to be assessed?

58. Do commenters believe that the Commission should provide staggered compliance dates for proposed Rule 1101(a)(2) for broker-dealers of different sizes, if the Commission adopts proposed Regulation Best Execution? For example, should the Commission provide longer compliance dates for smaller broker-dealers? If so, should the Commission define a smaller broker-dealer as a broker-dealer that qualifies as a ''small entity'' under the Regulatory Flexibility Act pursuant to 17 CFR 240.0–10(c) for this purpose? [181] Or should the Commission define a smaller broker-dealer in a different way? Please explain.

C. Proposed Rule 1101(b)—Policies and Procedures and Documentation for Conflicted Transactions

Proposed Rule 1101(b) would require a broker-dealer's best execution policies and procedures to address additional considerations with respect to ''conflicted transactions.'' It would also require a broker-dealer to document its compliance with the proposed best execution standard for conflicted transactions and document any arrangement concerning payment for order flow.

Proposed Rule 1101(b) would define a ''conflicted transaction'' for purposes of proposed Regulation Best Execution as any ''transaction for or with a retail customer'' where a broker-dealer: (i) executes an order as principal, including riskless principal; [182] (ii) routes an order to, or receives an order from, an affiliate for execution; or (iii) provides or receives payment for order flow as defined in Rule 10b–10(d)(8) under the Exchange Act.[183] For purposes of paragraph (b), ''affiliate'' would be defined by proposed Rule 1101(b)(4)(iii) as, with respect to a specified person, any person that, directly or indirectly, controls, is under common control with, or is controlled by, the specified person. ''Control'' would be defined for purposes of the proposed definition of ''affiliate'' by proposed Rule 1101(b)(4)(iii) as the power, directly or indirectly, to direct the management or policies of the broker-dealer whether through ownership of securities, by contract, or otherwise. A person is presumed to control a broker-dealer if that person is a director, general partner, or officer exercising executive responsibility (or having similar status or performing similar functions); directly or indirectly has the right to vote 25 percent or more of a class of voting securities or has the power to sell or direct the sale of 25 percent or more of a class of voting securities of the broker-dealer; or in the case of a partnership, has contributed, or has the right to receive upon dissolution, 25 percent or more of the capital of the broker-dealer.[184] In each of these types of conflicted transactions, the broker-dealer has a financial interest that could disincentivize the broker-dealer from achieving best execution for its customer's orders.[185] Accordingly, the Commission proposes to require more robust policies and procedures, as well as documentation, for conflicted transactions with retail customers to better address these disincentives.

Proposed Rule 1101(b) would apply to conflicted transactions for or with a retail customer, and proposed Rule 1101(b)(4)(i) would define a ''transaction for or with a retail customer'' as any transaction for or with the account of a natural person or held in legal form on behalf of a natural person or group of related family members. The proposed definition's limitation to accounts of natural persons is consistent with existing rules that are designed to identify the orders of individual investors. For example, the definition of ''retail customer'' in the

[181] *See supra* note 151 and accompanying text (describing the broker-dealers that qualify as small entities under the Regulatory Flexibility Act).

[182] For purposes of proposed Rule 1101(b), a broker-dealer would be executing an order as ''riskless principal'' if, after having received an order to buy from a customer, the broker-dealer purchases the security from another person to offset a contemporaneous sale to the customer or, after having received an order to sell, the broker-dealer sells the security to another person to offset a contemporaneous purchase from the customer. *See also,* Exchange Act Rule 3a5–1; U.S. Securities and Exchange Commission, Report on the Municipal Securities Market (July 31, 2012) *available at https://www.sec.gov/news/studies/2012/munireport073112.pdf.* The Commission preliminarily believes that it is appropriate to include riskless principal transactions as a type of conflicted transactions because of the variability of markups and markdowns associated with riskless principal transactions, which impacts the ultimate price paid by the customer (*i.e.,* the ultimate execution received by the customer) and often is not known to the customer prior to transacting. *See, e.g.,* John M. Griffin, et al., *supra* note 66.

[183] *See supra* note 43 (setting forth the definition of ''payment for order flow'' under Rule 10b–10(d)(8)). Given the widespread use of the Rule 10b–10(d)(8) definition of ''payment for order flow'' and the collective understanding of the term by market participants, the Commission proposes to use the existing Rule 10b–10(d)(8) definition in proposed Regulation Best Execution. As reflected in this definition, payment for order flow would include any payments from a wholesaler to a retail broker-dealer in return for order flow. It would also include any exchange rebates paid to a broker-dealer in return for sending orders to the exchange. When all payment for order flow for a customer order from a particular market is passed through to the customer and the broker-dealer retains no part of the payment for order flow associated with that customer order, the broker-dealer would not be engaging in a conflicted transaction under proposed Rule 1101(b) with respect to that customer order.

[184] These definitions are substantially the same as the definitions of ''affiliate'' and ''control'' prescribed for purposes of the disclosures required of an ATS that trades NMS stocks (''NMS Stock ATS'') about its operations on Form ATS–N with the following modifications: the Form ATS–N definition of ''affiliate'' uses a separately-defined term ''Person'' instead of the statutory definition of ''person,'' and Form ATS–N defines ''control'' as applicable to the ''broker-dealer of the alternative trading system'' instead of as applicable to a ''broker or dealer.'' The Commission believes that it would be appropriate to use substantially similar definitions of ''affiliate'' and ''control'' in the context of proposed Rule 1101(b) because, for purposes of Form ATS–N, the Commission defined such terms for use with respect to disclosures designed to enable market participants to better evaluate how relationships between certain persons could affect the handling of orders on a particular NMS Stock ATS. *See* Securities Exchange Act Release No. 83663 (July 18, 2018), 83 FR 38768 (Aug. 7, 2018). The substantially similar proposed definitions, as used in the context of proposed Rule 1101(b), are similarly designed to recognize that relationships among certain persons may impact the handling of orders, and are designed to help ensure that broker-dealers that have conflicts of interest in their order handing are subject to additional obligations under proposed Rule 1101(b).

[185] *See generally* section III.A.2 (discussing in more detail these conflicts of interest); *see also* 2022 Report on FINRA's Examination and Risk Monitoring Program 45 (Feb. 2022), *available at https://www.finra.org/sites/default/files/2022-02/2022-report-finras-examination-risk-monitoring-program.pdf* (describing FINRA exam findings, including firms not considering and addressing potential conflicts of interest relating to routing orders to affiliated broker-dealers, affiliated ATSs, or market centers that provide routing inducements, such as payment for order flow from wholesale market makers and exchange liquidity rebates).

Commission's Regulation Best Interest rule is limited to a ''natural person.'' [186] Moreover, several national securities exchanges operate programs for trading ''retail'' orders that are limited to accounts of natural persons or certain accounts on behalf of natural persons.[187] The proposed definition of retail customer is also consistent with FINRA's rule for certain trade reporting.[188] Proposing a definition of retail customer that is similar to existing Commission and SRO rules would facilitate compliance with proposed Rule 1101(b) and help mitigate the costs of compliance because broker-dealers would already be familiar with identifying orders for the accounts of natural persons, or for related accounts, in these other contexts.

In addition to the accounts of natural persons, the proposed definition of ''transaction for or with a retail customer'' would cover accounts held in legal form on behalf of a natural person or a group of related family members. A ''group of related family members'' would be defined broadly in proposed Rule 1101(b)(4)(i) to include a group of natural persons with any of the following relationships: child, stepchild, grandchild, great grandchild, parent, stepparent, grandparent, great grandparent, spouse, domestic partner, sibling, stepbrother, stepsister, niece, nephew, aunt, uncle, mother-in-law, father-in-law, son-in-law, daughter-in-law, brother-in-law, or sister-in-law, including adoptive and foster relationships; and any other natural person (other than a tenant or employee) sharing a household with any of the foregoing natural persons. This proposed definition is broad so as not to restrict the types of arrangements that may be set up to benefit family groups, including individual retirement accounts, corporations, and limited liability companies for the benefit of related family members.

Proposed Rule 1101(b) would create new requirements for broker-dealers' conflicted transactions that are not currently required by FINRA or the MSRB. Because a broker-dealer engaging in conflicted transactions for or with retail customers has an incentive to handle those orders in a manner that prioritizes its own interests over its customers' interests, the Commission preliminarily believes that, correspondingly, additional policies and procedures elements and documentation requirements should apply to such transactions in order to help mitigate the potential for these incentives to negatively affect the broker-dealer's best execution determinations. The Commission preliminarily believes that proposed Rule 1101(b) would help broker-dealers to comply with the proposed best execution standard with respect to conflicted transactions, because it would require heightened attention by broker-dealers for conflicted transactions and would require broker-dealers to document the basis for their determinations that, despite the conflicts of interest, they have complied with the best execution standard for their conflicted transactions.

The Commission also preliminarily believes that retail customers generally would benefit more than non-retail customers from the more robust conflicted transactions requirements because retail customers are likely to have fewer resources for evaluating the best execution practices of their broker-dealers than non-retail customers. For example, institutional customers likely have additional knowledge, experience, and analytical resources as compared to retail customers and, thus, are more readily able to evaluate the impact of their broker-dealers' conflicted transactions. In contrast, retail customers are less likely to have the same level of knowledge, experience, and resources to make such evaluations.

Request for Comment

The Commission requests comment on the types of conflicted transactions under proposed Rule 1101(b), and in particular:

59. Is it appropriate for proposed Rule 1101(b) to incorporate the definition of ''payment for order flow'' from Exchange Act Rule 10b–10(d)(8)? Why or why not? If not, how should ''payment for order flow'' be defined for purposes of proposed Regulation Best Execution? Please describe any alternative definition and explain why such definition would be appropriate.

60. Does proposed Rule 1101(b) appropriately identify the conflicts of interest of broker-dealers that are most relevant to the handling of retail customer orders? If not, why not? Are there other conflicted transactions that should be included in proposed Rule 1101(b) or are there transactions that are included that should be omitted? If so, please explain.

61. Should the principal trading conflict identified in proposed Rule 1101(b) include riskless principal trades with customers, as proposed? Why or why not? If riskless principal trades should be included, should they be defined as proposed—after having received an order to buy from a customer, the broker-dealer purchases the security from another person to offset a contemporaneous sale to the customer or, after having received an order to sell, the broker-dealer sells the security to another person to offset a contemporaneous purchase from the customer—similar to the definition of riskless principal in Exchange Act Rule 3a5–1? Why or why not?

62. Should the Commission provide an exemption from the definition of conflicted transactions for certain types of riskless principal trades? For example, should the Commission exempt from the definition of ''riskless principal'' in proposed Rule 1101 (b)(4)(ii) trades where the broker-dealer discloses to its customer the markup or markdown that it charges on these trades on a pre-trade basis? Please explain. If this type of exemption should be provided, what would be an appropriate method of pre-trade markup or markdown disclosure by the broker-dealer? For example, would it be appropriate for the broker-dealer to disclose a markup or markdown schedule in a readily accessible place such as its website? Please explain.

63. Alternatively, should the Commission exempt from the definition of ''riskless principal'' in proposed Rule

[186] 17 CFR 240.15l–1(b)(1) (defining ''retail customer'' to mean, among other things, a natural person who receives a recommendation of any securities transaction from a broker or dealer and uses the recommendation primarily for personal, family, or household purposes). Proposed Rule 1101(b) does not incorporate all of the definition of ''retail customer'' in Regulation Best Interest because that definition is limited to scenarios where a person receives and uses a recommendation. In contrast, proposed Rule 1101(b) and the proposed standard of best execution are not limited to scenarios where a person receives and uses a recommendation.

[187] *See, e.g.,* Investors Exchange LLC Rule 11.190(b)(15) (providing, among other things, that ''[a] Retail order must reflect trading interest of a natural person'' and that ''[a]n order from a retail customer can include orders submitted on behalf of accounts that are held in a corporate legal form—such as an Individual Retirement Account, Corporation, or a Limited Liability Company—that have been established for the benefit of an individual or group of related family members, provided that the order is submitted by an individual''); The Nasdaq Stock Market LLC, Equity 7, Section 118 (defining a ''Designated Retail Order'' as originating from a ''natural person'' and explaining that ''[a]n order from a 'natural person' can include orders on behalf of accounts that are held in a corporate legal form—such as an Individual Retirement Account, Corporation, or a Limited Liability Company—that has been established for the benefit of an individual or group of related family members, provided that the order is submitted by an individual'').

[188] FINRA Rule 7620A.01 (defining a ''retail order'' as originating from a ''natural person'' and explaining that ''[a]n order from a 'natural person' can include orders on behalf of accounts that are held in a corporate legal form, such as an Individual Retirement Account, Corporation, or a Limited Liability Corporation that has been established for the benefit of an individual or group of related family members, provided that the order is submitted by an individual'').

1101(b)(4)(ii) trades where the contemporaneous purchases and sales are executed at the same price resulting in a transaction with the customer that does not include any markup or markdown? Please explain. In these types of transactions, how would the broker-dealer be compensated by the customer? Would it charge a commission that is separately disclosed to the customer on the confirmation? Would the customer know the commission that it would pay the broker-dealer prior to engaging in the transaction?

64. Is the proposed definition of a ''transaction for or with a retail customer'' in Rule 1101(b)(4)(i), which would include accounts held in legal form on behalf of a natural person or a group of related family members, appropriate? Why or why not? Should the proposed definition be broadened or narrowed? If so, please explain how the definition should be broadened or narrowed and why.

65. Is the proposed definition of ''group of related family members'' in proposed Rule 1101(b)(4)(i) appropriate? Why or why not? Should it be more or less inclusive, and if so, in what regard? Please explain. For example, instead of capturing a group of natural persons with ''any'' of the relationships in the proposed definition (child, stepchild, grandchild, great grandchild, parent, stepparent, grandparent, great grandparent, spouse, domestic partner, sibling, stepbrother, stepsister, niece, nephew, aunt, uncle, mother-in-law, father-in-law, son-in-law, daughter-in-law, brother-in-law, or sister in law, including adoptive and foster relationships; and any other natural person (other than a tenant or employee) sharing a household with any of the foregoing natural persons), should the proposed definition be limited to a group of natural persons consisting ''only'' of those relationships?

66. Should the definition of a ''transaction for or with a retail customer'' exclude a transaction with a ''family office,'' which is defined in Rule 202(a)(11)(G)–1(b) under the Investment Advisers Act of 1940 as a company (including its directors, partners, members, managers, trustees, and employees acting within the scope of their position or employment) that: (1) has no clients other than family clients (as defined in the rule) (provided that if a person that is not a family client becomes a client of the family office as a result of the death of a family member or key employee (as defined in the rule) or other involuntary transfer from a family member or key employee, that person shall be deemed to be a family client for purposes of the rule for one year following the completion of the transfer of legal title to the assets resulting from the involuntary event); (2) is wholly owned by family clients and is exclusively controlled (directly or indirectly) by one or more family members and/or family entities; and (3) does not hold itself out to the public as an investment adviser? Why or why not?

67. Alternatively, should the definition of a ''transaction for or with a retail customer'' only exclude a subset of ''family offices''? For example, should it exclude a family office (as defined above) that (1) has one or more experienced securities or financial services professionals, (2) manages a threshold level of total assets (*e.g.,* $50 million or more) that are indicative of an institutional account, (3) has the capacity to evaluate independently the execution quality received from the broker-dealer, and (4) has professionals who are independent representatives of their family clients? Please explain.

68. Is the proposed definition of an ''affiliate'' in proposed Rule 1101(b)(4)(iii) appropriate? Why or why not? Should the proposed definition be broadened or narrowed? If so, please explain how the definition should be broadened or narrowed and why.

69. Is the proposed definition of ''control'' for purposes of the proposed definition of ''affiliate'' in proposed Rule 1101(b)(4)(iii) appropriate? Why or why not? Should the proposed definition be broadened or narrowed? If so, please explain how the definition should be broadened or narrowed and why.

70. Should some or all institutional customers' orders also have the protections afforded by proposed Rule 1101(b)? Please explain. If only certain categories of institutional customers' orders should also have the protections afforded by proposed Rule 1101(b), how should the Commission identify and define the institutional customers' orders that should benefit?

71. Should the size of institutional customers be considered when determining whether or not they should be afforded the protections of proposed Rule 1101(b)? If so, what would be the appropriate metric to identify such institutional customers? For example, should the Commission consider the amount of assets under management when determining which institutional customers should be afforded the protections of proposed Rule 1101(b)?

72. If the Commission were to apply the protections of proposed Rule 1101(b) to conflicted transactions for or with institutional customers, should it define ''institutional customer'' as any person that does not qualify as a QIB?[189] Should it define ''institutional customer'' to include any person that qualifies as a QIB? Or should it define ''institutional customer'' to include a broader set of institutional customers than the QIB definition, such as those entities that are included in the FINRA definition of ''institutional account'' under FINRA Rule 4512(c)?[190]

73. Do commenters believe there is another definition of ''institutional customer'' that would be more appropriate if the Commission were to apply the protections of proposed Rule 1101(b) to conflicted transactions for or with institutional customers? Please explain.

74. If institutional customers' orders should be afforded the additional protections, are some or all of the conflicts of interest identified in proposed Rule 1101(b) also relevant for institutional customers? Are there other conflicts of interest relevant for institutional customers that should be included in proposed Rule 1101(b)? Please explain.

75. If institutional customers' orders should be afforded the additional protections, should all the requirements under proposed Rule 1101(b) be extended to institutional customers' orders, or should only certain of the requirements be extended to institutional customers' orders? Should the Commission include other requirements for the protection of institutional customers' orders? Please explain.

1. Proposed Rules 1101(b)(1) and (2)—Policies and Procedures for Conflicted Transactions

Proposed Rules 1101(b)(1) and (2) would require a broker-dealer's best execution policies and procedures to address the following with respect to conflicted transactions: (1) how the broker-dealer will obtain and assess information beyond that required by proposed Rule 1101(a)(1)(i), including additional information about price, volume, and execution quality, in identifying a broader range of markets beyond those identified as material potential liquidity sources; and (2) how the broker-dealer will evaluate a broader range of markets, beyond those identified as material potential liquidity sources, that might provide the most favorable price for customer orders,

[189] *See supra* note 124 (providing the definition of QIB under Rule 144A under the Securities Act of 1933).

[190] *See supra* note 125 and accompanying text (describing the definition of institutional account in FINRA Rule 4512(c)).

including a broader range of order exposure opportunities and markets that may be smaller or less accessible.

Proposed Rule 1101(b) is not designed to eliminate order handling conflicts of interest, and does not ban conflicted transactions. However, because a broker-dealer engaging in conflicted transactions for or with retail customers has an incentive to handle those orders in a manner that prioritizes its own interests over its customers' interests, the Commission preliminarily believes that, correspondingly, such transactions should be subject to more robust policies and procedures in order to help mitigate the potential for these incentives to negatively affect the broker-dealer's best execution determinations. Specifically, to help ensure that a broker-dealer exercises the reasonable diligence required by proposed Rule 1100 despite its incentives not to, a broker-dealer would be required to have policies and procedures that are specific to conflicted transactions to address how it will assess information beyond what is required for non-conflicted transactions and how it will identify and evaluate of a broader set of liquidity sources than for non-conflicted transactions. These policies and procedures are designed to help ensure that a broker-dealer exercises additional diligence in considering relevant information and identifying the best market for customer orders, despite their conflicts of interest.

Specifically, proposed Rule 1101(b)(1) would require a broker-dealer's policies and procedures for conflicted transactions to address how it will obtain and assess information beyond what it would obtain and assess for non-conflicted transactions, including additional information about price, volume, and execution quality, in identifying a broader range of markets beyond those identified as material potential liquidity sources. While a broker-dealer would use reasonably accessible information in identifying material potential liquidity sources for non-conflicted transactions, a broker-dealer would additionally be required to consider how it would use information beyond what it used for non-conflicted transactions in identifying a broader range of markets beyond material potential liquidity sources for conflicted transactions.[191]

Proposed Rule 1101(b)(2) would require a broker-dealer's policies and procedures for conflicted transactions to address how it will evaluate a broader range of markets, beyond those identified as material potential liquidity sources, that might provide the most favorable price for retail customer orders, including a broader range of order exposure opportunities and markets that may be smaller or less accessible than those identified as material potential liquidity sources. Because a broker-dealer may have a financial incentive to engage in conflicted transactions, it may have an incentive to more quickly conclude that the conflicted transactions represent the best market and thus execute the trade in a conflicted transaction. Accordingly, the proposed rule would require a broker-dealer to have policies and procedures that reflect additional efforts to identify a broader range of markets, including a broader range of order exposure opportunities, that may provide retail customers with the most favorable price and the establishment of order handling, routing, and execution arrangements with this broader range of potential liquidity sources.[192]

Request for Comment

The Commission requests comment on all aspects of proposed Rules 1101(b)(1) and (2), and in particular:

76. Do proposed Rules 1101(b)(1) and (2) represent an appropriate approach to addressing conflicted transactions? Why or why not?

77. Should a broker-dealer be required to establish, maintain, and enforce best execution policies and procedures for conflicted transactions that address the additional requirements under proposed Rules 1101(b)(1) and (2)? Why or why not?

78. Should a broker-dealer's policies and procedures for conflicted transactions be required to address how it will obtain and assess information beyond what it would obtain and assess for non-conflicted transactions, including additional information about price, volume, and execution quality, in identifying a broader range of markets beyond the material potential liquidity sources? Why or why not?

79. Should a broker-dealer's policies and procedures for conflicted transactions be required to address how it will evaluate a broader range of markets beyond material potential liquidity sources, including a broader range of order exposure opportunities and markets that may be smaller or less accessible? Why or why not?

80. Would retail customers benefit from potentially having their orders exposed by a broker-dealer to a broader array of liquidity sources where the broker-dealer would have a conflict of interest? Why or why not?

81. Should proposed Rules 1101(b)(1) and (2) include different or additional requirements for conflicted transactions in different asset classes? Please explain.

82. What challenges, if any, would broker-dealers encounter in implementing proposed Rules 1101(b)(1) and (2)? Please explain.

83. Do commenters believe that the Commission should provide staggered compliance dates for proposed Rules 1101(b)(1) and (2) for broker-dealers of different sizes, if the Commission adopts proposed Regulation Best Execution? For example, should the Commission provide longer compliance dates for smaller broker-dealers? If so, should the Commission define a smaller broker-dealer as a broker-dealer that qualifies as a ''small entity'' under the Regulatory Flexibility Act pursuant to 17 CFR 240.0–10(c) for this purpose?[193]

[191] Proposed Rule 1101(b) would require a broker-dealer to consider a broader range of markets for conflicted transactions than non-conflicted transactions. In doing so, the broker-dealer may need to obtain and assess information beyond what it obtains and assesses for non-conflicted transactions. It is possible, however, that a broker-dealer obtains and assesses information beyond what is needed to identify material potential liquidity sources for non-conflicted transactions, including information concerning markets that it did not identify as material potential liquidity sources. Under these circumstances, the information the broker-dealer obtained and assessed for non-conflicted transactions may include information beyond what is required by proposed Rule 1101(a)(1), and this information may be sufficient for it to identify a broader set of markets beyond those identified as material potential liquidity sources. *See also supra* note 132 and accompanying text.

[192] For example, a retail broker-dealer, in accordance with its policies and procedures related to the identification of material potential liquidity sources as required by proposed Rule 1101(a), may have evaluated a certain number of markets and identified a subset of those markets as material potential liquidity sources for non-conflicted transactions. For conflicted transactions, the broker-dealer, in accordance with its policies and procedures for conflicted transactions, would additionally evaluate some of the markets that it did not identify as material potential liquidity sources for non-conflicted transactions. Conflicted transactions, such as routing orders to an affiliated ATS for execution, may involve financial incentives for the broker-dealer and could result in the broker-dealer prioritizing its own interests over its customers' interests. The additional requirements of proposed Rule 1101(b) are designed to help ensure that the broker-dealer exercises reasonable diligence for conflicted transactions in light of these incentives. As stated above, proposed Rule 1101(a)(1)(ii) would not prescribe the minimum number of markets that a broker-dealer would need to identify as material potential liquidity sources. *See supra* section IV.B.1. Rather, as stated above, the Commission believes that the identification of these markets could be influenced by the nature of the broker-dealer's business operation and customer order flow, such as whether it handles institutional or retail orders. *See id.*

[193] *See supra* note 151 and accompanying text (describing the broker-dealers that qualify as small entities under the Regulatory Flexibility Act).

Or should the Commission define a smaller broker-dealer in a different way? Please explain.

2. Proposed Rule 1101(b)(3)—Documentation for Conflicted Transactions

Proposed Rule 1101(b)(3) would require a broker-dealer to document its compliance with the best execution standard for conflicted transactions, including all efforts taken to enforce its policies and procedures for conflicted transactions and the basis and information relied on for its determination that such conflicted transactions would comply with the best execution standard. Proposed Rule 1101(b)(3) would require that such documentation be done in accordance with written procedures.

The Commission understands that broker-dealers currently differ in documentation practices relating to their compliance with their duty of best execution, and some broker-dealers currently retain information that allows them to recreate the prices that were available at the time of an execution. While proposed Rule 1101(b)(3) would not require a broker-dealer to document its compliance with the best execution standard with respect to its conflicted transactions in any specific way, the broker-dealer would need to document all efforts taken to enforce its policies and procedures for its conflicted transactions [194] and to demonstrate the basis and information relied on for its determination that its conflicted transactions would comply with the best execution standard.[195] Proposed Rule 1101(b)(3) also would not prescribe the manner in which a broker-dealer would need to document its compliance with the proposed best execution standard, and the Commission preliminarily believes that the manner of documentation may vary depending on various considerations specific to the broker-dealer, such as the nature of its customers and the characteristics of the securities traded. The Commission preliminarily believes that, in connection with documenting its compliance with the proposed best execution standard and its best execution determinations for conflicted transactions, the broker-dealer could document the prices received from those markets that it checked pursuant to its policies and procedures. The Commission preliminarily believes that such information could serve as a basis for demonstrating a broker-dealer's best execution efforts and determinations, and broker-dealers already maintain much of this information pursuant to existing regulatory or operational requirements.[196]

The proposed documentation requirement, including the obligation to document pursuant to written procedures, would assist broker-dealers in complying with proposed Regulation Best Execution and regulators in overseeing broker-dealers' compliance. As stated above in this section, while the Commission understands that some broker-dealers retain information that allows them to recreate the prices that were available at the time of an execution (for example, in response to a regulatory inquiry), the Commission understands that broker-dealers have varying degrees of documentation with respect to their best execution practices. By specifically requiring all broker-dealers that engage in conflicted transactions to document their compliance with the proposed best execution standard, including all efforts to enforce their policies and procedures, and the basis and information relied on for their determinations that the conflicted transactions would comply with the best execution standard, such broker-dealers would be required to collect important information concerning the application of their best execution process. This information may help broker-dealers better evaluate the effectiveness of their best execution policies and procedures, including their order handling practices. Moreover, by requiring that the documentation be conducted pursuant to written procedures, the proposed rule would help ensure that all broker-dealers that engage in conflicted transactions (and any applicable associated persons of such broker-dealers) document their compliance with the best execution standard in a consistently robust manner.[197] Similarly, the proposed documentation requirement would help ensure that regulators have access to a consistent and minimum level of information in overseeing broker-dealers' efforts to satisfy the best execution standard in proposed Rule 1100 with respect to conflicted transactions with retail customers.

Proposed Rule 1101(b)(3) would also require a broker-dealer to document any arrangement, whether written or oral, concerning payment for order flow, including but not limited to the parties to the arrangement, all qualitative and quantitative terms concerning the arrangement,[198] and the date and terms of any changes[199] to the arrangement.[200] This proposed documentation requirement would complement the other requirements of proposed Rule 1101(b), and could facilitate a broker-dealer's understanding of the effect of such arrangements on its order handling and execution practices, and more broadly, on its compliance with the best execution standard and proposed Rules

[194] A failure to have the policies and procedures required by proposed Rule 1101(b) that are applicable to all conflicted transactions, or a failure to enforce such policies and procedures, would be a violation of proposed Regulation Best Execution.

[195] This proposed documentation requirement would differ from proposed Rule 1101(a), which would more generally require the broker-dealer's policies and procedures to be reasonably designed to comply with the best execution standard and to address a number of specified elements.

[196] The Commission preliminarily believes that this documentation would be similar to many of the records that broker-dealers currently maintain pursuant to regulatory requirements, such as trade-through prohibitions and the National Market System Plan Governing the Consolidated Audit Trail (''CAT Plan'') reporting. For example, the CAT Plan requires a broker-dealer to report the entire lifecycle of an order. *See* CAT Plan, Appendix C, Section A. 2 (3); *See also* Rule 613(c)(1) of Regulation NMS, 17 CFR 242.613(c)(1) (stating that the CAT plan must provide for an accurate, time-sequenced record of orders beginning with the receipt or origination of an order by a member of a national securities exchange or national securities association, and document the life of the order through the process of routing, modification, cancellation, and execution (in whole or in part) of the order). This order lifecycle information that today is reported to the CAT Plan could include information that is relevant for the documentation provision of proposed Rule 1101(b). For example, in documenting the markets checked, a broker-dealer that routes customer orders to markets in an attempt to access midpoint liquidity could retain records concerning the markets it pinged for potential midpoint executions.

[197] For example, the written procedures concerning documentation could describe the obligations of various personnel within the broker-dealer with respect to this documentation requirement.

[198] Qualitative and quantitative terms would include any terms that impact the variability or establish a condition concerning payment for order flow. These could include, for example, any terms based on the characteristics of an order (*e.g.,* size, marketability, held or not held, special order handling instructions, whether the order is a complex options order) and the type of security involved (*e.g.,* whether the security is in the S&P 500 Index, ETF) or the price of a security.

[199] The proposed rule would require a broker-dealer to document the date and terms of any changes to an existing payment for order flow arrangement.

[200] This proposed requirement would apply whether or not there is any contractual obligation associated with the payment for order flow arrangement, and is intended to capture payment for order flow arrangements between broker-dealers and between broker-dealers and other markets, such as exchanges. Such documentation would be required in any scenario where payment for order flow is actually made or received by a broker-dealer. This proposed documentation requirement would also apply to rebates paid by an exchange to a broker-dealer in return for routing orders to the exchange. For example, a broker-dealer must document the specific rebate tiers that it qualifies for with respect to each exchange from which it receives payment for order flow. Furthermore, should a broker-dealer have an arrangement with an exchange for the establishment of a tier aimed at earning that broker-dealer's order flow, the broker-dealer must document that arrangement.

1100–1102. This proposed requirement would also help ensure that regulators have fuller and more efficient access to details regarding broker-dealers' payment for order flow arrangements,[201] which in turn should facilitate regulators' oversight of broker-dealers' compliance with the proposed rules by providing more context with respect to broker-dealers' operations, business model, and order handling and execution practices.

Request for Comment

The Commission requests comment on all aspects of the proposed documentation requirement under proposed Rule 1101(b)(3), and in particular:

84. Are the proposed documentation requirements appropriate? Why or why not?

85. Should such documentation requirements apply only to broker-dealers' conflicted transactions? Alternatively, should they apply to all transactions, including non-conflicted transactions? Or should they apply to all conflicted transactions and to a subset of non-conflicted transactions? Please explain.

86. Should such documentation be required to be done pursuant to written procedures? Please explain.

87. As proposed, a broker-dealer would need to document, for its conflicted transactions, its compliance with the best execution standard, including all efforts taken to enforce its best execution policies and procedures for conflicted transactions and the basis and information relied on for its determinations that the conflicted transactions would comply with the best execution standard. What challenges, if any, would a broker-dealer encounter in complying with the proposed documentation requirements? Would such challenges differ based on the type of security being traded or the type of broker-dealer engaging in the conflicted transactions? Please explain.

88. Do commenters agree with the Commission's understanding that broker-dealers have varying degrees of documentation with respect to their best execution practices? Why or why not?

89. Should the proposed documentation requirements apply only to certain types of conflicted transactions or for all types of conflicted transactions? Please explain.

90. Should broker-dealers in the NMS stock and listed options markets be subject to the documentation requirements for the orders they execute on a principal basis, or for which they have paid or received payment for order flow, or routed to an affiliate, as proposed? Why or why not?

91. Should broker-dealers in the corporate and municipal bond markets and government securities markets be subject to the documentation requirements for the orders they execute on a principal basis, as proposed? Why or why not?

92. Are there other aspects of the proposed additional requirements for a broker-dealer's policies and procedures for conflicted transactions that should also be required to be documented? Please explain.

93. Are there practices other than the proposed additional requirements for conflicted transactions that should be required to be documented? Please explain.

94. Should a broker-dealer be required to document any payment for order flow arrangement, whether written or oral, as proposed? Why or why not? If so, should such documentation requirements include the parties to the arrangement, all qualitative and quantitative terms concerning the arrangement, and the date and terms of any changes to the arrangement? Why or why not? Are there other aspects of the arrangements that should also be included in the documentation requirement? If so, please describe.

95. Are there other types of arrangements involving conflicted transactions that should also be subject to a documentation requirement? Please explain.

96. Do commenters believe that the Commission should provide staggered compliance dates for proposed Rule 1101(b)(3) for broker-dealers of different sizes, if the Commission adopts proposed Regulation Best Execution? For example, should the Commission provide longer compliance dates for smaller broker-dealers? If so, should the Commission define a smaller broker-dealer as a broker-dealer that qualifies as a ''small entity'' under the Regulatory Flexibility Act pursuant to 17 CFR 240.0–10(c) for this purpose?[202] Or should the Commission define a smaller broker-dealer in a different way? Please explain.

3. Application of Proposed Rule 1101(b) to NMS Stock Market Conflicts of Interest

Broker-dealers that engage in conflicted transactions for or with retail customers in NMS stocks would be required to comply with the additional policies and procedures requirements under proposed Rule 1101(b). For example, a retail broker-dealer that receives payment for order flow from a wholesaler would need to establish, maintain, and enforce policies and procedures to address how it will evaluate additional liquidity sources that the broker-dealer would not need to evaluate if it did not receive payment for order flow. Therefore, in connection with a determination of whether to route customer orders to the wholesaler that pays for order flow, the retail broker-dealer could evaluate other exchanges, ATSs, or order exposure opportunities that may not have been determined by the retail broker-dealer to be material potential liquidity sources for non-conflicted transactions under proposed Rule 1101(a)(1).

Retail broker-dealers that receive payment for order flow for retail customer orders must also comply with the documentation requirement under proposed Rule 1101(b)(3). For example, to the extent a retail broker-dealer attempts to execute customer orders prior to sending them to a wholesaler in return for payment, it could document such efforts by, for example, retaining a record of the markets at which it attempted to execute customer orders at prices better than the NBBO (*e.g.,* markets pinged for midpoint liquidity),[203] or documenting how it otherwise used reasonable diligence in assessing whether those markets may be the best market for customer orders. For retail nonmarketable orders routed to markets (*e.g.,* exchanges) that pay rebates for those orders, a retail broker-dealer would need to document its basis for determining that routing orders to such markets would comply with the best execution standard, as well as the information relied on for such determination. It could do so by, for example, documenting its assessment of fill rates and the likelihood of execution for nonmarketable orders at such

[201] Existing Commission rules, such as Rule 10b–10(d)(8), 17 CFR 240.10b–10(d)(8), and Rule 606 under Regulation NMS, 17 CFR 242.606, do not require the same level of detail with respect to the payment for order flow practices of broker-dealers that would be required under proposed Rule 1101(b)(3).

[202] *See supra* note 151 and accompanying text (describing the broker-dealers that qualify as small entities under the Regulatory Flexibility Act).

[203] *See supra* note 196 (describing records and documentations under the CAT Plan). As discussed above in section IV.C.2, proposed Rule 1101(b)(3) would not require a broker-dealer to document its efforts to comply with the best execution standard with respect to its conflicted transactions in any specific way. However, the broker-dealer would need to document in accordance with its written procedures the basis and information relied on for its determination that its conflicted transactions would comply with the best execution standard.

markets as compared to other markets that do not provide such rebates.

Furthermore, in documenting its determination that transactions that are conflicted due to payment for order flow from a wholesaler would comply with the best execution standard, a retail broker-dealer could document its process for evaluating and routing to wholesalers that pay it for order flow, including its assessment of wholesaler performance and any price improvement commitments. Additionally, a retail broker-dealer would be required to document its determination that customer transactions for which it receives payment for order flow would comply with the best execution standard.[204] A retail broker-dealer could do this by, for example, soliciting price improvement commitments from wholesalers for customer orders in the absence of payment for order flow and comparing those commitments to the price improvement commitments that the wholesaler would make if it were to pay the retail broker-dealer for order flow, and documenting these efforts. Finally, as described above in section IV.C.2, a retail broker-dealer would be required to document any arrangement concerning payment for order flow.

A wholesaler that executes customer orders in a principal capacity or pays a retail broker-dealer for order flow would also be required to document its compliance with the best execution standard for conflicted transactions.[205] For example, a wholesaler could document the prices received from those markets that it checked pursuant to its policies and procedures, such as by retaining a record of the markets at which it attempted to execute customer orders at prices better than the NBBO (*e.g.,* markets pinged for midpoint liquidity)[206] and by retaining records of market data feeds that the wholesaler uses when handling retail customer orders. A wholesaler could also document how it otherwise used reasonable diligence in its best execution determinations. For retail nonmarketable orders routed to markets that pay rebates for those orders, a wholesaler could document its basis for determining that routing to such markets would comply with the best execution standard and the information relied on for such determination by, for example, documenting its assessment of fill rates and the likelihood of execution for nonmarketable orders at such markets as compared to other markets that do not provide such rebates.

The wholesaler would also be required to document any arrangement concerning payment for order flow as described above in section IV.C.2. Furthermore, the wholesaler would be required to document its determination that its transactions with customer orders that were sent to it in return for payment would comply with the best execution standard. For example, a wholesaler could document that it provides the same price improvement to the customers of retail broker-dealers to which it does not pay for order flow that it provides to the customers of broker-dealers to which it pays for order flow.

4. Application of Proposed Rule 1101(b) to the Options Market

As discussed above, payment for order flow, principal trading, and affiliated routing conflicts of interest in the execution of retail customer orders also exist in the options market.[207] Under proposed Rule 1101(b), a wholesaler that pays for order flow or transacts with retail customers in a principal capacity would need to establish, maintain, and enforce policies and procedures for conflicted transactions that address how it will obtain and assess information beyond that required by proposed Rule 1101(a)(1)(i) and evaluate a broader range of liquidity sources, including a broader range of order exposure opportunities, which could include an evaluation of whether any price improvement auctions may provide an opportunity to execute a customer order at a price that is better than the displayed best bid and offer.[208]

Under proposed Rule 1101(b)(3), a wholesaler that engages in conflicted transactions would also be required to document, in accordance with written procedures, its compliance with the best execution standard for such conflicted transactions, including all efforts to enforce its policies and procedures for conflicted transactions and the basis and information relied on for its determinations that such conflicted transactions would comply with the best execution standard. For example, as with conflicted transactions in NMS stocks, a wholesaler could document the prices received from those markets that it checked pursuant to its policies and procedures, such as by retaining records of market data feeds that the wholesaler uses when handling retail customer orders. The wholesaler's documentation could also include a description of its decision making process for routing retail customer orders to execute against the wholesaler's or its affiliates' displayed prices on exchanges and when it chooses to execute through a price improvement auction that may provide an opportunity for price improvement. For retail nonmarketable orders routed to markets that pay rebates for those orders, a wholesaler would need to document its basis for determining that routing to such markets would comply with the best execution standard and the information relied on for such determination. It could do so by, for example, documenting its assessment of fill rates and the likelihood of execution for nonmarketable orders at such markets as compared to other markets that do not provide such rebates.

The wholesaler would also be required to document any arrangement concerning payment for order flow as described above in section IV.C.2. Furthermore, the wholesaler would be required to document its determination that its transactions with the customer orders that were sent to it in return for payment would comply with the best execution standard. For example, a wholesaler could document that it provides the same execution quality to the customers of retail broker-dealers to which it does not pay for order flow that it provides to the customers of broker-dealers to which it pays for order flow.

A retail broker-dealer in the listed options market would be engaged in a conflicted transaction under proposed Rule 1101(b) if it receives payment for order flow and its policies and procedures would have to address how it evaluates a broader range of markets, including opportunities to expose customer orders for the most favorable price. A retail broker-dealer's policies

[204] Similarly, FINRA has stated that broker-dealers may not negotiate the terms of order routing arrangements for customer orders in a manner that reduces the price improvement opportunities that, absent payment for order flow, otherwise would be available to those customer orders. *See* FINRA Regulatory Notice 21–23.

[205] *See supra* note 200.

[206] *See supra* note 203.

[207] *See supra* section III.A.2 (discussing the payment for order flow, affiliated routing and principal trading conflicts of interest in the options market).

[208] As discussed above, the wholesaler's policies and procedures that would be required by proposed Rule 1101(a)(1) could address how the wholesaler assesses price improvement auctions, including their relative competitiveness, when identifying material potential liquidity sources. A similar assessment would be required under proposed Rule 1101(b)(2) for a broader range of order exposure opportunities that may result in the most favorable price for customer orders. A wholesaler's best execution policies and procedures that favor one price improvement auction when other, more competitive, price improvement auctions exist may be relevant to an assessment of whether such policies and procedures are reasonably designed to identify material potential liquidity sources or to evaluate a broader range of order exposure opportunities that may result in the most favorable price for the customer order, as required by proposed Rules 1101(a) and 1101(b).

and procedures could evaluate wholesaler practices concerning the use of price improvement auctions and whether such wholesalers are appropriately considering a broader range of opportunities to expose customer orders and identifying exposure opportunities that are designed to enhance competition for customer orders.

Retail broker-dealers that accept payment for order flow for retail customer orders would also be required to comply with the documentation requirement under proposed Rule 1101(b)(3). To the extent a retail broker-dealer routes retail customer nonmarketable orders to markets that pay rebates for those orders, a retail broker-dealer would need to document its basis for determining that routing to such markets would comply with the best execution standard and the information relied on for such determination. It could do so by, for example, documenting its assessment of fill rates and the likelihood of execution for nonmarketable orders at such markets as compared to other markets that do not provide such rebates.

Furthermore, in documenting its determination that transactions conflicted due to payment for order flow from a wholesaler would comply with the best execution standard, a retail broker-dealer could document its process for evaluating and routing to wholesalers that pay it for order flow, including its assessment of wholesaler performance and any price improvement commitments. Additionally, under proposed Rule 1101(b)(3), a retail broker-dealer would need to document its determination that customer transactions for which it receives payment for order flow would comply with the best execution standard and the information relied on for such determination. A retail broker-dealer could do this by, for example, soliciting price improvement commitments from wholesalers for customer orders in the absence of payment for order flow and comparing those commitments to the price improvement commitments that the wholesaler would make if it were to pay the retail broker-dealer for order flow. Finally, a retail broker-dealer would be required to document any arrangement concerning payment for order flow, as described above in section IV.C.2.

5. Application of Proposed Rule 1101(b) to the Corporate and Municipal Bond Markets and Government Securities Markets

Many broker-dealers in the corporate and municipal bond markets and government securities markets trade with retail customers in a principal capacity and therefore engage in conflicted transactions. Such broker-dealers would also be subject to proposed Rule 1101(b) with respect to their conflicted transactions. A broker-dealer's policies and procedures for conflicted transactions would be required to address how it will evaluate a broader range of markets, including a broader range of order exposure opportunities. This could include evaluation of a broader range of ATSs, broker's brokers, RFQ systems, and other broker-dealers that trade corporate and municipal bonds and government securities, than the markets that the broker-dealer identifies as material potential liquidity sources under proposed Rule 1101(a)(1).

Under proposed Rule 1101(b)(3), a retail broker-dealer that trades in a principal capacity with retail customers would be required to document, in accordance with written procedures, its compliance with the best execution standard for conflicted transactions, including all efforts taken to enforce its policies and procedures for conflicted transactions and the basis and information relied on for its determinations that such conflicted transactions would comply with the best execution standard. In doing so, a retail broker-dealer could retain records of any data feeds or other pricing information that the retail broker-dealer uses when handling retail customer orders, including ATS data feeds, responses to RFQs, transaction prices, and evaluated pricing information.[209] In documenting its efforts to comply with the best execution standard, a retail broker-dealer could also document its order handling practices that can impact whether customer orders are executed in compliance with the best execution standard. This could include, for example, its practices concerning the use of RFQ systems, including its filtering, response time, and last look practices and how those practices promote the execution of retail customer orders in a manner that complies with the best execution standard. Finally, broker-dealers could document their markup policies for principal trades, including documenting how the broker-dealer assesses markups for trades with customers and any variation in its markups depending on the nature of the transaction (*e.g.,* riskless principal trades versus trades with the broker-dealer's inventory).

Request for Comment

The Commission requests comment on the application of proposed Rule 1101(b) to the NMS stock, options, corporate and municipal bond markets, and government securities markets, and in particular:

97. Has the Commission appropriately described the various practices in sections IV.C.3–5 that should be addressed in a broker-dealer's policies and procedures for conflicted transactions? Please explain.

98. Are there other practices not described in sections IV.C.3–5 that should be addressed in a broker-dealer's policies and procedures for conflicted transactions, or any that are described that should be not be addressed? Please explain.

D. Proposed Rule 1101(c)—Regular Review of Execution Quality

Proposed Rule 1101(c) would require a broker-dealer, no less frequently than quarterly, to review the execution quality of its transactions for or with its customers or customers of another broker-dealer, and how such execution quality compares with the execution quality the broker-dealer might have obtained from other markets, and to revise its best execution policies and procedures, including its order handling and routing practices, accordingly. Proposed Rule 1101(c) would also require a broker-dealer to document the results of this review.

While the Commission understands that broker-dealers generally currently conduct certain execution quality reviews,[210] including pursuant to

[209] As discussed above in section IV.C.2, proposed Rule 1101(b)(3) would not require a broker-dealer to document its efforts to comply with the best execution standard with respect to its conflicted transactions in any specific way. However, the broker-dealer would need to document the basis and information relied on for its determination that its conflicted transactions would comply with the best execution standard, and the Commission preliminarily believes that the manner of documentation may vary depending on asset class. For example, a broker-dealer's best execution policies and procedures may provide for more individualized handling of customer orders in corporate and municipal bonds and government securities than in equities securities. Accordingly, the broker-dealer's documentation for conflicted retail transactions in corporate and municipal bonds and government securities would need to reflect the more individualized best execution process.

[210] FINRA describes the findings from its best execution exams in an annual report. *See, e.g.,* 2022 Report on FINRA's Examination and Risk Monitoring Program, *supra* note 185, at 44–45 (describing FINRA exam findings, including: not comparing the quality of the execution obtained via firms' existing order-routing and execution arrangements against the quality of execution they could have obtained from competing markets; not conducting adequate reviews on a type-of-order basis, including, for example, on market, marketable limit, or non-marketable limit orders;

Continued

FINRA's best execution rule, the scope of proposed Rule 1101(c) differs from FINRA's best execution rule in that it would apply to a broader range of broker-dealers.[211] Specifically, while FINRA's execution quality review requirement applies only to a broker-dealer that routes customer orders to other broker-dealers for execution on an automated, nondiscretionary basis or that internalizes customer order flow,[212] proposed Rule 1101(c) would apply to all broker-dealers that are not introducing brokers (discussed in section IV.E below) that transact for or with customers. The Commission preliminarily believes that it would be beneficial to customers for a broader range of broker-dealers to regularly review the execution quality that their customer orders receive. Aside from this distinction in scope, proposed Rule 1101(c) is designed to be consistent with FINRA Rule 5310.09.

The requirements of proposed Rule 1101(c) would complement a broker-dealer's policies and procedures concerning how it will comply with the proposed best execution standard and the determination of the best market for customer orders, as well as the additional policies and procedures for conflicted transactions. As proposed, a broker-dealer must compare the execution quality it obtains via its current order routing and execution arrangements (including through the internalization of its order flow or executing its order flow through another broker-dealer in a wholesaler or other arrangement) to the execution quality it might have obtained from other markets. A broker-dealer would not meet the requirements of proposed Rule 1101(c) if it solely conducted its review based on the markets to which it currently routes customer orders without considering other markets or trading venues.[213] Rather, a broker-dealer would be required to consider the potential execution quality at trading venues that it does not currently use to execute customer orders, including new markets to the extent they become available, and consider whether it needs to access such markets in order to attain best execution for its customer orders.[214]

In reviewing and comparing the execution quality of its customer transactions to the execution quality that might have been obtained from other markets, a broker-dealer could consider various factors, including price improvement opportunities, differences in price disimprovement,[215] likelihood of execution of limit orders, speed of execution, size of execution, transaction costs, customer needs and expectations, and the existence of internalization or payment for order flow arrangements.[216] Furthermore, a broker-dealer that routinely routes customer orders to multiple trading centers, whether internal or external, could evaluate the latency impacts, fill rates, information leakage, and resulting execution quality harms.[217] And when conducting these reviews, a broker-dealer could consider the procedures it uses or would use for executing the same or similar transactions for its own accounts.[218] The Commission believes that, when compared to the execution quality that the broker-dealer might have obtained from other markets, the review could help the broker-dealer evaluate the effectiveness of its current best execution policies and procedures, including its order handling practices, and enable the broker-dealer to make informed judgments regarding whether these policies and procedures and practices need to be modified.

As described in this section IV.D above, proposed Rule 1101(c) would apply to a broader range of broker-dealers than FINRA Rule 5310.09. However, the substantive review requirements of proposed Rule 1101(c) are similar to FINRA Rule 5310.09, which requires a broker-dealer to compare, among other things, the quality of the executions it is obtaining via current order routing and execution arrangements to the quality of the executions that the broker-dealer could obtain from competing markets.

While the review under FINRA Rule 5310.09 must be conducted on a security-by-security, type-of-order basis (*e.g.,* limit order, market order, and market on open order), proposed Rule 1101(c) does not provide this level of specificity concerning the manner of execution quality reviews. The Commission believes that execution quality reviews would differ based on the characteristics of a market or of a broker-dealer's business, and the methods for conducting execution quality reviews would evolve over time

not considering certain factors set forth in FINRA Rule 5310 when conducting a ''regular and rigorous review,'' including, among other things, speed of execution, price improvement and the likelihood of execution of limit orders; and using routing logic that was not necessarily based on quality of execution).

[211] The MSRB rule does not require broker-dealers to conduct quarterly (or more frequent) comparative analysis of execution quality. Rather, MSRB Rule G–18 requires an annual review of the broker-dealer's policies and procedures that takes ''into account the quality of the executions the [broker-dealer] is obtaining under its current policies and procedures, changes in market structure, new entrants, the availability of additional pre-trade and post-trade data, and the availability of new technologies'' and requires the broker-dealer ''to make promptly any necessary modifications to such policies and procedures as may be appropriate in light of such reviews.'' *See* MSRB Rule G–18.08(a).

[212] *See* FINRA Rule 5310.09.

[213] This is consistent with FINRA's rule concerning the review of execution quality. *See* FINRA Rule 5310.09(b) (''To assure that order flow is directed to markets providing the most beneficial terms for their customers' orders, the member must compare, among other things, the quality of the executions the member is obtaining via current order routing and execution arrangements (including the internalization of order flow) to the quality of the executions that the member could obtain from competing markets.'').

[214] FINRA has pursued enforcement against broker-dealers relating to compliance with FINRA Rule 5310.09 concerning the regular and rigorous review of execution quality. *See, e.g., TradeStation Securities, Inc.,* Letter of Acceptance, Waiver and Consent (FINRA Case No. 2014041812501) (Mar. 2021) (describing violations of FINRA's best execution rule where the firm ''did not exercise reasonable diligence to ascertain whether the venues where it routed certain equity and option customer orders provided the best market for the subject securities as compared to the execution quality that was being provided at competing markets''); Robinhood FINRA, *supra* note 69 (describing violations of FINRA's best execution rule where the firm routed its customers' orders to four broker-dealers that all paid for order flow and ''did not exercise reasonable diligence to ascertain whether these four broker-dealers provided the best market for the subject securities to ensure its customers received the best execution quality from these as compared to other execution venues''); *E*Trade Securities LLC,* Letter of Acceptance, Waiver, and Consent (FINRA Case No. 20130368815–01) (June 2016) (describing violations of FINRA's best execution rule where the firm lacked sufficient information to reasonably assess the execution quality it provided to its customer because, among other things, the firm ''did not take into account the internalization model employed by the firm'' and ''was overly reliant on comparisons of the firm's overall execution quality with industry and custom averages, rather than focusing on comparisons to the actual execution quality provided by the market centers to which the firm routed orders'').

[215] Price disimprovement occurs when a customer receives a worse price than the best quotes prevailing at the time the order is received by the market. *See, e.g.,* FINRA Rule 5310.09(b)(2).

[216] These considerations are consistent with FINRA's rule regarding the review of execution quality. *See* FINRA Rule 5310.09(b) (providing that, in reviewing and comparing the execution quality of its current order routing and execution arrangements to the execution quality of other markets, a member should consider: (1) price improvement opportunities; (2) differences in price disimprovement; (3) the likelihood of execution of limit orders; (4) the speed of execution; (5) the size of execution; (6) transaction costs; (7) customer needs and expectations; and (8) the existence of internalization or payment for order flow arrangements).

[217] This is also consistent with existing FINRA guidance concerning these types of reviews. *See* FINRA Regulatory Notice 15–46, at 4–5.

[218] This is consistent with existing FINRA guidance. *See* FINRA Regulatory Notice 15–46, at 4–5. FINRA states that ''firms should consider the risk of information leakage by routing orders to a particular venue in light of the fill rates achieved at that venue and carefully assess whether the risks outweigh the potential for an execution.'' *Id.* at 5.

based on the availability of data and advancements in technology. A broker-dealer generally should conduct such reviews in a manner that will provide it with robust information concerning its customer orders' execution quality so that it can assess whether it needs to revise its best execution policies and procedures. In doing so, a broker-dealer should exercise its expertise and judgment in this regard and the manner of its execution quality reviews may be tailored to reflect various factors (*e.g.,* whether the broker-dealer engages in conflicted transactions, the sizes of customer orders).[219]

FINRA Rule 5310.09 also requires a broker-dealer to determine whether any material differences in execution quality exist among the markets trading the security and, if so, modify its routing arrangements or justify why it is not modifying its routing arrangements. While proposed Rule 1101(c) does not include ''materiality'' language or require a broker-dealer to justify why it is not modifying its routing arrangements, these concepts are consistent with the language of proposed Rule 1101(c). Proposed Rule 1101(c) states that a broker-dealer would be obligated to ''revise its best execution policies and procedures, including its order handling practices, accordingly'' after it has conducted its comparative execution quality analysis. The Commission preliminarily believes that revisions to the broker-dealer's policies and procedures, including its order handling practices, would be appropriate if there were material differences in execution quality that were not otherwise justifiable. Moreover, proposed amendments to Rule 17a–4 would require a broker-dealer to retain documentation of the results of its execution quality review, which could include any justifications for not modifying its policies and procedures if a comparative analysis revealed material differences in execution quality.[220]

MSRB rules do not require broker-dealers to conduct comparative analysis of execution quality.[221] Rather, MSRB Rule G–18.08 states that, when conducting its periodic reviews, a broker-dealer must assess whether its policies and procedures are reasonably designed to achieve best execution, taking into account the quality of the executions the broker-dealer is obtaining under its current policies and procedures, changes in market structure, new entrants, the availability of additional pre-trade and post-trade data, and the availability of new technologies, and make promptly any necessary modifications to such policies and procedures as may be appropriate in light of such reviews. While MSRB Rule G–18.08 reflects an execution quality review by broker-dealers, proposed Rule 1101(c) would impose a specific requirement for review of execution quality on at least a quarterly basis, including a comparative analysis requirement, for all broker-dealers regardless of whether they are currently subject to MSRB or FINRA rules.

Proposed Rule 1101(c) would require a broker-dealer to review the execution quality of customer orders no less frequently than quarterly.[222] In complying with the proposed rule, a broker-dealer should determine the appropriate frequency of review by considering, for example: the nature of its business; the asset class transacted; new pools of liquidity, trading protocols, or sources of data that have emerged; the availability of technology needed to conduct execution quality reviews; and the level of transparency in a particular market. In doing so, the Commission believes that, in many cases, broker-dealers may determine that a more frequent review of execution quality than quarterly is appropriate. For example, market participants subject to Rule 605 of Regulation NMS are required to disclose on a monthly basis certain execution quality statistics in NMS stocks. These Rule 605 reports provide a broker-dealer with information that it could use to evaluate the execution quality of customer transactions in NMS stocks more frequently than quarterly.[223] In contrast, a broker-dealer may determine that it is appropriate to review the execution quality of customer transactions in non-NMS stocks less frequently due to the characteristics of those other markets.[224]

Finally, proposed Rule 1101(c) would require a broker-dealer to document the results of its execution quality reviews.[225] By documenting its execution quality reviews, a broker-dealer would maintain and preserve a robust record of its order execution quality over time that could assist the broker-dealer to better evaluate the effectiveness of its best execution policies and procedures, including its order handling practices, on an ongoing basis. Similarly, such documentation would allow regulators to more effectively oversee the broker-dealer's efforts to meet the best execution standard of proposed Rule 1100 and the requirements of proposed Rules 1101 and 1102.

Request for Comment

The Commission requests comment on all aspects of proposed Rule 1101(c), and in particular:

99. Should broker-dealers be required to conduct reviews of execution quality of their transactions for or with customers at least quarterly, including how such execution quality compares with the execution quality that might

[219] Under FINRA Rule 5310.09, a broker-dealer must have procedures in place to ensure it periodically conducts regular and rigorous reviews of the quality of the executions of its customers' orders if it does not conduct an order-by-order review. FINRA has stated in a regulatory notice that broker-dealers must conduct order-by-order best execution reviews rather than relying on regular and rigorous reviews in certain circumstances. In particular, FINRA has stated that a ''regular and rigorous review alone (as opposed to an order-by-order review) may not satisfy best execution requirements, given that the execution of larger-size orders 'often requires more judgment in terms of market timing and capital commitment.' '' FINRA has also stated that ''[o]rders that a firm determines to execute internally are subject to an order-by-order best execution analysis.'' Finally, FINRA has recognized that advances in order routing technology make order-by-order reviews of execution quality for a range of orders in all equity and standardized options increasingly possible. *See* FINRA Regulatory Notice 15–46, at 3–4. As stated above, proposed Regulation Best Execution would not affect a broker-dealer's obligation to comply with the FINRA or MSRB best execution rule. Accordingly, a broker-dealer would be required to comply with proposed Regulation Best Execution, in addition to the FINRA and MSRB best execution rules, as applicable. *See supra* note 109 and accompanying text. To the extent FINRA or the MSRB impose more specific requirements than proposed Regulation Best Execution, broker-dealers must continue to comply with those requirements, as applicable.

[220] For a discussion of recordkeeping requirements of the proposed rules, *see infra* section IV.G.

[221] *See supra* note 211.

[222] FINRA also requires a broker-dealer to conduct regular and rigorous reviews of its customer execution quality at least quarterly, but has specified that a broker-dealer should consider, based on its business, whether more frequent reviews are needed. *See* FINRA Rule 5310.09; FINRA Regulatory Notice 15–46, at 4. MSRB Rule G–18 requires a broker-dealer to, at a minimum, conduct annual reviews of its policies and procedures for determining the best available market for the executions of its customers' transactions, but the broker-dealer should consider a frequency reasonably related to the nature of its municipal securities business, including but not limited to its level of sales and trading activity. *See* MSRB Rule G–18.08(a).

[223] FINRA has stated that some broker-dealers conduct monthly reviews of execution quality, recognizing that market participants are required to publish Rule 605 execution quality statistics on a monthly basis. *See* FINRA Regulatory Notice 15–46, at 4, 15 n.21.

[224] FINRA has also stated that orders in the fixed income market may be handled and executed differently than in equity and options markets. Because of these differences, FINRA stated that broker-dealers may determine to conduct execution quality reviews of such securities under FINRA's rule less frequently than for equities and options. *See* FINRA Regulatory Notice 15–46, at 8.

[225] *See* proposed amendments to Rule 17a–4; *infra* section IV.G (describing the recordkeeping obligations applicable to any documentation made pursuant to proposed Regulation Best Execution).

have been obtained from other markets, as required by proposed Rule 1101(c)? Why or why not? Should broker-dealers document the results of their execution quality reviews, as required by proposed Rule 1101(c)? Why or why not?

100. Should a review of execution quality include factors similar to those identified in FINRA rules and guidance, such as price improvement opportunities, differences in price disimprovement, likelihood of execution of customer limit orders, speed of execution, size of execution, transaction costs, customer needs and expectations, and the existence of internalization or payment for order flow arrangements? Why or why not? Are there other factors that should also be included in a review of execution quality? If so, please explain. Should these factors be specified in proposed Rule 1101(c)? Please explain.

101. Would the proposed documentation requirement improve the utility of the reviews of execution quality by a broker-dealer? Please explain. Should the proposed rule include other specific documentation requirements to supplement the documentation of the execution quality reviews? If so, please explain.

102. Should proposed Rule 1101(c) apply to broker-dealers that currently rely on their executing brokers to conduct such reviews, if they otherwise would not qualify as introducing brokers as defined in proposed Rule 1101(d) and discussed in section IV.E below? Please explain. Would broker-dealers that currently rely on the execution quality reviews of their executing brokers (and do not qualify as introducing brokers as defined in proposed Rule 1101(d) and discussed in section IV.E below) have the resources and expertise to conduct the reviews required by proposed Rule 1101(c)? Would such broker-dealers have the information necessary to compare the executions received for their customers and the customers of other broker-dealers with the execution quality that could have been obtained on other markets to which they did not route customer orders? Please explain.

103. Should the Commission require a different frequency for the reviews of execution quality? If so, how frequently should such reviews be required and should the frequency be different for different asset classes? Should the frequency be monthly, semi-annually, annually, or another time period? Please explain.

104. Should the frequency of such reviews be dependent on any unique characteristics of the broker-dealer, its customers, its order flow, or the securities traded? For example, should the frequency standard be at least monthly for reviews of execution quality for NMS stocks because broker-dealers and market centers are required to disclose execution quality on a monthly basis under Rules 605 of Regulation NMS? Or does the availability of Rule 605 reports suggest that reviews of execution quality in NMS stocks should be less frequent? Please explain.

105. Should broker-dealers that handle and execute customer municipal bond orders be required to conduct reviews of execution quality at least quarterly as required by proposed Rule 1101(c)? Please explain. Is there a different frequency for these reviews that would be more appropriate for the municipal bond market? If so, please explain. Is there a frequency standard that would be more appropriate for other fixed income markets, such as the corporate bond and government securities markets? Is it appropriate to require that a broker-dealer's best execution policies and procedures, including its order handling practices, be revised based on the outcome of the proposed execution quality reviews? Please explain. Should there be more specificity concerning when a broker-dealer would be required to revise its best execution policies and procedures, including its order handling practices? For example, should the rule specify that best execution policies and procedures, including order handling practices, must be revised if the broker-dealer identifies material differences in execution quality among the various markets and trading venues that trade the applicable security? Please explain.

106. Should the proposed requirement that a broker-dealer revise its best execution policies and procedures, including its order handling practices, based on its review of execution quality apply differently depending on the type of asset class or any unique characteristics of the broker-dealer, its customers, its order flow, or the securities traded? Please explain.

107. Do commenters agree with the Commission's understanding that broker-dealers currently conduct certain execution quality reviews and those reviews vary in rigor? Please describe the frequency and rigor of any such reviews and whether broker-dealers document the results of such reviews.

108. Do commenters believe that the Commission should provide staggered compliance dates for proposed Rule 1101(c) for broker-dealers of different sizes, if the Commission adopts proposed Regulation Best Execution? For example, should the Commission provide longer compliance dates for smaller broker-dealers? If so, should the Commission define a smaller broker-dealer as a broker-dealer that qualifies as a ''small entity'' under the Regulatory Flexibility Act pursuant to 17 CFR 240.0–10(c) for this purpose? [226] Or should the Commission define a smaller broker-dealer in a different way? Please explain.

E. Proposed Rule 1101(d)—Introducing Brokers

Proposed Rule 1101(d) would permit a broker-dealer that qualifies as an introducing broker to rely on its executing broker to comply with proposed Rules 1101(a), (b), and (c), subject to certain review requirements.

Broker-dealers have different business models, including whether they accept, and the extent to which they handle and execute, customer orders. Certain broker-dealers commit their own capital by executing customer transactions on a principal basis, while some broker-dealers employ an agency model that requires them to find another buyer or seller in order to execute a customer order. The sizes and resources of broker-dealers also vary, with some broker-dealers carrying the accounts of millions of customers, while others carry few customer accounts and employ significantly fewer in-house personnel.

Many broker-dealers do not provide the service of holding customer funds and securities and instead enter into agreements with other broker-dealers to provide such services and handle and execute their customers' orders. Such agreements generally allocate various functions among the broker-dealers, including the opening and approval of accounts, acceptance of orders, transmission of orders for execution, execution of orders, extension of credit, receipt and delivery of funds and securities, preparation and transmission of confirmations, maintenance of books and records, and monitoring of accounts.[227] Typically, a broker-dealer that does not carry customer accounts enters into an agreement with another broker-dealer that would require the initial broker-dealer to transmit all of its customer orders to the other broker-dealer for order handling and execution. In this circumstance, the second broker-dealer, which accepts the responsibility to handle and execute the customer orders, would be subject to the full obligations of proposed Regulation Best

[226] *See supra* note 151 and accompanying text (describing the broker-dealers that qualify as small entities under the Regulatory Flexibility Act).

[227] *See* FINRA Rule 4311 (establishing standards for carrying agreements between executing firms and introducing firms).

Execution. On the other hand, the first broker-dealer is not making any decisions or exercising discretion regarding the manner in which its customer orders will be handled and executed, beyond its determination to engage the services of the second broker-dealer, and it would not be subject to the full obligations of proposed Regulation Best Execution.

FINRA Rule 5310.09(c) provides that a broker-dealer that routes its order flow to another broker-dealer that has agreed to handle that order flow as agent for the customer can rely on that broker-dealer's regular and rigorous review, as long as the statistical results and rationale of the review are fully disclosed to the first broker-dealer and the first broker-dealer periodically reviews how the review is conducted, as well as the results of the review.[228] MSRB Rule G–18.08(b) provides that a broker-dealer that routes its customers' transactions to another broker-dealer that has agreed to handle those transactions as agent or riskless principal for the customer may rely on that other broker-dealer's periodic reviews as long as the results and rationale of the review are fully disclosed to the first broker-dealer and the first broker-dealer periodically reviews how the other broker-dealer's review is conducted and the results of the review.[229] As discussed in section IV.E.1 below, the exemption under proposed Rule 1101(d) would be provided to a narrower group of broker-dealers than contemplated by FINRA and MSRB rules, because it would apply only to broker-dealers that meet the proposed definition of ''introducing broker.'' Accordingly, certain broker-dealers that qualify under the current FINRA and MSRB exemptions may not similarly qualify for the exemption under proposed Rule 1101(d), absent a change in business practices that would allow them to meet the additional criteria described below in section IV.E.1. Moreover, as discussed in section IV.E.2 below, the exemption under proposed Rule 1101(d) would require the introducing broker's policies and procedures to provide for comparisons between the execution quality obtained from its executing broker and the execution quality it might have obtained from other executing brokers, which would be a more specific policies and procedures obligation for introducing brokers than required under the current FINRA and MSRB rules. Finally, a broker-dealer that qualifies as an introducing broker under proposed Rule 1101(d) would be exempt from the requirement to separately comply with proposed Rules 1101(a), (b), and (c), while the FINRA and MSRB rules only provide certain broker-dealers with exemptions from conducting either the regular and rigorous execution quality review under the FINRA rule or the periodic review under the MSRB rule.

1. Definition of Introducing Broker and Executing Broker

For purpose of proposed Rule 1101(d), the Commission would define an ''introducing broker'' as a broker-dealer that: (1) does not carry customer accounts and does not hold customer funds or securities; (2) has entered into an arrangement with an unaffiliated broker-dealer that has agreed to handle and execute on an agency basis all of the introducing broker's customer orders (''executing broker''); and (3) has not accepted any monetary payment, service, property, or other benefit that results in remuneration, compensation, or consideration from the executing broker in return for the routing of the introducing broker's customer orders to the executing broker.[230] Broadly, these proposed conditions are designed to identify those entities that, due to their business models, expertise, and resources, need to be able to rely on their executing brokers, and to ensure that these entities do not have order handling conflicts of interest such that their reliance on their executing brokers would be appropriate.

The first proposed condition of this definition (in proposed paragraph (d)(1)) would require that an introducing broker not carry customer accounts or hold customer funds or securities. This proposed condition is designed to identify those broker-dealers that do not handle or execute customer orders and therefore need to enter into arrangements with other broker-dealers to provide those services. The Commission preliminarily believes that this proposed condition would identify broker-dealers that do not exercise any discretion with respect to how their customer orders are handled and executed, beyond the selection of the executing broker. Because these introducing brokers do not handle or execute customer orders in a manner that would warrant the application of the proposed best execution rules, the Commission proposes to permit these broker-dealers to rely on their executing brokers for purposes of complying with proposed Rules 1101(a), (b), and (c). In addition, these introducing brokers may not be in a position to implement certain of the proposed best execution rules because they have chosen to outsource order handling and execution functions to another broker-dealer.

The second proposed condition in the definition (in proposed paragraph (d)(2)) would require an introducing broker to enter into an arrangement with an *unaffiliated* broker-dealer that has agreed to handle and execute on an *agency* basis all of the introducing broker's customer orders. This proposed condition contains several elements. First, the proposed requirement that an arrangement be in place for the handling and execution of all customer orders by another broker-dealer would help ensure that the introducing broker does not exercise discretion concerning the routing and execution of customer orders in a manner that would otherwise necessitate the application of all of the provisions of proposed Regulation Best Execution.[231] Second, the introducing broker would be required to have an order handling and execution arrangement with an unaffiliated broker-dealer. Because the

[228] *See* FINRA Rule 5310.09(c).

[229] *See* MSRB Rule G–18.08(b). The MSRB has further interpreted the obligations of introducing brokers under this provision. *See* MSRB Implementation Guidance on MSRB Rule G–18, on Best Execution, at Section II.1 (last updated Feb. 7, 2019) (''Under this provision, introducing dealers may rely on the best-execution policies and procedures of their clearing firms or other executing dealers, all of which are subject to their own best-execution obligations under the rule. An introducing dealer, however, is not relieved of its obligations to establish written policies and procedures of its own. For example, such an introducing dealer's policies and procedures could provide for the reliance on another dealer's policies and procedures and periodic reviews by the introducing dealer of the other dealer's reviews of its policies and procedures.'').

[230] This proposed definition of ''introducing broker'' would be used only for purposes of proposed Rule 1101(d), and would not affect the use of this term under existing Exchange Act rules. *See, e.g.,* 17 CFR 240.15c3–3 (defining introducing broker as a broker-dealer that ''clears all transactions with and for customers on a fully disclosed basis with a clearing broker or dealer, and who promptly transmits all customer funds and securities to the clearing broker or dealer which carries all of the accounts of such customers and maintains and preserves such books and records pertaining thereto . . . as are customarily made and kept by a clearing broker or dealer''). While the term ''introducing broker'' is defined differently for purposes of other Commission rules, the Commission preliminarily believes the definition in proposed Rule 1101(d) is appropriately tailored for application in the best execution context. As discussed in this section, the proposed definition is designed to identify introducing brokers that rely on their executing brokers and to ensure that they do not have order handling conflicts of interest in their reliance on their executing brokers. *See also* section IV.E.1 (describing FINRA Rule 5310.09(c), MSRB Rule G–18.08(b), and the definition of introducing broker in proposed Rule 1101(d)).

[231] The broker-dealer that has agreed to handle all of the introducing broker's customer orders on an agency basis would be subject to proposed Regulation Best Execution, including proposed Rules 1101(a)–(c).

introducing broker would be permitted to rely on the executing broker rather than having policies and procedures that address independently many of the operative provisions of proposed Regulation Best Execution (including the additional obligations for conflicts of interest with retail customers), the introducing broker should not be permitted to be subject to a conflict of interest by selecting an affiliated executing broker. Such conflict of interest could impede the introducing broker's efforts to achieve best execution by providing the introducing broker an incentive to act in manner that benefits its own or its affiliate's interests. Third, the executing broker that has been selected by the introducing broker would be required to agree to handle all of the introducing broker's customer orders on an agency basis. If an executing broker could trade with the introducing broker's customers in a principal capacity, the introducing broker would effectively be making a determination concerning how its customer order should be executed, and the introducing broker should be subject to the full requirements of proposed Regulation Best Execution.

There are two principal trading scenarios that, under proposed Rule 1101(d)(2), would be considered to be orders handled on an agency basis solely for the purposes of proposed Rule 1101(d)(2): fractional share trading in NMS stocks and riskless principal trading in corporate and municipal bonds and government securities. The Commission understands that many broker-dealers permit their customers to submit orders for fractional shares of a stock. These orders are often the result of a retail customer submitting an order for a security for a certain dollar amount, rather than for a specific number of shares. In order for an executing broker to fill the fractional share orders of an introducing broker's customer buy orders, for example, the executing broker may buy a whole share into its inventory and allocate a portion of that share to fill the customer's fractional share order. This scenario involves a principal trade between the executing broker and the customer that is necessary to fill the customer's fractional share order. The Commission preliminarily believes that an executing broker filling the fractional share components of an introducing broker's customer orders in this manner should not disqualify the initial broker-dealer from meeting prong (2) of the definition of an introducing broker, because the executing broker is filling the fractional share components on a principal basis solely for the purpose of completing transactions that otherwise would be executed on an agency basis. Therefore, in this context, the executing broker filling a customer's fractional share order would be considered to be acting on an agency basis.

In the corporate and municipal bond markets and government securities markets, the Commission understands that executing brokers most often execute an introducing broker's customer orders on a riskless principal basis.[232] In these transactions, the executing broker does not fill a customer order out of its own inventory, but rather finds a counterparty for the customer order prior to executing the customer order.[233] The bond simply flows through the executing broker's account for transaction processing before ultimately being transferred to the appropriate customer. For purposes of proposed Rule 1101(d)(2), riskless principal would be defined as proposed under Rule 1101(b)(4)(ii). In particular, a transaction would be riskless principal if, after having received an order to buy from the introducing broker on behalf of its customer, the executing broker purchased the security from another person to offset a contemporaneous sale to such introducing broker on behalf of a customer or, after having received an order to sell, the executing broker sold the security to another person to offset a contemporaneous purchase from such introducing broker on behalf of its customer.[234] The Commission preliminarily believes that this riskless principal transaction scenario in the corporate and municipal bond markets and government securities markets should not disqualify the initial broker-dealer from meeting the definition of an introducing broker in proposed Rule 1101(d), as the riskless principal trading in this context is analogous to the executing broker trading on an agency basis.

The third proposed condition in the definition of introducing broker (in proposed paragraph (d)(3)) is that the introducing broker may not accept any monetary payment, service, property, or other benefit that results in remuneration, compensation, or consideration from the executing broker in return for the routing of the introducing broker's customer orders to the executing broker.[235] Similar to the second proposed condition concerning the use of unaffiliated executing brokers, the Commission preliminarily believes that this proposed condition is appropriate because the introducing broker, which would be exempt from many of the operative provisions of proposed Regulation Best Execution, should not be subject to a conflict of interest that could influence its selection of a broker-dealer that will handle and execute its customers' orders.

2. Review of Executing Broker's Execution Quality

Proposed Rule 1101(d) would provide that an introducing broker that routes customer orders to an executing broker

[232] The MSRB best execution rule recognizes that introducing brokers may have a relationship with clearing firms that handle and execute customer orders on a riskless principal basis. *See, e.g.,* MSRB Rule G–18.08(b) (''A dealer that routes its customers' transactions to another dealer that has agreed to handle those transactions as agent or riskless principal for the customer (*e.g.,* a clearing firm or other executing dealer) may rely on that other dealer's periodic reviews as long as the results and rationale of the review are fully disclosed to the dealer and the dealer periodically reviews how the other dealer's review is conducted and the results of the review.'').

[233] As the Commission has stated, ''[t]rading on a riskless principal basis is similar, conceptually, to a municipal bond dealer trading on an agency basis. In these transactions, the municipal bond dealer is not putting its capital at risk. For example, when it receives a customer order to buy, the [dealer] will offset the sale to the customer by contemporaneously purchasing the security sold to the customer.'' *See* U.S. Securities and Exchange Commission, Report on the Municipal Securities Market (2012), *available at https://www.sec.gov/news/studies/2012/munireport073112.pdf. See also* 17 CFR 240.3a5–1(b) (defining the term ''riskless principal transaction'' for purposes of a bank's exemption from the definition of dealer).

[234] This riskless principal trading scenario would be limited to these types of transactions in the corporate and municipal bond markets and government securities markets and is consistent with the concept in MSRB Rule G–18.08(b) and with the Commission's defined term of riskless principal in Exchange Act Rule 3a5–1, which exempts banks from the definition of ''dealer'' under the Exchange Act when acting in a riskless principal capacity. *See* 17 CFR 240.3a5–1 (defining riskless principal as a transaction in which, after having received an order to buy from a customer, the bank purchased the security from another person to offset a contemporaneous sale to such customer or, after having received an order to sell from a customer, the bank sold the security to another person to offset a contemporaneous purchase from such customer). Furthermore, the Commission believes that this definition of a riskless principal trade is a commonly used and understood definition of the term. *But see* 17 CFR 240.10b–18 (defining a riskless principal transaction in the context of a safe harbor for issuers from liability under the Exchange Act fraud provisions as a transaction in which a broker or dealer after having received an order from an issuer to buy its security, buys the security as principal in the market at the same price to satisfy the issuer's buy order, where the issuer's buy order must be effected at the same price per share at which the broker or dealer bought the shares to satisfy the issuer's buy order, exclusive of any explicitly disclosed markup or markdown, commission equivalent, or other fee).

[235] This proposed condition is based on the definition of payment for order flow in Exchange Act Rule 10b–10(d)(8), 17 CFR 240.10b–10(d)(8). *See supra* note 43 (stating the definition of payment for order flow under Rule 10b–10(d)(8)).

does not need to separately comply with proposed Rules 1101(a), (b), and (c) so long as the introducing broker establishes, maintains, and enforces policies and procedures that require the introducing broker to regularly review the execution quality obtained from such executing broker, compare it with the execution quality it might have obtained from other executing brokers, and revise its order handling practices, accordingly. The introducing broker would also be required to document the results of this review.

Because proposed Rule 1101(d) would require the introducing broker to establish, maintain, and enforce policies and procedures that provide for regular reviews of the execution quality obtained from its executing broker, as part of its agreement with the executing broker, an introducing broker may wish to consider requiring the executing broker to fully disclose its execution quality reviews of the introducing broker's customer orders to the introducing broker, in lieu of conducting its own independent analysis of the execution quality ultimately received from the executing broker.[236] This aspect of proposed Rule 1101(d) would impose a direct obligation on introducing brokers to regularly review the execution quality obtained from their executing brokers, in addition to what is required under current FINRA and MSRB rules.[237]

In addition, because proposed Rule 1101(d) would require the introducing broker's policies and procedures to provide for comparisons of its executing broker's execution quality with the execution quality it might have obtained from other executing brokers, the introducing broker would need to obtain execution quality information concerning other executing brokers that could handle and execute the introducing broker's customer orders.[238] While the information concerning the execution quality that might be obtained from other executing brokers would not include information concerning the execution of the introducing broker's customer orders, this information would nevertheless better inform the introducing broker's decisions concerning the selection of an executing broker. This aspect of proposed Rule 1101(d) would impose a direct obligation on introducing brokers to conduct comparisons of execution quality, in addition to what is required under current FINRA and MSRB rules.[239] While the broker-dealer would be afforded discretion in how it evaluates the execution quality that could be provided by other executing brokers, the Commission believes that introducing brokers could consider the execution quality and order routing disclosures of these executing brokers along with the information that these executing brokers might provide to the introducing broker directly in connection with this obligation.

Proposed Rule 1101(d) would also require an introducing broker's policies and procedures to address how it would revise its order handling practices, if its execution quality comparison shows that a change is warranted. This aspect of proposed Rule 1101(d) would establish an obligation for an introducing broker to revise its policies and procedures following an execution quality comparison, which is not explicitly required under the current FINRA and MSRB rules.[240] An introducing broker may consider it appropriate to change its routing practices to the extent a material difference exists between the execution quality provided by its existing executing broker and the execution quality that might have been obtained from other executing brokers. Alternatively, the Commission preliminarily believes that an introducing broker could discuss the results of its review with its executing broker and whether it is appropriate for the executing broker to modify its order handling and execution practices in order to provide better execution quality for the introducing broker's customers.[241] If the executing broker were to either provide a reasonable explanation for the execution quality disparity identified by the introducing broker or agree to modify its order handling and execution practices in order to provide better execution quality, it could be appropriate for the introducing broker to continue to retain the services of its executing broker. Should the introducing broker's regular review demonstrate persistent execution quality issues that are not justifiable by the executing broker, the introducing broker should consider retaining the services of another executing broker. As a result, the Commission preliminarily believes that this regular review process would promote competition among executing brokers and help ensure that customer orders are executed consistently with the proposed best execution standard.

Moreover, proposed Rule 1101(d) would require an introducing broker to document the results of its execution quality review,[242] which would assist the introducing broker and regulators by helping to ensure that the introducing broker maintains and retains a robust record of the execution quality its customers receive from its executing

[236] The executing broker's review of execution quality that the introducing broker relies on would be required to be an execution quality review specific to the introducing broker's customer orders. The Commission preliminarily believes that it would not be appropriate for the introducing broker to rely on the executing broker's execution quality review if that review involved the executing broker's aggregate executions, including those of other introducing brokers' customers. As a result, proposed Rule 1101(d) would require the introducing broker to evaluate the execution quality *its* customers received from the executing broker.

[237] *See* FINRA Rule 5310.09(c); MSRB Rule G–18.08(b) (providing that an introducing broker can ''rely on'' its executing broker's execution quality reviews as long as the results and rationale of the review are fully disclosed to the introducing broker and the introducing broker periodically reviews how the review is conducted and the results of the review). Under these rules, broker-dealers are permitted to rely on the execution quality reviews of their executing brokers and are required only to periodically review how the review is conducted and the results of the review. These broker-dealers are not required to compare the execution quality they are receiving to the execution quality that might have been received from another executing broker.

[238] The Commission preliminarily believes that other executing brokers would have an incentive to provide the introducing broker with accurate and comparable execution quality information that the introducing broker could use to evaluate its existing arrangement due to their financial interest in potentially providing the introducing broker with order handling and execution services.

[239] *See supra* note 236.

[240] *See* FINRA Rule 5310.09(c) (''A member that routes its order flow to another member that has agreed to handle that order flow as agent for the customer (*e.g.,* a clearing firm or other executing broker-dealer) can rely on that member's regular and rigorous review as long as the statistical results and rationale of the review are fully disclosed to the member and the member periodically reviews how the review is conducted, as well as the results of the review.''). *See also* MSRB Rule G–18.08(b) (''A dealer that routes its customers' transactions to another dealer that has agreed to handle those transactions as agent or riskless principal for the customer (*e.g.,* a clearing firm or other executing dealer) may rely on that other dealer's periodic reviews as long as the results and rationale of the review are fully disclosed to the dealer and the dealer periodically reviews how the other dealer's review is conducted and the results of the review.''). These provisions do not obligate the broker-dealers that rely on the regular and rigorous review of other broker-dealer under FINRA Rule 5310.09(c) and MSRB Rule G–18.08(b) to modify the order handling arrangements if execution quality analysis merits modification.

[241] As part of this process, the introducing broker and executing broker could assess why execution quality may be different as between the executing broker and other executing brokers, and the reason for these differences may inform the introducing broker's decision as to whether to retain the executing broker or change executing brokers. As discussed above with respect to proposed Rule 1101(c), an executing broker would be required to revise its best execution policies and procedures, including its order handling and routing practices, if warranted by its regular review of the execution quality of the introducing broker's customer orders.

[242] *See* proposed amendments to Rule 17a–4; *infra* section IV.G (describing the recordkeeping obligations applicable to any documentation made pursuant to proposed Regulation Best Execution).

broker over time. This documentation should enable the introducing broker to better evaluate the effectiveness of its executing broker on an ongoing basis. This documentation would also help ensure that regulators have access to information to effectively oversee the introducing broker's efforts to satisfy its obligations under proposed Rule 1101(d).

Request for Comment

The Commission requests comment on proposed Rule 1101(d) relating to the proposed definitions of introducing broker and executing broker, and the proposed exemptions for introducing brokers, and in particular:

109. Are the proposed definitions of introducing broker (including the three proposed conditions to qualify as an introducing broker) and executing broker appropriate? If not, please explain whether and how the definitions should be more broadly or narrowly drawn, including whether certain market participants should be included or excluded from the definitions.

110. Do commenters believe the use of the term ''introducing broker'' in proposed Regulation Best Execution is appropriate? Should the Commission use an alternative term to describe the types of entities contemplated by proposed Rule 1101(d)? If so, what alternative term would be appropriate?

111. Does an introducing broker typically exercise any discretion with respect to how its customer orders are handled and executed by its executing broker, beyond the selection of the executing broker? If so, should the definition of introducing broker be modified in any manner to account for this discretion by the introducing broker? Please describe.

112. Does an introducing broker typically have multiple executing brokers or does it typically have an arrangement with only one executing broker to handle and execute all of its customer orders?

113. Are the proposed conditions concerning the arrangement between the introducing broker and its executing broker appropriate? Please explain.

114. Is it appropriate to require the executing broker to handle and execute all of the introducing broker's customer orders on an agency basis in order for the introducing broker to meet the definition of introducing broker under proposed Rule 1101(d)? Please explain.

115. Do executing brokers, which can include many clearing firms that provide these types of services to other broker-dealers, typically execute transactions to fill an introducing broker's customer orders in a riskless principal capacity? Do these executing brokers often use inventory to fill the introducing broker's customer orders?

116. Would the proposed condition that an executing broker execute customer orders on an agency basis harm liquidity for the introducing broker's customer orders for any asset class or classes? If so, please explain. For example, is the principal trading desk of an executing broker (*e.g.,* clearing firm) in the corporate or municipal bond markets and government securities markets an important source of potential liquidity for the customers of an introducing broker?

117. Does the proposed introducing broker definition and the proposed approach concerning riskless principal trading appropriately capture the manner in which introducing brokers and executing brokers do business in the corporate and municipal bond markets and government securities markets? Please explain.

118. Should riskless principal transactions by an executing broker disqualify the introducing broker from meeting the definition of introducing broker under proposed Rule 1101(d)? Please explain.

119. Is the description of a riskless principal trade in section IV.E.1 above appropriate? Why or why not?

120. In contrast to the discussion of riskless principal trades in section IV.E.1 above, would it be more appropriate to require the two legs of a riskless principal trade to be executed at the same price, exclusive of any explicitly disclosed markup or markdown, commission equivalent, or other fee? For example, should a riskless principal trade for purposes of proposed Rule 1101(d)(2) be defined to mean: a transaction in which the executing broker, after having received an order from the introducing broker on behalf of its customer to buy a security, buys the security from another person as principal to offset a contemporaneous sale to such introducing broker on behalf of a customer at the same price, or after having received an order to sell, the executing broker sold the security to another person to offset a contemporaneous purchase from the introducing broker on behalf of its customer at the same price? Please explain. Would a potential benefit of this alternative definition of riskless principal transaction be that the bond transaction between the introducing broker and its customer would reflect the entire markup or markdown on the customer's trade, which would be disclosed to the customer pursuant to existing FINRA and MSRB confirmation disclosure rules?

121. Do commenters agree that principal trades by an executing broker to fill fractional share orders in NMS stocks and riskless principal trades by an executing broker in fixed income securities should be order handling on an agency basis for purposes of proposed Rule 1101(d)(2)? Why or why not? Are there additional types of principal transactions that should also be considered order handling on an agency basis for purposes of proposed Rule 1101(d)(2)? If so, please describe.

122. Do commenters agree with the proposed requirement that there be no affiliation between an introducing broker and its executing broker in order for the introducing broker to meet the definition of introducing broker under proposed Rule 1101(d)? Why or why not?

123. What is the typical relationship between an introducing broker and its executing broker for handling and executing customer orders in different asset classes?

124. The proposal would prohibit a broker-dealer from receiving any payment for order flow from its executing broker in order to qualify as an introducing broker under proposed Rule 1101(d). Currently, to what extent do introducing brokers accept payment for order flow for their customer orders from an executing broker? What are the common payment for order flow arrangements between introducing brokers and their executing brokers?

125. Do commenters agree with the proposed requirement that there be no payment for order flow between an introducing broker and its executing broker in order for the introducing broker to meet the definition of introducing broker under proposed Rule 1101(d)? Please explain. What are the implications for introducing brokers resulting from the requirement that they not accept payment for order flow from their executing brokers in order to qualify as introducing brokers under proposed Rule 1101(d)?

126. Should an executing broker be prohibited from accepting payment for order flow from other broker-dealers that the executing broker uses to execute the introducing broker's customer orders? Why or why not?

127. Do commenters agree that the proposed exemptions for introducing brokers from proposed Rule 1101(a), (b), and (c) are appropriate? Why or why not?

128. Do commenters believe that the approaches taken by FINRA and the MSRB with respect to the definition of introducing broker are preferable to the

Commission's proposal?[243] Please explain. Would an approach that is more restrictive than the FINRA and MSRB approach but less restrictive than the Commission's proposal be preferable? If so, please explain.

The Commission also seeks comment on the proposed requirement that, to avail itself of the exemptions under proposed Rule 1101(d), an introducing broker must establish, maintain, and enforce policies and procedures that require it to regularly review the execution quality obtained from its executing broker, compare such execution quality with the execution quality it might have obtained from other executing brokers, and revise its routing practices accordingly. In particular:

129. How do introducing brokers currently evaluate the execution quality of their executing brokers? How often is this evaluation typically performed?

130. Would introducing brokers be able to obtain execution quality information concerning other executing brokers? If so, how? Would executing brokers have an incentive to share execution quality information with introducing brokers for which they do not handle orders or handle few orders?

131. Would an introducing broker be able to perform a comparison of execution quality received with execution quality that it might have obtained from other executing brokers? Please explain any challenges in making such a comparison and whether any challenges depend on the asset class or classes involved. Please describe any distinctions that should be drawn among executing brokers handling and executing orders in various asset classes.

132. Should the Commission require that an introducing broker compare the execution quality received with the execution quality it might have obtained from other executing brokers only to the extent that such execution quality information is reasonably accessible to the introducing broker? Please explain.

133. Would introducing brokers have the capacity and resources to independently compare the quality of executions received from their executing brokers to the quality of executions that they might have received from other executing brokers? Are introducing brokers likely to rely on third parties to facilitate this comparison? Please explain.

134. How frequently should an introducing broker be required to perform a comparative analysis of execution quality as proposed in Rule 1101(d)? For example, should it be required quarterly, similar to what FINRA requires under FINRA Rule 5310.09? Alternatively, should the review be required with a different frequency, such as on a monthly, semiannual, or annual basis, instead of quarterly? Please explain.

135. Should introducing brokers be required to evaluate the execution quality of a minimum number of alternative executing brokers when they compare the execution quality received from their own executing brokers? If so, how many and why?

136. Would the proposed documentation requirement improve the utility of an introducing broker's execution quality comparison? Why or why not? Should the Commission require additional documentation to supplement the documentation of the introducing broker's review? If so, please explain.

137. Rather than conducting the execution quality review under proposed Rule 1101(d), should introducing brokers be subject to the regular review of execution quality requirement under proposed Rule 1101(c)? Are there other factors that would make one more appropriate for introducing brokers than the other? Please explain.

138. Do commenters believe there are any concerns with the proposed requirement that an introducing broker's policies and procedures require it to revise its order handling practices to the extent justified by its execution quality reviews? If so, please explain. Should the Commission provide more specificity concerning when order handling practices would be required to be revised? For example, should the Commission specify that order handling practices be revised if there are material differences between the execution quality received from the executing broker and the execution quality that could have been obtained from another executing broker?

139. How do introducing brokers currently address execution quality concerns relating to their executing brokers' order handling? Please describe.

140. Do introducing brokers have a number of executing brokers to choose from when determining the firm they will use to handle and execute their customer orders?

141. Is the approach in FINRA Rule 5310.09(c) and MSRB Rule G–18.08(b) preferable to the Commission's proposal? Why or why not? Would some combination of the FINRA and MSRB approaches and the Commission's proposal be preferable to either? Please explain.

142. Do commenters believe that the Commission should provide staggered compliance dates for proposed Rule 1101(d) for broker-dealers of different sizes, if the Commission adopts proposed Regulation Best Execution? For example, should the Commission provide longer compliance dates for smaller broker-dealers? If so, should the Commission define a smaller broker-dealer as a broker-dealer that qualifies as a ''small entity'' under the Regulatory Flexibility Act pursuant to 17 CFR 240.0–10(c) for this purpose?[244] Or should the Commission define a smaller broker-dealer in a different way? Please explain.

F. Proposed Rule 1102—Annual Report

Proposed Rule 1102 would require a broker-dealer that effects any transaction for or with a customer or a customer of another broker-dealer to, no less frequently than annually, review and assess the design and overall effectiveness of its best execution policies and procedures, including its order handling practices. Such review and assessment would be required to be conducted in accordance with written procedures and would be required to be documented.[245] The broker-dealer also would be required to prepare a written report detailing the results of such review and assessment, including a description of all deficiencies found and any plan to address such deficiencies. The report would be required to be presented to the board of directors (or equivalent governing body) of the broker-dealer. The proposed annual review requirement is designed to require broker-dealers to evaluate whether their best execution policies and procedures continue to work as designed and whether changes are needed to ensure their continued effectiveness.

In assessing the overall effectiveness of its best execution policies and procedures, a broker-dealer should consider its policies and procedures holistically, and may utilize its execution quality reviews and any documentation with respect to conflicted transactions prepared during

[243] *See supra* notes 228–230 and accompanying text.

[244] *See supra* note 151 and accompanying text (describing the broker-dealers that qualify as small entities under the Regulatory Flexibility Act).

[245] The Commission believes that broker-dealers currently have written compliance procedures reasonably designed to review their business activity, which a broker-dealer could update to document the method in which the broker-dealer plans to conduct its review pursuant to proposed Rule 1102.

the course of the review period.[246] Although proposed Rule 1101(c), as discussed in section IV.D above, would require a broker-dealer to implement an at least quarterly review of the execution quality of its customer transactions, the annual review requirement in proposed Rule 1102 would be a broader, more holistic review of the broker-dealer's policies and procedures not focused solely on execution quality. As part of its annual review, a broker-dealer may review the findings of its execution quality reviews in conjunction with its overall review of its policies and procedures, to the extent it would assist the broker-dealer in identifying any inadequacies and supporting any revisions to its best execution policies and procedures, including its order handling practices, as appropriate.[247] Ongoing changes in order handling technology and differing broker-dealer trading models and practices may present a need for a broker-dealer to reconsider its best execution policies and procedures in a way that is not identified during the course of a broker-dealer's regular execution quality reviews conducted pursuant to proposed Rule 1101(c). For example, the proposed annual review process may encourage the broker-dealer to consider investments in new technologies to improve its overall best execution process, despite the fact that the broker-dealer has not identified any issues with its existing execution quality. Accordingly, the Commission believes that the proposed annual review requirement, including the associated written report that would be presented to the broker-dealer's board of directors or equivalent governing body, would create a robust internal compliance process under the oversight of the highest level of a broker-dealer's internal governance to help ensure the broker-dealer maintains robust best execution policies and procedures and complies with proposed Regulation Best Execution. The written report prepared pursuant to proposed Rule 1102 would also help regulators better understand the broker-dealer's compliance with proposed Regulation Best Execution.

FINRA's best execution rule does not require a periodic review of a broker-dealer's best execution policies and procedures.[248] However, FINRA Rule 3130(c) requires a broker-dealer to have a report that describes its processes to: establish, maintain, and review its policies and procedures reasonably designed to achieve compliance with applicable FINRA rules, MSRB rules, and Federal securities laws and regulations; modify such policies and procedures as changes and events dictate; and test the effectiveness of such policies and procedures on a periodic basis, the timing and extent of which is reasonably designed to ensure continuing compliance with FINRA rules, MSRB rules, and Federal securities laws and regulations. FINRA Rule 3130(c) further requires the broker-dealer's chief executive officer(s) (or equivalent officer(s)) to certify to the existence of such processes, and to certify that the report of such processes has been submitted to the broker-dealer's board of directors and audit committee (or equivalent bodies). The Commission understands that, currently, broker-dealers periodically review their policies and procedures (including those related to best execution), although the frequency of review may vary. However, because the Commission is proposing its own best execution rule, proposed Rule 1102 would help ensure the effectiveness of the broker-dealer's best execution policies and procedures that it adopts pursuant to the proposed rules.

MSRB Rule G–18.08(a) requires a broker-dealer to, at a minimum, conduct annual reviews of its policies and procedures for determining the best available market for the executions of its customers' transactions. In conducting these reviews, a dealer must assess whether its policies and procedures are reasonably designed to achieve best execution, taking into account the quality of the executions the dealer is obtaining under its current policies and procedures, changes in market structure, new entrants, the availability of additional pre-trade and post-trade data, and the availability of new technologies, and to make promptly any necessary modifications to such policies and procedures as may be appropriate in light of such reviews. As described above in connection with the FINRA rules, because the Commission is proposing its own best execution rule, proposed Rule 1102 would help ensure the effectiveness of the broker-dealer's best execution policies and procedures that it adopts pursuant to the proposed rules. Moreover, as compared to MSRB Rule G–18.08(a), proposed Rule 1102 would include a specific requirement that a broker-dealer review its order handling practices, require that a report be maintained of this annual review, and require that the broker-dealer provide the annual report to its governing body.

Request for Comment

The Commission requests comment on all aspects of proposed Rule 1102, and in particular:

143. Should a broker-dealer be required to have written procedures for annual (or more frequent) reviews of the overall effectiveness of its best execution policies and procedures, including its order handling practices, and be required to document such review, as proposed? Why or why not?

144. Would the proposed requirement for written procedures for annual (or more frequent) reviews help to ensure the overall effectiveness of a broker-dealer's best execution policies and procedures? Why or why not?

145. Should a broker-dealer be required to prepare a written report detailing the results of its review, including any plan to address deficiencies, as proposed? Why or why not? Should the Commission require specific information to be included in the written report? If so, what specific information should be required?

146. Should the written report of the review be presented to the broker-dealer's board of directors (or equivalent governing body), as proposed? Why or why not?

147. Would the proposed requirement for annual (or more frequent) reviews and for presenting written reports of the reviews to the board of directors help to ensure a broker-dealer's compliance with proposed Regulation Best Execution? Why or why not?

148. Should a broker-dealer's board of directors (or governing body) also be required to approve the best execution policies and procedures that would initially be established under proposed Regulation Best Execution? Please explain.

149. Do commenters agree with the Commission's understanding that, currently, broker-dealers periodically review their best execution policies and procedures? Please describe the rigor of any such reviews, whether broker-dealers document such reviews, and whether broker-dealers present the results of such reviews to their boards of directors (or equivalent governing bodies).

[246] While a broker-dealer that qualifies as an introducing broker under proposed Rule 1101(d) would need to conduct a review and prepare a written report pursuant to proposed Rule 1102, an introducing broker's review should appropriately reflect its obligations under proposed Rule 1101(d), rather than the aspects of proposed Rules 1101(a), (b), and (c) that would be considered as part of the executing broker's annual review.

[247] By utilizing its regular reviews of execution quality as part of its annual review, a broker-dealer may avoid any duplication of efforts to the extent it needs to conduct any execution quality analysis in order to assess the overall effectiveness of its best execution policies and procedures as required by proposed Rule 1102.

[248] FINRA Rule 5310.

150. Do commenters agree with the Commission's understanding that such reviews vary in frequency among broker-dealers? Please describe the frequency of such reviews. Does the frequency of review vary depending on whether the broker-dealer is subject to the FINRA rules or the MSRB rules? Please explain.

151. Should management, a committee, or an expert be designated to conduct the annual review and prepare the report? Should specific experience or expertise be required to conduct the annual review and prepare the report? Would additional specificity in the rule promote accountability over the annual review and report and ensure that adequate resources are devoted to such review and report? Why or why not?

152. Does the annual review raise any particular challenges for smaller broker-dealers? If so, what could the Commission do to mitigate those challenges?

153. Are there any conflicts of interest if the same personnel that designs or implements the policies and procedures also conduct the annual reviews? If so, how can those conflicts be mitigated or eliminated? Should broker-dealers be required to have their policies and procedures periodically audited by an unaffiliated third party to assess their design and effectiveness? Why or why not? If so, should the rule define the term ''affiliate'' to specify the entities that would be eligible to perform such an audit and should the Commission use the definition of ''affiliate'' in proposed Rule 1101(b)(4)(iii) for this purpose? Please explain. What types of unaffiliated third parties might have the necessary specific experience and expertise to review a broker-dealer's best execution policies and procedures? For example, should an unaffiliated consulting firm, accounting firm, or law firm be permitted to provide this service, if required? Should the rule prescribe the types of unaffiliated third parties that would have the requisite experience and expertise? Please explain.

154. Do commenters believe that the Commission should provide staggered compliance dates for proposed Rule 1102 for broker-dealers of different sizes, if the Commission adopts proposed Regulation Best Execution? For example, should the Commission provide longer compliance dates for smaller broker-dealers? If so, should the Commission define a smaller broker-dealer as a broker-dealer that qualifies as a ''small entity'' under the Regulatory Flexibility Act pursuant to 17 CFR 240.0–10(c) for this purpose? [249] Or should the Commission define a smaller broker-dealer in a different way? Please explain.

G. Recordkeeping Requirements Under Rule 17a–4

In connection with proposed Regulation Best Execution, the Commission is proposing new recordkeeping requirements for broker-dealers. Section 17(a)(1) of the Exchange Act requires registered broker-dealers to keep for prescribed periods such records as the Commission prescribes as necessary or appropriate in the public interest, for the protection of investors, or otherwise in furtherance of the purposes of the Exchange Act.[250] Rule 17a–4 under the Exchange Act specifies how long broker-dealers must preserve required records and other documents.[251]

Proposed Regulation Best Execution would require broker-dealers to make the following records:

- Policies and procedures under proposed Rules 1101(a), (b), and (d) and Rule 1102;
- Documentation of compliance with the best execution standard for conflicted transactions under proposed Rule 1101(b);
- Documentation of payment for order flow arrangements under proposed Rule 1101(b);
- Documentation of the results of the regular review of execution quality under proposed Rule 1101(c);
- Documentation of the results of the regular review of execution quality by introducing brokers under proposed Rule 1101(d);
- Documentation of the annual review under proposed Rule 1102; and
- Annual report under proposed Rule 1102.

Current Rule 17a–4(e)(7) under the Exchange Act would apply to the policies and procedures required by proposed Regulation Best Execution.[252] The Commission proposes to amend Rule 17a–4 to add new paragraph (b)(17) to require broker-dealers to preserve all other records made pursuant to proposed Rules 1101 and 1102 for a period of not less than three years, the first two years in a readily accessible place.

The Commission preliminarily believes that the preservation of records made pursuant to proposed Regulation Best Execution for this time period would assist broker-dealers in ensuring that they continue to maintain robust best execution practices for an appropriate amount of time. In addition, the preservation and availability of records that support and document broker-dealers' compliance with proposed Regulation Best Execution would also assist the Commission and SROs in assessing the broker-dealer's efforts to comply with proposed Regulation Best Execution.

Request for Comment

The Commission requests comment on the proposed record preservation requirements related to proposed Regulation Best Execution:

155. Should all records made pursuant to proposed Regulation Best Execution be required to be preserved? Please explain.

156. Do commenters agree that the policies and procedures required by proposed Regulation Best Execution should be subject to Rule 17a–4(e)(7) and preserved until three years after the termination of their use? Please explain.

157. Do commenters agree that all other records required by proposed Regulation Best Execution should be subject to Rule 17a–4(b) and preserved for a period of not less than three years, the first two years in a readily accessible place? Please explain.

158. Should the Commission impose additional record preservation requirements related to proposed Regulation Best Execution? Why or why not? If the Commission were to impose additional requirements, what specific records should broker-dealers be required to preserve? Please explain.

V. Economic Analysis

A. Introduction

The Commission is mindful of the economic effects that may result from proposed Regulation Best Execution, including the benefits, costs, and the effects on efficiency, competition, and capital formation.[253] This section

[249] *See supra* note 151 and accompanying text (describing the broker-dealers that qualify as small entities under the Regulatory Flexibility Act).

[250] 15 U.S.C. 78q(a)(1).

[251] 17 CFR 240.17a–4.

[252] Rule 17a–4(e)(7) requires broker-dealers to maintain and preserve in an easily accessible place compliance, supervisory, and procedures manuals (and any updates, modifications, and revisions thereto) describing the policies and practices of the broker-dealer with respect to compliance with applicable laws and rules, and supervision of the activities of associated persons until three years after the termination of the use of the manual. 17 CFR 240.17a–4(e)(7).

[253] Exchange Act Section 3(f) requires the Commission, when it is engaged in rulemaking pursuant to the Exchange Act, and is required to consider or determine whether an action is necessary or appropriate in the public interest, to consider, in addition to the protection of investors, whether the action will promote efficiency, competition, and capital formation. *See* 15 U.S.C.

Continued

analyzes the expected economic effects of proposed Regulation Best Execution relative to the current baseline, which consists of the current market and regulatory framework in existence today.

A broker-dealer's duty of best execution predates the Federal securities laws and, as noted previously, has ''its roots in the common law agency obligations of undivided loyalty and reasonable care that an agent owes to his principal.'' [254] In general terms, the Commission position is, and has been, that ''the duty of best execution requires broker-dealers to execute customers' trades at the most favorable terms reasonably available under the circumstances, *i.e.,* at the best reasonably available price.''[255] FINRA Rule 5310(a) and MSRB Rule G–18(a) codify essentially the same requirement that members must ''use reasonable diligence to ascertain the best market for the subject security and buy or sell [there] so that the resultant price to the customer is as favorable as possible under prevailing market conditions.''

The duty of best execution is a foundational component of the current best execution regulatory framework that helps protect investors in a setting of imperfect markets. The duty serves to counteract market failures that arise, for example, when an agent (in this case, a broker or broker-dealer) has different incentives than a principal (investor), and the principal, particularly the retail investor, is not in a position to monitor the agent. This is known in economics as a principal-agent problem.[256] A principal-agent problem arises when a broker-dealer undertakes costly actions to achieve best execution and the principal (investor) cannot observe the broker-dealer's actions. The broker-dealer in this situation has financial incentives to take (or not take) certain actions to reduce its costs or increase its profits.

The principal-agent problem can be exacerbated by a specific conflict of interest that arises when the broker-dealer executes a customer order in a principal capacity.[257] In these instances, the broker-dealer acting as principal on the trade has a financial incentive to maximize its gains from the trade, which would be at the expense of the counterparty, here the broker-dealer's customer, in a zero-sum game.[258] This conflict of interest should be mitigated because the broker-dealer as agent for its customer also has a duty to ensure that the order was executed at the most favorable terms reasonably available to the customer under the circumstances. However, retail customers typically lack access to the information that would allow them to determine independently whether an order received best execution from a broker-dealer. Further, obtaining and analyzing such information could be costly for retail customers.

The Commission has long taken the position that the ''scope of [the] duty of best execution must evolve as changes occur in the market that give rise to improved executions for customer orders . . . [and that] broker-dealers' procedures for seeking to obtain best execution for customer orders also must be modified to consider price [improvement] opportunities that become 'reasonably available.' '' [259] Current SRO rules that specifically address broker-dealer best execution policies and procedures requirements focus on a retrospective ''regular and rigorous'' review of execution quality. With limited exceptions, such as those for orders involving foreign securities, and securities for which there is limited pricing information or quotations available, existing SRO rules do not establish specific standards concerning a broker-dealer's policies and procedures for complying with the best execution obligations in FINRA Rule 5310(a) and MSRB Rule G–18(a).[260]

The proposal would build on the existing regulatory framework, codify in a Commission rule a best execution standard that is consistent with how the Commission and the courts have described the duty of best execution, enhance the Commission's ability to enforce best execution, and impose detailed policies and procedures obligations on broker-dealers' handling and execution of customer orders, including documented incremental efforts required for a broker-dealer to obtain the most favorable price in conflicted transactions for or with retail customers.[261] These requirements could further help enhance broker-dealers' ability to maintain robust best execution practices, including in situations where broker-dealers have order handling conflicts of interest with retail customers.

The Commission estimates aggregate compliance costs of $165.4 million in one-time costs and $128.9 million in annual costs on broker-dealers as they update, or establish, their policies and procedures for the handling, execution, and review of customer orders. To the extent that broker-dealers already have policies and procedures that are consistent with the proposed rules, aggregate implementation costs would be less than this estimate, and based on the Commission's experience, the Commission preliminarily believes these estimates overstate costs broker-dealers would bear in implementing the proposal.[262] Broker-dealers may also

78c(f). In addition, Exchange Act Section 23(a)(2) requires the Commission, when making rules pursuant to the Exchange Act, to consider among other matters, the impact that any such rule would have on competition, and not to adopt any rule that would impose a burden on competition that is not necessary or appropriate in furtherance of the purposes of the Exchange Act. *See* 15 U.S.C. 78w(a)(2).

[254] *Newton* v. *Merrill, Lynch, Pierce, Fenner & Smith, Inc.,* 135 F.3d 266, 270, n. 30 (3rd Cir. 1998). As the Commission explained when adopting rules governing payment for order flow almost three decades ago, ''[a] broker-dealer's duty to seek to obtain best execution of customer orders derives, in part, from the common law agency duty of loyalty, which obligates an agent to act exclusively in the principal's best interest. Restatement (Second) of Agency section 387 (1958). Thus, when an agent acts on behalf of a customer in a transaction, the agent is under a duty to exercise reasonable care to obtain the most advantageous terms for the customer. *Id.* at section 424.'' Payment For Order Flow Release, *supra* note 33, at n. 15.

[255] Regulation NMS Adopting Release, *supra* note 21, at 37538 (citations omitted). *See also,* Special Study, *supra* note 10, at 623 (''A broker-dealer acting as an agent for a customer in the execution of a transaction assumes the obligations of a fiduciary . . . . A corollary of the fiduciary's duty of loyalty to his principal is his duty to obtain or dispose of property for his principal at the best price discoverable in the exercise of reasonable diligence.'') (citations omitted), *available athttps://www.sechistorical.org/collection/papers/1960/1963_SSMkt_Chapter_07_2.pdf*

[256] *See* Joseph E. Stiglitz, *Principal and Agent, in Allocation, Information and Markets* 241 (John Eatwell *et al.* eds., 1989).

[257] For instance, a broker-dealer may decide to act in a principal capacity in a situation where there is a liquidity externality in that the investor's order lacks a counterparty, though the presence of such an externality is not necessary to the broker-dealer's decision.

[258] ''Trading is a zero-sum game in an important accounting sense. In a *zero-sum game,* the total gains of the winners are exactly equal to the total losses of the losers. Trading is a zero-sum game, because the combined gains and losses of buyers and sellers always sum to zero.'' Larry Harris, *Trading and Exchanges: Market Microstructure for Practitioners* (2002).

[259] *See, e.g., Marc N. Geman,* Securities Exchange Act Release No. 43963 (Feb. 14, 2001) (Commission opinion) (citing Order Execution Obligations Adopting Release, *supra* note 10, 61 FR 48322–48323).

[260] As discussed *supra* in note 129 and the accompanying text, FINRA Rule 3110(b)(1) requires broker-dealers to have policies and procedures for compliance with FINRA rules and Federal securities laws and regulations. MSRB Rule G–18.08 requires broker-dealers to have policies and procedures for determining the best available market for the executions of their customers' transactions. MSRB Rule G–28 requires broker-dealers to have procedures for compliance with MSRB rules and the Exchange Act and rules thereunder. Unlike these FINRA and MSRB rules, proposed Regulation Best Execution would establish specific standards concerning the policies and procedures for complying with the proposed best execution standard, as discussed in sections IV.B.1 and 2 *supra.*

[261] *See supra* section IV.

[262] *See infra* section V.C.2.

incur indirect costs.[263] Some of these costs could be passed through to customers in the form of higher commissions or reduced services.

The Commission has considered the economic effects of proposed Regulation Best Execution and, wherever possible, the Commission has quantified the likely economic effects of proposed Regulation Best Execution. The Commission is providing both a qualitative assessment and quantified estimates of the potential economic effects of the proposal where feasible. The Commission has incorporated data and other information to assist it in the analysis of the economic effects of proposed Regulation Best Execution. However, as explained in more detail below, because the Commission does not have, and in certain cases does not believe it can reasonably obtain, data that may inform the Commission on certain economic effects, the Commission is unable to quantify certain economic effects. Further, even in cases where the Commission has some data, quantification is not practicable due to the number and type of assumptions necessary to quantify certain economic effects, which render any such quantification unreliable. Our inability to quantify certain costs, benefits, and effects does not imply that the Commission believes such costs, benefits, or effects are less significant. The Commission requests that commenters provide relevant data and information to assist the Commission in quantifying the economic consequences of proposed Regulation Best Execution.

B. Baseline

Commission statements and SRO rules, including FINRA Rule 5310 and MSRB Rule G–18, and related SRO interpretive notices and guidance address broker-dealer best execution duties primarily through a broad, principles-based approach. Differences in security characteristics and market structure can cause broker-dealer order handling and execution practices to vary significantly across different asset classes, including the role that conflicts of interests play in the handling and execution of a broker-dealer's retail customer orders. In addition, policies related to the handling of customer orders can impact competition among broker-dealers, trading venues, and broker-dealers that offer order routing and execution services. The baseline against which the costs, benefits, and the effects on efficiency, competition, and capital formation of proposed Regulation Best Execution is measured consists of the current regulatory requirements and SRO guidance for broker-dealers concerning customer best execution, current broker-dealer best execution review processes, the current market structure and broker-dealer practices concerning handling and executing customer orders that may be impacted by proposed Regulation Best Execution,[264] and the structure of the market for broker-dealer services.

1. Current Legal and Regulatory Framework

Although FINRA and the MSRB have established rules and issued guidance directly addressing the duty of best execution that are applicable to their respective members, the Commission has never established its own rule governing a broker-dealer's legal duty of best execution. As described above in section II.A, the duty of best execution that a broker-dealer has today was originally derived from an implied representation that a broker-dealer makes to its customers when it agrees to engage in certain transactions on their behalf. The common law agency obligations of ''undivided loyalty and reasonable care'' that an agent owes to its principal require that a ''broker-dealer seek to obtain for its customer orders the most favorable terms reasonably available under the circumstances.'' [265] Expressed in economic terms, because a ''client-principal seeks his own economic gain and the purpose of the agency is to help the client-principal achieve that objective, the broker-dealer['s best execution obligation], absent instructions to the contrary, [means that a broker-dealer] is expected to use reasonable efforts to maximize the economic benefit to the client in each transaction.'' [266]

In addition to the duty itself, the current framework consists of examination and monitoring programs conducted by the Commission and FINRA [267] of Commission registrants and FINRA and MSRB members. Best execution is and has been a priority item in these examinations.[268] In addition, FINRA produces monthly status reports for members, known as the best execution Outside-of-the-Inside report card, ''detailing the number of transactions reported to a FINRA [trade reporting] Facility, in which [a] firm participated that were executed Outside-of-the-Inside market in apparent violation of the Best Execution Rule.'' [269]

(a) Commission and Court Statements, Agency Guidance, and Enforcement Activities

In the context of agency rulemaking, adjudication, and Federal court litigation, the Commission and various Federal courts of appeal have articulated what the duty of best execution means and interpreted how the duty applies in various circumstances. For example, the duty of best execution requires a broker-dealer to ''execute customers' trades at the most favorable terms reasonably available under the circumstances, *i.e.,* at the best reasonably available price.'' [270] When considering what the

[263] *See infra* section V.C.2.b).

[264] While proposed Regulation Best Execution would apply to all securities, the Commission preliminarily believes that the proposal would not have economic effects on the market structure or order handling practices in the markets for securities based swaps, asset-backed securities, and repurchase and reverse repurchase agreements because these markets are mostly dominated by institutional investors that do their own order handling. Therefore, the market structure and order handling practices in these markets are not discussed in the economic baseline of this release.

[265] *Newton* v. *Merrill, Lynch, Pierce, Fenner & Smith, Inc.,* 135 F.3d at 270.

[266] *See id.*

[267] The MSRB does not conduct its own enforcement or compliance examinations. MSRB, The Role and Jurisdiction of the MSRB, at 2 (2021) (''the SEC and federal bank regulators [ ] share responsibility for enforcement and compliance examinations''), *available at https://www.msrb.org/sites/default/files/2022-09/Role-and-Jurisdiction-of-MSRB.pdf.*

[268] The Division of Exams 2022 priorities note that best execution in fixed-income securities, best execution obligations in a zero commission environment, and possible effects of conflicts of interest on best execution are focus points of its broker-dealer exam program. Division of Examinations, 2022 Examination Priorities, at 19 and 20, *available at https://www.sec.gov/files/2022-exam-priorities.pdf.* According to FINRA, ''[a]ssessing firms' compliance with their best execution obligations under FINRA Rule 5310 (Best Execution and Interpositioning) is one of the cornerstones of FINRA's oversight activities.'' FINRA, 2022 Report on FINRA's Examination and Risk Monitoring Program, at 2 (Feb. 2022), *available at https://www.finra.org/sites/default/files/2022-02/2022-report-finras-examination-risk-monitoring-program.pdf.*

[269] FINRA, Best Execution Outside-of-the-Inside Report Card, *available at https://www.finra.org/compliance-tools/report-center/equity/best-execution-outside-inside-report-card.* Member firms are told that they should ''make no inference . . . that FINRA staff has or has not determined that the information contained on the Best Execution Outside-of-the-Inside report cards does or does not constitute rule violations.'' *Id.*

[270] Regulation NMS Adopting Release, *supra* note 21, at 37538. *See also* Order Execution and Routing Practice Release, *supra* note 22, at 75418 (price is a critical concern for investors); *Geman* v. *SEC,* 334 F.3d 1183, 1186 (10th Cir. 2003) (''[T]he duty of best execution requires that a broker-dealer seek to obtain for its customer orders the most favorable terms reasonably available under the circumstances.'') (quoting *Newton* v. *Merrill, Lynch, Pierce, Fenner & Smith, Inc.,* 135 F.3d 266, 270 (3d Cir. 1998)); *Kurz* v. *Fidelity Management & Research Co.,* 556 F.3d 639, 640 (7th Cir. 2009) (describing the ''duty of best execution'' as ''getting

Continued

best reasonably available price means in the context of a broker-dealers' best execution analysis, the Commission has articulated a non-exhaustive list of factors that may be relevant to broker-dealers' best execution analysis. These factors include the size of the order, speed of execution, clearing costs, the trading characteristics of the security involved, the availability of accurate information affecting choices as to the most favorable market center for execution and the availability of technological aids to process such information, and the cost and difficulty associated with achieving an execution in a particular market center.[271]

Other Commission statements address what best execution means in the context of various market practices and circumstances. Interpositioning, which occurs when a broker-dealer places a third party between itself and the best market for executing a customer trade in a manner that results in a customer not receiving the best available market price or paying unnecessary expenses, violates the broker-dealer's duty of best execution.[272] When a broker-dealer receives a limit order, the duty of best execution requires the broker-dealer to account for potential material differences in execution quality, such as the likelihood of execution among the various securities markets or market centers to which limit orders may be routed.[273] The Commission has also recognized that it may be impractical for a broker-dealer that handles a heavy volume of orders to make individual determinations regarding where to route each order[274] and that the duty of best execution requires a broker-dealer to assess periodically the quality of competing markets to ensure that its customers' order flow is directed to the markets providing the most beneficial terms.[275]

Although the Commission has not established a set of specific minimum data elements that a broker-dealer would need to acquire to achieve best execution[276] and has acknowledged that it cannot specify the data elements that may be relevant to every specific situation,[277] it has identified the various types of data needed by broker-dealers to fulfill their duty of best execution. For example, information contained in the public quotation system must be considered in seeking best execution of customer orders.[278] In adopting Rules 605 and 606,[279] the Commission recognized that the reports required of market centers would provide statistical disclosures regarding certain factors, such as execution price and speed of execution, relevant to a broker-dealer's order routing decisions and that these public disclosures of execution quality should help broker-dealers fulfill their duty of best execution.[280] More recently, the Commission emphasized that broker-dealers should consider the availability of consolidated market data, including the various elements of data content and the timeliness, accuracy, and reliability of the data in developing and maintaining best execution policies and procedures.[281]

The Commission has also emphasized the importance of price improvement in considering whether a customer order received best execution stating that ''notwithstanding any ambiguity that may have once existed [ ], it should now be clear that a firm must consider the potential for price improvement in carrying out its best execution obligations.''[282] Relatedly, the Commission has taken the position that simply routing customer order flow for automated executions or internalizing customer orders on an automated basis at the best bid or offer does not necessarily satisfy a broker-dealer's duty of best execution for small orders in non-NMS stock equity securities (and NMS stocks).[283] Rather, broker-dealers handling small orders should look for price improvement opportunities when executing these orders.[284] And the expectation of price improvement for customer orders is particularly important when broker-dealers receive payment for order flow.[285] According to the Commission, a broker-dealer's receipt of payment for order flow is not a violation of its duty of best execution as long as it periodically assesses the quality of the markets to which it routes packaged order flow.[286]

An additional component of the best execution baseline for the Commission is enforcement mechanisms. The Commission has broad statutory authority under the Exchange Act to bring an injunctive action in Federal district court under Exchange Act Section 21(d)(1) whenever any person is engaged or is about to engage in acts or practices constituting a violation of the Federal securities laws and rules and regulations thereunder and, among other things, FINRA and MSRB rules, including best execution rules. Exchange Act Section 21(f) directs the Commission *not* to bring an injunctive action against any person for a SRO rule violation ''unless . . . such self-regulatory organization . . . is unable or unwilling to take appropriate action . . ., or (2) such action is otherwise necessary or appropriate in the public interest or for the protection of investors.''[287] The Commission's authority to obtain monetary sanctions in Federal district court actions for FINRA and MSRB rule violations is also not co-extensive with its authority to obtain injunctive relief for violations of the Federal securities laws. For example, while the Commission can seek disgorgement and any equitable relief for Federal securities law violations and SRO rule violations, the Commission's authority to obtain civil penalties in a Federal district court action under Section 21(d) extends to violations of ''any provision of th[e

the optimal combination of price, speed, and liquidity for a securities trade'').

[271] *See* Order Execution and Routing Practice Release, *supra* note 22, at 75422; Regulation NMS Adopting Release, *supra* note 21, at 37538.

[272] *See supra* notes 29–30 listing Commission opinions. *See also SEC* v. *Ridenour,* 913 F.2d 515 (8th Cir. 1990) (bond salesman's interpositioning of personal trading between his customers' securities transactions and the market violated the antifraud provisions).

[273] *See* Order Execution Obligations Adopting Release, *supra* note 10, at 48323.

[274] *See* Payment for Order Flow Release, *supra* note 33, at 55009.

[275] *See* Regulation NMS Adopting Release, *supra* note 21, at 37516; Payment for Order Flow Release, *supra* note 33, at 55009.

[276] *See* MDI Adopting Release, *supra* note 38, at 18606.

[277] *Id.*

[278] *See* Order Execution and Routing Practice Release, *supra* note 22, at 75418.

[279] 17 CFR 242.605, 242.606.

[280] *See* Order Execution and Routing Practice Release, *supra* note 22, at 75418. *See also, id.* at 75420 (information provided by these reports is not, by itself, sufficient to support conclusions regarding the provision of best execution, and any such conclusions would require a more in-depth analysis of the broker-dealer's order routing practices than will be available from the disclosures required by the rules).

[281] *See* MDI Adopting Release, *supra* note 38, at 18605–06.

[282] *Marc N. Geman,* Exchange Act Release No. 43963 (Feb. 14, 2001) (C'n opinion) (record did not support a finding that firm fraudulently violated its duty of best execution), *affirmed on other grounds,* 334 F.3d 1183, 1186 (10th Cir. 2003). *See* Order Execution Obligations Adopting Release, *supra* note 10, at 48323. *See also, id.* at 48323 n. 357

[283] *See id.* at 48323.

[284] *See id.*

[285] *See* Payment for Order Flow Release, *supra* note 33, at 55008. *See* Exchange Act Rule 10b–10, 17 CFR 240.10b–10. *See also supra* note 43 (reviewing the definition of payment for order flow).

[286] *See* Payment for Order Flow Release, *supra* note 33, at 55009.

[287] Under Exchange Act Section 21(f), the Commission ''shall not bring any action pursuant to subsection (d) or (e) of this section against any person for violation of, or to command compliance with, the rules of a self-regulatory organization . . . unless it appears to the Commission that (1) such self-regulatory organization . . . is unable or unwilling to take appropriate action against such person in the public interest and for the protection of investors, or (2) such action is otherwise necessary or appropriate in the public interest or for the protection of investors.''

Exchange Act], the rules or regulations thereunder, or a cease-and-desist order entered by the Commission . . . other than [ ] a violation subject to a penalty pursuant to [the Exchange Act provision penalizing insider trading violations].'' [288] Section 21(d)(3) does not include the language in Section 21(d)(1) regarding the ''rules of a registered securities association'' or the ''rules of the Municipal Securities Rulemaking Board.''

The Commission's authority to obtain relief in administrative and cease-and-desist proceedings is more limited. The Commission can institute administrative proceedings pursuant to Exchange Act Sections 15(b)(4) and 15(b)(6), against broker dealers and their associated persons respectively, and pursuant to Exchange Act Sections 15B(c)(2) and 15B(c)(4) against municipal securities dealers and their associated persons respectively, for willful violations, and willful aiding and abetting violations of, among other things, the Federal securities statutes, the rules and regulations thereunder, ''or the rules of the Municipal Securities Rulemaking Board.'' [289] There is no parallel provision for the rules of an SRO or a registered securities association such as FINRA. A cease-and-desist proceeding can be brought only if ''any person is violating, has violated, or is about to violate any provision of [the Exchange Act], or any rule or regulation thereunder.'' [290] There is no parallel provision for the rules of the MSRB [291] or the rules of a Federal securities association.[292]

(b) FINRA Rule 5310 Best Execution Rule and Related Information

As discussed in greater detail in Sections II.C and IV., FINRA has a rule for its members that details their best execution obligations.[293] Specifically, Rule 5310(a)(1) states that ''[i]n any transaction for or with a customer or customer of another broker-dealer, a member and persons associated with a member shall use reasonable diligence to ascertain the best market for the subject security and buy or sell in such market so that the resultant price to the customer is as favorable as possible under prevailing market conditions.'' [294] FINRA's rule applies ''not only where the member acts as agent for the account of its customer but also where transactions are executed as principal'' [295] and cannot be transferred to others.[296] Interpositioning is expressly prohibited.[297] Like the position taken by the Commission,[298] FINRA's rule lists a set of non-exclusive ''factors that will be considered in determining whether a member has used 'reasonable diligence.'' The five factors listed are:

i. the character of the market for the security (*e.g.,* price, volatility, relative liquidity, and pressure on available communications);
ii. the size and type of transaction;
iii. the number of markets checked;
iv. accessibility of the quotation; and
v. the terms and conditions of the order which result in the transaction, as communicated to the member and persons associated with the member.[299]

FINRA's best execution rule and related guidance [300] addresses how its members' obligations and these factors are accounted for and considered. For example, for debt securities, FINRA Rule 5310.03 explains that the term ''quotation'' in its ''accessibility of the quotation'' factor ''refers to either dollar (or other currency) pricing or yield pricing'' and that ''[i]n the absence of accessibility, members are not relieved from taking reasonable steps and employing their market expertise in achieving the best execution of customer orders.'' [301] FINRA Rule 5310.06 also states that FINRA members ''must have written policies and procedures in place that address how the member will determine the best inter-dealer market for such a security in the absence of pricing information or multiple quotations and must document its compliance with those policies and procedures.''

FINRA Rule 5310.07 also addresses orders involving foreign securities.

[288] Exchange Act Section 21(d)(3)(A).

[289] Exchange Act Section 15(b)(4)(D) and (E) and 15(b)(6)(A)(i). Where broker-dealer's best execution-related misconduct has also involved fraud, the Commission may exercise its discretion to bring best execution-based fraud charges pursuant to the Exchange Act's and the Securities Act's antifraud provisions. *See, e.g.,* Linkbrokers Derivatives LLC, Exchange Act Rel. No. 72,846 (Aug. 14, 2014) (settled Section 15(b) and cease-and-desist proceeding alleging antifraud violations of Exchange Act Section 15(c)(1)), *available at https://www.sec.gov/litigation/admin/2014/34-72846.pdf.*

[290] Exchange Act Section 21C(a).

[291] Where the Commission can institute an administrative proceeding under both Sections 15B(c) and 21C, the Commission can order remedies, including a cease-and-desist order, and other sanctions against a municipal securities dealer. *See, e.g., RBC Capital Markets, LLC,* Exchange Act Rel. No. 93,042 (Sept. 17, 2021) (settled action) *available at https://www.sec.gov/litigation/admin/2021/34-93042.pdf.*

[292] In situations where broker-dealer best execution-related misconduct has involved fraud, the Commission can exercise its discretion to bring best execution-based fraud charges pursuant to the Exchange Act's or the Securities Act's antifraud provisions. *See, e.g.,* Robinhood SEC, supra note 69 (settled cease-and-desist proceeding alleging antifraud violations of Securities Act Sections 17(a)(2) and 17(a)(3)) *https://www.sec.gov/litigation/admin/2020/33-10906.pdf*; *Patrick R. Burke,* Exchange Act Rel. No. 76,285 (Oct. 28, 2015) (settled cease-and-desist and Section 15(b) proceeding alleging antifraud violations of Exchange Act Section 10(b) and Rule 10b–5 and Securities Act Section 17(a)), *available at https://www.sec.gov/litigation/admin/2015/33-9968.pdf.*

[293] Rule 5310, which first became effective in May 2012, consolidated FINRA members' best execution requirements that were based largely on NASD Rule 2320 and NASD Interpretive Guidance with Respect to Best Execution Requirements, NASD IM–2320, as well as new provisions. FINRA, Regulatory Notice 12–13, SEC Approves Consolidated FINRA Best Execution Rule, *available at https://www.finra.org/rules-guidance/notices/12-13.* As previously noted *supra* in note 129, in addition to FINRA's best execution rule, FINRA Rule 3110(b)(1) requires broker-dealers to have procedures for compliance with FINRA rules (including its best execution rule) and Federal securities laws and regulations. Separately, FINRA Rules 3130(b) and (c) require the chief executive officer (or equivalent officer) of a FINRA member to certify annually that the member has in place processes to establish, maintain, review, test and modify written compliance policies and written supervisory procedures reasonably designed to achieve compliance with applicable FINRA rules, MSRB rules, and Federal securities laws and regulations. *See also,* FINRA Regulatory Notice 21–12, *supra* note 174, at 9 (''FINRA has also advised Member firms should have effective procedures in place to ensure they are fulfilling their best execution obligations during extreme market conditions'').

[294] FINRA Rule 5310(a)(1), *available at https://www.finra.org/rules-guidance/rulebooks/finra-rules/5310.* FINRA rule 5310 recodified FINRA's predecessor, the NASD, rule and interpretative material (IM) governing best execution and interpositioning, NASD Rule 2320 and IM–2320. FINRA's most recent regulatory guidance on Rule 5310 is contained in Regulatory Notice 15–46, Best Execution: Guidance on Best Execution Obligations in Equity, Options and Fixed Income Markets (Nov. 2015) (''FINRA Regulatory Notice 15–46''), *available at https://www.finra.org/sites/default/files/notice_doc_file_ref/Notice_Regulatory_15-46.pdf*; and Regulatory Notice 21–23, Best Execution and Payment for Order Flow (June 23, 2021) (''FINRA Regulatory Notice 21–23'') *available at https://www.finra.org/sites/default/files/2021-06/Regulatory-Notice-21-23.pdf.*

[295] FINRA Rule 5310(e). This paragraph also states that a broker-dealer's duty of best execution is ''distinct from the reasonableness of commission rates, markups, or markdowns, which are governed by Rule 2121 and its Supplementary Material.'' *Id.*

[296] FINRA Rule 5310.09(a).

[297] FINRA Rule 5310(a)(2). This subparagraph is one of a number of the rule's specific provisions addressing interpositioning. For a discussion of the related burdens and prohibitions imposed by FINRA in connection with interpositioning, see the discussion of FINRA Rules 5310(b), (c), and (d) in Section IV.A., including the text accompanying *supra* notes 149 and 150.

[298] *See* Order Execution and Routing Practice Release, *supra* note 22, at 75422, and the accompanying discussion.

[299] FINRA Rule 5310(a)(1).

[300] FINRA Rule 5310 includes supplementary material which addresses: (i) the execution of marketable customer orders; (ii) the definition of ''market;'' (iii) debt securities; (iv) executing brokers; (v) the use of another broker, a broker's broker, to execute a customer's orders; (vi) orders involving securities with limited quotation or pricing information; (vii) orders involving foreign securities; (viii) customer instructions for order handling; and (ix) the regular and rigorous review of execution quality. The text of FINRA Rule 5310 is *available at https://www.finra.org/rules-guidance/rulebooks/finra-rules/5310.* Regulatory Notices 15–46 and 21–23 are FINRA guidance documents for its best execution rule.

[301] FINRA Rule 5310.03.

''Even though a security does not trade in the U.S., members still have an obligation to seek best execution for customer orders involving any foreign security.'' [302] ''[A] member that handles customer orders involving foreign securities that do not trade in the U.S. must have specific written policies and procedures in place regarding its handling of customer orders for these securities that are reasonably designed to obtain the most favorable terms available for the customer, taking into account differences that may exist between U.S. markets and foreign markets.'' [303] Referencing two of its factors to be considered, FINRA Rule 5310.07 states that ''the character of the particular foreign market and the accessibility of quotations in certain foreign markets may vary significantly'' and that ''the determination as to whether a member has satisfied its best execution obligations necessarily involves a 'facts and circumstances' analysis.'' [304] Further, for customer orders involving a foreign security FINRA requires its members to ''have specific written policies and procedures in place regarding its handling of customer orders for these securities that are reasonably designed to obtain the most favorable terms available for the customer.'' [305]

FINRA rules address two situations where a member's best execution obligation is modified or no longer applicable. If a broker-dealer ''receives an unsolicited instruction from a customer to route that customer's order to a particular market for execution, the member is not required to make a best execution determination beyond the customer's specific instruction.'' [306] FINRA Rule 5310.04 addresses a specific situation where its best execution rule does not apply. The rule ''does not apply in instances when another broker-dealer is simply executing a customer order against the member's quote.'' The rule explains that ''[t]he duty to provide best execution to customer orders received from other broker-dealers arises *only when an order is routed from the broker-dealer to the member for the purpose of order handling and execution.*'' [307]

FINRA Rule 5310 addresses a broker-dealer's best execution-related obligations to determine order execution quality. FINRA Rule 5310.09(a) requires that ''[a] member that routes customer orders to other broker-dealers for execution on an automated, non-discretionary basis, as well as a member that internalizes customer order flow, must have procedures in place to ensure the member periodically conducts regular and rigorous reviews of the quality of the executions of its customers' orders if it does not conduct an order-by-order review.'' [308] This ''regular and rigorous'' review must be conducted at a minimum no less frequently than quarterly unless, based on a member's business, ''more frequent reviews are needed.'' Reviews are required to be done on a security-by-security and type-of-order basis.[309] Execution quality reviews must compare customer execution quality to the execution quality of other markets that are not used for customer order execution.[310] However, FINRA Rule 5310.09(c) allows a broker-dealer to rely on another broker-dealer's regular and rigorous review if the broker-dealer seeking to rely ''routes its order flow to another member that has agreed to handle that order flow as agent for the customer (*e.g.,* a clearing firm or other executing broker-dealer)'' and ''as long as the statistical results and rationale of the review are fully disclosed to the member and the member periodically reviews how the review is conducted, as well as the results of the review.'' [311] Issues associated with payment for order flow are also addressed in FINRA's best execution rule and guidance. FINRA recently issued best execution guidance that stated that ''firms that provide payment for order flow for the opportunity to internalize customer orders cannot allow such payments to interfere with their best execution obligations.'' [312] For example, ''inducements such as payment for order flow and internalization may not be taken into account in analyzing market quality.'' [313]

''In other words, . . . firms may not negotiate the terms of order routing arrangements for those customer orders in a manner that reduces the price improvement opportunities that otherwise would be available to those customer orders absent payment for order flow.'' [314]

FINRA publishes reports that include the results of its examination program's annual review of member best execution compliance. These reports, covering examinations from 2017 through 2021, include a series of findings and observations on various aspects of Rule 5310.[315] In each year, FINRA observed some noncompliance with Rule 5310. Among the points made in each report, FINRA reported observing some firms that did not: (1) assess execution in competing markets; (2) conduct an adequate review on a type-of-order basis; (3) evaluate certain required factors when conducting regular and rigorous review; and, in more recent

[302] FINRA Rule 5310.07.

[303] *Id.*

[304] *Id.* The rule also states that ''best execution obligations also must evolve as changes occur in the market that may give rise to improved executions [and] members also must regularly review these policies and procedures to assess the quality of executions received and update or revise the policies and procedures as necessary.''

[305] *Id.*

[306] FINRA Rule 5310.08. FINRA does require, however, that the broker-dealer process the ''order promptly in accordance with [its] terms . . . [and] where a customer has directed that an order be routed to another specific broker-dealer,'' that broker-dealer receiving the directed order would be subject to the duty of best execution with respect to the customer's order. *Id.*

[307] FINRA Rule 5310.04 (emphasis added).

[308] FINRA Rule 5310.09(a). FINRA has stated that there are two situations where an order-by-order review would satisfy best execution requirements when a ''regular and rigorous review alone . . . may not'' do so. One involves certain larger-sized security orders. *See* FINRA Regulatory Notice 15–46, *supra* note 294, at 3 (''when routing or internally executing larger-sized orders in any security, regular and rigorous review alone (as opposed to an order-by-order review) may not satisfy best execution requirements, given that the execution of larger-size orders ''often requires more judgment in terms of market timing and capital commitment'' (quoting NASD Notice to Members 01–22 at n. 13)). The other circumstance involves ''any orders that a member firm determines to execute internally'' which, according to FINRA Regulatory Notice 21–23, ''are subject to an order-by-order best execution analysis.'' *Id., supra* note 294, at 3. FINRA guidance includes commentary that advances in technology make ''order-by-order review of execution quality [ ] increasingly possible for a range of orders in equity securities and standardized options. *Id.* Although the text of FINRA Rule 5310 and its interpretive guidance refer to an ''order-by-order *review*'' in contrast to the ''regular and rigorous *review*'' detailed in Rule 5310.09, it is our understanding that FINRA has not directly addressed what an ''order-by-order review'' entails.

[309] FINRA Rule 5310.09(a).

[310] ''[A] member must determine whether any material differences in execution quality exist among the markets trading the security and, if so, modify the member's routing arrangements or justify why it is not modifying its routing arrangements.'' FINRA Rule 5310.09(b). FINRA has identified eight factors for members to consider in order to assure that order flow is directed to markets providing the most beneficial terms for a member's customers' orders. These factors are discussed in the text accompanying *supra* note 299.

[311] FINRA Rule 5310.09(c).

[312] FINRA Regulatory Notice 21–23, *supra* note 294, at 4.

[313] *Id.* FINRA's guidance stated that ''the possibility of obtaining price improvement is a heightened consideration when a broker-dealer receives payment for order flow.'' *Id.* (citation omitted).

[314] *Id.* (citing FINRA Regulatory Notice 15–46, *supra* note 294, at n.25 (''For example, if a firm obtains price improvement at one venue of $0.0005 per share, and it could obtain mid-point price improvement at another venue of $0.025 per share, the firm should consider the opportunity of such midpoint price improvement on that other venue as part of its best execution analysis.'')).

[315] Each of these reports is *available at https://www.finra.org/media-center/reports-studies.* For 2017 through 2019, the reports are titled ''FINRA Report on Examination Findings.'' More recent reports are titled ''Report on FINRA's Examination and Risk Monitoring Program.''

years, (4) consider and address potential conflicts of interest in conflicts of interest relating to routing of orders to affiliated broker-dealers, ATSs, or market centers that provide payment for order flow or other routing inducements.[316]

(c) MSRB Rule G–18 Best Execution Rule and Guidance

The MSRB's adopted its best execution rule, Rule G–18, in 2015 which became effective on March 21, 2016.[317] It is generally modeled after and similar to FINRA Rule 5310.[318] It extends the outline of ''reasonable diligence'' to include ''the information reviewed to determine the current market for the subject security or similar securities,'' provides more granular detail regarding transactions in which the broker-dealer acts in a principal capacity, and directs at least annual reviews of best execution (versus at least quarterly reviews required by FINRA). Unlike FINRA Rule 5310, MSRB Rule G–48(e) provides an exception from the requirements of Rule G–18 for all transactions with sophisticated municipal market professionals, defined in MSRB Rule D–15.[319] According to FINRA and the MSRB, there are two instances where ''material differences'' exist between the MSRB's best execution guidance and FINRA's.[320] They involve the regular and rigorous review of execution quality required by members,[321] and the timeliness of executions consistent with reasonable diligence.[322] MSRB Rule G–18.08(a) requires a broker-dealer to, at a minimum, conduct annual reviews of its policies and procedures for determining the best available market for the execution of its customers' transactions. MSRB Rule G–18.08(b) provides that where a broker-dealer routes its customers' transactions to another broker-dealer, and that broker-dealer has agreed to handle those transactions as agent or riskless principal for the customer, the routing broker-dealer may rely on the other broker-dealer's periodic reviews as long as the results and rationale of the reviews are fully disclosed to the broker-dealer and the broker-dealer periodically reviews how the other broker-dealer's reviews are conducted and the results of such reviews.[323]

The other material difference between FINRA and MSRB best execution rules can be found in MSRB Rule G–18.03. According to this rule, ''[a] dealer must make every effort to execute a customer transaction promptly, taking into account prevailing market conditions. In certain market conditions a dealer may need more time to use reasonable diligence to ascertain the best market for the subject security.'' [324] FINRA Rule 5310 has no similar provision noting the potential need for more time.

MSRB does not have authority to bring enforcement actions itself. Rather, FINRA and the Commission may enforce MSRB rules.

2. Best Execution Review Processes

Policies and procedures for reviewing the execution quality of customer orders vary across broker-dealers. Under the existing SRO rules and guidance, broker-dealers [325] that route to clearing or executing brokers on an agency basis may rely on the best execution review of their clearing firm or executing brokers. Other broker-dealers may use third-party transactions costs analysis (TCA) services and internal review systems, including best execution committees. Currently, broker-dealers review best execution to standards set by FINRA Rule 5310 or MSRB Rule G–18, as applicable.[326] FINRA Rule 5310 requires at least a quarterly review of execution quality. MSRB Rule G–18 requires an annual review of best execution policies and procedures that takes into account execution quality obtained under those policies and procedures, among other things. In performing reviews of customers' order execution quality, broker-dealers compare the execution actually achieved to the execution quality in other markets that were not used. Overall, these processes help broker-dealers to evaluate whether or not access to a specific market will improve customer execution quality given cost of access. FINRA Rule 5310.02 provides a ''market'' definition and states that broker-dealers must not mandate that ''certain trading venues have less relevance than others in the course of determining a firm's best execution obligations.'' What constitutes a relevant/material market to access varies based on the needs of the individual customer order and estimated changes in their transaction costs. A best execution policy including a documented process of venue selection aids this decision.

Introducing brokers perform best execution reviews by evaluating the execution quality achieved by brokers to which they route their customers' orders. As discussed above in this section, introducing brokers [327] may rely on the best execution review processes of their routing or executing brokers and use these to evaluate the execution

[316] *Id.*

[317] The full text of the MSRB rule is *available at https://www.msrb.org/Rules-and-Interpretations/MSRB-Rules/General/Rule-G-18.aspx*. The rule applies to brokers, dealers, and municipal securities dealers. In addition, MSRB Rule G–28 requires broker-dealers to have procedures for compliance with MSRB rules and the Exchange Act and rules thereunder. As previously noted in *supra* note 48, for ease of discussion and consistency, when discussing the MSRB rule, the release refers to these entities collectively as ''broker-dealers.'' The MSRB issued ''Implementation Guidance on MSRB Rule G–18, on Best Execution'' on November 20, 2015 (''MSRB 2015 Guidance''), *available at https://www.msrb.org/~/media/Files/MISC/Best-Ex-Implementation-Guidance.ashx*. An updated version of portions of that guidance from February 7, 2019 (''MSRB Notice 2019–05'') is *available at https://www.msrb.org/-/media/Files/Regulatory-Notices/Announcements/2019-05.ashx??n=1*. The MSRB and FINRA coordinated their issuance of independent guidance in 2015 with each notice including a statement that the guidance being issued was ''consistent in all material respects with guidance on best execution obligations [being published by the other SRO] . . . except where the rule or context otherwise specifically requires.'' MSRB 2015 Guidance, at n. 1; FINRA Regulatory Notice 15–46, *supra* note 294, at n. 1. The MSRB has also issued information for investors *available at https://www.msrb.org/msrb1/pdfs/Best-Execution-Investors-Perspective.pdf*.

[318] *See* sections II.C and IV for detailed discussions of Rule G–18. The discussion in this section of the economic analysis is largely limited to identifying the differences between Rule G–18 and FINRA Rule 5310.

[319] MSRB Rule G–48 and paragraph (e) provide that ''a broker, dealer, or municipal securities dealer's obligations to a customer that it reasonably concludes is a Sophisticated Municipal Market Professional, or SMMP, as defined in Rule D–15, shall be modified'' such that ''[t]he broker, dealer, or municipal securities dealer shall not have any obligation under Rule G–18 to use reasonable diligence to ascertain the best market for the subject security and buy or sell in that market so that the resultant price to the SMMP is as favorable as possible under prevailing market conditions.'' *See supra* note 120.

[320] FINRA Regulatory Notice 15–46, *supra* note 294, at 12 n. 1; MSRB Notice 2019–05, *supra* note 317, at 4 n.1. In addition to these ''material differences,'' the MSRB guidance also expressly states that the provisions of Rule G–18 do not apply to transactions in municipal fund securities.'' MSRB Rule G–18.09. The FINRA guidance has no comparable position.

[321] The MSRB, ''[i]n adopting Rule G–18, and paragraph .08 of the Supplementary Material specifically, [ ] did not include provisions that are contained in FINRA Rule 5310 pertaining to ''regular and rigorous review of execution quality,'' to tailor the rule to the characteristics of the municipal securities market.'' MSRB Notice 2019–05, *supra* note 317, at 7 n.12.

[322] FINRA Regulatory Notice 15–46, *supra* note 294, at 12 n. 1.

[323] For a discussion of how the MSRB has interpreted the obligations of introducing brokers, *see supra* note 229.

[324] MSRB Rule G–18.03.

[325] These broker-dealers can include introducing brokers as proposed to be defined by this rule, but FINRA's rule applies more generally.

[326] *See supra* Section II.C for a detailed discussion of FINRA and MSRB best execution review requirements.

[327] All broker-dealers who route to executing or clearing brokers on an agency basis may use this reliance, per FINRA Rule 5310, for the purposes of best execution.

quality of orders by comparing execution statistics of executing brokers, with which the introducing broker has a relationship. The Commission believes this is currently done by comparing execution statistics in aggregate, rather than on an order-by-order basis, except where an introducing broker is following FINRA's statements in its regulatory notice regarding order-by-order best execution reviews.[328] Introducing brokers typically have pre-arranged agreements with a small number of executing brokers, which vary by introducing broker.[329] This may lead to introducing brokers principally relying on execution statistics from these executing brokers to determine whether customers' orders are receiving best execution. While the FINRA rule requires introducing brokers to review the methodology and results of its executing broker's regular and rigorous review of its execution quality on a quarterly basis, it does not specifically require the introducing broker to compare the execution quality of its executing broker(s) to what it would have received from other executing brokers.[330]

Executing brokers are able to conduct a more thorough review of execution quality of the orders they receive. Executing brokers review execution quality by comparing execution statistics of executions received given particular execution methods, *e.g.,* routing to a particular market center or internalization. The Commission preliminarily believes this review is highly heterogeneous among executing brokers (*i.e.,* some use third party transaction cost analysis (''TCA'') services exclusively while others supplement and verify their own analysis with third party TCA statistics), with some brokers performing very rigorous comparisons of executions using various methods, and other brokers performing a more cursory review.

Some brokers may utilize third-party analysis in their execution quality reviews. In order to evaluate their execution quality, some brokers may send information on their orders to third parties TCA services to produce independent order execution quality statistics. TCA components may include, but are not necessarily limited to, fees, taxes, rebates, spreads, delay costs, price appreciation, market impact, timing risk, and opportunity costs. For example, TCA service providers in the NMS stock and options markets may produce execution quality reports for their clients which contain, in addition to other metrics, information on the percentage of trades receiving price improvement, percentage of trades at or within the NBBO, average savings per share from price improvement, liquidity multiple (*i.e.,* average size of order execution at or better than the NBBO at the time of order routing, divided by average quoted size), execution speed, and effective to quoted spread ratios. In NMS Stocks, broker-dealers may also utilize Rule 605 reports to help evaluate execution quality at different market centers, including market to which they may not route orders.[331]

Some broker-dealers use best execution committees (BECs) to evaluate their execution quality and establish their best execution policies and procedures. Order-by-order reviews are typically reserved for large orders, which likely leaves the execution quality review of retail orders as a task to be done in aggregate. BECs meet periodically, as often as monthly, to review execution quality of all applicable order types, compare order routing practices, policies, and procedures to industry standards, and maintain written documentation for order execution and evaluation. BEC members may consist of senior trading representatives along with members of the broker-dealer's compliance, legal, and operational risk departments.

3. Description of Markets and Broker-Dealer Order Handling and Execution Practices

Broker-dealers execute orders from their customers in a variety of ways, which may depend on the nature of the market, broker-dealer, or customer, or characteristics of the order such as size. Some broker-dealers may act on a purely agency basis by routing orders to the best available quotes set by other broker-dealers or third-party market makers on exchanges and ATSs or at other OTC market centers, some broker-dealers may choose to execute the orders on a principal basis, and some may do both.

Certain conflicts of interest may arise in the handling and execution of customer orders that exacerbate the principal-agent problem between the customer and broker-dealer. Common types of conflicts of interest that may exacerbate the principal-agent problem can involve: (1) a broker-dealer routing a customer order in exchange for a payment or a lower fee; or (2) a broker-dealer seeking to transact in a principal capacity with a customer order, which involves trading off the spread the broker-dealer can earn on the transaction vs the price the customer must pay; or (3) a broker-dealer routing a customer order to a trading venue or broker-dealer with which it may have a relationship, such as a broker-dealer routing a customer order to an affiliated ATS.[332] However, SRO rules address the extent to which certain specific situations presenting conflicts of interest are prohibited from influencing a broker-dealer's duty of best execution. For example FINRA rules and guidance (*e.g.,* FINRA Regulatory Notice 21–23) require that ''member firms may not let payment for order flow interfere with their duty of best execution.'' [333]

The below sections discuss in more detail the trading environment and broker-dealer order handling and execution practices in different asset classes. They also discuss the role that certain conflicts of interest such as PFOF and principal trading play in the handling and execution of retail orders in different asset classes.

(a) NMS Securities

i. NMS Stocks

a. NMS Stocks Trading Services Overview

Market centers compete to attract order flow in NMS stocks. At the same time, market participants compete to provide liquidity in NMS stocks within market centers. As shown in Table 1, in Q1 of 2022, NMS stocks were traded on 16 registered securities exchanges [334]

[328] *See supra* note 308 for further discussion on FINRA's rules and guidance related to broker-dealers reviewing the execution quality of customer orders.

[329] *See* Henry F. Minnerop, *The Role and Regulation of Clearing Brokers-Revisited,* 75 Bus. Lawyer 2201 (Summer 2020), *available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3663233* (retrieved from Elsevier database).

[330] *See* FINRA Rule 5310.09(c), Regular and Rigorous Review of Execution Quality.

[331] *See supra* note 223 and accompanying discussion for more information on Rule 605 reports.

[332] *See supra* Section III.A.

[333] *See supra* Section III.A.2.

[334] Most of these 16 registered securities exchanges are owned by three exchange families. Currently, CBOE Global Markets owns: Cboe BYX Exchange, Inc., Cboe BZX Exchange, Inc. (''Cboe BZX''), Cboe EDGA Exchange, Inc., and Cboe EDGX Exchange, Inc. (''Cboe EDGX''); the Nasdaq Inc. owns: Nasdaq BX, Inc. (''Nasdaq BX''), Nasdaq PHLX LLC (''Nasdaq Phlx''), and The Nasdaq Stock Market LLC (''Nasdaq''); and the Intercontinental Exchange Inc. owns: NYSE, NYSE American LLC (''NYSE American''), NYSE Arca, Inc. (''NYSE Arca''), NYSE Chicago, Inc., and NYSE National, Inc. Other registered securities exchanges that trade NMS stocks and do not belong to one of these exchange groups include: Investors Exchange LLC (''IEX''), Long-Term Stock Exchange, Inc., MEMX LLC, and MIAX Pearl, LLC (''MIAX PEARL''). Among these exchanges, eight trade only equities and eight trade both equities and options. The Commission has approved BOX Exchange LLC (''BOX'') to trade certain equity securities that would be NMS stocks on a facility, BSTX LLC

and off-exchange at 32 NMS Stock ATSs and at over 230 other FINRA members, including OTC market makers.[335] OTC market markers include 6 wholesalers that internalize the majority of individual investor marketable orders.[336] These numerous market centers match traders with counterparties, provide a framework for price negotiation and/or provide liquidity to those seeking to trade.

Market centers' primary customers are broker-dealers that route their own orders or their customers' orders for execution. Market centers may compete with each other for these broker-dealers' order flow on a number of dimensions, including execution quality. They also may innovate to differentiate themselves from other trading centers to attract more order flow. While registered exchanges cater to a broader spectrum of investors, ATSs and OTC market makers, including wholesalers, tend to focus more on providing trading services to either institutional or individual investor orders.

TABLE 1—Q1 2022 NMS STOCK SHARE VOLUME PERCENTAGE BY MARKET CENTER TYPE

Market center type	Venue count	Percentage of total share volume	Percentage of off-exchange share volume
Exchanges	16	59.7	.....
NMS Stock ATSs	32	10.2	25.2
Wholesalers [a]	6	23.9	59.4
Other FINRA Members	232	6.3	15.6

This table reports for Q1 2022 the percentage of NMS stock share volume executed by market center type and the percentage of off-exchange share volume by market centers type. Venue Count lists the number of venues in each market center category. Percentage of Total Share Volume is the percentage of all NMS stock share volume (on-exchange plus off-exchange) executed by the type of market center. Percentage of off-Exchange Share Volume is the percentage of off-exchange share volume executed by the type of market center. Exchange share volume and total market volume are based on CBOE Market Volume Data on monthly share volume executed on each exchange and share volume reported in FINRA Trade Reporting Facilities (TRFs).[b] NMS Stock ATSs, wholesalers and Other FINRA members share volume are based on monthly FINRA OTC Transparency data on aggregated NMS stock trading volume executed on individual ATSs and over-the-counter at Non-ATS FINRA members.[c] The Percentage of Off-Exchange Share Volume is calculated by dividing the NMS Stock ATS, wholesaler and FINRA member share volume from the FINRA Transparency Data by the total TRF share volume reported in CBOE Market Volume Data. Percentages do not add up to 100 percent due to rounding.

[a] *See supra* note 336 for details regarding how FINRA member OTC market makers are classified as wholesalers for purposes of this release.

[b] Cboe, U.S. Historical Market Volume Data, *available at https://cboe.com/us/equities/market_statistics/historical_market_volume/.* Trade Reporting Facilities (TRFs) are facilities through which FINRA members report off-exchange transactions in NMS stocks, as defined in SEC Rule 600(b)(47) of Regulation NMS. *See generally* FINRA, Trade Reporting Facility, *available at https://www.finra.org/filing-reporting/trade-reporting-facility-trf.*

[c] FINRA OTC (Non-ATS) Transparency Data, Monthly Statistics, *available at https://otctransparency.finra.org/otctransparency/OtcData;* FINRA OTC (ATS Block)Transparency Data, Monthly Statistics, *available at https://otctransparency.finra.org/otctransparency/AtsBlocksDownload.* The FINRA OTC (Non-ATS) Transparency Data may not contain all share volume transacted by a wholesaler or FINRA member because FINRA aggregates ''[s]ecurity-specific information for firms with 'de minimis' volume outside of an ATS'' and ''publishe[s it] on a non-attributed basis.'' FINRA, OTC (ATS & Non-ATS) Transparency, Overview, *available athttps://www.finra.org/filing-reporting/otc-transparency.*

Table 1 displays NMS stock share volume percentage by market center type for Q1 2022. Exchanges execute approximately 60% of total share volume in NMS stocks, while off-exchange market centers execute approximately 40%. The majority of off-exchange share volume is executed by wholesalers, who execute almost one quarter of total share volume (23.9%)[337] and about 60% of off-exchange share volume.[338] NMS Stock ATSs execute approximately 10% of total NMS stock share volume and 25% of off-exchange share volume. Other FINRA members, besides wholesalers and ATSs, execute approximately 15% of off-exchange share volume. Wholesalers and other OTC market makers also operate single dealer platforms (''SDPs'') where they operate as dealers to internalize marketable institutional orders.[339] One study found that SDPs accounted for approximately 10% of off-exchange

(''BSTX''), but BSTX is not yet operational. *See* Securities Exchange Act Release Nos. 94092 (Jan. 27, 2022), 87 FR 5881 (Feb. 2, 2022) (SR–BOX–2021–06) (approving the trading of equity securities on the exchange through a facility of the exchange known as BSTX); 94278 (Feb. 17, 2022), 87 FR 10401 (Feb. 24, 2022) (SR–BOX–2021–14) (approving the establishment of BSTX as a facility of BOX). BSTX cannot commence operations as a facility of BOX until, among other things, the BSTX Third Amended and Restated Limited Liability Company Agreement approved by the Commission as rules of BOX is adopted. *Id.* at 10407.

[335] *See* Concept Release on Equity Market Structure, Exchange Act Release No. 61358 (Jan. 14, 2010), 75 FR 3593 (Jan. 21, 2010) at 3598–3560 (for a discussion of the types of trading centers); *see also* Form ATS–N Filings and Information, *available at https://www.sec.gov/divisions/marketreg/form-ats-n-filings.htm.* Some academic studies attribute the fragmented nature of this market, in part, to certain provisions of Regulation NMS. *See, e.g.,* Maureen O'Hara & Mao Ye, *Is Market Fragmentation Harming Market Quality?,* 100 J. Fin. 459 (2011); Amy Kwan, et. al., *Is Market Fragmentation Harming Market Quality?,* 115 J. Fin. 330 (2015).

[336] The six OTC market makers that are classified as wholesalers for purposes of this release are the OTC market makers to which the majority of marketable orders originating from retail brokers were routed as identified from information from retail broker Rule 606(a)(1) reports from Q1 2022. Rule 606(a)(1) requires broker-dealers to produce quarterly public reports containing information about the venues to which the broker-dealer regularly routed non-directed orders for execution, including any payment relationship between the broker-dealer and the venue, such as any PFOF arrangements. See 17 CFR 242.606(a)(1).

[337] Of the six wholesalers identified in Q1 2022, two accounted for approximately 66% of wholesalers' total executed share volume of NMS stocks. This result suggests that just two wholesalers account for a very large percentage of order flow coming from individual investors. One study finds that the concentration of wholesaler internalization, as measured by the Herfindahl-Hirschman Index (HHI) of share volume executed across wholesalers, has increased from 2018 to 2021. *See* Edwin Hu & Dermot Murphy, *Competition for Retail Order Flow and Market Quality* (Working paper, June 2022), *available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4070056* (retrieved from Elsevier database).

[338] The share volume reported for wholesalers in FINRA OTC Transparency Data includes both individual investor orders executed by wholesalers in a principal capacity, as well as other orders executed by wholesalers in a principal capacity, such as institutional orders executed on their single dealer platforms. It does not include share volume that they executed in a riskless principal capacity or share volume that was routed and executed at another market center.

[339] Wholesalers and OTC market makers can execute orders itself or instead further route the order to other venues. An SDP always acts as the counterparty to any trade that occurs on the SDP. *See, e.g.,* FINRA, *Investor Insights, Where Do Stocks Trade?* (Dec. 3, 2021), *available at https://www.finra.org/investors/insights/where-do-stocks-trade* .

trading volume in Q1 2022.[340] Exchanges (via their rules) and ATSs determine how orders compete with each other, wherein liquidity suppliers set prices and wait for execution at their prices by liquidity demanders. This interaction between liquidity providers and demanders encompasses order-by-order competition. Unlike exchanges, for which each exchange's rules determine competition in a non-discretionary fashion, wholesalers execute or route orders in a discretionary fashion.[341] While some orders may be routed to a central limit order book against which institutional investors may execute (on the discretion of the wholesaler), institutional investors generally consider order flow routed to a wholesaler to be ''inaccessible.'' [342]

As a proxy for expected execution quality, quoted prices are a dimension on which exchanges compete to attract order flow. Specifically, exchanges are required to post the best bid and ask prices available on the exchange at that time [343] and broker-dealers can observe those prices and choose to route orders to the exchange posting the best prices at a given point in time. However, others who provide trading services, such as ATSs and OTC market makers, do not compete on this dimension.[344] In other words, wholesalers generally do not compete for order flow by posting competitive prices the way exchanges do. They do not display or otherwise advertise the prices at which they are willing to internalize individual investor orders at a given point in time. This suggests that wholesalers attract order flow by offering retail brokers more than just competitive price improvement.[345] In particular, wholesalers bundle their market access services with execution services, thereby fully vertically integrating order handling and execution services for their retail broker customers.

b. Rules Addressing Consolidated Market Data

In 2020, the Commission adopted a new rule and amended existing rules to establish a new infrastructure for consolidated market data (''MDI Rules''),[346] and the regulatory baseline for NMS stocks includes these changes to the current arrangements for consolidated market data. However, as discussed in more detail below, the MDI Rules have not been implemented, and so they have not yet affected market practice. As a result, the data used to measure the baseline below reflects the regulatory structure in place for consolidated market data prior to the implementation of the MDI Rules. Accordingly, this section first will briefly summarize the regulatory structure for consolidated market data prior to the implementation of the MDI Rules. It then will discuss the current status of the implementation of the MDI Rules and provide an assessment of the potential effects that the implementation of the MDI Rules could have on the baseline estimations.

Regulatory Structure for Consolidated Market Data Prior to the MDI Rules

Consolidated market data are made widely available to investors through the national market system, a system set forth by Congress in section 11A of the Exchange Act [347] and facilitated by the Commission in Regulation NMS.[348] Market data are collected by exclusive SIPs, who consolidate that information and disseminate an NBBO and last sale information. For quotation information, only the 16 exchanges that currently trade NMS stocks provide quotation information to the SIPs for dissemination in consolidated market data.[349] FINRA has the only SRO display-only facility (the ADF). No broker-dealer, however, currently uses it to display quotations in NMS stocks in consolidated market data. Disseminated quotation information includes each exchange's current highest bid and lowest offer and the shares available at those prices, as well as the NBBO.

For transaction information, currently all of the national securities exchanges that trade NMS stocks and FINRA provide real-time transaction information to the SIPs for dissemination in consolidated market data. Such information includes the symbol, price, size, and exchange of the transaction, including odd-lot transactions.

Unimplemented Market Data Infrastructure Rules

Among other things, the unimplemented MDI Rules update and expand the content of consolidated market data to include: (1) certain odd-lot information; [350] (2) information about certain orders that are outside of an exchange's best bid and best offer (*i.e.,* certain depth of book data); [351] and (3) information about orders that are participating in opening, closing, and other auctions.[352] The MDI Rules also introduced a four-tiered definition of round lot that is tied to a stock's average closing price during the previous month.[353] For stocks with prices greater than $250, a round lot is defined as consisting of between 1 and 40 shares, depending on the tier.[354] The MDI Rules also introduce a decentralized consolidation model under which competing consolidators, rather than the existing exclusive SIPs, will collect, consolidate, and disseminate certain NMS information.[355]

In the MDI Adopting Release, the Commission established a transition period for implementation of the MDI Rules.[356] The ''first key milestone'' for

[340] *See* Rosenblatt Securities, *US Equity Trading Venue Guide* (May 24, 2022), *available at https://www.rblt.com/market-reports/rosenblatts-2021-us-equity-trading-venue-guide-2.* SDP trading volume would be included in the share volume percentage estimates for wholesalers and other FINRA members in Table 1.

[341] A study estimates that the volume of individual investor orders executed by wholesalers accounted for approximately 16% to 17% of consolidated share volume during Q1 2022. *See* Rosenblatt Securities, *An Update on Retail Market Share in US Equities* (June 24, 2022), *available at https://www.rblt.com/market-reports/trading-talk-an-update-on-retail-market-share-in-us-equities.* However, wholesalers are not completely focused on individual investor order flow and some do offer services to institutional order flow.

[342] *See, e.g.,* Jennifer Hadiaris, *Cowen Market Structure: Retail Trading — What's going on, what may change, and what can you do about it?,* Insights (Mar. 23, 2021), *available at https://www.cowen.com/insights/retail-trading-whats-going-on-what-may-change-and-what-can-institutional-traders-do-about-it/* (''Market makers print most of these shares internally at their firm, so they trade off-exchange. One way we have for isolating retail volume is to look at the share of volume that trades off-exchange, but not in a dark pool. We refer to this as 'inaccessible liquidity.' This is because most institutional orders—whether they are executed via algos directly or by high touch desks—primarily go to exchanges and dark pools.'').

[343] *See* Rule 602 of Regulation NMS.

[344] ATSs typically compete for institutional order flow by offering innovative trading features such as distinct trading protocols and segmentation options. They may also compete on fees. In addition, they could include their ATS access in the broader set of bundled services that the broker-dealer operator of the ATS offers to its institutional investors.

[345] Wholesalers do not compete by quoting price at a given point in time, but instead generally attract order flow by offering prices that are on average better than displayed prices.

[346] *See supra* note 38, discussing MDI Adopting Release.

[347] *See supra* note 13.

[348] 17 CFR 242.600 through 242.614.

[349] *See supra* note 334.

[350] *See* 17 CFR 242.600(b)(59); MDI Adopting Release, *supra* note 38, 86 FR at 18613. The Commission outlined a phased transition plan for the implementation of the MDI Rules, including the implementation of odd-lot order information. *See* MDI Adopting Release, 86 FR at 18698–701.

[351] *See* MDI Adopting Release, *supra* note 38, 86 FR 18596.

[352] *See id.* at 18630.

[353] *See id.* at 18617.

[354] *See id.* The Commission adopted a four-tiered definition of round lot: 100 shares for stocks priced $250.00 or less per share, 40 shares for stocks priced $250.01 to $1,000.00 per share, 10 shares for stocks priced $1,000.01 to $10,000.00 per share, and 1 share for stocks priced $10,000.01 or more per share.

[355] *See id.* at 18637.

[356] *Id.* at 18698–18701.

the transition period was to be an amendment of the effective national market system plan(s), which ''must include the fees proposed by the plan(s) for data underlying'' consolidated market data (''Proposed Fee Amendment'').[357] The compliance date for the MDI Rules was set with reference to the date that the Commission approved the Proposed Fee Amendment.[358] The end of the transition period was to be at least two years after the date the Commission approved the Proposed Fee Amendment.[359]

The MDI Adopting Release did not specify a process for continuing the transition period if the Commission disapproved the Proposed Fee Amendment. On September 21, 2022, the Commission disapproved the Proposed Fee Amendment, because the Participants had not demonstrated that the proposed fees were fair, reasonable and not unreasonably discriminatory.[360] Accordingly, there currently is no date to begin the at-least-two-year period for implementation of the MDI Rules, and there is no date that can be reasonably estimated for the implementation of the MDI Rules to be completed.

Given that the MDI Rules have not yet been implemented, they have not affected market practice and therefore data that would be required for a comprehensive quantitative analysis of a baseline that includes the effects of the MDI Rules is not available. It is possible that the baseline (and therefore the economic effects relative to the baseline) could be different once the MDI Rules are implemented. The following discussion reflects the Commission's assessment of the anticipated economic effects of the MDI Rules as described in the MDI Adopting Release.[361]

The Commission anticipated that the new round lot definition will result in narrower NBBO spreads for most stocks with prices greater than $250 because, for these stocks, fewer odd-lot shares will need to be aggregated together (possibly across multiple price levels)[362] to form a round lot and qualify for the NBBO.[363] The reduction in spreads will be greater in higher-priced stocks because the definition of a round lot for these stocks will include fewer shares, such that even fewer odd-lot shares will need to be aggregated together.[364] This could cause statistics that are measured against the NBBO to change because they will be measured against the new, narrower NBBO. For example, execution quality statistics on price improvement for higher-priced stocks may show a reduction in the number of shares of marketable orders that received price improvement because price improvement will be measured against a narrower NBBO. In addition, the Commission anticipated that the NBBO midpoint in stocks priced higher than $250 could be different under the MDI Rules than it otherwise would be, resulting in changes in the estimates for statistics calculated using the NBBO midpoint, such as effective spreads. In particular, at times when bid odd-lot quotations exist within the current NBBO but no odd-lot offer quotations exist (and vice versa), the midpoint of the NBBO resulting from the rule will be higher than the current NBBO midpoint.[365] More broadly, the Commission anticipated that the adopted rules will have these effects whenever the new round lot bids do not exactly balance the new round lot offers. However the Commission stated that it does not know to what extent or direction such odd-lot imbalances in higher priced stocks currently exist, so it is uncertain of the extent or direction of the change.[366]

The Commission also anticipated that the MDI Rules could result in a smaller number of shares at the NBBO for most stocks in higher-priced round lot tiers.[367] To the extent that this occurs, there could be an increase in the frequency with which marketable orders must walk the book to execute. This would affect statistics that are calculated using consolidated depth information, such as measures meant to capture information about whether orders received an execution of more than the displayed size at the quote, *i.e.,* ''size improvement.''

The MDI Rules may also result in a higher number of odd-lot trades, as the inclusion of odd-lot quotes that may be priced better than the current NBBO in consolidated market data may attract more trading interest from market participants that previously did not have access to this information.[368] However, the magnitude of this effect depends on the extent to which market participants who rely solely on SIP data and lack information on odd-lot quotes choose to receive the odd-lot information and trade on it. The Commission states in the MDI Adopting Release that it believes it is not possible to observe this willingness to trade with existing market data.[369]

The MDI Rules may have implications for broker-dealers' order routing practices. For those market participants that rely solely on SIP data for their routing decisions and that choose to receive the expanded set of consolidated market data, the Commission anticipated that the additional information contained in consolidated market data will allow them to make more informed order routing decisions. This in turn would help facilitate best execution, which would reduce transaction costs and increase execution quality.[370]

The MDI Rules may also result in differences in the baseline competitive standing among different trading venues, for several reasons. First, for stocks with prices greater than $250, the Commission anticipated that the new definition of round lots may affect order flows as market participants who rely on consolidated data will be aware of

[357] *Id.* at 18699.

[358] *See, e.g., id.* at 18700 n. 355 (compliance date for amendment to Rule 603(b) to be 180 calendar days from the date of the Commission's approval of the amendments to the effective national market system plan(s)).

[359] *Id.* at 18700–18701 (specifying consecutive periods of 90 days, 90 days, 90 days, 180 days, 90 days, a period for filing and approval of another national market system plan amendment to effectuate the cessation of the operations of the SIPs (with a 300-day maximum time for Commission action after filing to approve or disapprove the filing).

[360] Securities Exchange Act Release No. 95851 (Sept. 21, 2022) (Order Disapproving the Twenty-Fifth Charges Amendment to the Second Restatement of the CTA Plan and Sixteenth Charges Amendment to the Restated CQ Plan).

[361] *See* MDI Adopting Release, *supra* note 38, 86 FR 18741–18799.

[362] The calculation of the NBBO includes odd-lots that, when aggregated, are equal to or greater than a round lot. As stated in CFR 242.600(b)(21)(ii), ''such aggregation shall occur across multiple prices and shall be disseminated at the least aggressive price of all such aggregated odd-lots.'' For example, if there is one 50-share bid at $25.10, one 50-share bid at $25.09, and two 50-share bids at $25.08, the odd-lot aggregation method would show a protected 100-share bid at $25.09.

[363] For example, if there is one 20-share bid at $250.10, one 20-share bid at $250.09, and two 50-share bids at $250.08, prior to MDI the NBB would be $250.08, as even aggregated together the odd lot volume would not add up to at least a round lot. After MDI, the NBB would be $25.09, as the odd-lot aggregation method would show a protected 40-share round lot bid at $25.09.

[364] *See supra* note 354. An analysis in the MDI Adopting Release showed that the new round lot definition caused a quote to be displayed that improved on the current round lot quote 26.6% of the time for stocks with prices between $250.01 and $1,000, and 47.7% of the time for stocks with prices between $1,000.01 and $10,000. *See* MDI Adopting Release, *supra* note 38, 86 FR 18743.

[365] For example, if the NBB is $260 and the NBO is $260.10, the NBBO midpoint is $260.05. Under the adopted rules a 40 share buy quotation at $260.02 will increase the NBBO midpoint to $260.06. Using this new midpoint, calculations of effective spread will be lower for buy orders, but will be higher for sell orders.

[366] *See* MDI Adopting Release, 86 FR 18750.

[367] However, this effect will depend on how market participants adjust their order submissions. *See id.* at 18746, for further discussion.

[368] *See id.* at 18754.

[369] *See id.*

[370] *See id.* at 18725.

quotes at better prices that are currently in odd-lot sizes, and these may not be on the same trading venues as the one that has the best 100 share quote.[371] Similarly, it anticipated that adding information on odd-lot quotes priced at or better than the NBBO to expanded core data may cause changes to order flow as market participants take advantage of newly visible quotes.[372] However, the Commission stated that it was uncertain about the magnitude of both of these effects.[373] To the extent that it occurs, a change in the flow of orders across trading venues may result in differences in the competitive baseline in the market for trading services.

Second, national securities exchanges and ATSs have a number of order types that are based on the NBBO, and so the Commission anticipated that the changes in the NBBO caused by the new round lot definitions may affect how these order types perform and could also affect other orders with which they interact.[374] The Commission stated that these interactions may affect relative order execution quality among different trading platforms, which may in turn affect the competitive standing among different trading venues, with trading venues that experience an improvement/decline in execution quality attracting/losing order flow.[375] However, the Commission stated that it was uncertain of the magnitude of these effects.[376]

Third, the Commission anticipated that, as the NBBO narrows for securities in the smaller round lot tiers, it may become more difficult for the retail execution business of wholesalers to provide price improvement and other execution quality metrics at levels similar to those provided under a 100 share round lot definition.[377] To the extent that wholesalers are held to the same price improvement standards by retail brokers in a narrower spread environment, the wholesalers' profits from executing individual investor orders might decline,[378] and to make up for lower revenue per order filled in a narrower spread environment, wholesalers may respond by changing how they conduct their business in a way that may affect retail brokers. However, the Commission stated that it was uncertain as to how wholesalers may respond to the change in the round lot definition, and, in turn, how retail brokers may respond to those changes, and so was uncertain as to the extent of these effects.[379] If wholesalers do change how they conduct business, it may impact wholesalers' competitive standing in terms of the execution quality offered, particularly to individual investor orders.

Where implementation of the above-described MDI Rules may affect certain numbers in the baseline, the description of the baseline below notes those effects.

c. Market Access

Some broker-dealers that connect directly to one or more exchanges and other trading centers offer order routing to smaller broker-dealers that may not directly connect to exchanges. This is, in part, driven by the requirement that in order to directly route orders to an exchange, broker-dealers need to be a member of that exchange.[380] It is also driven by economies of scale in being able to distribute high fixed costs related to exchange connectivity and proprietary market data feeds.[381] Most large broker-dealers connect to multiple exchanges.[382] These broker-dealers may use their connections to provide order-routing and execution services, such as access to smart order routers (SORs), to smaller broker dealers who may find direct connections to exchanges prohibitively expensive.[383] To this end, such smaller broker-dealers access exchanges through intermediaries, *i.e.,* larger broker-dealers, allowing these intermediaries to compete with exchanges in the trade execution and order-routing markets.[384] These intermediaries often compete on both the quality of their order execution and the fees they charge.[385]

d. Retail Order Handling in NMS Stocks

The Commission estimates that in 2021 approximately 1,037 retail brokers originated orders from retail investors in NMS stocks.[386] Retail brokers route most of their customers' marketable order flow to wholesalers.[387] Wholesalers do not typically directly charge retail brokers for their order routing and execution services. In fact, they may pay some retail brokers for the opportunity to handle their order flow with PFOF. Wholesalers' vertical integration of routing and execution services for the orders of individual investors provides them flexibility with regard to their handling of order flow. They utilize sophisticated algorithmic trading technology to deliver their services.[388] In particular, wholesalers determine which orders to internalize (*i.e.,* execute in a principal capacity) and which to execute in a riskless principal or agency capacity. Commission analysis indicates that wholesalers

[371] *See id.* at 18744.

[372] *See id.* at 18754.

[373] *See id.* at 18745, 18754.

[374] *See id.* at 18748.

[375] *See id.*

[376] *See id.*

[377] *See id.* at 18747.

[378] Individual investor orders typically feature lower adverse selection than other types of orders, such as institutional orders. It is generally more profitable for any liquidity provider, including wholesalers, to execute against orders with lower adverse selection risk. *See, e.g.,* David Easley, Nicholas M. Kiefer & Maureen O'Hara, *Cream-skimming or profit-sharing? The curious role of purchased order flow,* 51 J. Fin. 811 (1996).

[379] *See id.* at 18748.

[380] Membership on an exchange also gives the broker-dealer access to exchange-provided order routers that re-route orders to other exchanges at a per-order fee.

[381] Broker-dealers may choose to incur these costs in order to gain faster access through direct exchange connectivity as well as proprietary exchange data feeds, both of which may improve order handling and execution capabilities, and thus their competitive position. *See* Section V.B.3.(e) of Market Data Infrastructure Adopting Release (for discussions on broker-dealer competitive trading strategies).

[382] *See* MDI Adopting Release, *supra* note 38, at 86 FR 18740 (for analysis indicating that 50 firms connected to all but one of the exchanges in a sample of FINRA audit trail data from December 2016), *available at https://www.govinfo.gov/content/pkg/FR-2021-04-09/pdf/2020-28370.pdf.*

[383] The number of broker-dealers providing access is thus limited due to the expenses of being an exchange member and ATS subscriber. In addition, membership on an exchange also gives the broker-dealer access to exchange-provided order routers that re-route orders to other exchanges at a per-order fee. Thus, membership on one exchange can effectively provide access, though not directly, to all exchanges.

[384] Providing market access can mean rerouting customer orders and it can also involve sponsoring access for the broker to send customer orders directly to a market center.

[385] The types of fees charged by routing brokers can vary, some charge a per-order/share fee or a fee that is part of other bundled services they may offer.

[386] This number is estimated using CAT data for broker-dealers that originated an order from an ''Individual Customer'' CAT account type in 2021. *See infra* note 422 for more info CAT account types.

[387] Commission analysis of broker-dealer Rule 606 report order routing data in *infra Table 3* indicates that retail brokers route over 90% of their marketable orders to wholesalers.

[388] Wholesalers, similar to other market makers, must establish connections with the numerous venues in which they wish to operate and provide liquidity. They also must design smart order routers that can locate and provide liquidity in real time, as well as maintain fast data processing capabilities that enable them to respond to market conditions while abiding by the relevant trade execution regulations. Wholesalers also face the costs associated with price risk. As wholesalers trade against market participants, they take positions at the opposite side, accumulating inventory. Holding inventory exposes wholesaler profits to inventory (price) risk, where the value of inventory, and hence, that of the wholesaler's holdings, may fluctuate as security prices vary. Scaling up the size of the business to ensure steady incoming flow from opposite sides of the markets is a common strategy pursued by wholesalers. This strategy enables them to execute buy and sell transactions, offsetting order flow from opposite sides, reducing the possibility of accumulating prolonged, unwanted inventory. However, among other costs, scaling up requires more comprehensive, efficient connectivity networks, and adds to the costs of establishing and maintaining such networks.

internalize over 90% of the executed dollar volume from individual investor marketable orders that are routed to them and executed.[389]

One aspect of the wholesaler business model is the segmentation of the order flow of individual investors, which typically have lower adverse selection risk than the orders of other types of market participants.[390] Wholesalers are market makers that can identify orders with low adverse selection risk.[391] Through segmentation, wholesalers typically internalize marketable orders with lower adverse selection risk and generally execute them at prices better than the current NBBO, *i.e.,* because of segmentation, wholesalers are typically able to execute the marketable orders of individual investors at better prices than they would receive if they were routed to an exchange. An analysis of marketable NMS stock orders presented below indicates that the orders that wholesalers internalize present lower adverse selection risk and receive higher execution quality relative to marketable orders wholesalers receive and execute in a riskless principal or agency capacity.[392] Additional results [393] show that, relative to orders executed on exchanges, orders internalized by wholesalers are associated with lower price impacts (*i.e.,* lower adverse selection risk),[394] lower effective half-spreads (*i.e.,* higher price improvement),[395] and higher realized half-spreads (*i.e.,* higher potential profitability).[396] Academic studies have also found that retail orders in NMS stocks benefit from being segmented and internalized by wholesalers, because wholesalers can offer the segmented retail orders more price improvement due to their lower adverse selection risk.[397]

[389] *See* analysis in *infra* Table 7.

[390] Wholesalers and other liquidity providers face adverse selection risk when they accumulate inventory, for example, by providing liquidity to more informed traders, because of the risk of market prices moving away from market makers before they are able to unwind their positions. Wholesalers and other market makers are usually not privy to the motives or information of the investors they are trading with. As such, should the liquidity provider trade with an investor possessing short-lived price information about the security price, it is exposing its inventory to adverse selection risk. Hence, liquidity providers normally choose their trading strategies to minimize their interaction with order flow with increased adverse selection risk. Wholesalers do this by attracting marketable orders of individual investors, known to be the order flow with the lowest adverse selection risk. Pursuing this strategy also requires scaling up the part of the business that interacts with retail order flow.

[391] *See infra* Table 7 and corresponding discussion. Adverse selection is based on various characteristics of the order, including the identity of the originating broker.

[392] *See* analysis in *infra* Table 7.

[393] *See infra* Table 5 and Table 6 for a comparison of exchange and wholesaler execution quality.

[394] ''Price impact'' is the extent to which the NBBO midpoint moves against the liquidity provider for a marketable order in a short time period after the order execution. For Rule 605 reporting, the time period is five minutes after the time of order execution. For the analyses of CAT data provided later in this section, the time period is one minute after the time of order execution, which was chosen to reflect the increase in trading speed in the years since Rule 605 was adopted. By measuring the difference between the transaction price and the prevailing market price for some fixed period of time after the transaction (*e.g.,* one minute), price impact measures the extent of adverse selection costs faced by a liquidity provider. For example, if a liquidity provider provides liquidity by buying shares from a trader who wants to sell, thereby accumulating a positive inventory position, if the liquidity provider wants to unwind this inventory position by selling shares in the market, it will incur a loss if the price has fallen in the meantime. In this case, the price impact measure will be positive, reflecting the liquidity provider's exposure to adverse selection costs.

[395] The effective half-spread is calculated by comparing the trade execution price to an estimate of the stock's value (*i.e.,* the midpoint of the prevailing NBBO at the time of order receipt) and thus captures how much more than the stock's estimated value a trader has to pay for the immediate execution of their order. The effective spread will be smaller (or less positive) when it is closer to the NBBO midpoint, reflecting the order receiving a greater amount of price improvement. *See, e.g.,* Bjorn Hagströmer, *Bias in the Effective Bid-Ask Spread,* 142 J. Fin. Econ. 314 (2021). For the remainder of this analysis, we will use the term ''effective spread'' to refer to the ''effective half-spread.'' *See also* results in Thomas Ernst & Chester S. Spatt, *supra note 77.* Rule 600(b)(8) of Regulation NMS defines ''average effective spread'' as the share-weighted average of effective spreads for order executions calculated, for buy orders, as double the amount of difference between the execution price and the midpoint of the NBB and NBO at the time of order receipt and, for sell orders, as double the amount of difference between the midpoint of the NBB and NBO at the time of order receipt and the execution price.

[396] The realized half-spread is calculated similarly to the effective half-spread, but, instead of using the NBBO midpoint at the time of order receipt, the realized spread calculation uses the NBBO midpoint a short time period after the execution of a marketable order. For Rule 605 reporting, the time period is five minutes after the time of order execution. For the analyses of CAT data provided later in this section, the time period is one minute after the time of order execution. The realized half-spread proxies for the potential profitability of trading for liquidity providers after accounting for the adverse selection risk (*i.e.,* price impact) of the trade. *See, e.g.,* Securities Exchange Act Release No. 43590 (Nov. 17, 2000), 65 FR 75423–75424 (Dec. 1, 2000) (Disclosure of Order Execution and Routing Practices) (''The smaller the average realized spread, the more market prices have moved adversely to the market center's liquidity providers after the order was executed, which shrinks the spread 'realized' by the liquidity providers. In other words, a low average realized spread indicates that the market center was providing liquidity even though prices were moving against it for reasons such as news or market volatility.''); *See also* Larry Harris, Trading and Exchanges: Market Microstructure for Practitioners at 286 (Oxford University Press 2003) (''Informed traders buy when they think that prices will rise and sell otherwise. If they are correct, they profit, and whoever is on the other side of their trade loses. When dealers trade with informed traders, prices tend to fall after the dealer buys and rise after the dealer sells. These price changes make it difficult for dealers to complete profitable round-trip trades. When dealers trade with informed traders, their realized spreads are often small or negative. Dealers therefore must be very careful when trading with traders they suspect are well informed.''). *See also* Joel Hasbrouck, Empirical Market Microstructure: The Institutions, Economics, and Econometrics of Securities Trading at 147 (Oxford University Press 2007) (''The execution cost based on the pretrade bid-ask midpoint (BAM) is also known as the effective cost. Since 2001, the U.S. SEC has required U.S. equity markets to compute effective costs and make summary statistics available on the Web . . . The rule . . . also requires computation of the realized cost . . . . The difference between effective and realized costs is sometimes used as an estimate of the price impact of the trade. The realized cost can also be interpreted as the revenue of the dealer who sold to the customer . . . and then covered his position at the subsequent BAM.''). For the remainder of this analysis, we will use the term ''realized spread'' to refer to the realized half-spread. Rule 600(b)(9) of Regulation NMS generally defines ''average realized spread'' as the share-weighted average of realized spreads for order executions calculated, for buy orders, as double the amount of difference between the execution price and the midpoint of the NBB and NBO five minutes after the time of order execution and, for sell orders, as double the amount of difference between the midpoint of the NBB and NBO five minutes after the time of order execution and the execution price.

[397] *See* Ernst & Spatt, *supra* note 77 and Kothari, S.P., So, E., & Johnson, T. *Commission Savings and Execution Quality for Retail Trades* (Working paper, 2021). *See also* Adams, Kasten, & Kelley, *Do investors save when market makers pay? Retail Execution costs under PFOF models* (Working paper, 2021), *available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3975667* (*retrieved from Elsevier database*).

Segmentation and Routing of Individual Investor Orders in NMS Stocks

Most individual investor orders are non-directed, so individual investor order routing choices are largely made by retail brokers. Specifically, retail brokers choose how to access the market in order to fill their individual investor customers' orders. Wholesalers are the dominant providers of market access for retail brokers and bundle their market access services with execution services.

Retail brokers may route to wholesalers because the cost of sending orders to wholesalers is lower than the various alternatives available to their customers for market access. While some broker-dealers have SORs,[398] exchange memberships, and ATS subscriptions, and are thus able to provide market access to retail brokers, other broker-dealers incur costs in handling order flow for retail brokers in the form of exchange access fees, ATS access fees, and administrative and regulatory costs such as recordkeeping and the risk management controls of Rule 15c3–5. While wholesalers could incur some of these marginal costs as well, they benefit on the margin from individual investor order flow because it gives them the option to internalize the most profitable of that order flow, *i.e.,* the individual investor orders with the lowest adverse selection risk.[399] This ability to capture, identify, and internalize profitable orders from individual investors allows wholesalers to provide market access to retail brokers at low explicit cost, either by providing PFOF or by not charging retail brokers explicitly for market access. This service of obtaining market access on behalf of retail brokers assists retail brokers by allowing them to avoid routing expenses (even in cases where the wholesaler further routes the order instead of internalizing) or costly liquidity searches, and may increase retail brokers' reliance on wholesalers beyond any payment they receive for routing their order flow to wholesalers.

Indeed, Table 2 shows that retail brokers who accept PFOF (''PFOF brokers'') pay less to route their orders to wholesalers than to route them elsewhere.[400] In fact, they are paid to route their order flow to wholesalers for every order type reported in the table. On average, rates paid by wholesalers for both market and marketable limit orders are higher than those paid by alternative venues, with wholesalers paying an average of 13 cents per 100 shares for market orders and 12.6 cents for marketable limit orders across S&P 500 and non-S&P 500 stocks during Q1 2022. In contrast, exchanges, on average, charged PFOF brokers when they routed their marketable order flow to exchanges. This likely indicates that most of the volume that PFOF brokers sent to exchanges was routed to maker-taker exchanges (where fees are assessed on marketable orders).[401] Furthermore, since retail brokers that do not accept PFOF (''non-PFOF brokers'') also incur fees when they route marketable orders to exchanges, they are incentivized to route their marketable order flow to wholesalers, who do not charge them explicit costs to route and execute their orders.

TABLE 2—AVERAGE RULE 606 PAYMENT RATES FOR Q1 2022 TO PFOF BROKERS BY TRADING VENUE TYPE

		Market orders	Marketable limit orders	Non-marketable limit orders	Other orders
S&P 500	Exchange	−5.9	−23.9	30.9	20.8
	OMM—Wholesaler	15.2	21.8	41.1	24.1
	Other	4.5	−0.6	−0.6	7.5
Non-S&P 500	Exchange	−14.9	−15.3	17.9	16.5
	OMM—Wholesaler	12.5	11.8	24.6	10.1
	Other	1.5	−3.7	−4.6	1.5
Combined	Exchange	−12.4	−15.7	19.3	17.1
	OMM—Wholesaler	13.0	12.6	27.1	11.9
	Other	1.7	−3.7	−4.5	2.0

This table shows the average payment rates (in cents per 100 shares) made from different types of trading venues in Q1 2022 to 14 retail PFOF brokers from wholesalers based on their Rule 606 reports. The table breaks out average rates from exchanges, wholesalers, and other trading venues for market orders, marketable limit orders, non-marketable limit orders, and other orders in S&P 500 stocks and non-S&P 500 stocks. Other venues include any other venue to which a retail broker routes an order other than a wholesaler or an exchange. The 43 broker-dealers were identified from the 54 retail brokers used in the CAT retail analysis (*see infra* note 422). This analysis uses the retail broker's Rule 606 report if it publishes one or the Rule 606 report of its clearing broker if it did not publish a Rule 606 report itself (the sample of 43 broker-dealer Rule 606 reports include some broker-dealers that were not included in the CAT analysis because some clearing broker Rule 606 reports are included). Some broker-dealers reported handling orders only on a not held basis and did not have any Rule 606.

[398] Individual investors and professional traders relying on displayed screens to access financial markets generally do not have access to these low-latency (algorithmic, high speed) technologies.

[399] *See infra* Table 7 and corresponding discussion.

[400] In Table 2, average payment rates reported in Rule 606 reports for PFOF brokers in S&P 500 stocks and non-S&P 500 stocks in Q1 2022 are broken down by trading venue and order type, with rates given in cents per 100 shares.

[401] Furthermore, wholesaler rates for non-marketable orders are more than double the rates for marketable orders, averaging 27.1 cents per hundred shares compared to 13 cents for market orders and 12.6 cents for marketable limit orders. Additionally, Table 2 shows that the average payment rates PFOF brokers receive from routing non-marketable limit orders to wholesalers is greater than the average rates they receive from routing them to exchanges. This may be driven by wholesalers passing through exchange rebates for these orders, for which they may receive higher volume-based tiering rates compared to retail brokers, back to broker-dealers.

Table 3 confirms that wholesalers dominate the business of providing market access for retail brokers and that PFOF is a factor in retail broker routing decisions.[402] Data from Table 3 indicates that orders of individual investors for NMS stocks are primarily routed to wholesalers, although, a small fraction of individual investor orders are routed to exchanges and other broker-dealers providing market access or other market centers (*i.e.,* ATSs), some of which may be affiliated with the broker that received the original order.

TABLE 3—RETAIL BROKER ORDER ROUTING IN NMS STOCKS FOR Q1 2022, COMBINING PFOF AND NON-PFOF BROKERS

Venue type	Market (percent)	Marketable limit (percent)	Non-marketable limit (percent)	Other (percent)	Total (percent)
Panel A: Non S&P 500 Stocks					
Other	6.0	4.7	3.1	1.5	3.6
Exchange	0.2	5.5	22.5	0.8	8.5
Wholesaler	93.9	89.8	74.4	97.6	87.9
Total	26.5	12.6	33.6	27.3	100.0
Panel B: S&P 500 Stocks					
Other	6.6	5.9	1.8	1.7	3.6
Exchange	0.2	4.6	25.1	0.8	9.1
Wholesaler	93.3	89.6	73.1	97.5	87.3
Total	30.6	9.6	33.5	26.4	100.0

This table aggregates Rule 606 reports from retail brokers and shows the percentage of market orders, marketable limit orders, non-marketable limit orders, and other orders that retail brokers route to different types of venues in Q1 2022. Other venues include any other venue to which a retail broker routes an order other than a wholesaler or an exchange. Order type classifications are based on the order types broker-dealers are required to include in their Rule 606 reports.

This table aggregates routing information from 43 broker-dealer Rule 606 reports from Q1 2022. The 43 broker-dealers were identified from the 54 retail brokers used in the CAT retail analysis (*see infra* note 422). This analysis uses the retail broker's Rule 606 report if it publishes one or the Rule 606 report of its clearing broker if it did not publish a Rule 606 report itself (the sample of 43 broker-dealer Rule 606 reports include some broker-dealers that were not included in the CAT analysis because some clearing broker Rule 606 reports are included). Some broker-dealers reported handling orders only on a not held basis and did not have any Rule 606 reports. Because Rule 606 only include percentages of where there order flow is routed and not statistics on the number of orders, the reports are aggregated together using a weighting factor based on an estimate of the number of non-directed orders each broker-dealer routes each month. The number of orders is estimated by dividing the number of non-directed market orders originating from a retail broker in a given month (based on estimates from CAT data) by the percentage of market orders as a percent of non-directed orders in the retail broker's Rule 606 report (the weight for a clearing broker consists of the aggregated orders from the introducing brokers in the CAT retail analysis that utilize that clearing broker).

TABLE 4—RETAIL BROKER ORDER ROUTING IN NMS STOCKS FOR Q1 2022

Venue type	Market (percent)	Marketable limit (percent)	Non-marketable limit (percent)	Other (percent)	Total (percent)
Panel A: Non-S&P 500 Stocks Non-PFOF Brokers					
Other	24.1	22.3	4.2	41.6	16.0
Exchange	<0.1	25.3	80.8	19.7	39.8
Wholesaler	76.0	52.4	15.0	38.8	44.2
Total	38.4	12.4	44.2	5.0	100.0
PFOF Brokers					
Other	<0.1	1.2	2.8	0.3	1.1
Exchange	0.2	1.5	5.8	0.2	2.1
Wholesaler	99.7	97.3	91.4	99.5	96.8
Total	24.1	12.7	31.5	31.8	100.0

[402] Table 3 summarizes order routing decisions of 43 of the most active retail brokers about non-directed orders. Table 4 repeats the analysis but separately summarizes routing choices for 14 retail brokers who accept PFOF in equity markets and 29 who do not. Note that some brokers do not accept PFOF for orders in equities but do accept PFOF for orders in options. Consistent with Rule 606, routing statistics are aggregated together in Rule 606 reports based on whether the stock is listed in the S&P500 index. Rule 606 reports collect routing and PFOF statistics based on four different order types for NMS stocks: (1) market orders, resulting in immediate execution at the best available price; (2) marketable limit orders, resulting in immediate execution at the best price that is not worse that the order's quoted limit price; (3) non-marketable limit orders whose quoted limit price less aggressive than the NBBO, often preventing immediate execution; and (4) all other orders. *See supra* note 336 for a summary of the requirements of Rule 606(a)(1) of Regulation NMS.

TABLE 4—RETAIL BROKER ORDER ROUTING IN NMS STOCKS FOR Q1 2022—Continued

Venue type	Market (percent)	Marketable limit (percent)	Non-marketable limit (percent)	Other (percent)	Total (percent)
Panel B: S&P 500 Stocks Non-PFOF Brokers					
Other	24.8	27.0	3.2	23.4	15.4
Exchange	<0.1	19.6	83.2	8.2	39.0
Wholesaler	75.2	53.4	13.6	68.3	45.6
Total	39.0	9.2	43.8	8.0	100.0
PFOF Brokers					
Other	<0.1	0.5	1.3	0.3	0.6
Exchange	0.2	0.9	3.4	0.3	1.3
Wholesaler	99.8	98.6	95.3	99.5	98.2
Total	28.4	9.7	30.7	31.2	100.0

This table aggregates Rule 606 reports from PFOF and non-PFOF retail brokers and separately shows the percentage of market orders, marketable limit orders, non-marketable limit orders, and other orders PFOF brokers and non-PFOF brokers route to different types of venues in Q1 2022. PFOF brokers are retail brokers that receive payments for routing marketable orders to wholesalers. Other venues include any other venue to which a retail broker routes an order other than a wholesaler or an exchange. Order type classifications are based on the order types broker-dealers are required to include in their Rule 606 reports.

This table aggregates routing information from PFOF and non-PFOF broker-dealer Rule 606 reports from Q1 2022. Fourteen retail brokers are identified as PFOF brokers that receive payments for routing orders in NMS stocks to wholesalers. Twenty-nine non-PFOF brokers are identified as retail brokers that do not receive monetary compensation when they route orders in NMS stocks to wholesalers. The 43 broker-dealers were identified from the 54 retail brokers used in the CAT retail analysis (*see infra* note 422). This analysis uses the retail broker's Rule 606 report if it publishes one or the Rule 606 report of its clearing broker if it did not publish a Rule 606 report itself (the sample of 43 broker-dealer Rule 606 reports include some broker-dealers that were not included in the CAT analysis because some clearing broker Rule 606 reports are included). Some broker-dealers reported handling orders only on a not held basis and did not have any Rule 606 reports. Because Rule 606 only include percentages of where there order flow is routed and not statistics on the number of orders, the reports are aggregated together using a weighting factor based on an estimate of the number of non-directed orders each broker-dealer routes each month. The number of orders is estimated by dividing the number of non-directed market orders originating from a retail broker in a given month (based on estimates from CAT data) by the percentage of market orders as a percent of non-directed orders in the retail broker's Rule 606 report (the weight for a clearing broker consists of the aggregated orders from the introducing brokers in the CAT analysis that utilize that clearing broker).

CAT data analysis indicates that about 80% of the share volume and about 74% of the dollar volume of individual investor marketable orders that were routed to wholesalers and executed comes from PFOF brokers.[403] Data from Table 4 indicates that, while retail brokers who accept PFOF from wholesalers tend to send more of their orders to those wholesalers, wholesalers even dominate the market access services for non-PFOF brokers, though non-PFOF brokers route a significantly lower fraction (*i.e.,* 75.2% to 76%) of their market orders to wholesalers, compared to 99.7% to 99.8% of market orders for PFOF brokers. Moreover, non-PFOF brokers route 24.1% to 24.8% of their market orders to other non-exchange market centers, *e.g.,* ATSs, while PFOF brokers route less than 1% of their market orders to these market centers. However, regardless of whether the retail broker accepts PFOF, the order type, or the S&P500 index inclusion of the stock,[404] Table 3 shows that retail brokers route over 87% of their customer orders to wholesalers.

This result suggests that, while PFOF may be a factor in retail brokers' routing decisions, wholesalers likely also compare favorably to other market access (including retail brokers pursuing their own market access) along other dimensions. The routing behavior in Table 4 may, in part, reflect a tendency of non-PFOF brokers to route customer orders to market centers such as their own ATSs for mid-point execution and the lack of an affiliated ATS for PFOF brokers. However, even broker-dealers with their own ATSs do not route the majority of their individual investor order flow to those ATSs and typically do not internalize order flow. Further, retail brokers with membership on multiple exchanges primarily route their marketable orders to wholesalers. These results could point to a lower marginal costs of routing to wholesalers relative to other routing and execution alternatives. Table 5 shows that wholesalers appear to compare favorably to exchanges in the execution quality of orders routed to them, suggesting that execution quality could be another key factor in the decision of retail brokers to route to wholesalers.[405] In particular, marketable orders routed to wholesalers appear to have higher fill rates, lower effective spreads, and lower E/Q ratios.[406] These orders are also more likely to receive price improvement and, conditional on receiving price improvement, receive greater price improvement when routed to wholesalers as compared to exchanges.

In addition, wholesalers may provide additional valuable services to retail brokers that route order flow to them. Based on staff experience, the Commission understands that wholesalers are more responsive to retail brokers that provide them with order flow, including, for example, following customer instructions not to internalize particular orders. More broadly, wholesalers appear to provide retail brokers with a high degree of consistency with regard to execution quality. More specifically, wholesalers receive order flow from retail brokers

[403] *See infra* Table 15.

[404] Rule 606 reports require that broker-dealers separate their disclosure information for S&P 500 stocks, non-S&P 500 stocks, and options.

[405] *See infra* Table 5 and corresponding discussions.

[406] The E/Q ratio is the ratio of a stock's effective spread over quoted spread. A lower value indicates smaller effective spreads (*i.e.,* trading costs) as a percentage of the quoted spread.

that contains orders that vary with regard to quoted spreads and adverse selection risk. While wholesalers receive order flow from retail brokers that contains variation in quoted spreads and adverse selection risk, wholesalers could target an average level of price improvement across this heterogeneous order flow, resulting in a relatively consistent degree of execution quality.

When wholesalers do not internalize an order, they obtain an execution from another market center by either routing in an agency capacity or using what is known as a riskless principal transaction. In a riskless principal transaction, after receiving an order from a retail broker, a wholesaler may send a principal marketable order similar to the retail broker order to an exchange and, upon execution of the principal order at the exchange, execute the original retail broker order at the same price.[407]

Commission analysis shows that wholesalers internalize over 90% of the executed dollar value in NMS stocks from the marketable order flow routed to them by retail brokers, which amounts to more than 80% of share volume.[408] Results also show that the marketable NMS stock orders wholesalers choose to internalize have less adverse selection risk: orders that wholesalers execute in a principal capacity have a price impact of 0.9 bps, compared to a price impact of 4.6 bps for those executed via other methods. This is consistent with the dealer incentive to hold inventory that is less likely to experience adverse changes in price.[409]

Fractional Share Orders

A number of retail brokers allow individual investors to trade and enter orders for fractional shares of a security, *e.g.,* an individual investor could submit an order to buy 0.2 shares of a stock.[410] This type of trading has grown dramatically since 2019, with an increasing number of broker-dealers offering this functionality. Evidence suggests that this growth is in great part due to the rise in direct retail participation in equity markets.[411] It is the Commission's understanding that retail or executing brokers generally trade in a principal capacity against their customers' fractional share orders and in turn, send out principal orders that are in a whole number of shares (*i.e.,* not containing a fractional share component) for execution to manage their inventory risk.

An analysis using CAT data reveals that more than 46 million fractional share orders were executed in March 2022, originating from more than 5 million unique accounts. Over 31 million of these orders were for less than 1 share, and they originated from more than 3.3 million accounts. The overwhelming majority (92%) of fractional share orders were attributed to natural persons, (*i.e.,* individual investors). While fractional shares orders only represented a small fraction (2.1%) of total executed orders, they represent a much higher fraction (15.3%) of executions received by individual investors.

Execution Quality of Individual Investor Marketable Orders

The wholesaler business model relies on segmentation and internalization of marketable order flow of individual investors, which is characterized by low adverse selection risk. An analysis of the execution quality of market and marketable limit orders handled by wholesalers retrieved from Rule 605 reports[412] and presented in Table 5[413] shows that orders in NMS stocks handled by wholesalers are associated with lower price impact[414] compared to those executed on exchanges, indicating that orders handled by wholesalers on average have lower adverse selection costs.[415] This lower adverse selection

[407] *See supra* note 182 for further discussions on riskless principal transactions.

[408] *See* analysis in *infra* Table 7.

[409] *See, e.g.,* David Easley, et. al. *supra* note 378.

[410] Fractional shares often arise from retail brokers allowing individual investors to submit orders for a fixed dollar value.

[411] *See,* Zhi Da, et. al., *Fractional Trading* (working paper, November 18, 2021), *available at https://ssrn.com/abstract=3949697* (retrieved from SSRN Elsevier database). Also see Rick Steves, *Fractional Shares Experts Weigh In Amid Exploding Retail Trading Volumes,* FinanceFeeds (Jun. 7, 2021), *available at https://financefeeds.com/fractional-shares-experts-weigh-in-amid-exploding-retail-trading-volumes/*, which shows that trading volume increased substantially (in one case, more than 1,400%) for brokers after they introduced the use of fractional shares.

[412] Rule 605 requires market centers to make available, on a monthly basis, standardized information concerning execution quality for covered orders in NMS stocks that they received for execution. *See* 17 CFR 242.605. Covered orders are defined in 17 CFR 242.600(b)(22) to include orders (including immediate-or-cancel orders) received by market centers during regular trading hours at a time when a national best bid and national best offer is being disseminated, and, if executed, is executed during regular trading hours, and excludes orders for which the customer requests special handling for execution (such as not held orders). Rule 605 reports contain a number of execution quality metrics for covered orders, including statistics for all non-marketable limit orders with limit prices within ten cents of the NBBO at the time of order receipt as well as separate statistics for market orders and marketable limit orders. Under the Rule, the information is categorized by individual security, one of five order type categories (*see* 17 CFR 242.600(b)(14)), and one of four order size categories, which does not include orders for less than 100 shares or orders greater than or equal to 10,000 shares (*see* 17 CFR 242.600(b)(11)). As such, Rule 605 does not require reporting for orders smaller than 100 shares, including odd-lot orders. Rule 605 requires market centers to report execution quality information for all covered orders that the market center receives for execution, including orders that are executed at another venue (*i.e.,* because they are effectively rerouted to another trading center by the market center).

[413] The following filters were applied to the Rule 605 data to remove potential data errors. Observations where the total shares in covered orders were less than the sum of the canceled shares, share executed at the market center, and share executed away from the market center were deleted. Observations with missing order size code, order type code, total covered shares, or total covered orders were deleted. Realized and effective spread values are set to missing values if the total shares executed at and away from the market center are zero. Per share dollar realized spreads, per share dollar effective spreads, and per share dollar price improvements were winsorized at 20% of the volume weighted average price of the stock for the month as calculated from NYSE Daily TAQ data.

[414] *See supra* note 394 and accompanying text for a definition and discussion of price impact. Table 5 estimates the average price impact associated with marketable orders routed to wholesalers to be 1.2 bps. This means that for a $10 stock the NBBO midpoint would move up (down) by an average of 0.12 cents in the five minutes following the execution of marketable buy (sell) order.

[415] Once implemented, the changes to the current arrangements for consolidated market data in the MDI Adopting Release, 86 FR 18621 may impact the numbers in Table 5, including by reducing those for realized spread, effective spread, and amount of price improvement. The NBBO will narrow in stocks priced greater than $250 because it will be calculated based off a smaller round lot size. This narrower NBBO will decrease price improvement statistics in Rule 605 reports, which is measured against the NBBO. The effects on effective and realized spreads is more uncertain, because they are measured against the NBBO midpoint, which may not change if both the NBB and NBO decrease by the same amount. However, if marketable orders are more likely to be submitted when there are

Continued

cost allows wholesalers to provide these orders with better execution quality, manifested in lower effective spreads [416] and E/Q ratios compared to exchanges.[417] The higher realized spreads [418] associated with orders handled by wholesalers observed in Table 5 suggest that wholesalers have an opportunity to earn higher economic profits than liquidity suppliers on exchanges after accounting for adverse selection costs (*i.e.,* after adjusting for price impact).[419] This is despite the finding that the orders handled by wholesalers eventually execute at better prices than those received by and executed on exchanges, as observed by the lower effective spreads shown in Table 5 for marketable orders handled by wholesalers.

Additionally, the results in Table 5 show that approximately 79% of the executed dollar volume in marketable orders handled by wholesalers are market orders. The Commission believes that these outcomes reflect the heavy utilization of market orders for NMS stocks by individual investors whose orders are primarily handled by wholesalers, contrary to the heavy utilization of limit orders by other market participants.

Table 5 also highlights significantly higher fill rates, *i.e.,* the percentage of the shares in an order that execute in a trade, for marketable orders sent to wholesalers as compared to exchanges.[420] Wholesalers execute the vast majority of orders that they receive against their own capital, *i.e.,* they internalize the vast majority of orders they receive.[421] Wholesalers expose themselves to inventory risk when internalizing order flow, but mitigate this risk by internalizing orders that possess low adverse selection risks.

TABLE 5—COMPARISON OF RULE 605 EXECUTION QUALITY STATISTICS BETWEEN EXCHANGES AND WHOLESALERS FOR NMS COMMON STOCKS AND ETFS IN Q1 2022

	Combined marketable orders		Market		Marketable limit	
	WH	EX	WH	EX	WH	EX
Average Price	$47.89	$58.14	$56.19	$85.45	$30.66	$58.08
Share Volume (billion shares)	106.97	179.49	72.20	0.39	34.77	179.10
Dollar Volume (billion $)	$5,122.91	$10,436.02	$4,056.85	$33.53	$1,066.06	$10,402.49
Fill Rate (%)	69.32%	25.77%	99.79%	58.08%	34.81%	25.77%
Effective Spread (bps)	1.81	2.06	1.47	3.29	3.11	2.06
Realized Spread (bps)	0.61	−0.38	0.39	2.40	1.43	−0.39
Price Impact (bps)	1.20	2.44	1.08	0.90	1.68	2.45
E/Q ratio	0.48	1.01	0.40	1.65	0.83	1.01
Pct of Shares Price Improved	83.17%	8.78%	88.99%	15.95%	61.01%	8.75%
Constrained Amount of Price Improvement (bps)	2.17	1.50	2.33	1.92	1.24	1.50

This table computes aggregated execution quality statistics for marketable orders covered orders received by exchanges and wholesalers from Rule 605 reports for Q1 2022 for NMS common stocks and ETFs. *See supra* note 412 for a definition of covered orders. Individual wholesaler and exchange Rule 605 reports are aggregated together at the stock-month level, into two categories, WH and EX, such that aggregate execution quality data is averaged for, a) wholesalers (WH) and, b) exchanges (EX), for each stock during each month.

The following metrics were calculated: Average Price is the stock's average execution price from the Rule 605 data (Dollar Volume/Share Volume), Share Volume is the total executed shares (in billions) from the Rule 605 data. Dollar Volume is the total executed dollar volume (in billions), calculated as the executed share volume from the Rule 605 data multiplied by the stock's monthly VWAP price, as derived from NYSE Daily Trade and Quote data (TAQ). Fill Rate is the weighted average of the stock-month total executed share volume/total covered shares from the Rule 605 data. Effective Spread is the weighted average of the stock-month percentage effective half spread in basis points (bps). Realized Spread is the weighted average of the stock-month percentage realized half spread in basis points (bps). Price Impact is the weighted average of the stock-month percentage price impact in basis points (bps). E/Q ratio is the weighted average of the stock-month ratio of the effective spread/quoted spread. Pct of Shares Price Improved is the weighted average of the stock-month ratio of shares executed with price improvement/total executed share volume. Conditional Amount of Price Improvement is the weighted average of the stock-month of the amount of percentage price improvement in basis points (bps), conditional on the executed share receiving price improvement.

imbalances on the opposite side of the limit order book (*i.e.,* more marketable buy orders are submitted when there is more size on the offer side of the limit order book than the bid side), then the NBBO midpoint may change such that it is closer to the quote the marketable order executes against, which may decrease the effective and realized spreads in stocks above $250 when Market Data Infrastructure is implemented. It is uncertain how likely this NBBO midpoint is to change. It is also uncertain how or to what degree these changes would differ between exchange and wholesaler Rule 605 reports. If both changed similarly, then there would not be changes in relative differences between their reported spread measures. *See supra* section V.B.3.a).i.b.

[416] *See supra* note 395 for a definition and discussion of effective spreads.

[417] The E/Q ratio is the ratio of a stock's effective spread over quoted spread. A lower value indicates that smaller effective spreads (*i.e.,* trading costs) as a percentage of the quoted spread.

[418] *See supra* note 396 and accompanying text for a definition and discussion of realized spreads as a measure of the economic profits earned by liquidity providers. Realized spreads do not measure the actual trading profits that market makers earn from supplying liquidity. In order to estimate the trading profits that market makers earn, we would need to know at what times and prices the market maker executed the off-setting position for a trade in which it supplied liquidity (*e.g.,* the price at which the market maker later sold shares that it bought when it was supplying liquidity). If market makers offset their positions at a price and time that is different from the NBBO midpoint at the time lag used to compute the realized spread measure (Rule 605 realized spread statistics are measured against the NBBO midpoint 5 minutes after the execution takes place), then the realized spread measure is an imprecise proxy for the profits market makers earn supplying liquidity. Additionally, realized spread metrics do not take into account any transaction rebates or fees, including PFOF, that a market maker might earn or pay, which would also affect the profits they earn when supplying liquidity. Furthermore, realized spreads also do not account for other costs that market makers may incur as part of their business, such as fixed costs for setting up their trading infrastructure and costs for connecting to trading venues and receiving market data.

[419] The execution quality information in Rule 605 combines information about orders executed at a market center with information on orders received for execution at a market center but executed by another market center; *see supra* note 412. As such, the execution quality statistics presented in Table 5 include orders that are effectively rerouted by wholesalers. Furthermore, note that Rule 605 does not specifically require market centers to prepare separate execution quality reports for their SDPs, and as such these calculations reflect all covered market and marketable limit orders in NMS stocks received and executed by wholesalers, including those on SDPs.

[420] Marketable orders may not fully execute if there isn't sufficient liquidity on the exchange to fill the order within its limit price and/or if it contains other instructions that limit their execution, such as if they are designated as IOC orders or their instructions not to route the order to another exchange.

[421] *See* analysis in *infra* Table 7 and corresponding discussion.

Aggregated effective and realized percentage spreads are measured in half spreads in order to show the average cost of an individual investor order and are calculated by dividing the aggregated Rule 605 reported per share dollar amount by twice the stock's monthly volume weighed average price (VWAP), as derived from NYSE Daily Trade and Quote data (TAQ), for trades executed during regular market hours during the month. Percentage price impact is calculated as the aggregated Rule 605 reported per share dollar effective spreads minus per share dollar realized spreads divided by twice the stock's monthly volume weighed average price (VWAP), as derived from NYSE Daily Trade and Quote data (TAQ). Percentage amount of price improvement is calculated as the aggregated Rule 605 reported per share dollar amount of price improvement divided by the stock's monthly volume weighed average price (VWAP), as derived from NYSE Daily Trade and Quote data (TAQ). Percentage spreads and amount of price improvement percentages are reported in basis points (bps). The Combined Market and Marketable Limit order type category is constructed for each security-month-order size category by combining the market and marketable limit order categories and computing the total and share weighted average metrics for the order size category for each security-month.

The sample includes NMS common stocks and ETFs that are present in the CRSP 1925 US Stock Database, Ctr. Rsch. Sec. Prices, U. Chi. Booth Sch. Bus. (2022). The CRSP 1925 US Indices Database, Ctr. Rsch. Sec. Prices, U. Chi. Booth Sch. Bus. (2022), was used to identify if a stock was a member of the S&P 500. The stock did not have to be in the CRSP 1925 US Indices Database to be included in the analysis. NMS Common stocks and ETFs are identified, respectively, as securities in TAQ with a Security Type Code of 'A' and 'ETF'. For each stock-month-order-type (such that aggregate execution quality data is averaged for, (a) wholesalers and, (b) exchanges, for each stock during each month) the per dollar share weighted measures from Rule 605 reports are aggregated together by share-weighting across different trading venues and order-size categories within the stock-month-order-type and venue type (i.e. trading venue Rule 605 reports for exchanges and wholesalers are aggregated into different categories). Percent values are then calculated for each stock month by dividing by the stock's monthly volume weighed average price (VWAP). These percentage stock-month values are averaged together into order-type categories (market orders, marketable limit orders, and the combined market and marketable limit order type category, for both wholesalers and exchanges) based on weighting by the total dollar trading volume for the wholesaler or exchange category in that stock-month-order type, where dollar trading volume is estimated by multiplying the Rule 605 report total executed share volume, *i.e.,* the share volume executed at market center + share volume executed away from the market center, for the stock-month-order type by the stock's monthly VWAP). *See supra* note 413 for a discussion of filters that were applied to the Rule 605 data in this analysis. This analysis uses data from prior to the implementation of the MDI Rules and specific numbers may be different following the implementation of the MDI Rules. *See supra* note 415.

To supplement the analyses using Rule 605 data and test for the robustness of the results that it generated, CAT data [422] was analyzed to look at the execution quality of marketable orders of individual investors in NMS Common Stocks and ETFs that were less than $200,000 in value and that executed and were handled by wholesalers during Q1 2022 (''CAT retail analysis'').[423] This was compared to a sample of CAT data examining the execution quality of executed market and marketable limit orders in NMS Common Stocks and ETFs received by exchanges that were less than $200,000 in value over the same time period (''CAT exchange analysis'').[424]

[422] This analysis used CAT data to examine the execution quality of marketable orders in NMS Common stocks and ETFs that belonged to accounts with a CAT account type of ''Individual Customer'' and that originated from a broker-dealer MPID that originated orders from 10,000 or more unique ''Individual Customer'' accounts during January 2022. The number of unique ''Individual Customer'' accounts associated with each MPID was calculated as the number of unique customer account identifiers with an account customer type of ''Individual Customer'' that originated at least one order during the month of January 2022. The Commission found that 58 broker-dealer MPIDs associated with 54 different broker-dealers originated orders from 10,000 or more unique Individual Customer accounts in January 2022. For the Consolidated Audit Trail, account type definitions are available in Appendix G to the CAT Reporting Technical Specifications for Industry Members (*https://catnmsplan.com/*), for the field name ''accountHolderType.'' Account types represent the beneficial owner of the account for which an order was received or originated, or to which the shares or contracts are allocated. Possible types are: Institutional Customer, Employee, Foreign, Individual Customer, Market Making, Firm Agency Average Price, Other Proprietary, and Error. An Institutional Customer account is defined by FINRA Rule 4512(c) as a bank, investment adviser, or any other person with total assets of at least $50 million. An Individual Customer account means an account that does not meet the definition of an ''institution'' and is also not a proprietary account. Therefore, the CAT account type ''Individual Customer'' includes natural persons as well as corporate entities that do not meet the definitions for other account types. The Commission restricted that analysis to MPIDs that originated orders from 10,000 or more ''Individual Customer'' accounts in order to ensure that these MPIDs are likely to be associated with retail brokers to help ensure that the sample is more likely to contain marketable orders originating from individual investors. NMS Common stocks and ETFs are identified, respectively, as securities in TAQ with a Security Type Code of 'A' and 'ETF'.

[423] Fractional share orders with share quantity less than one share were excluded from the analysis. The analysis included market and marketable limit orders that originated from one the 58 retail broker MPIDs and were received by a market center that was associated with one of the six wholesalers CRD numbers (FINRA's Central Registration Depository number) during some point in the order's lifecycle. Orders that were received by the wholesaler or executed outside of normal market hours were excluded. Orders were also excluded if they had certain special handling codes so that execution quality statistics would not be skewed by orders being limited in handling by special instructions (*e.g.,* pegged orders, stop orders, post only orders). Orders identified in CAT as Market and Limit orders with no special handling codes or one of the following special handling codes were included in the analysis: NH (not held), CASH (cash), DISQ (display quantity), RLO (retail liquidity order), and DNR (do not reduce). These special handling codes were identified based on their common use by retail brokers and descriptions of their special handling codes. The marketability of a limit order was determined based on the consolidated market data feed NBBO at the time a wholesaler first receives the order. Limit orders that were not marketable were excluded. The dollar value of an order was determined by multiplying the order's number of shares by either its limit price, in the case of a limit order, or by the far side quote (*i.e.,* NBO for a market buy order and NBB for a market sell) of the consolidated market data feed NBBO at the time the order was first received by a wholesaler, in the case of a market order. Orders with dollar values greater than or equal to $200,000 were excluded from the analysis. The analysis includes NMS Common Stocks and ETFs (identified by security type codes of 'A' and 'ETF' in NYSE TAQ data) that are also present in CRSP data. Price improvement, effective spreads, realized spreads, quoted spreads, and price impacts were winsorized if they were greater than 20% of a stock's VWAP during a stock-week. *See* Table 6 for a detailed description of the analysis.

[424] The Commission analysis used CAT data to examine the execution quality of market and marketable limit orders in NMS Common Stocks and ETFs that were under $200,000 in value that were received and executed by exchanges during normal market hours in Q1 2022. The analysis employed filters to clean the data and account for potential data errors. The analysis is limited to orders identified in CAT as market and limit orders accepted by exchanges. Orders were excluded from the analysis if they had certain special handling codes, such as post or add-liquidity only orders, midpoint orders, orders that can only execute in opening and closing auctions, orders with a minimum execution quantity, pegged orders, or stop order or stop-loss orders. Orders were also required to execute in normal trades during normal trading hours to be included in the analysis. Normal trades are identified in CAT data by sale conditions ''blank, @, E, F, I, S, Y'' which correspond to regular trades, intermarket sweep orders, odd lot trades, split trades, and yellow flag regular trades. For orders submitted to exchanges, the NBBO the exchange records seeing at the time of order receipt is used to measure the NBBO and NBBO midpoint for calculating statistics that are based on the time of order receipt (*e.g.,* effective spreads, price improvement, quoted spreads, etc.). The marketability of exchange orders was determined based on the NBBO observed by the exchange at the time of order receipt. The dollar value for a market order was calculated as the price of the far side NBBO quote (NBO for a market buy order and NBB for a market sell) times the shares in the order. The dollar value for a limit order was calculated as the price of the limit order times the number of shares in the order. Orders with dollar values greater than or equal to $200,000 were excluded from the analysis. The consolidated market data feed NBBO was used to calculate statistics that use the NBBO or NBBO one minute after execution (*e.g.,* realized spreads, price impacts, etc.). The analysis includes NMS Common Stocks and ETFs (identified by security type codes of 'A' and 'ETF' in NYSE TAQ data) that are also present in CRSP data. Price improvement, effective spreads, realized spreads, quoted spreads, and price impacts were winsorized if they were greater than 20% of a stock's VWAP during a stock-week. *See* Table 6 for a detailed description of the analysis.

Table 6 reports the results from CAT data analysis.[425] In addition to reporting results for all stocks, it also breaks out results based by if a stock is an ETF or is in the S&P 500 or not. Generally, the results from this analysis are consistent with results from the analysis of Rule 605 data from Table 5. Specifically, wholesalers display lower price impacts (WH Price Impact) and E/Q ratios (WH E/Q Ratio), indicating that orders internalized by wholesalers receive better execution quality relative to order executed on exchanges (EX Price Impact and EX E/Q Ratio containing the corresponding statistics for exchanges). Despite this enhanced execution quality, realized spreads of wholesalers (WH Realized Spread) exceed those produced by exchanges (EX Realized Spread).

Table 6 also reports some statistics for wholesalers that are not available in Rule 605 reports, including statistics on midpoint executions (WH Pct Shares Executed at Midpoint) and sub-penny trades (WH Pct of Shares Executed as Subpenny Prices). In all NMS common stock and ETF orders, wholesalers execute approximately 44% of shares at prices at or better than the NBBO midpoint (WH Pct Shares Executed at Midpoint or Better). However, wholesalers also offer less than 0.1 cents price improvement to approximately 18.6% of shares that they execute (WH Pct Shares Executed with <0.1 cent Price Improvement). Wholesalers execute more than 65% of shares at sub-penny prices (WH Pct of Shares Executed as Subpenny Prices), with over 40% of shares being executed at prices with four decimal points (*i.e.,* the fourth decimal place is not equal to zero, which is measured by the WH Pct of Shares Executed at Subpenny Prices with 4 Decimals variable).

TABLE 6—WHOLESALER CAT ANALYSIS OF EXCHANGE INDIVIDUAL INVESTOR ORDER EXECUTION QUALITY FOR MARKETABLE ORDERS IN NMS COMMON STOCKS AND ETFS BY TYPE OF STOCK

Variable	All	SP500	NonSP500	ETF
Panel A: Wholesaler and Exchange Execution Quality				
Average Price	$29.87	$110.31	$10.52	$53.14
WH Principal Execution Rate	90.44%	93.07%	87.66%	88.12%
WH Share Volume (billion shares)	87.11	11.63	63.17	12.31
EX Share Volume (billion shares)	281.90	66.98	140.82	74.10
WH Dollar Volume (billion $)	$2,601.44	$1,282.62	$664.41	$654.41
EX Dollar Volume (billion $)	$16,194.84	$6,479.89	$3,246.09	$6,468.85
WH Effective Spread (bps)	2.11	0.67	6.23	0.76
EX Effective Spread (bps)	3.18	1.52	8.11	1.42
WH Realized Spread (bps)	0.85	0.42	2.00	0.51
EX Realized Spread (bps)	−1.22	−0.28	−3.90	−0.34
WH Price Impact (bps)	1.26	0.25	4.22	0.25
EX Price Impact (bps)	4.40	1.80	12.00	1.75
WH E/Q Ratio	0.39	0.32	0.50	0.41
EX E/Q Ratio	1.04	1.01	0.98	1.17
Panel B: Wholesaler Price Improvement				
WH Pct Executed with Price Improvement	89.95%	93.33%	85.43%	87.93%
WH Conditional Amount Price Improvement (bps)	2.54	1.47	6.16	0.99
WH Pct Shares Executed at Midpoint or Better	44.57%	47.37%	39.76%	43.97%
WH Pct Shares Executed at Midpoint	31.69%	32.47%	28.46%	33.44%
WH Pct Shares Executed at NBBO	8.38%	5.86%	10.97%	10.69%
WH Pct Shares Executed Outside NBBO	1.67%	0.81%	3.61%	1.38%
WH Pct Shares Executed with <0.1 cent Price Improvement	18.64%	16.62%	20.58%	20.64%
WH Pct of Shares Executed as Subpenny Prices	66.98%	65.10%	64.16%	73.55%
WH Pct of Shares Executed at Subpenny Prices without Midpoint Trades	47.60%	46.82%	47.03%	49.68%
WH Pct of Shares Executed at Subpenny Prices with 4 Decimals	41.36%	40.80%	41.76%	42.06%

This table uses CAT data to compare aggregated execution quality statistics for Q1 2022 broken out for different security types for executed marketable orders with order size under $200,000 in NMS Common Stocks and ETFs received by wholesalers from individual investors to similar orders received by exchanges. Aggregated statistics in the table labeled WH are based on analysis of CAT data of executed marketable orders in NMS Common Stocks and ETFs from individual investors for under $200,000 in value belonging to one of 58 retail broker MPIDs that were handled by one of 6 wholesalers during normal market hours in Q1 2022 (see supra note 423 for additional discussions on the CAT data used in the CAT retail analysis). Aggregated statistics in the table labeled EX are based on a corresponding analysis of CAT data of executed marketable orders in NMS Common Stocks and ETFs receive by exchanges that were under $200,000 in value and received and executed during normal market hours in Q1 2022 (see supra note 424 for additional discussions on the CAT data used in CAT exchange analysis).

[425] Certain items in Table 6 may also be affected by the MDI rules once they are implemented. *See supra* note 415.

The following metrics are calculated for all stocks and for each of the stock-types. EX indicates aggregated statistics for executed marketable orders routed to exchanges and WH indicates aggregated statistics for executed marketable orders from individual investors that were routed to wholesalers. Average Price is the average execution price. WH Principal Execution Rate is the percentage of dollar volume of individual investor trades that a wholesaler executed in a principal capacity. Share Volume is the total executed share volume. Dollar Volume is the total executed dollar volume. Effective Spread is the weighted average of the percentage effective half spread in basis points (bps) (measured as average (execution price—NBBO midpoint at time of order receipt) * average transaction price). Realized Spread is the weighted average of the percentage one minute realized spread in bps (measured as average (execution price—NBBO midpoint one minute after execution) * average transaction price). Price Impact is the weighted average of the percentage one-minute price impact spread in bps (measured as average (NBBO midpoint one minute after execution—NBBO midpoint at time of order receipt)/average transaction price). E/Q Ratio is the weighted average of the ratio of the effective dollar spread divided by its quoted spread at the time of order receipt. WH Pct Executed with Price Improvement is the weighted average of the percentage of share volume that is routed to wholesalers and executed at a price better than the NBBO. WH Conditional Amount Price Improvement is the weighted average amount of percentage price improvement given by wholesalers conditional on the order receiving price improvement in bps (measured for a marketable buy order as average (NBO at time of order receipt—execution price) and measured for a marketable sell order as average (execution price—NBB at time of order receipt) and then dividing the difference by the average transaction price). WH Pct Share Executed at Midpoint or Better is the weighted average of the percentage of shares that are routed to a wholesaler and executed at prices equal to or better than the NBBO midpoint at the time of order receipt. WH Pct Share Executed at Midpoint is the weighted average of the percentage of shares that are routed to a wholesaler and executed at a price equal to the NBBO midpoint at the time of order receipt. WH Pct Shares Executed at NBBO is the weighted average of the percentage of share volume routed to a wholesaler and executed at the NBBO at the time of order receipt (executed at the NBB for marketable sell orders and the NBO for marketable buy orders). WH Pct Shares Executed Outside NBBO is the weighted average of the percentage of share volume routed to wholesalers and executed at prices outside the NBBO at the time of order receipt (executed a price less than the NBB for marketable sell orders and a price greater than the NBO for marketable buy orders). WH Pct Shares Executed with <0.1 cent Price Improvement is the weighted average of the percentage of shares that are executed with an amount of price improvement less than 0.1 cents measured against the NBBO at the time of order receipt. WH Pct Shares Executed Subpenny Prices is the weighted average of the percentage of shares that execute at a subpenny price (a dollar execution price with a non-zero value in the third or fourth decimal place). WH Pct Shares Executed at Subpenny without Midpoint Trades is the weighted average of the percentage of shares that execute at a subpenny price (an dollar execution price with a non-zero value in the third or fourth decimal place), excluding executions with subpenny prices that occur at the NBBO midpoint. WH Pct Shares Executed at Subpenny Prices with 4 Decimals is the weighted average of the percentage of shares that execute at a subpenny price where there is a dollar execution price with a non-zero value in the fourth decimal place. Average transaction prices used in calculating the metrics are calculated as the total dollar trading volume divided by the total share trading volume in the category and time period.

For the wholesaler (WH) CAT metrics used in the sample, the analysis includes marketable orders for under $200,000 in value that originate from a customer with a CAT account type of ''individual'' at one of the 58 retail broker MPIDs and are routed to a wholesaler (*see supra* note 422 for more info on CAT account types and retail broker identification methodology and supra note 423 for more details on how the CAT retail analysis sample was constructed). Fractional share orders with share quantity less than one share were excluded from the analysis. Orders were also excluded if they had certain special handling codes. The marketability of a limit order is determined based on the consolidated market data feed NBBO at the time a wholesaler first receives the order.

For the exchange (EX) CAT metrics, executed market and marketable limit orders received by exchanges during normal market hours were over the same period were used to calculate the exchange execution quality statics (*see supra* note 424 for more details on how the CAT exchange sample was constructed). Exchange orders were filtered if they had certain special handling codes. The marketability of exchange orders was determined based on the NBBO observed by the exchange at the time of order receipt.

The dollar value of an order was determined by multiplying the order's number of shares by either its limit price, in the case of a limit order, or by the far-side quote of the NBBO at the time of order receipt, in the case of a market order. The analysis includes NMS Common Stocks and ETFs (identified by security type codes of 'A' and 'ETF' in NYSE TAQ data) that are also present in CRSP data from CRSP 1925 US Stock Database, Ctr. Rsch. Sec. Prices, U. Chi. Booth Sch. Bus. (2022). The CRSP 1925 US Indices Database, Ctr. Rsch. Sec. Prices, U. Chi. Booth Sch. Bus. (2022), was used to identify if a stock was a member of the S&P 500. The stock did not have to be in the CRSP 1925 US Indices Database to be included in the analysis. Time of order receipt is defined as the time the wholesaler or exchange first receives the order. Wholesaler metrics based on the time of order receipt are measured against the NBBO from the consolidated market data feed. Exchange metrics based on time of order receipt are measured against the NBBO the exchange reports observing. Realized spreads for both exchange and wholesaler metrics are calculated with respect to the NBBO midpoint from the consolidated market data feed observed one minute after the time of order execution.

Separately, for both the exchange and wholesaler samples, total share volume, total dollar volume, average transaction price, percentage volume metrics, and share weighted average dollar per share spread, price impact, and price improvement metrics were calculated at a stock-week-order size category level by aggregating together execution quality statistics calculated for individual orders. The order-size categories were defined as orders less than 100 shares, 100–499 shares, 500–1,999 shares, 2,000–4,999, 5,000–9,999 shares, and 10,000+ shares. For each stock-week-order size category, percentage spread, price impact, and price improvement metrics were calculated by dividing the average dollar per share metric by the average transaction price calculated for each stock-week-order size category. E/Q ratios were calculated for each stock-week-order size category by dividing the average dollar per share effective spread by the average dollar per share quoted spread.

Exchange sample metrics for E/Q ratios and percentage spread, price impact, and price improvement metrics for a for each stock-week-order size category were then merged with the corresponding stock-week-order size category in the wholesaler sample. Weighted averages for both wholesaler and exchange metrics and the wholesaler percentage volume metrics are then calculated for the security type in the sample by averaging across stock-week-order size category levels based on their total dollar transaction volume during the sample period in the wholesaler CAT sample (*i.e.,* for both exchanges and wholesalers, using the stock's total dollar trading volume in wholesaler executed transactions as the weight when averaging the share weighted average stock-week- size category values). Weighting the exchange and wholesaler execution metrics by the same weights helps to ensure the samples are comparable across stocks. Total dollar volume and share volume for the exchange and wholesaler samples are calculated by summing across all executions in a security type in each sample. The wholesaler Principal Execution Rate is calculated for a security type in the wholesaler sample by summing the total dollar volume in trades wholesalers executed in a principal capacity across the security type in the wholesaler sample and dividing by the total dollar volume in traded in the security type in the wholesaler sample.

This analysis uses data from prior to the implementation of the MDI Rules and specific numbers may be different following the implementation of the MDI Rules. *See supra* note 415.

Table 7 uses CAT data to summarize how individual investor marketable NMS stock order execution quality varies based on whether the wholesaler executes the order in a principal capacity (*i.e.,* internalizes the order) or effectively reroutes the order (*i.e.,* executes in a riskless principal or handles it in an agency capacity). This analysis supports the interpretation that wholesalers identify and tend to internally execute individual investor orders associated with the lower adverse selection costs.[426] Internalized orders have a lower price impact (0.91 bps as compared to 4.63 bps for those effectively rerouted, measured by WH Price Impact), and lower effective

[426] Certain items in Table 7 may also be affected by the MDI Rules once they are implemented. *See supra* note 415.

spreads (1.77 compared to 5.36 for other transactions, measured by WH Effective Spread). Wholesalers also earn higher realized spreads on the orders they execute as principal (0.86 bps for principal transactions compared to 0.72 bps earned by those providing liquidity for the riskless principal or agency transactions, measured by WH Realized Spread), despite executing them at lower effective spreads.

TABLE 7—WHOLESALER CAT ANALYSIS OF INDIVIDUAL INVESTOR ORDER EXECUTION QUALITY BY WHOLESALER EXECUTION CAPACITY

Variable	Internalized	Effectively rerouted
Average Price	$33.48	$14.78
WH Orders (million)	236.95	34.36
WH Trades (millions)	251.32	74.36
WH Share Volume (billion shares)	70.28	16.83
WH Pct of Executed Share Volume	80.68%	19.32%
WH Dollar Volume (billion $)	$2,352.80	$248.64
WH Pct of Executed Dollar Volume	90.44%	9.56%
WH Effective Spread (bps)	1.77	5.36
WH Realized Spread (bps)	0.86	0.72
WH Price Impact (bps)	0.91	4.63
WH E/Q Ratio	0.35	0.70
WH Pct Executed with Price Improvement	93.37%	57.65%
WH Conditional Amount Price Improvement (bps)	2.45	3.74
WH Pct Shares Executed at Midpoint or Better	46.05%	30.65%
WH Pct Shares Executed at Midpoint	32.23%	26.53%
WH Pct Shares Executed at NBBO	5.51%	35.49%
WH Pct Shares Executed Outside NBBO	1.12%	6.86%
WH Pct Shares Executed with <0.1 cent Price Improvement	20.38%	2.22%

The table summarizes execution quality statistics from the CAT retail analysis based on whether the wholesaler executed the individual investor NMS stock order in a principal capacity or in another capacity (*i.e.,* in an agency or riskless principal capacity). The majority of the other transactions are executed by the wholesaler in a riskless principal capacity. *See supra* Table 6 for additional details on the sample and metrics used in the analysis. Share-weighted percentage metrics are averaged together at the individual execution capacity-stock-week-order-size category level for the wholesaler sample using the methodology in Table 6. Weighted averages for the metrics are then calculated for each execution capacity by averaging across execution capacity-stock-week-order size category levels based on their total dollar transaction volume during the sample period in the wholesaler CAT sample. This analysis uses data from prior to the implementation of the MDI Rules and specific numbers may be different following the implementation of the MDI Rules. *See supra* note 415.

The analysis in Table 7 presents evidence that wholesalers execute 46% of the shares they internalize at prices equal to or better than the midpoint. However, additional analysis of CAT data indicates that there is often midpoint liquidity on exchanges and NMS Stock ATSs when wholesalers internalize individual investor orders at prices worse than the midpoint.

Table 8 uses CAT data from March 2022 to examine the non-displayed liquidity available at the NBBO midpoint on exchanges and NMS Stock ATSs at a moment in time when a wholesaler internalizes an individual investor marketable order at a price less favorable (to the customer) than the NBBO midpoint.[427] The results indicate that, on average,[428] 51% of the shares internalized by wholesalers are executed at prices less favorable than the NBBO midpoint (Wholesaler Pct Exec Shares Worse Than Midpoint). Out of these individual investors shares that were executed at prices less favorable than the midpoint, on average, 75% of these shares could have hypothetically executed at a better price against the non-displayed liquidity resting at the NBBO midpoint on exchanges and NMS Stock ATSs. Under the current market structure, this liquidity is not displayed, so wholesalers may not have been aware of this liquidity and able to execute the individual investor marketable orders against it. Currently, if wholesalers wanted to detect this hidden liquidity, they would have had to ping each individual exchange or NMS Stock ATS to see if midpoint liquidity was available on that venue.[429]

Table 8 also estimates that the additional dollar price improvement that these individual investor marketable orders would have received

[427] More specifically, the analysis uses CAT data to look at the total shares available at the NBBO midpoint that originate from hidden midpoint pegged orders on exchanges and NMS Stock ATSs. The analysis compares the size of an individual investor marketable order that was internalized in a principal capacity by a wholesaler at a price less favorable than the NBBO midpoint (measured at the time the wholesaler received the order) to the total shares of midpoint liquidity (originating from midpoint peg orders) at the NBBO midpoint on exchanges and NMS Stock ATSs at the time the individual investor order is executed in order to hypothetically see how many additional shares could have gotten price improvement if they had executed against the hidden liquidity available at the NBBO midpoint. A midpoint peg order is a type of hidden order whose price automatically adjusts with the NBBO midpoint. The analysis looks at midpoint peg orders on exchanges and ATSs during normal market hours (midpoint peg orders with an Immediate or Cancel or Fill or Kill modifier are excluded). The total potential shares in orders that were available at the NBBO midpoint from midpoint peg orders on exchanges and ATSs was calculated each stock day by adding shares when midpoint peg orders were received by an exchange or ATS and subtracting shares in these orders that were canceled or traded. Shares were also subtracted from the total when a wholesaler internalized an individual investor marketable order at a price worse than the NBBO midpoint and shares were available at the midpoint on exchanges and ATSs that the order could have hypothetically executed against. This ensures that that analysis is not overestimating the available midpoint liquidity (*i.e.,* it ensures that we do not estimate two individual investor 100 share orders could have executed against the same resting 100 share midpoint order). The analysis also kept track of the total amount of dollars of additional price improvement that individual investors would have received if their orders had hypothetically executed against the liquidity available at the NBBO midpoint instead of being internalized by the wholesaler. Note that this analysis might underestimate the total non-displayed liquidity available at the NBBO midpoint because it only looks at orders that pegged to the midpoint and not other orders, such as limit orders with a limit price equal to the NBBO midpoint.

[428] As discussed in Table 8, percentages were computed at a stock-week level and then averaged across stock-weeks by weighting by the total dollar volume the wholesaler internalized during that stock-week.

[429] Pinging for midpoint liquidity at multiple venues could increase the risk of information leakage or that prices may move, possibly resulting in some market participants canceling midpoint orders they posted.

if they had executed against the available midpoint liquidity instead of being internalized. The total amount of additional price improvement that all of these individual investor orders would have received was about 51% of the total dollar price improvement provided by wholesalers to all of the individual investor marketable orders that they internalized (*i.e.,* the marketable orders internalized at prices better or equal to the midpoint plus marketable orders internalized at prices worse than the midpoint).[430]

In addition, the results in Table 8 also indicate the availability of NBBO midpoint liquidity is only slightly lower for less liquid (non-S&P 500 stocks) as liquid (S&P500) stocks. That is, while about 57% of the shares in individual investor marketable orders in non-S&P500 stocks internalized by wholesalers received executions at less favorable prices than the NBBO midpoint, there was nevertheless hidden liquidity available at the NBBO midpoint for about 68% of these non-S&P500 shares. Moreover, the potential additional price improvement that could have been gained by if these individual investor orders had executed against this NBBO midpoint liquidity is almost 55% of the total price improvement provided by wholesalers in these stocks.

TABLE 8—AVAILABLE MIDPOINT LIQUIDITY WHEN WHOLESALER INTERNALIZES A RETAIL TRADE

Stock type	Price group	Liquidity bucket	Wholesaler Pct exec shares worse than midpoint	Pct shares MP price improvement	Additional dollar price improvement Pct
All	All		51.05	74.60	51.05
SP500	All		48.41	72.32	41.43
SP500	(1) <$30		64.36	60.08	50.00
SP500	(2) $30 – $100		47.82	60.36	29.29
SP500	(3) $100+		47.69	75.69	43.27
NonSP500	All		57.45	68.10	54.51
NonSP500	(1) <$30	Low	73.30	49.52	67.63
NonSP500	(1) <$30	Medium	71.30	60.25	82.85
NonSP500	(1) <$30	High	66.77	52.18	59.74
NonSP500	(2) $30 – $100	Low	63.60	80.69	68.88
NonSP500	(2) $30 – $100	Medium	57.71	85.24	61.80
NonSP500	(2) $30 – $100	High	50.24	71.79	44.58
NonSP500	(3) $100+	Low	61.62	84.32	61.49
NonSP500	(3) $100+	Medium	55.40	93.29	55.96
NonSP500	(3) $100+	High	47.15	90.99	45.57
ETF	All		49.93	86.06	58.28
ETF	(1) <$30	Low	66.58	39.75	31.61
ETF	(1) <$30	Medium	57.95	54.91	38.35
ETF	(1) <$30	High	62.24	78.47	88.70
ETF	(2) $30 – $100	Low	61.01	62.00	41.78
ETF	(2) $30 – $100	Medium	53.94	77.54	46.85
ETF	(2) $30 – $100	High	49.87	84.09	49.56
ETF	(3) $100+	Low	52.45	72.28	40.13
ETF	(3) $100+	Medium	47.51	87.20	45.35
ETF	(3) $100+	High	46.93	90.28	48.33

This table summarizes midpoint liquidity available on exchanges and ATSs during March 2022 when a wholesaler internalizes an individual investor marketable order less than $200,000 in an NMS common stock or ETF on a principal basis at a price less favorable than the NBBO midpoint (at the time of the wholesaler receives the order) from one of the 58 retail broker MPIDs in the CAT retail analysis. Stocks are broken out into buckets based on their security type, price, and liquidity. Stock type is based on whether a security is an ETF, or a common stock in the S&P 500 or Non-S&P 500. Price buckets are based on a stock's weekly average VWAP price as estimated from TAQ. Stocks within each security type-price bucket, except S&P 500 stocks, are sorted into three equal liquidity buckets based on the stock's total share trading volume during the week estimated using TAQ data. See supra Table 6 for additional details on the sample and CAT analysis of wholesaler executions of the orders of individual investors.

Wholesaler Pct Exec Shares Worse Than Midpoint is the average percentage of individual investor shares that wholesalers executed on a principal basis at a price less favorable than the NBBO midpoint (measured at the time the wholesaler receives the order). Pct Shares MP Price Improvement is the average percentage of shares that the wholesaler executed at a price less favorable than the NBBO midpoint that could have executed at a better price against resting liquidity available at the NBBO midpoint on exchanges and NMS Stock ATSs at the time the wholesaler executed the order. Additional Dollar Price Improvement Pct is the ratio of the total additional dollars of price improvement of the sample period that individual investors whose orders were executed at a price less favorable than midpoint would have received if their orders would have executed against available midpoint liquidity, divided by the total dollars in price improvement (measured relative to the NBB or NBO at the time of order receipt) that wholesalers provided over the sample period when they internalized individual investor orders (i.e. the total price improvement for orders wholesalers internalized at prices less favorable than the midpoint plus the total price improvement for orders wholesalers internalized at prices more favorable than the midpoint).

[430] This estimate of the potential additional price improvement if orders are executed against midpoint liquidity only accounts for differences in the potential execution prices of the order and does not account for any other differences in costs of executing the order at different venues, such as differences in PFOF or access fees and rebates.

Midpoint liquidity is measured based on resting midpoint peg orders on exchanges and NMS Stock ATSs during normal market hours identified from CAT data. Midpoint peg orders with an Immediate or Cancel or Fill or Kill modifier are excluded. The total potential shares in orders that were available at midpoint on exchanges and ATSs at a point in time were calculated keeping a running total each stock day by adding shares when midpoint peg orders were received by an exchange or NMS Stock ATS and subtracting shares when shares in these midpoint peg orders were canceled or traded. When a wholesaler executes an order at a price less favorable than the NBBO midpoint (at the time the wholesaler receives the order), then the executed shares are compared to the available resting liquidity at the NBBO midpoint. If the NBBO midpoint at the time the order is executed would provide price improvement over the price the wholesaler would have executed the order at, then the shares executed by the wholesaler are subtracted from the total resting shares available at the NBBO midpoint, up to the lesser of the number of shares executed by the wholesaler or the total resting shares available (i.e. the total resting shares will not drop below zero). These are counted as the total shares that would have received additional price improvement at the midpoint. This methodology ensures that that analysis is not overestimating the available midpoint liquidity (i.e. it ensures that we do not estimate two individual investor 100 share orders could have executed against the same resting 100 share midpoint order). NBBO midpoints for both time of order receipt and time of execution are estimated from the consolidated market data feed.

The additional dollars of price improvement individual investors whose orders were executed at a price less favorable than the midpoint would have received if their orders would have executed against available midpoint liquidity was calculated as the difference between the price the wholesaler executed the order at and the NBBO midpoint at the time the wholesaler executed the order (i.e., executed price—NBBO midpoint at the time of execution for a marketable buy order and midpoint—executed price for a marketable sell order) times the number of shares that would have received the additional price improvement.

Weighted averages are calculated for the variables Wholesaler Pct Exec Shares Worse Than Midpoint and Pct Shares MP Price Improvement using the following methodology. Percentages based on share volume are calculate for each stock-week (e.g., total shares executed at a price worse than the midpoint during a stock-week divided by the total shares of individual investor marketable orders executed by a wholesaler in a principal capacity during the stock-week). Weighted averages are then calculated for each stock-type-price-liquidity bucket by averaging these stock-week percentages over the month by weighting each stock-week by the total dollar trade volume internalized by the wholesaler during the stock-week (i.e., using the stock's total dollar trading volume internalized by the wholesaler as the weight when averaging the stock-week percentage values).

The Additional Dollar Price Improvement Pct is not weighted and is calculated as the ratio of the month's total additional dollar price improvement orders executed at a price less favorable than the NBBO would have received if their orders would have executed against available midpoint liquidity, divided by the month's total dollars in price improvement (measured relative the NBBO at the time of order receipt) that wholesalers provided when they executed individual investor orders (i.e. the total price improvement for orders wholesalers internalized at prices less favorable than the midpoint plus the total price improvement for orders wholesalers internalized at prices more favorable than the midpoint.

ii. Listed Options

a. Options Trading Services Overview

Registered exchanges are the sole providers of trading services in the market for listed options, and the Options Clearing Corporation (OCC) is the sole entity clearing trades for exchange-listed options and security futures.[431] All listed options trading occurs on exchanges. Exchanges compete with each other by offering different cost structures to participate on the exchange, and offering differing order types to allow customers advanced trading strategies. Options exchanges offer the ability to route orders to competing options exchanges in the event of a competing option exchange having the best price for a given options order.[432]

There are sixteen options exchanges[433] in the U.S. options market. Each of the sixteen exchanges is operated by one of five exchange groups.[434] Table 9 presents the market share, as measured by contract volume, for each option exchange and each exchange group based on OPRA data from 2022/01/01 to 2022/03/31. Cboe is the exchange with the largest market share,[435] at close to 15%. However, on the exchange group level, the Nasdaq group, with its six exchanges, has the highest market share.

TABLE 9—U.S. OPTIONS EXCHANGE MARKET SHARE

Group	Exchange	Market share (percent)
BOX	BOX	5.78
Cboe	Cboe	14.81
	C2	3.66
	EDGX	4.86
	BZX	7.91
Nasdaq	Nasdaq	7.93
	BX	2.01
	PHLX	10.91
	GEMX	2.32
	ISE	5.63
	MRX	1.69
NYSE	AMEX	6.68
	Arca	12.54
MIAX	MIAX	5.39
	PEARL	4.26
	EMERALD	3.61

There is one ATS in the market for listed options.[436] As the Commission understands, this ATS offers subscribers an RFQ protocol.[437] A customer may accept the quote the ATS returns from the RFQ protocol, after which the order is sent to an exchange for execution.

Most option exchanges do not provide midpoint liquidity, and marketable orders routed to the limit order book can only be executed at the NBBO prices when there is no price improvement order present. The Nasdaq Option Exchange first introduced an order type called price improvement order which allows market participants to enter the order at a non-displayed limit price within the NBBO spread at 1 cent increments regardless of the tick size of the option series. Marketable customer orders are able interact with the resting price improving orders and receive better prices than the prevailing NBBOs.

b. Retail Order Handling in Options

The Commission understands the majority of retail orders for options are handled by wholesalers.[438] Rule 606 data from Q1 2022 show that all but one of the top 15 retail options brokers routed all of their non-directed[439] orders from customers to wholesalers. Some of this flow is routed directly to wholesalers, while some goes through a third-party clearing firm, but is at some point handled by at least one wholesaler. Sometimes retail brokers do route to exchanges, either directly or through a third-party firm.

Table 10 summarizes order routing choices of 45 major retail brokers for non-directed orders for listed options. Routing decisions are summarized

[431] *See What Is OCC?,* The Options Clearing Corporation, *available at https://www.theocc.com/Company-Information/What-Is-OCC.* Listed options can only be traded on a registered options exchange. *See* By-Laws of The Options Clearing Corporation, Article I, Section 1(C)(28) (defining ''confirmed trade'') and Article VI, Section 1.

[432] *See e.g.,* Securities Exchange Act Release No. 60405 (July 30, 2009), 74 FR 39362 (August 6, 2009) (approving the national market system plan relating to options order protection and locked/crossed markets) (File No. 4–546).

[433] Eight exchanges trade only options. Eight trade both options and equities.

[434] Exchange groups are collection of exchanges operated by one parent entity.

[435] This is in part due to the fact that there are several very liquid Cboe-listed only products such as SPX and SPXW.

[436] In contrast to the market for NMS Stocks, ATS trades in NMS Options are still executed on an exchange.

[437] *See,* DASH Financial Technologies, Execution Services: Dash ATS *available at https://dashfinancial.com/execution-services/dash-ats/.*

[438] *See supra* section III.A.

[439] According to the Rule 606 filings for the top 15 retail brokers for listed options, on average non-directed orders made up around 99.13% of all retail orders in Q1 of 2022.

separately for 23 retail brokers who accept PFOF from wholesalers or clearing firms in option markets (PFOF brokers) and those who do not (non-PFOF brokers). Within each category of brokers, routing statistics for each order type [440] is reported separately.

Similar to results for NMS stocks, the composition of order types differ between non-PFOF and PFOF brokers. Market orders and marketable limit orders comprise a smaller proportion of orders routed by non-PFOF brokers than PFOF brokers. For example, market orders make up 9.97% and 14.60% of non-directed orders of non-PFOF and PFOF brokers, respectively. Consequently, the non-marketable limit order type and other order type make up smaller shares of orders routed by PFOF brokers.

Non-PFOF brokers route a significantly lower fraction, 46%, of their customer orders to wholesalers, compared to over 99% of customer orders that PFOF brokers route to wholesalers. Additionally, Non-PFOF brokers also route 17% of customer orders to clearing firms, whereas essentially no orders from PFOF brokers are routed in this manner. Finally, as an alternative to the previously mentioned routing choices, Non-PFOF brokers route a significantly higher fraction, 38%, of customers' orders directly to the exchanges than PFOF brokers, which route less than 0.1% of the order flow to the exchanges.

TABLE 10—RETAIL BROKER ORDER ROUTING IN LISTED OPTIONS FOR MARCH 2022

Venue type	Market (percent)	Marketable limit (percent)	Non-marketable limit (percent)	Other (percent)	Total (percent)
Non-PFOF Retail Brokers					
Clearing firm	4.49	1.46	10.62	0.27	16.84
Exchange	0.01	0.44	5.47	31.70	37.61
Wholesaler	5.48	7.88	47.14	35.01	45.55
Total	9.97	9.25	51.18	20.66	100.00
PFOF Retail Brokers					
Clearing firm	0.00	0.00	0.02	0.01	0.04
Exchange	0.00	0.00	0.06	0.01	0.07
Wholesaler	14.59	8.19	44.71	32.41	99.90
Total	14.60	8.20	44.78	32.42	100.00

This table shows the percentage of market orders, marketable limit orders, non-marketable limit orders, and other orders that retail brokers route to different types of venues in March 2022. Other venues include any other venue to which a retail broker routes an order other than a wholesaler or an exchange. Twenty-three retail brokers are identified as PFOF retail brokers that receive payments for routing orders in listed options to wholesalers or clearing firms. Twenty-two non-PFOF retail brokers are identified as retail brokers that do not receive monetary compensation when they route orders in listed options to wholesalers. The reports are aggregated together using a weighting factor based on an estimate of the number of orders non-directed orders each broker-dealer routes each month. The number of orders is estimated by dividing the number of market orders a retail broker routes according to a CAT analysis by the percentage of market orders the retail broker routes for March 2022.

Similar market forces that drive internalization of orders in the equity markets exist in option markets as well.[441] In the options market, internalization [442] can occur on the limit order book or through price improvement auction mechanisms.[443] Internalization on the limit order book requires the wholesalers' own quotes to be at the NBBOs, and some exchanges develop certain features (*e.g.,* specialist model) [444] to facilitate and improve the internalization rate. From the Consolidated Audit Trail data for March 2022, the Commission estimates that wholesalers internalize 70.6% of the single-leg orders routed to the price improvement auctions and 19.1% of the single-leg orders routed to the limit order books.[445] For multi-leg orders, the internalization rates are 82.4% and 9.27% respectively.[446] Combining single-leg and multi-leg orders, the Commission estimates wholesalers internalize around 31% of the executed orders routed to the option exchange: 73% of orders routed to price improvement auctions and 17% of orders routed to the limit order book.[447]

[440] *See supra* section V.C.2.e.i.

[441] *See supra* section V.B.3.i.(d).

[442] In contrast to the market for NMS Stocks, NMS options are typically internalized after being sent to an exchange. Broker-dealers wishing to internalize orders are able to use the rules of exchanges to internalize some orders completely, through routing to affiliated market makers (partial internalization), or through price improvement auctions (partial internalization), which offer competition advantages over competing market participants.

[443] Price improvement auctions can be used by institutional broker-dealers to seek price improvement opportunities for their institutional clients' orders as well. Some exchanges have developed auctions for large orders with an ''all-or-none'' feature.

[444] ''Specialist model'' is a general term. The term to describe a ''specialist'' varies by exchange. Some exchanges may formally call this ''Designated Market Marker,'' or other similar terms.

[445] A single-leg order involves buying or selling a single options series. For example, buying a call option on XYZ stock with a strike price of $5.00.

[446] A multi-leg order involves buying or selling multiple options series simultaneously. For example, buying a call option on XYZ stock with a strike price of $5.00, and, in the same order, selling a call option on XYZ stock with a strike price of $10.00.

[447] The internalization rate measure throughout this paragraph is based on the contract volume. A given customer's order can be partially internalized. For example, suppose a wholesaler routes an order with 10 contracts to a price improvement auction and is allocated 7 contracts after the auction concludes, then the wholesaler is deemed as internalizing 70% of the order.

TABLE 11—EXECUTION PROTOCOL AND ALLOCATION OF LIMIT ORDER

[Book by options exchange]

Group	Exchange	Specialist	Auction	Pro-rata
BOX	BOX	Y	Y	Y
CBOE	CBOE C2	N	N	Y
	CBOE	Y	Y	Y
	CBOE BZX	N	N	N
	CBOE EDGX	N	Y	Y
MIAX	MIAX	Y	Y	Y
	MIAX Emerald	Y	N	Y
	MIAX PEARL	N	N	N
Nasdaq	Nasdaq BX	Y	Y	Y
	Nasdaq GEMX	Y	Y	Y
	Nasdaq ISE	Y	Y	Y
	Nasdaq MRX	Y	Y	Y
	Nasdaq NOM	N	N	N
	Nasdaq PHLX	Y	N	Y
NYSE	NYSE American	Y	Y	Y
	NYSE Arca	N	Y	N

To internalize a given customer's marketable order on the exchange limit order book, the wholesaler needs to provide a quote that is at the NBBO.[448] This form of internalization may not yield complete internalization of the order because there could be quotes from other market makers, some of whom are quoting at the same price and may have priority over the wholesaler (*e.g.,* the other market makers will have priority if the wholesaler joins the NBBO set by other market makers in a price-time priority exchange or they quote with a larger trading interest than the wholesaler in a pro-rata exchange). Being a specialist enables the wholesaler to further internalize more orders more than a pro-rata allocation model would allow.[449] Some exchanges appoint a firm to be the specialist for each equity option class. According to Table 11, 10 out of 16 option exchanges adopt the specialist model for quoting and executing single-leg orders on the limit order book. The specialist has greater quoting requirements than other exchange members or market makers. To compensate specialists for continuous provision of two-sided quotes to match buyers and sellers, the exchanges reward specialists by allowing the specialist to receive a greater allocation (40%+) of incoming orders if they are at the NBBO and/or provide them with a guarantee of 100% allocation of orders of 5 contracts or less (the ''five-lot rule''). Some exchanges allow executing brokers to route customers' orders in the form of directed orders to the affiliated market makers with heightened allocation (40%+) and small order guarantees with 100% of the orders of one contract. According to the table, all exchanges that adopted the specialist model are pro-rata exchanges, meaning that trading interests are allocated based on the size of the quote in proportion to the total depth on the NBBO. Therefore, when wholesalers are also specialists, wholesalers may receive a disproportionate allocation of the customer order, even though, as the specialist, the wholesaler might not be providing the most depth at the best prices. A recent academic study[450] shows that the execution quality is worse for specialists who pay PFOF than the specialists who do not: the realized spreads for the 400 to 500 share orders, which can be fully internalized by the specialists, are 3 basis points higher when the specialists pay PFOF compared to when the specialists do not pay PFOF, suggesting that the process is not fully efficient.

Another way to internalize customer orders without being a specialist is through price improvement auctions. Some option exchanges[451] provide two-sided price improvement mechanisms for both single-leg and multi-leg orders originated from customers. To start a price improvement auction (PIA), the affiliated market maker (''MM'') of an executing broker usually submits a two-sided order representing a customer's order and its own ''contra'' order, which is on the opposite side of the customer's order, to the exchange. The PIA usually lasts for 0.1 seconds, during which time, the exchange would expose and broadcast the customer order to other exchange members (competing market participants) for price improvement opportunity over the current NBBO price, and the competing market participants then submit responding orders to the auction to the exchange. After the PIA concludes, the allocation of the execution will begin with the best price received from the contra order and responding orders and end with the price where the remaining volume of the customer's order will be filled. In addition to the previously mentioned benefits to specialists, option exchanges have developed certain arrangements or schedules to give wholesalers advantages to conduct operations on the exchange by further facilitating the ability of wholesalers to internalize the customer orders they receive through the auctions. Such preferential advantages include, but are not limited to the following: (1) asymmetric fee schedule in which initiating MMs pay a much smaller transaction fee than competing market participants, (2) price auto-match in which the exchanges allow the PIA initiating exchange members to match the best price among the responding orders from the competing market participants, and (3) guaranteed allocation in which the initiating exchange members are allowed to execute at least 40% of the customer's order exposed in a PIA. Academic studies suggest that the preferential treatment of wholesalers provided by the exchanges leads to less

[448] Internalizing a customer's non-marketable limit order with a price between the prevailing NBBO spread would require the wholesaler to route the customer's order to the limit order book first and then submit an immediate-or-cancel order to fill the limit order. The internalization rate may not be 100% since other market makers can react to the limit order after the exchange books the book in the limit order book.

[449] All the exchanges that appoint specialists are pro-rata exchanges. In a pro-rata exchange, allocations are proportional to the trading interests at the best prices for each options series.

[450] *See* Ernst & Spatt, *supra* note 77.

[451] According to Table 11, 10 out of 16 option exchanges provide price improvement auction mechanisms to wholesalers and other executing brokers.

than fully competitive liquidity provision in auctions.[452]

iii. Payment for Order Flow in NMS Securities [453]

Rule 10b–10(d)(8) defines payment for order flow as any monetary payment, service, property, or other benefit that results in remuneration, compensation, or consideration to a broker or dealer from any broker or dealer, national securities exchange, registered securities association, or exchange member in return for the routing of customer orders by such broker or dealer to any broker or dealer, national securities exchange, registered securities association, or exchange member for execution.[454] PFOF includes any payments from a wholesaler to a retail broker-dealer in return for order flow. It also includes any exchange rebates paid to a broker-dealer in return for sending orders to the exchange. PFOF has the potential to adversely affect routing decisions to the extent it is not directly passed on to the customer.[455] However, it is also possible that there is a tradeoff between PFOF and execution quality that does not adversely affect order routing decisions.

Studies have found that PFOF may adversely affect order execution quality. For example, one study looked at the effect of exchange rebates in the routing of non-marketable limit orders in the equities markets and found evidence that broker-dealers tend to route customer orders to the venues that pay high rebates, but offer lower execution quality in the form of lower fill rates and longer times to order execution.[456] Similarly, in the options market, a study [457] finds that some brokers tend to route non-marketable limit orders for listed options to exchanges that offer large rebates. The study's analysis indicates that non-marketable limit orders routed to exchanges that pay higher liquidity rebates receive worse execution quality than non-marketable limit orders routed to exchanges that do not offer liquidity rebates. One study finds no relation, potentially as a result of low statistical power.[458] Evidence on the potential adverse effects appears stronger in the options market than in the equity market.[459] Section V.B.3.(a).iii.a presents Commissions analysis.

a. PFOF Amounts and Rates

Table 12 summarizes information on PFOF payments in NMS Stocks and Options for Q1 2022 received by 52 retail broker-dealers and aggregated based on the order type and type of trading venue.[460] Wholesalers paid more than $750 million dollars, about 94% of the total PFOF payments of approximately $850 million. Note also that PFOF for options represent the largest share of these payments (70%), equal to more than $550 million. In addition, PFOF for non-S&P 500 orders was about 24% of total wholesale PFOF disbursements, substantially larger than the 6% share of PFOF paid for S&P 500 orders. Finally, note that wholesaler PFOF for marketable orders (market and marketable limit orders) was equal to 51% of all wholesaler PFOF, while PFOF for non-marketable limit orders equaled about 38% of wholesaler PFOF disbursements.

TABLE 12—AGGREGATED 606 PAYMENTS FOR Q1 2022 TO RETAIL BROKER-DEALERS BY VENUE TYPE, ASSET CLASS, AND ORDER TYPE

	Market orders	Marketable limit orders	Non-marketable limit orders	Other orders	Total
Wholesalers:					
S&P 500	$20,169,292	$6,861,406	$15,675,087	$4,963,329	$47,669,114
Non-S&P 500	74,313,900	45,711,676	53,253,329	14,502,924	187,781,828
Options	69,221,438	185,987,581	235,507,979	70,361,954	561,078,951
Total	163,704,629	238,560,663	304,436,395	89,828,206	796,529,894
National Securities Exchanges:					
S&P 500	−2,883	−1,600,326	4,151,796	−1,058,038	1,490,549
Non-S&P 500	−14,624	−13,794,526	24,538,646	−2,224,848	8,504,649
Options	−54,106	4,838,611	19,019,112	13,334,942	37,138,559
Total	−71,613	−10,556,240	47,709,554	10,052,056	47,133,756
Other Trading Venues:					

[452] *See supra* note 450 and *see also* Terrance Hendershott, Saad Khan, & Ryan Riordan, Option Auctions, (Working paper, May 15, 2022) available at *https://papers.ssrn.com/sol3/Papers.cfm?abstract_id=4110516* (retrieved from Elsevier database).

[453] *See infra* section V.B.3.(c) for a discussion of PFOF in the market for crypto asset securities.

[454] *See supra* note 43 for discussion of payment for order flow definition under Rule 10b–10(d)(8). In certain circumstances, broker-dealers are required to disclose their PFOF arrangements. For example. Rule 10b–10 requires extensive disclosures in confirmations, including specific disclosures about PFOF. Additionally, Rule 606 reports require the disclosure of PFOF arrangements and the average PFOF rates broker-dealers receive on non-directed orders in NMS stocks and options for routing orders to a trading venue.

[455] FINRA has stated that obtaining price improvement is a heightened consideration when a broker-dealer receives payment for order flow and it is especially important to determine that customers are receiving the best price and execution quality opportunities notwithstanding the payment for order flow. *See* FINRA Regulatory Notice 21–23, *supra* note 294.

[456] *See, e.g.,* Robert H. Battalio, Shane A. Corwin & Robert H. Jennings, *Can Brokers Have It All? On the Relation Between Make-Take Fees and Limit Order Execution Quality,* 71 J. Fin. 2193 (2016), *available at https://onlinelibrary.wiley.com/doi/10.1111/jofi.12422/full* (''We identify retail brokers that seemingly route orders to maximize order flow payments by selling market orders and sending limit order to venues paying large liquidity rebates. . . . [W]e document a negative relation between limit order execution quality and rebate/fee level. This finding suggests that order routing designed to maximize liquidity rebates does not maximize limit order execution quality. . . .'').

[457] *See, e.g.,* Robert Battalio, Todd Griffith & Robert Van Ness, *Do (Should) Brokers Route Limit Orders to Options Exchanges That Purchase Order Flow?,* 56 J. Fin. Quan. Anal. 183 (2020).

[458] *See* Christopher Schwarz, et. al., *The 'Actual Retail Price' of Equity Trades* (Working paper, September 14, 2022) (''Schwarz''), *available at https://ssrn.com/abstract=4189239* (retrieved from Elsevier database) do not find a relationship between the amount of PFOF a retail broker receives and the amount of price improvement their customers' orders receive. However, *see infra* note 466 for a discussion comparing the results in Table 16.

[459] *See* Ernst & Spatt, *supra* note 77, at 1 (''We exploit variation in the Designated Market Maker (DMM) assignments at option exchanges to show that retail traders receive less price improvement, and worse prices, from those DMMs who pay PFOF to brokers.''). The paper also finds PFOF amounts from wholesalers in the NMS stock market are small (compared to the options market) and that individual investor orders executed at wholesalers receive meaning price improvement.

[460] The PFOF data was aggregated from Rule 606 reports from the 52 retail brokers. The order types are based on those included in Rule 606 reports. Other Trading Venues includes any other trading center to which a retail broker routes an order other than a wholesaler or an exchange, including ATSs. *See supra* note 404 for more details on what is included in Rule 606 reports.

TABLE 12—AGGREGATED 606 PAYMENTS FOR Q1 2022 TO RETAIL BROKER-DEALERS BY VENUE TYPE, ASSET CLASS, AND ORDER TYPE—Continued

	Market orders	Marketable limit orders	Non-marketable limit orders	Other orders	Total
S&P 500	−14,335	−87,299	514,713	16,715	429,794
Non-S&P 500	41,513	−1,397,974	1,736,516	−5,007	375,049
Options	185,367	−305,579	4,740,343	649,611	5,269,742
Total	212,545	−1,790,852	6,991,572	661,319	6,074,585
Grand Total	163,845,562	226,213,571	359,137,521	100,541,581	849,738,235

This table shows the aggregate payments made from different types of venues in Q1 2022 to 52 broker-dealer based on their Rule 606 reports. The table breaks out payments from exchanges, wholesalers, and other trading venues for market orders, marketable limit orders, non-marketable limit orders, and other orders in S&P 500 stocks, Non-S&P 500 stocks and Options. Other Trading Venues includes any other trading center to which a retail broker routes an order other than a wholesaler or an exchange, including ATSs.

Table 13, Panel A summarizes the total PFOF dollars paid to the 52 broker-dealers in Q1 2022 based on their total assets. The majority of payments, more than 750 million dollars, went to broker-dealers with more than 1 billion dollars in assets. As shown earlier, most of this payment came from the options market.

Table 13, Panel B summarizes the distribution of total PFOF dollars paid to the 52 broker-dealers as a percentage of their total revenue in Q1 2022. On average, the payments reported on Rule 606 reports accounted for 21% of the broker-dealer's total revenue. However, there was considerable variation across broker-dealers. Rule 606 reported payments accounted for less than 5.9% of total revenue for over 50% of the broker-dealers in the sample. However, for the top 10% of broker-dealers by revenue, Rule 606 reported payments accounted for more than 74% their total revenue in Q1 2022.

TABLE 13—RULE 606 REPORT BROKER-DEALER SAMPLE AND PAYMENTS BY ASSET SIZE AND DISTRIBUTION OF PAYMENTS AS PERCENT OF BROKER-DEALER TOTAL REVENUE

Variable	Size of Broker-Dealer (Total Assets)						
	>50bn	1bn–50bn	500mn–1bn	100mn–500mn	10mn–100mn	1mn–10mn	<1mn
Panel A: Broker-Dealers and Payments in Rule 606 Sample by Asset Size							
Number of Firms in 606 Sample	10	20	2	13	7	0	0
Number of Firms with Positive 606 Payments	5	11	1	5	4	0	0
606 Total Dollar Payments	$323,768,783	$437,613,668	$4,122	$72,400,510	$15,951,151	$0	$0
606 Total Equity Payments	$112,360,651	$108,639,249	$4,122	$23,525,311	$1,721,651	$0	$0
606 Total Options Payments	$211,408,132	$328,974,419	$0	$48,875,200	$14,229,501	$0	$0
Panel B: Distribution of Firm Payments Reported in Rule 606 as Percentage of Broker-Dealers' Total Revenue							
	Mean	Std Dev	10th Pctl	25th Pctl	50th Pctl	75th Pctl	90th Pctl
606 Total Payments % of Total Revenue	20.94%	32.31%	0.02%	0.08%	5.82%	28.66%	74.29%
606 Equity Payments % of Total Revenue	6.67%	11.57%	0.00%	0.02%	1.24%	7.70%	16.23%
606 Options Payments % of Total Revenue	14.28%	27.52%	0.00%	0.02%	2.52%	17.50%	49.96%

This table summarizes total payments from the Q1 2022 Rule 606 Reports for 52 broker-dealers based on their total assets and total revenue. Panel A shows how many broker-dealers fall within each asset size category and the total payments reported on their Rule 606 Reports that they received in the equity and options markets from venues to which they routed orders in Q1 2022. Panel B shows the distribution of the equity and options payments as a percentage of a firm's total revenue for Q1 2022. Total Assets are estimated by Total Assets (allowable and non-allowable) from Part II of the FOCUS filings (Form X–17A–5 Part II) from Q4 2021 and correspond to balance sheet total assets for the broker-dealer. Total Revenue is reported by each broker-dealer during Q1 2022 in their FINRA Supplemental Statement of Income Form.

From the Rule 606 reports of 15 major retail brokers for listed options, we can infer that as of Q4 of 2020, 11 of them had PFOF arrangements with wholesalers, one firm routed the orders directly to the exchanges, one firm routed the orders to its parent firm, and the remaining two firms routed the orders to wholesalers but did not have PFOF arrangements. According to the Rule 606 reports, wholesalers paid $560 million in PFOF to the 11 retail brokers for non-directed orders in listed options in Q1 2022.

Table 14 presents the average payment rates reported in Rule 606 reports for PFOF broker-dealers in listed options in Q1 2022. The statistics are further broken down by trading venue and order type, with rates given in cents per 100 shares.[461] The average PFOF rates are negative for the marketable limit orders and other orders routed to exchanges, but the rate is positive for non-marketable limit orders suggesting the brokers route most of the non-marketable limit orders to the maker-taker exchanges to collect rebates. According to the table, the average PFOF rates paid by clearing firms are smaller but not much smaller than wholesalers across all order types suggesting that clearing firms pass majority of the monetary compensation from wholesalers to the retail brokers with which they have PFOF arrangements.

[461] The PFOF rate is missing for the market orders routed directly to the options exchanges because, according to the rule 606 reports, these brokers neither paid fees nor received rebates from exchanges for the market orders in Q1 2022.

TABLE 14—AVERAGE RULE 606 PAYMENT RATES FOR Q1 2022 TO PFOF BROKER-DEALERS BY VENUE TYPE FOR LISTED OPTIONS

Venue type	Market orders	Marketable limit orders	Non-marketable limit orders	Other orders
Exchange	N/A	−43.1	42.6	−59.6
Clearing firm	38.4	33	35.2	39.8
Wholesaler	39.9	52.5	51.8	40.4

This table shows the average payment rates (in cent per 100 shares) made from different types of venues in Q1 2022 to 23 broker-dealers that received PFOF from wholesalers based on their Rule 606 reports. The table breaks out average rates from wholesalers and clearing firms for market orders, marketable limit orders, non-marketable limit orders, and other orders in listed options. Twenty-three retail brokers are identified as PFOF retail brokers that receive payments for routing orders to wholesalers or clearing firms. This analysis uses the retail broker-dealer's Rule 606 report if it publishes one or the Rule 606 report of its clearing broker if the retail broker did not produce a Rule 606 report itself. The reports are aggregated using a weighting factor equal to the PFOF amount.

b. Empirical Relation Between PFOF and Price Improvement

Although wholesalers provide individual investor orders with price improvement relative to exchanges, the magnitude of this price improvement is not uniform across retail brokers.[462] Analysis in this section shows that two factors driving variation in the price improvement wholesalers provide are the amount of PFOF the wholesaler pays to the retail brokers and the average adverse selection risk posed by the customers of the retail broker.

Commission analysis presented in Table 15 compares average execution quality for PFOF and non-PFOF brokers for executed marketable orders of individual investors under $200,000 in NMS common stocks and ETF orders that are routed to wholesalers.[463] Results are divided between orders that were executed by the wholesaler on a principal basis (*i.e.,* internalized) and those executed via other methods (the majority of which are in a riskless principal capacity).

TABLE 15—COMPARISON OF PFOF AND NON-PFOF BROKER EXECUTION QUALITY IN NMS COMMON STOCKS AND ETFS

	Principal transactions		Other transactions	
	Non-PFOF	PFOF	Non-PFOF	PFOF
Average Price	$41.79	$31.35	$23.90	$12.47
Wholesaler (WH) Share Volume (billion shares)	14.32	55.96	3.40	13.43
WH Dollar Volume (billion $)	$598.44	$1,754.36	$81.23	$167.41
Pct of Executed Dollar Volume	23.00%	67.44%	3.12%	6.44%
WH Effective Spread (bps)	1.50	1.86	4.57	5.75
WH Realized Spread (bps)	0.88	0.85	0.83	0.66
WH Realized Spread Adj PFOF (bps)	0.88	0.43	0.83	−0.55
WH Price Impact (bps)	0.62	1.01	3.74	5.07
WH E/Q Ratio	0.30	0.37	0.78	0.67
WH Pct Executed with Price Improvement	90.59%	94.32%	46.89%	62.87%
WH Conditional Amount Price Improvement (bps)	2.75	2.34	2.31	4.30

The table summarizes execution quality statistics from the CAT retail analysis in Common Stocks and ETFs based on whether the retail broker MPID receives PFOF from wholesalers (PFOF) or does not (Non-PFOF) and whether the wholesaler executed the individual investor order in a principal capacity or in another capacity (*i.e.,* in an agency or riskless principal capacity). A broker-dealer MPID was determined to be a PFOF broker if the broker-dealer reported receiving PFOF on its Q1 2022 606 report, or if the report of its clearing broker reported receiving PFOF in the event that the broker did not publish a Rule 606 report. Broker-dealers or clearing brokers that handled orders on a not held basis and did not disclose PFOF information in their Rule 606 report were classified as PFOF brokers if disclosures on their websites indicated they received PFOF. Twenty-two MPIDs belonging to 19 retail brokers were classified as receiving PFOF. The majority of the other transactions are executed by the wholesaler in a riskless principal capacity. *See supra* Table 6 for additional details on the sample and metrics used in the analysis. WH Realized Spread Adj PFOF is the estimated realized spread in bps earned by the wholesaler after adjusting the realized spread for the estimated PFOF they pay to retail brokers.[a] Share-weighted percentage metrics are averaged together at the individual PFOF-execution capacity-stock-week-order-size category level for the wholesaler sample using the methodology in Table 6. Weighted averages for the metrics are then calculated for each PFOF-execution capacity category by averaging across execution capacity-stock-week-order size category levels based on their total dollar transaction volume during the sample period in the wholesaler CAT sample. This analysis uses data from prior to the implementation of the MDI Rules and specific numbers may be different following the implementation of the MDI Rules. *See supra* note 415

[a] *See infra* note 467 for further details on estimated PFOF retail brokers receive. Realized spreads for marketable orders routed to wholesalers are adjusted for PFOF by subtracting the estimated dollar per share PFOF rate the retail broker receives from the average per share dollar realized spread in the execution capacity-stock-week-order type-order size category and then dividing by the average transaction price to calculate the percentage metric as discussed in further detail in *supra* Table 6.

The results in Table 15 show that wholesaler internalized orders (Principal Transactions) originating from PFOF brokers are associated with (1) higher effective spreads, (2) higher E/Q ratios, and (3) slightly smaller price improvement on orders that achieved at least some price improvement (WH Conditional Amount Price

[462] Several recent working papers found that price improvement varies across retail brokers; *see* Schwarz, *supra* note 458, and Bradford Lynch, *Price Improvement and Payment for Order Flow: Evidence from A Randomized Controlled Trial* (Working paper, June 27, 2022), *available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4189658* (retrieved from Elsevier database) (''Lynch''). These studies only included trades that were initiated by the authors, and do not include other trades that were handled by the brokers in their samples. In contrast, the Commission's analysis is based on the data reflecting all orders routed by 58 broker-dealer MPIDs.

[463] Some brokers that do not accept PFOF for orders in equities accept PFOF for orders in options. Certain items in Table 15 may also be affected by MDI Rules once they are implemented. *See supra* note 415.

Improvement), relative to wholesaler internalized orders originating from non-PFOF brokers. However, the results also show that orders internalized from non-PFOF brokers also have lower adverse selection risk and similar realized spreads (before PFOF is paid), indicating the lower adverse selection risk could explain differences in the observed execution quality.

Because the results in Table 15 are averages across broker-dealers, they cannot disentangle the effects of PFOF on execution quality from differences in the adverse selection risk of different broker-dealers.[464] In order to control for these differences, the Commission analyzed the effects of PFOF and differences broker-dealer adverse selection risk on execution quality in a regression framework that controls for other factors that could affect the price improvement provided by wholesalers.

Table 16 displays regression results from Commission CAT retail analysis of NMS Common stock and ETF orders,[465] and shows that the previous results indicating that brokers that receive PFOF receive inferior execution quality are robust to the inclusion of controls for differences in the type of order flow coming from different broker-dealers.[466] The regression tests whether there is a relationship between execution quality and the amount of PFOF a broker-dealer receives and includes several individual stock- and market-level controls[467] as well as the retail broker's average price impact and size (as measured by percent of executed individual investor dollar volume). Four different measures of execution quality are used for the dependent variable, including E/Q ratio, effective spread, realized spread, and price improvement.[468]

TABLE 16—REGRESSION ANALYSIS SHOWING RELATIONSHIP BETWEEN EXECUTION QUALITY AND PFOF IN NMS COMMON STOCKS AND ETFS

Variables	(1) E/Q ratio	(2) Effective spread (bps)	(3) Realized spread (bps)	(4) Amount price improvement (bps
PFOF Rate	0.0132 *** [2.82]	0.217 *** [6.31]	0.211 *** [7.13]	−0.170 *** [−5.52].
Stock Share Volume	0.0379 [0.51]	−0.0462 [−0.14]	−0.886 * [−1.65]	−0.533 ** [−2.53].
Stock VWAP	−0.000028 [−1.06]	0.000233 [0.61]	−0.000450 [−0.78]	0.000014 [0.04].
Stock Return	−0.000273 [−0.21]	−0.0200 * [−1.93]	−0.0120 [−0.36]	0.00840 [0.84].
VIX	0.00968 *** [7.29]	0.0122 * [1.79]	0.0607 *** [2.85]	−0.000256 [−0.05].
Market Return	−0.00710 ** [−2.02]	0.00787 [0.36]	0.00686 [0.15]	−0.0150 [−0.96].
Market Dollar Volume	0.0306 *** [9.70]	0.0641 *** [3.44]	0.164 *** [3.07]	−0.0390 *** [−2.69].
Stock Avg Effective spread	0.00700 *** [3.34]	0.122 *** [6.07]	−0.0455 * [−1.94]	0.00746 [0.52].
Stock Avg Realized spread	−0.00169 * [−1.87]	−0.00902 [−1.45]	0.0730 *** [2.98]	−0.00552 [−1.48].
Stock Quote Volatility	0.457 ** [2.09]	2.232 [1.05]	−1.799 [−0.65]	4.458 ** [2.03].
Broker-Dealer Average Price Impact	0.145 *** [14.74]	0.414 *** [9.83]	0.316 *** [8.50]	−0.417 *** [−10.21].
Broker-Dealer Pct Volume	−2.45e–05 [−0.07]	−0.00207 * [−1.76]	−0.00546 *** [−3.77]	0.000124 [0.12].
Average Trade Qspread	−0.00720 *** [−10.12]	0.517 *** [19.78]	0.378 *** [10.84]	0.392 *** [21.14].
Wholesaler Fixed Effects	Yes	Yes	Yes	Yes.
Order Size Category Fixed Effects	Yes	Yes	Yes	Yes.
Stock Fixed Effects	Yes	Yes	Yes	Yes.
Observations	13,365,122	13,365,122	13,365,122	12,453,440.

[464] They also cannot disentangle the effects of differences in the stocks traded by PFOF and non-PFOF brokers.

[465] Certain items in this Table 16 may also be affected by the amendments in the MDI Rules once they are implemented. *See supra* note 415.

[466] Schwarz et. al., *supra* note 458, did not find a relationship between the amount of PFOF a retail broker receives and the amount of price improvement its customers' orders receive. However, they noted that the variation in the magnitude of price improvement they saw across retail brokers was significantly greater than the amount of PFOF the retail broker received, which could indicate their sample was not large enough to observe a statistically significant effect. Similarly, when we examine variation in effective spreads across retail brokers based on their average price impact (*i.e.,* their average adverse selection risk), we observe that the differences between the effective spreads of PFOF and non-PFOF brokers as shown in Table 15, *infra,* are significantly smaller than the differences observed across retail brokers based on variation in their average price impacts. Lynch, *supra* note 462, compares the execution quality of similar orders routed to two different retail brokers that receive different amounts of PFOF from wholesalers. The study finds that the retail broker that received a greater amount of PFOF from wholesalers (*i.e.,* had a higher per share PFOF rate reported in their Rule 606 reports) provided less price improvement compared to a similar order routed to a retail broker that received less PFOF. Importantly, both studies only included trades that were initiated by the authors and do not include other trades that were handled by the brokers in their samples, preventing them from examining the attributes of a typical retail order handled by each broker. As such, these studies do not observe the variation in price improvements that reflect differences in the adverse selection risk associated with the order flow of different brokers, and hence, likely conflate the impacts of PFOF with those of adverse selection risk. That is, these studies cannot control for the possibility that a wholesaler would offer smaller price improvement to order flows with higher adverse selection risk. In contrast, the Commission relies on CAT data to examine the adverse selection risk at the broker level, which is a determinant of the amounts of price improvements that a given wholesaler would offer to different brokers. The regression framework in *infra* Table 16 controls for the adverse selection risk of the retail broker and finds that is has a negative relationship with the magnitude of price improvement their customers' orders receive. We also find a negative relationship between the amount of PFOF a broker-dealer receives and the magnitude of the price improvement their customers' orders receive after controlling for the retail broker adverse selection risk.

[467] Broker-dealer cents per 100 shares PFOF rates (dollar PFOF rates) are determined from their Q1 2022 Rule 606 reports (*see supra* Table 2) or the Rule 606 reports of its clearing broker reported receiving PFOF in the event that the broker did not publish a Rule 606 report. A PFOF rate of 20 cents per 100 shares was used for the introducing broker-dealers and clearing broker that reported handled orders on a not held basis and did not disclose PFOF information in their Rule 606 report but disclosed on their website that they received PFOF for their order flow. 20 cents per 100 shares was the PFOF rate that the clearing broker that handles orders on a not held basis disclosed on their website that they received. Twenty-two MPIDs belonging to 19 retail brokers were classified as receiving PFOF. Dollar PFOF rates for each retail broker were merged with the corresponding stock (S&P 500 and non-S&P 500) and order type in the CAT sample. For the regressions in Table 16, percentage PFOF rates are estimated in basis points by dividing the PFOF cents per 100 share values from Rule 606 reports (after converting them to dollar per share values) by the stock-week VWAP for the security in the CAT sample. Stock-level controls include average share volume, VWAP, return, average effective spread, average realized spread, and average quote volatility during a week. Market-level controls include market volatility, market return, and the market's average daily trading volume during week.

[468] The regression also includes variables to control for differences in execution quality across different wholesalers and across different order size categories. The analysis examines trades in Q1 2022 that wholesalers execute in a principal capacity from market and marketable limit orders from individual investors that are under $200,000 in value and are in NMS Common Stocks and ETFs. *See supra* Table 6 for further discussion on the sample. The unit of observation for the regression is the average execution quality provided to trades that are aggregated together based on having the same stock, week, order type, order size category, wholesaler, and retail broker MPID. The coefficients are estimated by weighting each observation by the total dollar volume of trades executed in that observation.

TABLE 16—REGRESSION ANALYSIS SHOWING RELATIONSHIP BETWEEN EXECUTION QUALITY AND PFOF IN NMS COMMON STOCKS AND ETFS—Continued

Variables	(1) E/Q ratio	(2) Effective spread (bps)	(3) Realized spread (bps)	(4) Amount price improvement (bps
Adjusted R-squared	0.279	0.574	0.060	0.594.

This table presents the results of a regression analysis examining the effect of retail brokers receiving PFOF from wholesalers on levels of price improvement and the execution quality of their customers' orders when the wholesaler internalizes the order on a principal basis.

The analysis examines trades in Q1 2022 that wholesalers execute in a principal capacity from market and marketable limit orders from individual investors that are under $200,000 in value and are in NMS Common stocks and ETFs. *See supra* Table 6 for further discussion on the CAT retail sample. The unit of observation for the regression is the average execution quality provided to trades that are aggregated together based on having the same stock, week, order type, order size category, wholesaler, and retail broker MPID. Weighted regression are performed based on the total dollar value executed by the wholesaler in that observation (*i.e.,* total shares executed for all orders that fit within that stock-week-retail broker-wholesaler-order type-order size category). This means that the regression coefficients capture the effect on execution quality on a per-dollar basis.

Dependent variables include: the average E/Q ratio of the shares traded; the average percentage effective spread of the shares traded measured in basis points; the average percentage realized spread of the shares traded measured in basis points; and the average percentage value of the amount of price improvement measured in basis points, conditional on the order being price improved. These variables are from the CAT retail analysis and described in *supra* Table 6.

Explanatory variables include: PFOF Rate is the retail brokers' PFOF rates in bps (the per share rates were determined from retail broker Rule 606 reports and divided by the VWAP of the executed shares in the sample to determine the PFOF rate on a percentage basis, see supra note 467); Broker-Dealer Pct Volume is the retail broker size (in terms of percentage total executed dollar trading volume in the sample); Stock Share Volume is the stock's total traded share volume during the week (from TAQ in billions of shares); Stock VWAP is the VWAP of stock trades during the week (from TAQ); Stock Return is the stock's return during the week (from CRSP 1925 US Stock Database, Ctr. Rsch. Sec. Prices, U. Chi. Booth Sch. Bus. (2022)); VIX is the average value of the VIX index during the week (from CBOE VIX data); Market Return is the average CRSP value weighted market return during the week, Market Dollar Volume is the total market dollar trading volume during the week (from CRSP 1925 US Stock Database, Ctr. Rsch. Sec. Prices, U. Chi. Booth Sch. Bus. (2022)); Stock Avg Effective spread is the stock's share weighted average percent effective half spread during the week measured in basis points (from TAQ); Stock Avg Realized spread is the stock's share weighted average percent realized half spread during the week measured in basis points (from TAQ); Stock Quote Volatility is the stock's average 1 second quote midpoint volatility measured in basis points (from TAQ); Broker-Dealer Average Price Impact is calculated for each Retail Broker MPID's by share weighting their average percentage price impact half spread within an individual NMS common stock or ETF and then averaging across stocks using the weighting of the dollar volume the retail broker MPID executed in each security (see supra Table 6 for additional details on how the metric is constructed); Average Trade Qspread is the average percentage quoted half spread at the time of order submission for orders in that stock-week-retail broker-wholesaler-order type-order size category measured in basis points; wholesaler fixed effects (*i.e.,* indicator variables for each wholesaler that control for time-invariant execution quality differences related to each wholesaler); order-size category fixed effects (*i.e.,* indicator variables for each order-size category that control for time-invariant execution quality differences related to order-size category); and individual stock fixed effects (*i.e.,* indicator variables for each stock that control for time-invariant execution quality differences related to individual stocks). The order size categories include less than 100 shares, 100–499 shares, 500–1,999 shares, 2,000–4,999, 5,000–9,999 shares, and 10,000+ shares. Brackets include t-statistics for the coefficients based on robust standard errors that are clustered at the stock level. ***, **, and * indicate the t-statistics for the coefficients are statistically significant at the 0.01, 0.05, and 0.1 levels, respectively.

This analysis uses data from prior to the implementation of the MDI Rules and specific numbers may be different following the implementation of the MDI Rules. *See supra* note 415

Regression results in Table 16 support the conclusion that wholesalers provide worse execution quality to brokers that receive more PFOF. The coefficients on the PFOF Rate variable indicates that, all else equal, for the orders wholesalers internalize, execution quality declines as the amount of PFOF paid to the retail broker increases. Orders from retail brokers that receive a greater amount of PFOF have higher E/Q ratios and effective spreads and receive less price improvement. The regression results (as measured by the coefficient on the PFOF Rate variable) indicate that, all else equal, wholesalers earn higher realized spreads on orders for which they pay more PFOF. Note that PFOF is not taken out of the realized spread measure, so the realized spread serves as a proxy for wholesaler's economic profits before any fees are taken out.

The regression results in Table 16 also show that the retail broker's adverse selection risk (as measured by the coefficient on the Broker-Dealer Average Price Impact variable) has a statistically significant effect on the execution quality wholesalers give on trades they internalize. The positive coefficient indicates that wholesalers provide worse execution quality to broker-dealers whose customers' orders pose a greater adverse selection risk.

(b) Fixed Income Securities

i. Corporate Debt Securities

The market for corporate debt securities (''corporate bonds'') represents a significant part of the fixed income market. In July 2022, the average daily par value dollar volume of corporate bond trading was $34.2 billion.[469] Estimates put the annualized growth rate of the corporate bond market at 5.2 percent between 2008 and 2019, a growth rate second only to that of U.S. Treasury securities within the fixed income space.[470]

[469] Average daily par value dollar volume is reported by FINRA each month. *See* FINRA Data, TRACE Monthly Volume Files, *available at https://www.finra.org/finra-data/browse-catalog/trace-volume-reports/trace-monthly-volume-files.* The corporate bond market has over 58,000 outstanding issues. Maureen O'Hara and Xing (Alex) Zhou, *Corporate Bond Trading: Finding the Customers' Yachts,* 48 J. Portfolio Mgt Mkt Microstructure 96, 98 (June 2022), *available at https://jpm.pm-research.com/content/early/2022/06/11/jpm.2022.1.373.*

[470] Vega Economics, *Trends in the U.S. Corporate Bond Market Since the Financial Crisis* (Oct. 12, 2020), *available at https://vegaeconomics.com/trends-in-the-us-corporate-bond-market-since-the-financial-crisis.*

Fixed income securities trading venues (*e.g.,* ATSs, non-ATS trading venues (RFQ platforms), voice methods) compete on fees and trading protocols that help expose retail customer orders to attract order flows from retail broker-dealers. Corporate bond ATSs are primarily used by broker-dealers to trade on behalf of retail customers or to rebalance excess inventories.[471] In September 2021, corporate bond trading on ATSs accounted for 7.7 percent of total TRACE-reported corporate bond trading dollar volume (calculated using bond par value).[472] Currently, the Commission understands that there are 12 ATSs with a Form ATS on file trading corporate bonds.[473] Trading protocols offered on corporate bond ATSs include, among other things, limit order books (LOBs), displayed and non-displayed trading interests, and auctions (*e.g.,* RFQ, bids-wanted-in-competition (BWIC), and offers-wanted-in-competition (OWIC)).

BILLING CODE 8011–01–P

Table 17—Estimated Transaction Costs and Trade Price Dispersion Across Fixed Income Categories

[471] *See, e.g.,* Matthew Kozora, Bruce Mizrach, Matthew Peppe, Or Shachar & Jonathan Sokobin, *Alternative Trading Systems in the Corporate Bond Market,* Fed. Res. B.N.Y. Staff Report No. 938 (Aug. 2020), available at *https://www.newyorkfed.org/medialibrary/sr938.pdf. See,* Louis Craig, Abby Kim & Seung Won Woo, *Pre-trade Information in the Corporate Bond Market,* SEC Division of Economic and Risk Analysis White Paper (Oct. 2020), *available at https://www.sec.gov/files/corporate_bond_white_paper.pdf.* White papers and analyses are prepared by SEC staff in the course of rulemaking and other Commission initiatives. The U.S. Securities and Exchange Commission disclaims responsibility for any private publication or statement of any employee or Commissioner. White papers express the authors' views and do not necessarily reflect those of the Commission, the Commissioners, or other members of the staff. This staff white paper on corporate bond ATSs finds that large dealers (*i.e.,* those in the highest quartile of trading volume and number of bonds traded) are more likely to provide corporate bond quotes on ATSs than smaller dealers.

[472] *See* FINRA, TRACE Monthly Volume Files, *available at https://www.finra.org/finra-data/browse-catalog/trace-volume-reports/trace-monthly-volume-files.* One commenter referenced similar numbers for 2020, stating that corporate bond trades (including both investment-grade and high-yield bonds) on all ATSs represented 6.4 percent of the trade volume and 18.7 percent of the trade count reported to TRACE. *See* MarketAxess Letter, at 1.

[473] In addition, a small percentage of corporate bonds are exchange-traded on trading systems such as NYSE Bonds and the Nasdaq Bond Exchange. *See generally, https://www.nyse.com/markets/bonds.* Trading volume in exchange-traded bonds was reported to be around $19 billion as of January 2020. *See* Eric Uhlfelder, *A Forgotten Investment Worth Considering: Exchange-Traded Bonds,* Wall St. J. (Jan. 6, 2020) *available at https://www.wsj.com/articles/a-forgotten-investment-worth-considering-exchange-traded-bonds-11578279781.* (Retrieved from Factiva database).

	Panel A: Estimated Effective Spread		
Fixed Income Category	**Retail-Sized Trades (≤$100k)**	**Large-Sized Trades (>$100k)**	**Difference**
Agency	0.35	0.15	**0.20**
Asset-Backed	1.05	0.16	**0.89**
CMO	2.29	0.53	**1.76**
Corporate	0.52	0.25	**0.27**
MBS	0.85	0.20	**0.65**
Municipal	0.57	0.29	**0.28**
Treasury	0.07	0.04	**0.03**

	Panel B: Standard Deviation Ratio		
Fixed Income Category	**Retail-Sized Trades (≤$100k)**	**Large-Sized Trades (>$100k)**	**Difference**
Agency	1.66	2.59	**-0.93**
Asset-Backed	1.63	2.75	**-1.12**
CMO	4.42	4.16	**0.26**
Corporate	2.87	1.92	**0.94**
MBS	1.24	3.78	**-2.54**
Municipal	4.56	4.99	**-0.43**
Treasury	1.38	1.11	**0.27**

This table presents summary statistics for trade price dispersion across fixed income categories (agency, asset-backed, collateralized mortgage obligations (CMO), corporate, mortgage backed securities (MBS), municipal, and treasury). The time period is defined as August 1, 2021 through July 31, 2022. Estimated effective spread and average standard deviation ratio are defined below.

Estimated effective spreads are computed daily for each bond as the difference between the average (par volume-weighted) dealer-to-customer buy price and the average (par volume-weighted) dealer-to-customer sell price, and then averaged across bonds using equal weighting. For each trading day, each security must have at least one customer purchase and one customer sale to be eligible for the analysis.

The daily standard deviation in prices is calculated for each CUSIP, for customer and interdealer secondary markets, by averaging buy and sell order deviations separately. The ratio of standard deviations of customer trade prices and interdealer trade prices is then computed for each CUSIP for each day. Next, the standard deviation ratios are averaged with weights based on the total number of trades in each day, across all days and CUSIPs within each fixed income category. Average Standard Deviation Ratio is defined as:

$$Average\ Standard\ Deviation\ Ratio = \sum_{ij \in \Omega} \frac{\sigma_{ij}^{c}}{\sigma_{ij}^{d}} \omega_{ij}$$

- i is the CUSIP, j is the date
- ω_{ij} is a weight based on the number of trades in CUSIP i on day j
- σ_{ij}^{c} (σ_{ij}^{d}) is the standard deviation of customer (interdealer) prices for CUSIP i on day

BILLING CODE 8011–01–C

The aforementioned changes in bond market structure have fundamentally lowered the cost of trading. Though the corporate bond market remains subject to periodic and security-specific illiquidity constraints, one recent academic study finds that corporate bond transactions costs have decreased by 70% over the past decade.[474] According to Commission analyses, par volume-weighted average effective

[474] *See* O'Hara and Zhou, *supra* note 469.

spreads[475] calculated in the year ending July 2022 in corporate bond markets were approximately 27 basis points. Liquidity often concentrated in the largest and most recently issued bonds.[476] Additional Commission analyses indicate that the top and bottom quartile of corporate bond effective spreads differ by more than 30 bps.

Effective spreads for retail-sized trades are nearly twice as wide as larger size trades (see Panel A of Table 17).[477] The Commission estimates that effective spreads on riskless principal transactions are approximately 12 bps lower for retail-sized corporate bond trades, but the difference between large size trade effective spreads remains wide at 26 bps.

The standard deviation ratio statistics of Panel B in Table 17 show dispersion in the execution quality for corporate bond trades. The standard deviation ratio statistics compare interdealer trade execution prices to those of customers within a given bond-trading day. Even for large trades, a standard deviation ratio of 1.92 suggests that for every dollar of price dispersion in the interdealer market customers see almost twice the dispersion in prices. For retail trades, this difference increases to 2.87 suggesting an even wider range of price execution quality outcomes.[478]

ii. Municipal Securities

The market for municipal securities (''municipal bonds'') represents another important part of the fixed income market. Unlike in the markets for other fixed income securities, which are mostly owned by institutional investors, retail investors play a prominent role in the ownership of municipal bonds, with 40 percent of municipal bonds held by households and nonprofits as of Q1 2022.[479] This is largely due to the tax-exempt status of most municipal bonds, which makes them attractive to households but less attractive to institutional investors such as pension funds, whose holdings are already tax-deferred or tax exempt. Municipal bond markets also tend to be highly localized, as investors that are located in geographic proximity to an issuer are more likely to be informed about that issuer, and tax benefits are often conferred on investors that are located in the same state as the issuer.[480] Daily trading volumes in the municipal bond market averaged around $9 billion during the 2021 calendar year.[481] Average trade sizes in this market tend to be smaller than in other fixed income markets: in July 2022, 81 percent of trades were for $100,000 or less, reflecting the higher presence of retail investors in this market.[482]

Municipal securities trading venues (*e.g.,* ATSs, non-ATS trading venues (RFQ platforms), voice methods) compete on fees and trading protocols that help expose retail customer orders in order to attract order flows from retail broker-dealers. ATSs play an increasingly important role in the municipal bond market. Between August 2016 and April 2021, an estimated 56.4 percent of municipal bond interdealer trades (26 percent in terms of par volume) were executed on ATSs.[483] Municipal bond ATSs are primarily used by broker-dealers to execute trades on behalf of retail customers or to rebalance excess inventories. ATSs may help to reduce search costs. Indeed, one study finds that dealers are more likely to access ATS systems for trades that are more difficult to price and that face substantial search costs, such as smaller size trades and trades involving municipal bonds with complex features.[484] Accordingly, 90 percent of quotes on municipal bond ATSs are offer quotes.[485] On the other hand, the vast majority of RFQs on municipal bond ATSs are requests for bids, reflecting that RFQ protocols are more likely to be used when customers want to sell. Similar to the case of corporate bond markets, RFQs may instead be preferred by traders that want to limit information leakage, such as in case of large size trades. At least 43.6 percent of interdealer trades (74.1 percent in terms of par volume) in the municipal bond market take place via trading methods that are not ATSs, with 38.3 percent taking place on interdealer platforms and 5.3 percent on broker's broker platforms.[486]

Transaction costs in the municipal bond market have typically been large compared to other markets, and academic studies have attributed these large transaction costs to a lack of price transparency and subsequent information asymmetry between dealers and customers.[487] One MSRB staff report suggests that a movement away from voice trading and towards electronic trading may have helped reduce transaction costs for customer trades by 51 percent between 2005 and 2018.[488] The Commission estimates that effective spreads for retail-sized trades remain approximately 23 basis points higher than that of larger municipal bond trades.

Commission estimates in Panel B of Table 17 show average execution price standard deviation ratios, however, which suggest much higher price dispersion for customers in the municipal bond market relative to other fixed income market segments. For retail-sized trades in municipal

[475] Effective spread calculation is defined in Table 17.

[476] *See A Financial System That Creates Economic Opportunities,* Capital Markets, U.S. Department of the Treasury, October 2017, *available at https://www.treasury.gov/press-center/press-releases/documents/a-financial-system-capital-markets-final-final.pdf* (''Treasury Report'') at 85.

[477] Neither FINRA TRACE nor MSRB RTRS data provide explicit identification of trades as ''retail'' in fixed income markets. We use the widely held convention of retail ''size'' trades of being under $100,000 consistent with studies including Lawrence Harris & Anindya Mehta, *Riskless Principal Trades in Corporate Bond Markets* (Aug. 26, 2020), *available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3681652* (retrieved from Elsevier database) and Griffin, *supra* note 66, in the corporate and municipal bond markets, respectively.

[478] Commission analyses for corporate debt securities trades with no remuneration/markups show the dispersion of customer execution prices was 65% greater than that of interdealer trades, suggesting that price dispersion in customer trades may not solely be driven by disparate markups.

[479] *See,* John Bagley, Marcelo Vieira & Ted Hamlin, *Trends in Municipal Securities Ownership,* at 6, Munic. Sec. Rulemaking Bd (June 2022), *available at https://www.msrb.org/sites/default/files/Trends-in-Municipal-Securities-Ownership.pdf.* Data used by this paper is largely from the Federal Reserve's Financial Accounts of the United States. *Id.,* at 2. *See also infra* note 495 and accompanying text.

[480] *See,* Paul Schultz, *The market for new issues of municipal bonds: The roles of transparency and limited access to retail investors,* 106 J. Fin. Econ. 492, 492 (2012).

[481] *See* Municipal Securities Rulemaking Board, Muni Facts, *available at https://www.msrb.org/News-and-Events/Muni-Facts.*

[482] *See* Municipal Securities Rulemaking Board, Municipal Trade Statistics, *available at https://emma.msrb.org/MunicipalTradeStatistics/ByTradeCharacteristic.aspx.*

[483] *See* Simon Z. Wu, *Characteristics of Municipal Securities Trading on Alternative Trading Systems and Broker's Broker Platforms,* Municipal Securities Rulemaking Board (Aug. 2021), (''Wu (2021)''), *available at https://msrb.org/sites/default/files/MSRB-Trading-on-Alternative-Trading-Systems.pdf. See also* Letter from Edward J. Sisk, Chair, Municipal Securities Rulemaking Board, dated March 1, 2021 (''MSRB Letter''), stating that MSRB trade data shows that ATSs were involved in 21 percent of all trades and 55 percent of all inter-dealer trades in the municipal bond market.

[484] *See* Wu (2021), *supra* note 483.

[485] *See* Simon Z. Wu, John Bagley, & Marcelo Vieira, *Municipal Securities Pre-Trade Market Activity: What Has Changed Since 2015?,* Municipal Securities Rulemaking Board (2020), *available at https://www.sec.gov/spotlight/fixed-income-advisory-committee/msrb-staff-analysis-of-municipal-securities-pre-trade-data.pdf.*

[486] *See* Wu (2021), *supra* note 483.

[487] *See, e.g.,* Lawrence E. Harris, & Michael S. Piwowar, *Secondary Trading Costs in the Municipal Bond Market,* 61 J. Fin. 1361 (2006).

[488] *See* Simon Z. Wu, *Transaction Costs for Customer Trades in the Municipal Bond Market: What is Driving the Decline?,* Municipal Securities Rulemaking Board (July 2018), at 15, *available at https://www.msrb.org/sites/default/files/Transaction-Costs-for-Customer-Trades-in-the-Municipal-Bond-Market.pdf.*

securities, the Commission estimates retail-size trades have more than four times the amount of price dispersion as dealers experience. One recent academic specifically examines execution quality in the market for municipal bonds.[489] Consistent with the Commission analysis in Table 17, the study examines bond prices for the same bond on the same trading day and finds significant dispersion in execution quality. Furthermore, the study finds differences in execution quality discrepancies within each broker-dealer in the same bond trading day.[490]

iii. Government Securities

The market for U.S. government securities is large both in terms of the outstanding debt amount and trading volume. According to the Treasury Department, the total amount outstanding for marketable Treasury securities was approximately $23.4 trillion.[491] The Financial Accounts of the United States Z.1 released by the Federal Reserve Board shows that the amount outstanding for Agency- and GSE-Backed Securities is about $10.9 trillion, as of the end of Q1 2022.[492] According to data published by SIFMA, in September 2021, the average daily trading volume in government securities was about $850.1 billion, which is roughly 95 percent of all fixed income securities trading volume in the U.S.[493] This includes $582.1 billion average daily trading volume in U.S. Treasury securities, $265.7 billion in Agency MBSs, and $2.4 billion in other Agency securities.

Government securities are traded through a diverse set of venues, including ATSs, RFQs, and bilateral protocols, such as voice methods. Government securities trading venues (*e.g.,* ATSs, non-ATS trading venues (RFQ platforms), voice methods) compete on fees and trading protocols that help expose retail customer orders in order to attract order flows from retail broker-dealers. Currently, government securities ATSs account for a significant percentage of all U.S. Treasury securities trading activity reported to TRACE.[494] The Commission estimates that ATSs account for approximately 37.8% percent of U.S. Treasury securities trading volume from April 2021 through March 2022. Broker-dealers utilize ATSs to source liquidity in government securities, including the liquidity needed to efficiently fill customer orders outside ATSs. The Commission understands that this means some portion of broker-dealer transactions on government securities ATSs are associated with the dealers' activity in filling customer orders.

Effective spreads for Treasuries in Table 17 are the lowest among all of the presented fixed income securities categories. Effective spreads for retail-sized trades are only 3 bps higher relative to larger trades. Agency securities exhibit relatively higher effective spreads in comparison to U.S. Treasury securities but remain the second least costly fixed income securities category in terms of transaction costs. There is less dispersion in execution quality for U.S. Treasury securities trades. Price dispersion in large size customer trades is small relative to that of interdealer trades (1.11) but is somewhat larger, albeit at an overall level less than other fixed income securities categories, for retail-sized trades (1.38).

iv. Market Access

With respect to fixed income securities trading, executing brokers provide market access to other broker-dealers including retail broker-dealers that qualify as introducing brokers under the FINRA/MSRB rules. The Commission understands executing broker-dealers that provide market access to retail introducing brokers under the FINRA and MSRB rules do not engage in conflicted transactions as defined under the proposal. Furthermore, the Commission understands that these executing brokers would consider factors, such as contemporaneous trade prices (*e.g.,* interdealer prices), quotes, trade prices and quotes of similar fixed income securities, yield curve, matrix prices, and different types of trading protocols (*e.g.,* RFQs and BWICs) in handling orders from other retail broker-dealers and also supply execution quality statistics to their customers. These executing brokers compete on the basis of fees, efficiency in order handling procedures, and efficiency in the selection of trading venues or counterparties, which determine overall execution quality.

v. Retail Order Handling and Execution

Retail investors transacting in fixed income securities most often trade municipal securities, and to a smaller extent, corporate debt securities and U.S. Treasury securities. As of 2021, household holdings of municipal securities hovered above 40 percent[495] of outstanding municipal securities,[496] but this share has been declining.[497] Households owned only roughly one percent of outstanding corporate debt securities in 2021.[498] U.S. Treasury securities have slightly higher household participation, at approximately three percent.

[489] *See, e.g.,* Griffin, *supra* note 66.

[490] The study finds that the range of differences in dealer fixed effects from the worst to best dealer markup is consistently 2% and retail-sized trades have, controlling for bond characteristics, 75 bps higher markups relative to larger trades. Furthermore, the study summarizes by stating that municipal bond ''markup differences represent different prices for the same security from the same dealer at essentially the same time, which would seem to be a clear failure of pricing fairness according to MSRB regulations and guidance.''

[491] *See* Monthly Statement of the Public Debt of the United States, dated July 31, 2020, *available at https://fiscaldata.treasury.gov/datasets/monthly-statement-public-debt/summary-of-treasury-securities-outstanding.*

[492] *See* Financial Accounts of the United States Z.1, First Quarter 2022, at 177, *available at https://www.federalreserve.gov/releases/z1/20220609/z1.pdf.*

[493] *See* SIFMA Fixed Income Trading Volume, *available at https://www.sifma.org/resources/research/us-fixed-income-securities-statistics/.* The stated figures include Treasury Securities, Agency MBS, and Federal Agency Securities.

[494] TRACE aggregation and analysis methods follow those used by Treasury market regulators and FINRA, including adjustments for multiple trade reports for a single transaction and counting only one trade report for an ATS or IDB. The regulatory version of TRACE was used in the analysis. A ''Give-Up'' ID is reported when a principal to a transaction delegates another participant to report a trade on its behalf. When a ''Give-Up'' ID is reported, the corresponding reporting or contra- party is replaced with the ''Give-Up'' ID. This ensures that trades are attributed to the principals to each transaction. System control numbers are used to link corrected, canceled, and reversed trade messages with original new trade messages. In these cases, only corrected trades are kept and all cancellation and reversal messages and their corresponding new trade messages are removed. Special care must be taken when counting market volume. When a FINRA registered broker directly purchases from another FINRA member, two trade messages are created. If those FINRA registered brokers transact through an inter-dealer broker (IDB), four trade messages are created, two for the IDB and one for each member. In both cases, the volume from only one report is needed. To ensure that double counting of transactions does not occur, only the following trade messages are summed to calculate market volume: sales to non-IDB members, sales to identified customers, such as banks, hedge funds, asset managers, and PTFs, and purchases from and sales to customers and affiliates. Any trade in which the contra-party is an IDB is excluded. Thus, in the case of trades involving IDBs, only the IDBs' sale message is added to overall volume.

[495] *See* Financial Accounts of the United States Z.1, Fourth Quarter 2021, *available at https://www.federalreserve.gov/releases/z1/20220310/z1.pdf.*

[496] In the Z.1 Financial Accounts of the United States, estimates for the 'household' sector include non-profits and domestic hedge funds. *See* Financial Accounts of the United States Z.1, Technical Q&As (September 23, 2022), *available at https://www.federalreserve.gov/releases/z1/z1_technical_qa.htm.*

[497] *See* Heather Gillers, *Municipal Bonds Increasingly Held by Funds, Not Individuals,* Wall St. J. (Jun. 29, 2022). *Available at https://www.wsj.com/articles/municipal-bonds-increasingly-held-by-funds-instead-of-individuals-11656408601.*

[498] *See id.*

Households own a similar amount of U.S. agency securities, also at approximately two percent.[499] In general, retail investors do not trade in the market for other fixed income securities, such as asset-backed securities, although broker-dealers offer trading services for these fixed income securities to their retail customers.

The Commission understands that retail investors generally use one broker-dealer for fixed income securities trading services. Broker-dealers execute retail customer orders mostly on a principal basis (*e.g.,* riskless principal trades, internalized trades). Broker-dealers may execute against resting orders (*e.g.,* limit orders displayed on ATSs), conduct RFQs/BWICs/OWICs,[500] and utilize voice methods (*e.g.,* telephone) in handling retail customer orders. For executing small or medium size retail customer orders, a broker-dealer may utilize limit orders or RFQs, while it might utilize voice methods for executing large retail customer orders or orders on illiquid fixed income securities. Only a few broker-dealers offer a trading service to represent a retail customer order in a limit order book. The Commission does not know the number of trading venues (*e.g.,* ATSs, RFQ platforms, broker's broker platforms, single dealer platforms) to which broker-dealers maintain access/connection for executing retail customer orders. The Commission also does not know the number of broker-dealers that access or connect to these venues through each type of interface (*e.g.,* via application programming interface (API), graphical user interface (GUI)). Furthermore, the Commission does not know how broadly broker-dealers expose retail customer orders, for example, via RFQs or limit order books for the purpose of riskless principal transactions and internalization.

The Commission understands that retail customer order handling practices for fixed income securities vary across retail broker-dealers offering different types of trading services and between the sides of the market (customer buy order vs. customer sell order). Some broker-dealers offer self-directed trading to their retail customers, whereas for some broker-dealers, the firm's brokers handle retail customer orders, and some offer both self-directed and broker-assisted trading services. Furthermore, some broker-dealers make only internal inventory, only external inventory (for brokers that do not carry inventory), or both internal and external inventory of fixed income securities available for retail customer trading. The Commission understands that some broker-dealers whose primary service is not focused on fixed income securities trading outsource fixed income securities execution services to another broker (*i.e.,* executing broker). The Commission does not know how many executing brokers perform fixed income securities trading services on behalf of these brokers. The Commission understands that executing brokers maintain access to multiple trading venues (*e.g.,* ATSs, RFQ platforms, broker's broker platforms, single dealer platforms) and generally handle orders from other broker-dealers, for which they provide execution services, on agency or riskless principal basis.

Some broker-dealers ingest offer quotes from internal inventory and/or trading venues (*e.g.,* ATSs, electronic venues) and then display them to their self-directed retail customers or the firm's brokers who handle retail customer orders. These offer quotes displayed to self-directed retail customers typically embed markup. Self-directed retail customers are able to submit buy orders to execute against offer quotes displayed on their systems. The Commission understands that some broker-dealers do not assess the competitiveness of ingested quotes or filter out quotes that may not be reflective of the prevailing market before displaying them to self-directed retail customers. Furthermore, the Commission does not have information about how orders submitted by self-directed retail customers are handled: the Commission does not know how a broker-dealer ensures the displayed quote, against which a self-directed retail customer submitted an order to execute, is reflective of the current market. For a broker-assisted customer buy trade, a broker handling a retail customer order would follow order handling procedures based on the FINRA/MSRB best execution rules. The broker may consider, among other things, prices, such as trade prices, trade prices of similar fixed income securities, internal and/or external offer quotes, offer quotes of similar fixed income securities, matrix prices, and prices derived from yield curve, as well as trading protocols, such as limit order, RFQ, and OWIC, in handling the retail customer buy order. The Commission understands that broker-dealers that carry inventory of fixed income securities may internalize retail customer buy orders by executing them against internal inventory after charging a markup. Broker-dealers may use offer quotes resting on trading venues and/or offer responses to RFQ/OWIC as reference prices to match or improve (via last-look practice) for the purpose of internalization.

Only a few retail broker-dealers display external and/or internal bid quotes of fixed income securities to their self-directed retail customers or the firm's brokers who handle retail customer orders. To the extent that these retail broker-dealers display external and/or internal bid quotes of fixed income securities to their self-directed retail customers, self-directed retail customers are able to submit sell orders to execute against bid quotes displayed on their systems. For a broker-assisted customer sell trade, a broker handling a retail customer order would typically conduct RFQ or BWIC to collect multiple bids. A broker would also consider other pricing sources, such as trade prices, trade prices of similar fixed income securities, bid quotes of similar fixed income securities, matrix prices, and prices derived from yield curve in handling the retail customer sell order. For broker-dealers that carry inventory of fixed income securities, these broker-dealers may internalize customer sell orders by buying the bond from their customer into inventory after charging a markdown to have an opportunity to resell the bond to another customer (earning the bid-ask spread and markup when the broker-dealer resells the bond to another customer). In conducting RFQs or BWICs for the purpose of internalization, the Commission understands that some broker-dealers may use last-look to apply trade desk spreads (in the form of markdown) to external bids but not to internal bids, which results in more favorable comparisons for the internal bids, to win RFQs/BWICs.[501]

vi. Principal Trading

With respect to fixed income securities trading, principal transactions[502] with retail customers, in which broker-dealers engage, include riskless principal[503] and internalized

[499] *See id.*

[500] Bid wanted in competition (BWIC) is a request for bids on a single security or a list of securities, submitted by a market participant (a broker-dealer or an institutional investor) to a number of broker-dealers. Offer wanted in competition (OWIC) is a request for offers on a single security or a list of securities, submitted by a market participant (a broker-dealer or an institutional investor) to a number of broker-dealers.

[501] *See infra* Section V.C.1.b for the discussion of last look practices and application of trade desk spreads.

[502] Principal transactions with retail customers would be subject to the requirements of the proposed rule 1101(b). *See also supra* section IV.E.

[503] These riskless principal trades would include retail customer self-directed trades. Some broker-

trades. With limited transparency in the fixed income securities markets, an internalized trade may represent conflicts of interest between a broker-dealer and its retail customer because the retail customer may not be able to assess broker-dealer compensation (*e.g.,* markup/markdown). Provided that transaction costs of riskless principal transactions are disclosed on a post-trade basis in customer confirmations, these riskless principal transactions represent potentially fewer conflicts of interest compared to internalization. When the transaction costs of riskless principal transactions are disclosed on a pre-trade basis via a markup/markdown schedule, there would be even fewer conflicts of interest between retail customers and broker-dealers handling their orders.[504] A significant portion of customer trades are executed on a principal basis. Table 18 shows that 87% and 80% of the corporate debt securities and municipal securities customer par volume trades, respectively, are executed on a principal basis. Furthermore, Table 18 shows that riskless principal transactions represent 31% and 48% of principal trades in the corporate debt securities and municipal securities markets, respectively.[505] An academic study has found a persistent increase in the frequency of riskless principal trades in the corporate debt securities market since 2014.[506]

TABLE 18—FIXED INCOME DEALER TRADING CAPACITY AND TRADE SIZE

Panel A: Corporate Debt Securities

Corporate bond	Trade size	Type	Total distinct MPIDs	Trades	Trade percent	Par volume (in billions)	Par volume percent
Dealer Buy	Retail Trades (≤$100k).	Agency	446	782,685	7.9	11.82	0.2
		Principal	465	1,466,145	14.8	42.63	0.6
		Riskless Principal	474	553,908	5.6	12.39	0.2
	Large Trades (>$100k).	Agency	241	163,505	1.6	201.03	2.7
		Principal	413	1,596,162	16.1	3,164.41	43.3
		Riskless Principal	392	183,391	1.8	235.28	3.2
Dealer Sell	Retail Trades (≤$100k).	Agency	338	1,052,845	10.6	18.40	0.3
		Principal	460	1,341,692	13.5	47.88	0.7
		Riskless Principal	475	704,699	7.1	19.71	0.3
	Large Trades (>$100k).	Agency	475	172,630	1.7	213.28	2.9
		Principal	458	1,698,176	17.1	3,140.93	43.0
		Riskless Principal	474	209,196	2.1	203.39	2.8
Total				9,925,034	100	7,311	100

Panel B: Municipal Securities

Municipal bond	Trade size	Type	Total distinct MPIDs	Trades	Trade percent	Par volume (in billions)	Par volume percent
Dealer Buy	Retail Trades (≤$100k).	Agency	331	263,505	5.1	6.49	0.3
		Principal	325	737,050	14.4	24.56	1.2
		Riskless Principal	458	847,353	16.5	24.80	1.2
	Large Trades (>$100k).	Agency	188	19,119	0.4	7.16	0.4
		Principal	284	244,097	4.8	458.28	22.5
		Riskless Principal	354	138,851	2.7	194.91	9.6
Dealer Sell	Retail Trades (≤$100k).	Agency	237	319,597	6.2	9.28	0.5
		Principal	339	1,037,384	20.2	35.86	1.8
		Riskless Principal	365	817,050	15.9	24.16	1.2
	Large Trades (>$100k).	Agency	365	34,090	0.7	16.04	0.8
		Principal	384	558,594	10.9	1,115.44	54.7
		Riskless Principal	440	119,447	2.3	123.77	6.1
Total				5,136,137	100	2,041	100

This table presents summary statistics for dealer trading capacity across corporate (using FINRA TRACE data) and municipal (MSRB RTRS) fixed income categories from April 1, 2021 through March 31, 2022. We drop all interdealer trades keeping only customer trades from TRACE and RTRS main data files. We then collapse this file by Buy/Sell indicator, Agency/Principal/Riskless Principal indicator and Trade size bucket. The table reports the total distinct MPIDs in each group the total trade count (with percentage), total Par volume (with percentage), the weighted markup of riskless principal trades, and unweighted markup of riskless principal trades. Riskless principal trade indicators are not provided in the main data but are inferred using trade pairs matched by MPID and trade size over a 15-minute window.

The Commission understands that there may be conflicts of interest in handling retail customer orders in fixed income securities markets, which could result in retail customers not receiving the most favorable prices under

dealers execute self-directed trades of retail customers on a riskless principal basis and charge markups/markdowns for their trading services. Retail customer self-directed trades would not be considered unsolicited instructions from customers under FINRA Rule 5310.08.

[504] Some broker-dealers disclose a markup/markdown schedule broken out by trade size on a pre-trade basis for retail customer self-directed trading on customer facing websites.

[505] Principal trading represents a relatively smaller proportion of retail-sized customer trades in the U.S. Treasury securities market. Commission analyses show trades executed in an agency capacity represent approximately 36.7% of all retail-sized U.S. Treasury securities trades. The commission estimates that riskless principal trades represent 7.9% of principal trades in the U.S. Treasury securities market, whereas the share of riskless principal trades for retail-sized trades is 10.2%.

[506] *See* O'Hara and Zhou, supra note 469. The study suggests that implementation of the Volcker Rule in 2014 led to a large increase in riskless principal capacity trading, particularly among bank broker-dealers who are subject to proprietary trading restrictions under the rule.

prevailing market conditions. A broker-dealer that submits an RFQ[507] on behalf of a retail customer typically has the option of selecting potential counterparties, from which it is requesting prices, on behalf of its customer. Applying counterparty filtering or limiting the number of counterparties in RFQs could result in less competitive prices for retail customer orders.[508] An academic study links competitiveness (*i.e.,* the number of bids and difference between winning and second best bid) directly to price improvement.[509] Another market practice is price matching using the best response to RFQ via ''last look'' or ''pennying'' for the purpose of internalization rather than customer benefit.[510] Such practice would discourage market participants from submitting competitive prices because responders to RFQs are not compensated for submitting competitive quotes (*i.e.,* selected to trade).

(c) Crypto Asset Securities

As discussed Section III.A.3, crypto asset securities, also called digital asset securities, refer to a range of assets that are issued and/or transferred using distributed ledger technology and that meet the definition of a security.[511] The Commission has provided a statement regarding broker-dealers engaging in custody and transactions of crypto asset securities.[512] Broker-dealers transacting in crypto asset securities would be subject to the requirements of this proposal.[513]

Because transaction data and other information on the crypto asset securities market is limited,[514] the Commission does not have a complete understanding of market participants' current practices with respect to order handling and best execution for crypto asset securities, including the extent to which current practices in the market for crypto asset securities are consistent with FINRA Rule 5310.[515]

Most known, off-chain trading activity for crypto asset securities occurs on online, openly accessible centralized platforms. These platforms are typically vertically integrated, combining account holding and trading services. The prevalence of vertically integrated trading platforms distinguishes the crypto asset securities market from other asset markets. These platforms often operate using a centralized limit order book, similar to exchanges for stocks and futures, but the volume is not audited or verified in any known manner.[516] Some platforms that trade crypto asset securities are domiciled and operated outside the U.S.[517] To trade on a centralized crypto asset securities platform, the only prerequisites for a retail investor are to sign up for an account with a location-accessible platform and link his or her bank account or digital asset wallet.[518]

The Commission understands that retail customers represent approximately 30% of trading in crypto asset securities at the largest centralized trading platforms.[519] Instead of trading directly on centralized platforms, some retail customers may choose to place crypto asset securities orders with retail businesses, which could be affiliates of SEC registrants, fintech firms, or even payment applications.[520] Those businesses typically route the order flow to unregistered third-party wholesalers, proprietary traders, or market makers for execution. Some of them provide zero or low commissions for trading crypto assets, and obtain all or a significant portion of their compensation through payments from the wholesalers for directed order flow. The Commission is not certain how these orders are handled (*i.e.,* internalized, routed to centralized platforms, etc.), given the lack of reporting in the crypto asset securities market. It is possible that crypto asset wholesalers internalize most of the order flow they purchased within their own proprietary trading desks and they may route any remaining order flow perceived to be from informed traders to a lit (*i.e.,* transparent order book driven) venue.

The Commission lacks knowledge on the prevalence of broker-dealer activity in this market and the routing behavior of broker-dealers in this market. The Commission likewise has limited information about the pervasiveness of payment for order flow in the crypto asset securities market.[521]

(d) Non-NMS Stock Equity Securities

Non-NMS stock equity securities trade in a market that appears to be a hybrid of the NMS securities market and the fixed income market. The non-NMS stock equities market is informally

[507] The Commission understands that, in general, responding to RFQs is a manual process. Recently, some market participants (*e.g.,* large broker-dealers) automated responses to RFQs for small order sizes.

[508] While filtering practices might be conducted by broker-dealer for order execution efficiency purposes (*i.e.,* evaluating only counterparties who provide firm indications), a broker-dealer must evaluate any efficiency gains directly against filtering quotes that may be more favorable to the end customer. Filtering counterparties to reduce information leakages is likely to produce little benefit for retail trades.

[509] *See* Terrence J. Hendershott, Dmitry Livdan & Norman Schuerhoff, *All-to-All Liquidity in Corporate Bonds,* Swiss Finance Institute Research Paper No. 21–43 (October 27, 2021), *available at https://ssrn.com/abstract=3895270* or *https://dx.doi.org/10.2139/ssrn.3895270.*

[510] The Commission understands that such practice is more common in RFQs on the bid side of the market.

[511] *See, e.g.,* Report of Investigation Pursuant to Section 21(a) of the Securities Exchange Act of 1934: The DAO, Exchange Act Release No. 81207 (July 25, 2017). *See SEC* v. *W. J. Howey Co.,* 328 U.S. 293 (1946). *See* Framework for ''Investment Contract'' Analysis of Digital Assets, *available at https://www.sec.gov/corpfin/framework-investment-contract-analysis-digital-assets.*

[512] *See* supra III.A.3. Since 2013, the Commission has brought a significant number of enforcement actions against issuers of crypto asset securities and crypto asset security market participants. Such enforcement investigations and actions have been brought for, among other things, violations of the registration requirements of the Securities Act of 1933 for offers and sales of crypto assets to the public as securities, violations of the exchange registration requirements of the Securities Exchange Act of 1934 for operating trading platforms for digital assets that are securities, and violations of the anti-fraud and other provisions of Federal securities laws. *See, e.g.,* Crypto Assets and Cyber Enforcement Actions, *available at https://www.sec.gov/spotlight/cybersecurity-enforcement-actions* for more information about these enforcement actions.

[513] *See supra* section III.A.3 for criteria of applicability to crypto asset securities.

[514] *See, e.g.,* FSOC Report, *supra* note 95, at 119, which notes that the digital asset ''ecosystem is characterized by opacity that creates challenges for the assessment of financial stability risks. Collection and sharing of data, as appropriate, could help reduce this opacity.'' *See also* Raphael Auer et al., *supra* at note 95 (discussing data gaps in the crypto market).

[515] As noted in *supra* Section III.A.3, circumstances have made it difficult for the Commission to have a full picture of the current market for crypto assets.

[516] *See,* for example, Le Pennec, G., Fiedler, I., and Ante, L., *Wash trading at cryptocurrency exchanges,* 43 Finance Research Letters 101982 (2021).

[517] Some platforms that purport to be located outside of US nevertheless seek to cater to US customers, among other ways, by complying with certain requirements set by the CFTC and FinCEN. As of August 30, 2022, only three of the top 25 trading platforms (according to CoinMarketCap) have registered FINRA entities. *See* CoinMarketCap's Top Cryptocurrency Spot Exchanges, *available at https://coinmarketcap.com/rankings/exchanges/* for further exchange level information.

[518] A digital asset wallet is a software, algorithm, or storage medium to store the public and private keys of the digital asset transactions. *See,* for example the definition of wallet in Cryptocurrencies glossary, Fidelity Investments, *available at https://www.fidelity.ca/en/investor/cryptocurrencies-glossary/.*

[519] This estimate comes from two different sources: (1) disclosures from Coinbase's 2021 10–K filings; and (2) a direct statement made by Binance US's CEO at the 2022 Georgetown Financial Market Quality Conference.

[520] Payment apps allow individuals and businesses to transfer funds outside of the traditional banking and payment processing systems. Many of these fintech or payment app entities are not registered with the Commission in any capacity. Thus, this activity is not visible to the Commission.

[521] The Commission understands PFOF rates from wholesalers for crypto assets are significantly higher than the PFOF rates from wholesalers for NMS securities.

referred to as the ''OTC market.'' The securities traded in the non-NMS stock equities market are typically unregistered equities; however, many non-NMS equities traded were formerly registered and formerly exchange listed. Analogous to the fixed income market, there are some securities which are very liquid, and also many securities that are difficult to trade. For FINRA members, non-NMS stock equities trading is subject to FINRA Rule 5310 for execution standards; however, there are other standards that also affect this market (*i.e.,* state law and/or platform/venue requirements). Academic studies have found that differences in regulation can impact market quality.[522] Trading in non-NMS stock equities primarily takes place via dealer-to-dealer trades or on one of several ATSs that specialize in non-NMS stock equities. In the interdealer market, broker-dealers interact directly with one another to fill customer orders or manage inventory. ATSs in the non-NMS stock equities market offer opportunities for broker-dealers to interact in either a traditional limit order book or in a negotiation feature somewhat similar to RFQs in fixed income markets. Some ATSs in this market allow direct participation by any client, including retail clients; however, as the Commission understands, most ATSs are accessible only by dealers.

From the perspective of order handling, retail orders are processed in a manner very similar to NMS stocks. Retail broker-dealers that offer the ability[523] to trade in the non-NMS stock equities market typically route an order to a wholesaler, who may internalize the order, or if the broker-dealer is directly connected to a non-NMS stock equities liquidity source, such as an ATS, may trade in a principal capacity with the customer. Orders that are not routed to wholesalers or internalized directly by the retail broker-dealer may be routed to an ATS to expose the order. From the Commission's analysis of non-NMS stock equities trades in March 2022, 63.2% of non-institutional trades were traded in a principal capacity. As noted in this section, some ATSs allow direct participation of any trader who registers and connects to their platform. Thus, some retail investors may be able to access liquidity without the aid of a broker-dealer in this market. In terms of pricing orders, non-NMS stock equities are not protected by a trade-through rule. Thus, pricing could be highly variable from one trade to the next in a given security. The non-NMS stock equities market is not required by regulation to report individual trades for public dissemination. This market frequently lacks quotes entirely, or lacks displayed quotes that are frequently updated. Despite this lack of mandated transparency, the largest[524] ATS serving this market offers pre-trade and post-trade information (*e.g.,* quotes, transaction prices).[525]

(e) Institutional Customer Order Handling

The Commission understands that institutional investors generally use multiple broker-dealers for NMS stock and options trading services. Institutional broker-dealers typically engage in order splitting when handling large institutional customer orders, often utilizing SORs to break up large, institutional ''parent'' orders into multiple smaller ''child'' orders.[526] It is the Commission's understanding that when an institutional customer gives a large order to be executed on behalf of one account (*e.g.,* a single mutual fund or pension fund), it expects the broker-dealer that handles and executes such large order to do so in a manner that ensures best execution is provided to the ''parent'' order. In other words, to the extent that a parent order is split into smaller ''child'' orders, the institutional customer expects the best execution analysis to evaluate whether the parent order was executed at the most favorable price possible under prevailing market conditions according to customer instructions.[527] A significant portion of institutional customer orders in NMS stocks and options is not held.[528] The Commission understands that institutional customer orders handled on a not held basis may sometimes be executed based on customer-specified standards that may prioritize outcomes other than execution prices, such as reducing the price impact of an order or matching volume weighted average price (VWAP) over a certain time horizon. An academic study looked at order routing by institutional brokers in the equity markets and found that institutional brokers who route more orders to affiliated ATSs are associated with lower execution quality in the form of lower fill rates and higher implementation shortfall costs than institution brokers that route more orders to non-affiliated ATSs.[529]

With respect to fixed income securities trading, the Commission understands that institutional investors, such as mutual funds, pension funds, insurance companies, and banks, in general directly trade with market participants (*e.g.,* broker-dealers) by accessing RFQs, platform-wide RFQs, firm quotes, and indicative quotes on trading venues. Institutional investors generally trade large blocks of fixed income securities via voice with broker-dealers. Furthermore, the Commission understands that institutional investors generally use multiple broker-dealers for trading services. Based on customers' instructions, broker-dealers may represent institutional customer orders by posting firm quotes on many-to-many and one-to-many platforms, or conduct RFQs on behalf of institutional customers.

Institutional investors may utilize third-party vendors to conduct transaction cost analysis and evaluate the performance of their broker-dealers based on those reports. If an institutional investor uses multiple brokers-dealers, it may direct more orders to broker-dealers that have better performance. This may reduce the

[522] *See, e.g.,* Ulf Brüggemann, Aditya Kaul, Christian Leuz & Ingrid M. Werner, *The Twilight Zone: OTC Regulatory Regimes and Market Quality,* 31 Rev. Fin. Stud. 898 (March 2018), *available at https://doi.org/10.1093/rfs/hhx102.* The authors find that increased regulation of OTC trading improves market quality in US OTC stocks.

[523] This ability often costs a premium compared to trading in NMS stocks. Many brokers will still charge commissions for trades in this market.

[524] *See* ATS Transparency *Data Quarterly Statistics,* FINRA.org, *available at https://www.finra.org/filing-reporting/otc-transparency/ats-quarterly-statistics.* This ATS is largest by number of OTC Stocks traded in Q2 2022. FINRA posts records on a quarterly basis listing ATSs trading OTC Stocks and the share volume traded on the ATS.

[525] *See* Anna-Louise Jackson, *What is the OTC Market?,* Forbes Advisor (Jun. 9, 2022), *available at https://www.forbes.com/advisor/investing/otc-market/. See generally,* OTC Markets Group, Inc. and OTC Link ATS, *available at https://www.otcmarkets.com/.*

[526] The small-sized and mid-sized institutional customer orders for options are typically routed to electronic order routing platforms. These platforms allow order entry and provide smart routers and order and position management. Furthermore, these platforms offer customized execution algorithms on an order-by-order basis. *See also* Tyler Beason & Sunil Wahal, *The Anatomy of Trading Algorithms,* (working paper Jan. 21, 2021), *available at https://ssrn.com/abstract=3497001* (retrieved from SSRN Elsevier database) for a discussion of institutional investor parent and child order handling in NMS stocks.

[527] *See supra* note 169.

[528] An analysis in the Rule 606 Adopting Release 83 FR 58338 (Jan 2019), studied orders submitted from customer accounts of 120 randomly selected NMS stocks listed on NYSE during the sample period between December 5, 2016 and December 9, 2016, consisting of 40 large-cap stocks, 40 mid-cap stocks, and 40 small-cap stocks. The analysis found that among the orders received from the institutional accounts, about 69% of total shares and close to 39% of total number of orders in the sample are not held orders, whereas among the orders received from the individual accounts, about 19% of total shares and about 12% of total number of orders in the sample are not held orders. *See* Rule 606 Adopting Release, 83 FR 58393.

[529] *See* Anand, *supra* note 91.

switching costs for institutional investors related to changing broker-dealers and increase competition among broker-dealers to attract institutional orders.

4. Broker-Dealer Services and Revenue

A small subset of broker-dealers hold most customer accounts and control a significant portion of broker-dealer assets. Table 19 shows statistics on broker-dealer customers and total assets. Based on FOCUS data as of Q2 2022, there were approximately 3,498 broker-dealers, 162 of which carry their own customer accounts. These broker-dealers reported carrying over 240 million public customer accounts. Of the total population of these broker-dealers, approximately 2,440 reported retail customer activity.[530] Of the broker-dealers that reported retail customer activity, 144 reported carrying their own customer accounts.[531] A small set of 23 broker-dealers report more than 50 billion dollars in total assets and 119 report between 1 billion and 50 billion in assets. The majority of broker-dealers have less than 10 million dollars in assets, with 1,613 having less than 1 million dollars in assets. However, most customer accounts are concentrated in the 142 large broker-dealers with 1 billion dollars or more in assets: 119 of them are from the category of broker-dealers with assets greater than 1 billion dollars and less than 50 billion dollars and 23 of them are from the category of broker-dealers with assets greater than 50 billion dollars. Ninety eight broker-dealers carry non-customer accounts for other broker-dealers. The majority of these, 66, are large broker-dealers with 1 billion dollars or more in assets. On average, they carry accounts for over 50 other broker-dealers.

TABLE 19—NUMBER OF BROKER-DEALERS AND CUSTOMER ACCOUNTS BY ASSET SIZE

Variable	Size of broker-dealer (total assets)							
	>50bn	1bn–50bn	500mn–1bn	100mn–500mn	10mn–100mn	1mn–10mn	<1mn	Total
Panel A: All Broker-Dealers								
Number of Broker-Dealers	23	119	30	136	523	1,054	1,613	3,498
Number of Broker-Dealers Registered as Investment Advisers	11	22	4	35	95	179	134	480
Number of Broker-Dealers with Investment Adviser Affiliate	19	74	17	87	274	401	445	1,317
Number of Broker-Dealers Carrying Own Customer Accounts	19	59	8	22	26	21	7	162
Total Number of Public Customer Accounts	75,834,917	153,216,558	6,045,929	3,555,383	606,606	887,833	6,668	240,153,894
Total Number of Omnibus Accounts	421,583	525	12	4	33	19	0	422,176
Number of Broker-Dealers Carrying Non-Customer Accounts	18	48	7	9	11	5	0	98
Avg Number Other Broker-Dealers Carrying Customer Accounts For Fully Disclosed Basis	57.5	50.7	30.5	9.0	2.5	1.0	.....	.....
Avg Number Other Broker-Dealers Carrying Accounts for Omnibus Basis	19.2	26.3	15.3	3.5	2.5	.....	1.0	.....
Panel B: Retail Broker-Dealers								
Number of Retail Broker-Dealers	19	76	21	109	393	750	1,072	2,440
Number of Broker-Dealers Registered as Investment Advisers	11	21	4	34	92	171	128	461
Number of Broker-Dealers with Investment Adviser Affiliate	17	56	12	76	228	331	350	1,070
Number of Broker-Dealers Carrying Own Customer Accounts	18	51	7	20	22	19	7	144
Total Number of Public Customer Accounts	75,829,888	142,899,902	6,012,125	2,641,879	606,447	880,021	6,668	228,876,930
Total Number of Omnibus Accounts	421,583	524	12	1	33	15	0	422,168
Number of Broker-Dealers Carrying Non-Customer Accounts	17	44	7	8	8	5	0	89
Avg Number Other Broker-Dealers Carrying Customer Accounts For Fully Disclosed Basis	60.9	55.4	30.5	8.0	2.0	1.0	.....	.....

[530] *See* item 8080 on FOCUS Report Form X–17A–5 Schedule I for additional information on the number of reported public customer accounts.

[531] Retail sales activity is identified from Form BR, which categorizes retail activity broadly (by marking the ''sales'' box) or narrowly (by marking the ''retail'' or ''institutional'' boxes as types of sales activity). We use the broad definition of sales as we believe that many firms will just mark ''sales'' if they have both retail and institutional activity. However, we note that this may capture some broker-dealers that do not have retail activity, although we are unable to estimate that frequency.

TABLE 19—NUMBER OF BROKER-DEALERS AND CUSTOMER ACCOUNTS BY ASSET SIZE—Continued

Variable	Size of broker-dealer (total assets)							
	>50bn	1bn–50bn	500mn–1bn	100mn–500mn	10mn–100mn	1mn–10mn	<1mn	Total
Avg Number Other Broker-Dealers Carrying Accounts for Omnibus Basis	19.2	28.5	15.3	2.0	2.5		1.0	

This table summarizes the number broker-dealers (Panel A) and retail broker-dealers (Panel B), their investment adviser status, their customer account carrying status, and the number of customer and omnibus accounts they carry broken out into groups based on their total assets. The number of Broker-dealers comprises the broker-dealers that had a valid FOCUS Report for Q2 2022 and a valid Form Custody and Form BD for Q2 2022. Total Assets are estimated by Total Assets (allowable and non-allowable) from Part II/IIA of the FOCUS filings (Form X–17A–5 Part II/IIA) from Q4 2021 and correspond to balance sheet total assets for the broker-dealer. The numbers of public and omnibus accounts are from FOCUS Schedule I from Q4 2021. Broker-dealer registration as an investment adviser is from Form Custody from Q2 2022 and includes broker-dealers that are registered as an investment adviser with the Commission or with a state. Broker-dealers carrying customer accounts and non-customer accounts is identified from Form Custody from Q2 2022. Average number of other broker-dealer carrying accounts on a fully disclosed or omnibus basis is the average number of other broker-dealers for which a broker-dealer carrying non-customer accounts holds accounts for and it is determined from Form Custody from Q2 2022. Retail brokers are identified based on retail sales activity from Form BR in Q2 2022, which categorizes retail activity broadly (by marking the ''sales'' box) or narrowly (by marking the ''retail'' or ''institutional'' boxes as types of sales activity). We use the broad definition of sales as we believe that many firms will just mark ''sales'' if they have both retail and institutional activity. However, we note that this may capture some broker-dealers that do not have retail activity, although we are unable to estimate how often it does so.

A small number of broker-dealers with more than 1 billion dollars in revenue account for the majority of broker-dealer assets, revenue, and expenses. Table 20 shows statistics on total assets, total revenues, total expenses, and net income based on broker-dealer asset size. The top 23 brokers, each with assets over $50 billion, have more than 3.8 trillion dollars in assets out of a total of 5.4 trillion dollars across all broker-dealers. The top 142 brokers account for the majority of revenue, earning over 71 billion dollars in Q2 2022 out of total of 97 billion dollars for all broker-dealers. Similarly, the top 142 broker-dealers accounted for the majority of expenses and net income.

TABLE 20—ASSETS, REVENUE AND EXPENSES OF BROKER-DEALERS BY ASSET SIZE

Variable	Statistic	Size of broker-dealer (total assets)						
		>50bn	1bn–50bn	500mn–1bn	100mn–500mn	10mn–100mn	1mn–10mn	<1mn
Total Number of Broker-Dealers		23	119	30	136	523	1,054	1,613
Total Assets ($1,000s).	Mean	$168,631,851	$12,226,934	$737,161	$207,753	$34,340	$3,580	$299
	Median	$85,750,282	$6,628,584	$737,598	$181,812	$25,645	$2,757	$207
	Total	$3,878,532,570	$1,455,005,108	$22,114,818	$28,254,392	$17,959,877	$3,773,694	$481,530
Total Revenue ($1,000s).	Mean	$1,495,923	$315,344	$84,500	$76,247	$17,310	$2,622	$378
	Median	$841,321	$81,517	$25,232	$30,703	$7,638	$1,396	$99
	Total	$34,406,232	$37,525,938	$2,535,011	$10,369,565	$9,036,076	$2,695,264	$508,546
Total Expenses ($1,000s).	Mean	$1,263,904	$283,825	$75,088	$66,749	$15,760	$2,349	$293
	Median	$973,919	$67,638	$22,577	$25,153	$6,213	$1,064	$78
	Total	$29,069,788	$33,775,125	$2,252,648	$9,077,875	$8,242,340	$2,473,435	$470,898
Net Income ($1,000s).	Mean	$219,406	$30,564	$12,941	$9,243	$1,470	$206	$24
	Median	$33,372	$5,377	$4,553	$3,032	$417	$29	−$6
	Total	$5,046,337	$3,637,137	$388,236	$1,257,046	$769,031	$217,453	$37,856

This table estimates average, median and total values for broker-dealer assets, total revenue, total expenses, and net income broken out into groups based on their total assets. Number of Broker-dealers is based on the broker-dealers that had a valid FOCUS Report for Q2 2022. Statistics for Total Assets (allowable and non-allowable), Total Revenue, Total Expenses, and Net Income (after Federal income taxes) are computed from the corresponding items in Part II and Part IIA of the FOCUS filings (Form X–17A–5 Part II/IIA) from Q2 2022.

From the perspective of the number of individual customer accounts, the broker-dealer market appears to be somewhat concentrated, with the top four brokers handling about 106 million accounts, equal to 44% of the industry, while the top eight firms have about 159 million accounts, or 66% of the industry. From the perspective of total assets, the level of concentration is slighter lower, with the top four brokerages having a total of around $2.1 trillion, equal to 39% of all assets held by broker-dealers, and the top eight firms about $2.8 trillion, or 52% of total industry assets. The broker-dealer industry looks less concentrated from the perspective of revenue, with the top four firms earning more than $18 billion, or 19% of the market, and the top eight firms earning $28 billion, or 29% of total industry revenues.

TABLE 21—BROKER DEALER MARKET CONCENTRATION—ASSETS, REVENUES, AND CUSTOMER ACCOUNTS

	Total assets (1,000s)	Total revenue (1,000s)	Customer accounts
4-firm total	$2,112,685,000	$18,039,203	106,463,445
8-firm total	$2,834,007,000	$28,402,354	158,609,487
All broker dealers	$5,406,121,988	$97,076,632	240,153,894
4-firm concentration	39.08%	18.58%	44.33%

TABLE 21—BROKER DEALER MARKET CONCENTRATION—ASSETS, REVENUES, AND CUSTOMER ACCOUNTS—Continued

	Total assets (1,000s)	Total revenue (1,000s)	Customer accounts
8-firm concentration	52.42%	29.26%	66.04%

This table uses FOCUS data analyzed in the previous table to calculate the market share of broker dealers based on firm total assets, total revenue, and customer accounts. The sum of the top four and eight firms for each of these variables is compared to the sum of all broker dealers for each of these three variables (assets, revenue, total accounts) that submitted a Form FOCUS PART II for Q2 2022. Total accounts are from FOCUS Report Schedule I for Q4–2021.

There is significant variation in the sources of broker-dealer revenue. Table 22 reports sources of broker-dealer revenue along with the revenue as a percentage of the broker-dealer's total revenue in Q1 2022. A broker-dealer reports a source of revenue on its supplemental statement of income (SSOI) if it is more than 5% of its total revenue. Larger broker-dealers tend to have more diversified sources of revenue than smaller broker-dealers, with the majority of broker-dealers with 1 billion or more in assets reporting earning revenue in a number of categories. Smaller broker-dealers appear to earn more of their revenue from a limited number of sources, with some broker-dealers with under 10 million dollars in assets on average earning more than 50% of their revenue from one source. Larger broker-dealers appear to earn more money from fees and interest, rebate, and dividend income. Smaller broker-dealers appear to earn more money from fees and commissions and other revenue sources.

TABLE 22—SOURCES OF BROKER-DEALER REVENUE AS A PERCENTAGE OF BROKER-DEALER TOTAL REVENUE BY ASSET SIZE

Revenue source	Statistic	Size of Broker-Dealer (Total Assets)						
		>50bn	1bn–50bn	500mn–1bn	100mn–500mn	10mn–100mn	1mn–10mn	<1mn
Total Broker-Dealers Reporting Revenue		21	100	27	127	511	1,042	1,588
Total Commissions	Count	18	69	21	86	299	518	428
	Mean	10.75%	4.28%	26.47%	27.05%	30.03%	29.40%	26.48%
Revenue from Sale of Investment Company Shares.	Count	11	33	6	54	166	305	375
	Mean	0.79%	3.53%	0.40%	6.97%	6.41%	6.39%	13.80%
Total Revenue From Sale of Insurance Based Products.	Count	9	34	5	44	145	278	320
	Mean	0.22%	3.08%	7.65%	17.10%	24.81%	22.93%	30.67%
Total Net Gains or Losses on Principal Trading.	Count	18	80	19	66	201	224	86
	Mean	4.40%	7.81%	16.42%	3.76%	20.16%	29.47%	50.26%
Capital Gains (Losses on Firm Investments).	Count	8	42	11	43	123	189	141
	Mean	−3.10%	−3.41%	14.38%	−7.26%	−4.97%	19.70%	5.34%
Total Interest/Rebate/Dividend Income.	Count	21	90	22	109	370	604	520
	Mean	43.20%	31.27%	14.99%	5.42%	4.54%	2.68%	14.05%
Total Revenue From Underwritings and Selling Group Participation.	Count	17	65	12	62	187	272	231
	Mean	9.49%	10.67%	14.94%	18.03%	37.33%	39.07%	46.40%
Total Fees Earned	Count	19	82	24	114	434	812	897
	Mean	32.01%	37.00%	42.37%	58.92%	52.46%	56.79%	69.35%
Other Revenue	Count	17	75	18	85	307	513	469
	Mean	3.37%	1.20%	2.88%	8.96%	7.47%	16.93%	30.82%

This table estimates the number of broker-dealers reporting different sources of revenue and the average percentage of the reported revenue source as a percentage of broker-dealer total revenue for Q2 2022 broken out into groups based on the broker-dealer's total assets. The different sources of revenue and total revenue are reported by each broker-dealer during Q2 2022 in their FINRA Supplemental Statement of Income Form (Form SSOI). Form SSOI does not require a broker-dealer to report a revenue or expense section source if the revenue or expenses for that section is less than the greater of $5,000 or 5% of the broker-dealer's total revenue or total expenses, as applicable. Total Assets are estimated by Total Assets (allowable and non-allowable) from Part II of the FOCUS filings (Form X–17A–5 Part II) from Q2 2022 and correspond to balance sheet total assets for the broker-dealer.

Retail brokers compete for customers by providing a range of services that assist their clients in transacting in securities including stocks, bonds, mutual funds, ETFs, options, futures, and crypto asset securities. Retail broker services can broadly be divided into ''discount brokers'' and ''full-service'' brokers. Discount brokers typically provide commission-free trading for online purchases of stocks and ETFs, but often charge fees for purchases of other securities, such as mutual funds, options, and futures. Some discount brokers' affiliates manage proprietary mutual funds and ETFs, which earn them management fees paid by the investors that purchase these funds. Compared to discount brokers, ''full-service'' brokers charge higher commissions that may include compensations for other services, such as investment research and personalized financial guidance.

Some brokers seek to differentiate themselves from other broker-dealers by providing increased access to crypto asset securities futures, forex, or fractional share trading. Brokers also distinguish themselves by the accessibility and functionality of their trading platform, which can be geared towards less experienced or more sophisticated investors. Discount retail brokers can also differentiate themselves by providing more extensive customer service as well as tools for research and education on financial markets. Full-service brokers compete by developing a personalized broker-customer relationship and providing guidance based on the detailed knowledge of the customer's financial goals.

Broker-dealers may incur costs [532] or earn rebates in seeking to fill their

[532] Some exchanges pay rebates to orders that either provide or remove liquidity from their limit

customers' orders. These costs and rebates may be passed on to customers in whole or in part. Some of these costs are indirect: an illiquid or unlisted security may require the broker to search for liquidity either by attempting multiple routings to find a counterparty, or by contacting broker-dealers that may formally (in association with an ATS that specializes in unlisted securities) or informally make markets in unlisted or hard to trade securities. For some unlisted securities, there may be no market maker expected to continually provide two-sided quotes.

C. Economic Effects and Effects on Efficiency, Competition, and Capital Formation

The Commission preliminarily believes that the proposed requirements with respect to introducing brokers could result in better execution quality for retail customer orders to the extent that the proposal leads to changes in broker-dealers' order handling practices. Furthermore, the proposal would enable the Commission to exercise additional enforcement capabilities [533] that the Commission believes would enhance investor protection and improve specific deterrence.[534] The Commission also believes that the documentation requirement with respect to conflicted transactions could help enhance regulatory oversight, as well as promote broker-dealer compliance, and thus, improve investor protection to the extent that the documented information includes information or data that is not currently documented nor available through public or regulatory data sources. However, the Commission lacks detailed data on broker-dealers' current order handling practices and documentation practices that would allow it to predict the extent of changes as a result of this proposal.[535] The Commission therefore cannot ascertain the extent to which these benefits would be realized, as discussed below.

The Commission preliminarily believes that the proposal would result in costs associated with reviewing, updating, and establishing policies and procedures, and to the extent that the proposal leads to changes in broker-dealers' order handling practices, could result in costs associated with implementing changes to order handling practices according to the updated policies and procedures. The proposed requirements for broker-dealers that engage in conflicted transactions could result in further changes to order handling practices, but the extent of those changes is unknown. Due to the diversity of broker-dealer business models and operations and the lack of quantifiable data on how practices vary across broker-dealers, the Commission cannot reasonably estimate how many of these broker-dealers would choose to de-conflict [536] to avoid the costs associated with the proposed requirements that apply solely to conflicted transactions.

The Commission preliminarily believes that the proposal could promote competition in the market for trading services (*e.g.,* exchanges, ATSs, non-ATS trading venues) and also in the market for market access. However, the Commission believes that the proposal could have mixed effects on competition in the market for broker-dealer services. While it could promote competition among broker-dealers, especially on the basis of execution quality, it could also result in higher barriers to entry and potential exit of small broker-dealers.

The Commission assesses the economic effects of the proposed amendments in NMS stocks relative to a regulatory baseline in NMS stocks that includes the implementation of the MDI Rules.[537] Furthermore, the Commission's analysis reflects the Commission's assessment of the anticipated economic effects, including potentially countervailing or confounding economic effects from the MDI Rules in NMS stocks.[538] However, given that the MDI Rules have not yet been implemented, they have not affected market practice and therefore data that would be required for a comprehensive quantitative analysis of the economic effects in NMS stocks that includes the effects of the MDI Rules is not available. It is possible that the economic effects in NMS stocks relative to the baseline could be different once the MDI Rules are implemented.

1. Benefits

The Commission preliminarily believes the proposal, which incorporates and goes beyond the existing best execution regulatory regime set forth by FINRA and MSRB, could promote investor protection (*e.g.,* better execution quality for retail customer orders) by facilitating regulatory oversight and enforcement.[539] The Commission believes that benefits could result from, among other things, the requirements with respect to introducing brokers, the documentation requirements for conflicted transactions, and additional enforcement capabilities of the Commission.

The Commission preliminarily believes that the proposal would enhance investor protection and improve retail customer order execution quality to the extent that the proposal improves broker-dealers' order handling practices. Specifically, broker-dealers could improve their customer order handling practices, resulting from documentation, updates and reviews of both existing and the best execution policies and procedures that would be required under the proposal including the reductions in conflicts of interest when handling retail customer orders. The Commission also believes the proposal would enhance investor protection by enabling the Commission to exercise additional enforcement capabilities and improving specific deterrence through the ability to bring

order books. Some trading venues charge fees to one or both counterparties to the trade.

[533] This full complement of enforcement capabilities is not available to the Commission to enforce FINRA rules.

[534] *See also infra* section V.C.1.

[535] Considering broker-dealers are diverse in business models and practices, the Commission lacks quantifiable data that summarizes how order handling data are currently documented, which might serve as a baseline in assessing the effects of the proposed rule. While CAT includes routing data for NMS securities, no similar database exists for fixed income or other assets covered by the proposed rules. Although the Commission could discuss current routing practices through an analysis of CAT data, it would not capture the information set that a broker-dealer evaluated in making its routing decisions, such as what pricing information it had when it made the routing choice, what venues were considered for the order, or why those venues were considered for the order. The Commission also has no information regarding the broker-dealer's assessment as to how the specific customer and order characteristics affected its decision to handle a customer order in a certain way. Based on its experience, the Commission believes that some larger broker-dealers already maintain documentation on their transactions that exceeds what would be required under the proposed rules, but the Commission does not know the extent to which other broker-dealers also maintain such documentation. Consequently, some broker-dealers would incur fewer costs (and their compliance would result in fewer benefits) than others.

[536] To de-conflict, a broker-dealer might need to deal with the treatment of exchange rebates, payment for order flow, or the nature of its executing brokers' business (*i.e.,* principal versus agency capacity), among other factors.

[537] *See supra* section V.B.3.(a).d.

[538] *See id.* for a discussion of the Commission's anticipated economic effects of the MDI Rules as stated in the MDI Adopting Release.

[539] *See* the discussion of enforcement mechanisms in *supra* section V.B.1.(a). In enforcement situations limited to violations of proposed Regulation Best Execution, the Commission would gain the ability to (i) obtain civil money penalties against defendants in injunctive actions; (ii) order respondents to cease-and-desist and obtain related relief and sanctions; and (iii) in situations limited to violations of proposed Regulation Best Execution involving broker-dealers and associated persons that would not potentially be subject to MSRB best execution rules, obtain relief available under Sections 15(b)(4) and (6).

injunctive actions for violations of this rule, issue cease-and-desist proceedings for allegations of violations of this rule, and, among other things, order remedial actions and sanctions against a broader group of registered persons pursuant to Exchange Act Section 15(b)(4) for willful violations of this rule. Furthermore, improvements in investor protection could result from increased documentation requirements for conflicted transactions, particularly in fixed income and thinly traded non-NMS stock equity securities. The extent of this improvement depends on whether the documented information include information or data that is neither currently documented nor available through public or regulatory data sources. The proposed documentation requirement would help facilitate the Commission's and SRO's enforcement and examinations, as well as promote broker-dealer compliance, and thus, result in better investor protection.

The Commission preliminarily believes the proposal could lead to changes in order handling practices, and in turn, improve the execution quality of retail customer orders, through four mechanisms. First, the proposal would require that introducing brokers that route their orders to executing brokers compare that broker's execution quality to what might have been received from competing executing brokers.[540] The Commission believes that some broker-dealers that currently rely on executing brokers already compare their executing broker's execution quality to the execution quality of competing executing brokers, so these broker-dealers are unlikely to be affected by this element of the proposal. Introducing brokers that do not currently implement rigorous comparison of executing brokers are expected to adjust their routing practices in response to this newly required analysis, or justify in their policies and procedures how they fulfill their best execution duties in light of these analyses. Because FINRA's and MSRB's current policies and procedures requirements do not require this level of detail, the Commission cannot ascertain how many brokers already conduct such a comparison with alternative executing brokers and how many would need to make adjustments. However, any such adjustments could improve the execution quality that retail customers receive for their orders.

Second, the Commission preliminarily believes that the proposal's heightened standards for conflicted transactions could lead to improved prices for retail customers.[541] Under the proposal, broker-dealers that handle retail customer orders and that choose to accept PFOF, to participate in transactions on a principal basis, or to route to affiliated broker-dealers that execute orders would be subject to heightened standards. In response to this proposed requirement, the Commission believes that some broker-dealers that route to executing broker dealers that engage in conflicted transactions could seek to remove such conflicts, for example by no longer accepting payment for order flow or selecting executing brokers that do not execute on a principal basis.[542] The Commission also believes that executing brokers (*e.g.,* wholesalers) in NMS stocks and options could adjust their order handling practices under the proposal in anticipation of increased execution quality analysis by retail broker-dealers, from whom they receive order flow. These executing brokers in NMS stocks and options that routinely pay for retail order flow and/or engage with it on a principal basis could adjust their order handling practices to access additional venues to seek midpoint liquidity, additional price improvement, or offer more price improvement to the orders routed by those retail broker-dealers.[543] Although the Commission cannot quantify the degree of reduction in conflicted transactions that would occur under the proposal because it cannot predict how individual broker-dealers would adjust their business models to comply with the proposal, the Commission preliminarily believes that any resulting reduction in conflicted transactions could improve the prices retail customers realize for their transactions. That said, the Commission acknowledges that some retail customers could pay more for their transactions when in reducing its conflicted transactions, a broker-dealer changes order handling practices to route to destinations, which may not always provide the same price improvement that was previously realized for conflicted transactions.

Third, the Commission preliminarily believes the proposal could result in better execution quality for retail customer orders to the extent that the proposal leads to changes in broker-dealers' order handling practices. Compared to the FINRA and MSRB rules, the Commission believes that the proposal would require greater specificity in the policies and procedures with respect to best execution. Upon reviewing its existing policies and procedures, a broker-dealer could be required to update its policies and procedures to comply with the proposed requirements. To the extent that updated policies and procedures would require corresponding changes in order handling practices, the broker-dealer would adjust its order handling practices for retail customer orders. The Commission acknowledges that many broker-dealers currently may have order handling practices that are consistent with the requirements under the proposed Rule 1101(a).[544] In this case, the Commission does not expect the order handling practices of these broker-dealers to change.[545] On the other hand, many broker-dealers could be required to adjust order handling practices, including conducting more detailed reviews of their practices, under the proposal. However, the Commission lacks detailed information on broker-dealers' current policies and procedures with respect to best execution standards and order handling practices to determine how many broker-dealers would be required to change their order handling practices under the proposal.[546]

Fourth, the Commission preliminarily believes that the proposal could help ensure the effectiveness of broker-dealers' best execution policies and procedures, and thus, result in better execution quality for retail customer orders to the extent that the requirements under the proposed Rule 1102 enhances broker-dealers' current review process with respect to order

[540] While FINRA Rule 5310.09(c) allows an introducing broker, instead of conducting its own regular and rigorous review, to review the methodology and results of its executing broker's regular and rigorous review of its execution quality on a quarterly basis, it does not specifically require the introducing broker to compare the execution quality of its executing broker to what it would have received from other executing brokers. *See supra* section V.B.2.(a) for a discussion on introducing broker best execution review requirements. *See also* FINRA Rule 5310.09(c), Regular and Rigorous Review of Execution Quality.

[541] *See supra* section IV.C about the discussion for the requirements involving conflicted transactions for retail orders and *supra* sections V.C.2.a and V.C.2.b.i describing the conflicts of interest in retail order handling.

[542] *See infra* section V.C.2 for the discussion about costs of broker-dealer efforts to de-conflict versus comply with requirements of conflicted transactions.

[543] *See infra* section V.C.2.b for the discussion of wholesaler costs with respect to conflicted transactions.

[544] *See infra* section IX for proposed Rule 1101(a).

[545] As previously discussed in *supra* section IV.B, the factors that must be included in a broker-dealer's policies and procedures under proposed Rule 1101(a) are generally consistent with the factors that FINRA and the MSRB have identified as relevant to a broker-dealer's best execution determinations.

[546] *See supra* note 535 for the discussion about data availability on broker-dealers' current order handling practices.

handling practices. The Commission acknowledges that many broker-dealers currently may conduct reviews that are consistent with the requirements under the proposed Rule 1102, which includes a specific requirement to review order handling practices. In this case, the Commission does not expect the order handling practices of these broker-dealers to change, and there would thus be no change in execution quality for their retail customer orders.

The Commission does not believe that the order handling practices or execution quality of institutional customer orders would be significantly impacted by the proposal. The Commission understands that institutional customers often utilize multiple broker-dealers in the handling of their orders, which lowers the costs of switching brokers if they exhibit poor execution quality. Furthermore, in general, the Commission believes that there is less conflict in institutional customer order handling because institutional customers have better access (compared to retail customers) to data, which they utilize to monitor and analyze the execution quality that various broker-dealers offer.[547] The Commission believes that (compared to retail brokers) institutional monitoring and lower switching costs encourage broker-dealers to provide increased execution quality in order to compete to attract institutional orders. Thus, the Commission does not expect that broker-dealers would make significant adjustments to their order handling practices for institutional customer orders under the proposal.

(a) NMS Stocks and Options

The Commission preliminarily believes the proposed documentation requirement with respect to conflicted transactions could result in benefits in the NMS stock and options markets. However, a significant amount of information that would help reconstruct market conditions (*e.g.,* NBBO, size at NBBO, trade prices, volume, order level information in CAT) around the time of conflicted transactions is currently available through public and regulatory data sources (*e.g.,* SIP, CAT, OPRA), so those benefits may be small. To the extent that the documented information includes information that is not currently documented nor available through public or regulatory data sources , the proposed documentation requirement would help promote broker-dealer compliance and facilitate enforcement and examination, and thus, result in better investor protection. Furthermore, the Commission believes that any additional documentation could enhance internal review process (*e.g.,* a review by the best execution committee). Documented information could inform broker-dealers in adjusting order handling procedures with respect to conflicted transactions, which would result in better execution quality.

The Commission preliminarily believes that retail customer execution prices in NMS stocks and options could improve to the extent that there is a trade-off between the amount of PFOF a retail broker receives and the price improvement, which wholesalers provide to its customers' orders.[548] Under the proposal, retail broker-dealers accepting PFOF would be subject to the proposed Rule 1101(b), which would require a broker-dealer to establish additional policies and procedures and retain certain documentation with respect to conflicted transactions.[549] The proposed Rule 1101(b) would also require them to document any arrangement, whether written or oral, concerning PFOF, including the parties to the arrangement, all qualitative and quantitative terms concerning the arrangement, and the date and terms of any changes to the arrangement. Additionally, broker-dealers that accept PFOF would not qualify as introducing brokers under the proposed Rule 1101(d), which otherwise would permit these broker-dealers to rely on their executing broker's compliance with the proposed Rules 1101(a), (b), and (c).[550] Some broker-dealers, particularly those with business models that do not rely extensively on payment for retail order flow, could elect to pass any PFOF on to customers rather than complying with provisions of the proposal that apply only to broker-dealers that do not qualify for the relief provided to introducing brokers.[551]

The requirement for a broker-dealer to engage in additional due diligence if it engages in a conflicted transaction for or with a retail customer order could improve execution quality to the extent the requirement promotes competition between broker-dealers to provide best execution to retail broker-dealers that continue to accept PFOF. Because the proposal would require these retail broker-dealers to document their compliance with the best execution standard for conflicted transactions, including all efforts to enforce their best execution policies and procedures for conflicted transactions and the basis and information relied on for their determinations that such conflicted transactions would comply with the best execution standard, broker-dealers that pay for order flow could be incentivized to both improve the execution prices of orders routed to them for execution and to provide more information to broker-dealers routing to them, allowing those broker-dealers to improve their customers' execution prices and more easily comply with the provisions of the proposal that require more extensive documentation of their best execution standards.

To the extent broker-dealers that receive PFOF change their order handling practices to comply with the heightened standards in the proposal, these changes are likely to reduce the profitability of their business model because the orders they are routing may be more likely to be executed on venues that charge for providing liquidity, or do not provide compensation for order flow, or that provide compensation that is less than what these broker-dealers could realize by internalizing order flow, or routing elsewhere under existing procedures. Faced with potentially lower revenues from changing order handling procedures, broker-dealers that pay to receive order flow could choose to make few or no changes to their routing practices and could instead focus on maintaining arrangements with specific broker-dealers[552] (from whom they are already

[547] The Commission understands that institutional customers also utilize third-party vendors to conduct transaction cost analysis and evaluate the performance of their broker-dealers based on those reports. *See also supra* section V.B.3.e) for a discussion about institutional customer order handling practices.

[548] *See supra* section V.B.3.(a).b.

[549] *See supra* section IV.C.

[550] Under proposed Rule 1101(d), principal trades by an executing broker with the introducing broker's customer to fill fractional share orders in NMS stocks would be considered to be handled on an agency basis, and thus, allow it to rely on its executing broker's compliance with the proposed Rules 1101(a), (b), and (c). *See supra* section IV.E. for a discussion on proposed Rule 1101(d) and *supra* section V.B.3.(a).i.d for additional discussion on fractional share orders in NMS stocks.

[551] As explained in *supra* note 183, when all payment for order flow for a customer order from a particular market is passed through to the customer and the broker-dealer retains no part of the payment for order flow associated with that customer order, the broker-dealer would not be engaging in a conflicted transaction under proposed Rule 1101(b) with respect to that customer order. *See also infra* section V.C.2.a for the discussion about the costs of broker-dealer efforts to de-conflict versus comply with requirements of conflicted transactions.

[552] *See infra* section V.C.2.a for the discussion of how broker-dealers who route to other broker-dealers for execution may choose to comply with the proposal. The Commission recognizes that it is possible under the proposal that these broker dealers would reduce their payments for order flow because broker-dealers who route orders to them may choose to stop accepting PFOF in order to meet the definition of ''introducing broker'' in proposed Rule 1101(d). However, the Commission

Continued

receiving orders or could determine that their current PFOF arrangement meets the requirements under the proposal) to meet their obligations under the proposal without significant changes. Some broker-dealers that make payments for order flow could compete on the basis of providing service and information to their broker-dealer customers that help those broker-dealers satisfy their own requirements under the proposal, such as providing additional information on routing practices and data on how they provide the best execution possible. Competition between these broker-dealers could foster innovation that improves prices received by retail customer orders executed under PFOF agreements.

With respect to listed options, the Commission preliminarily believes that retail order execution quality could improve to the extent that the proposal results in broker-dealers adjusting their customer order handling practices consistent with the heightened standards required of conflicted transactions.[553] Some broker-dealers that handle retail options orders and engage in conflicted transactions, such as executing orders on a principal basis or routing to affiliates, may adjust their routing practices to access additional venues or consider additional opportunities for price improvement. This could be driven both by the requirements of proposed Rule 1101(b) to consider additional opportunities for price improvement and in anticipation of increased execution quality analysis by other broker-dealers, for whom they route orders. For example, these broker-dealers may adjust their routing practices to further consider the possibilities of exposing a smaller customer order of 5 contracts or less for price improvement opportunities in auctions or look for liquidity within the NBBO spread instead of routing the customer order to a venue that would allow a market maker to internalize 100% of a given customer order with 5 contracts or less on the limit order book at the best displayed prices without competition from other liquidity providers.[554] Additionally, broker-dealers may route more customer orders to price improvement auctions that are more competitive rather than ones that provide the broker-dealer a better chance at internalizing a larger share of the customers' orders. Furthermore, with regards to non-marketable limit orders, broker-dealers may consider routing more orders to exchanges that have higher likelihood of executions in the form of fill rates and average shorter time to execution rather than to the exchanges that pay the highest liquidity rebates.

(b) Fixed Income Securities

The Commission preliminarily believes that the proposed documentation requirement with respect to conflicted transactions could facilitate regulatory oversight and enforcement and promote broker-dealer compliance with best execution standards, promoting investor protection in the fixed income securities markets. For introducing brokers that utilize trading services of executing brokers, the requirement to review and compare execution quality of various executing brokers could result in better execution quality for retail customer trades to the extent that brokers choose to change their executing brokers to those that offer better execution quality. In general, the proposal would improve execution quality to the extent that the proposal results in enhancements to broker-dealers' order handling procedures. The extent to which customer order execution quality would improve depends on how many and to what extent broker-dealers would adjust their order handling procedures as a result of this proposal. However, the Commission cannot ascertain the extent to which this benefit would be realized because the Commission lacks data on how many broker-dealers would change order handling procedures in response to the proposal.

For very illiquid fixed income securities, execution quality improvement resulting from changes in order handling procedures with respect to conflicted transactions could be limited. Because a broker-dealer transacting in illiquid fixed income securities will only have a few potential counterparties, exposing retail orders to a greater number of trading venues (*e.g.,* through RFQs) may not result in more responses nor more competitive responses. On the other end of the spectrum, the Commission expects little impact on the execution quality of on-the-run U.S. Treasury securities because transaction costs for such securities are already low. The impact is most likely to materialize in fixed income securities that have moderate liquidity, as discussed further below.

The Commission preliminarily believes that the documentation requirement for conflicted transactions under the proposal could facilitate regulatory oversight and promote broker-dealer compliance with best execution standards, promoting investor protection in the fixed income securities markets.[555] To the extent that broker-dealers do not currently document efforts to obtain the most favorable price in conflicted transactions, these broker-dealers would be required to document such information. Compared to the markets for equities and listed options where quotes and trades are widely disseminated, in most fixed income markets only transactions are reported and disseminated publicly. The extent to which the proposed documentation requirement would help facilitate regulatory oversight depends on the types of documented information. To the extent that the documented information includes information or data that is not currently documented nor available through public or regulatory data sources, such as the markets checked, internal and external quotes, and other factors (*e.g.,* trading protocols, prices, immediacy, trade size) considered for the basis of best execution, the proposed documentation requirement would help facilitate regulators' enforcement and examination of a broker-dealer for compliance, and thus, result in better investor protection. Furthermore, the Commission believes that documentation could enhance internal review process (*e.g.,* a review by best the execution committee). Documented information could inform the broker-dealer in adjusting order handling procedures with respect to conflicted transactions, which would result in better execution quality.

The Commission preliminarily believes that the execution quality of retail customer trades in fixed income securities effected by brokers that qualified for relief under the FINRA/MSRB rules by relying on their executing brokers for trading services could improve. Under the proposal, introducing brokers,[556] as defined in proposed Rule 1101(d), and carrying

preliminarily believes this would not increase the profitability of broker-dealers that currently pay to receive order flow because presumably their payments to secure order flow are less than the profits they earn to execute that order flow often in a principal capacity.

[553] *See supra* section IV.C about the discussion for the requirements involving conflicted transactions for retail orders and *supra* Sections V.C.2.a and V.C.2.b.i describing the conflicts of interest in retail order handling.

[554] *See supra* section V.B.3.(a).ii for discussion of the handling of retail orders in the options markets.

[555] FINRA members are currently required to conduct regular and rigorous review of execution quality under FINRA Rule 5310.09. However, the Commission does not know the types of information that broker-dealers document for the purpose of regular and rigorous review of execution quality under FINRA Rule 5310 and MSRB Rule G–18.

[556] These brokers are non-carrying brokers that qualified for relief under the FINRA/MSRB rules.

brokers that currently avail themselves of the relief under the FINRA/MSRB rules and hence rely on their executing brokers for retail customer trading services, would be required to review and compare the execution quality of their executing brokers with the execution quality they might have obtained from other executing brokers and adjust their routing practices accordingly.[557] To the extent that some of these brokers change their executing brokers for trading services to those that offer better execution quality, retail customer trades of the brokers would receive better execution quality.[558] Furthermore, the requirement to review and compare execution quality of executing brokers could promote competition among executing brokers, which could result in better execution quality for retail customer trades.[559]

The Commission preliminarily believes that the proposed requirements with respect to conflicted transactions could result in better execution quality for internalized trades in fixed income securities. To the extent that broker-dealers make changes to order handling procedures (upon reviewing and comparing execution quality across competing markets) and connect to additional trading venues to expose retail customer orders (*e.g.,* via RFQs and BWICs) more broadly across multiple trading venues for the purpose of internalization, the execution quality of internalized trades could improve. Sending RFQ messages more broadly across multiple trading venues may result in better execution quality for internalized trades if a broader exposure of customer order results in more competitive prices for the purpose of internalization (*i.e.,* price-matching using more competitive price). For example, exposing a customer order via RFQs on multiple trading venues could result in more competitive responses to be used as the reference price to match or improve for the purpose of internalization. However, to the extent that broker-dealers continue to engage in last-look practices in RFQs for the purpose of internalization, conducting RFQs on more trading venues may not necessarily result in more responses nor more competitive responses as discussed below.

To the extent that a broker-dealer determines, upon reviewing data, that the use of last-look in RFQs impedes attracting competitive responses, the broker-dealer could discontinue last-look practices or limit the use of last-look to meaningfully improve price in an occasion when RFQ responses are not reflective of the market. For example, a broker-dealer handling a retail customer order may participate in an RFQ by blind bidding/offering and internalize the order only if the broker-dealer is the best bid/offer in the RFQ, or otherwise give up the order to another responder with the best bid/offer. Such RFQ practice could attract more competitive responses thereby improving the execution quality of internalized trades via RFQs.[560] However, the Commission believes that this benefit is not likely to be realized. Broker-dealers would continue to use last-look in conducting RFQs for the purpose of internalization so long as such internalization practice continues to provide profit incentive for those broker-dealers.

In order to justify the continued use of last-look in fixed income securities trading, broker-dealers could provide meaningful price improvement by exercising last-look in RFQs for the purpose of internalization, which would result in better execution quality. To the extent that a broker-dealer's review or assessment reveals that the use of last-look in RFQs impedes attracting competitive responses, the broker-dealer could respond by providing price improvements to the best response bids/offers to compensate for receiving less competitive bids/offers in RFQs as compared to, for instance, in a blind auction as described above.

Broker-dealers' assessment of last-look practices in fixed income securities trading may not affect execution quality for internalized trades via RFQs. Unless a broker-dealer's review or assessment shows a negative impact of last-look practices on the execution quality of internalized trades, the Commission does not expect the broker-dealer to alter nor discontinue last-look practices in RFQs for the purpose of internalization. If the broker-dealer makes no changes, the rule would produce no improvement in the execution quality for internalized trades via RFQs. Specifically, in exercising last-look, a broker-dealer that currently applies trade desk spreads (in the form of markdown/markup) to external bids/offers but not to internal bids/offers, which results in more favorable comparisons for the internal bids/offers, to win RFQs, may continue to apply such practice so long as the execution quality of external trades would be worse than that of internalized trades.

The Commission preliminarily believes that the proposed requirements with respect to conflicted transactions could result in better execution quality for riskless principal trades in fixed income securities. To the extent that broker-dealers make changes to order handling procedures (upon reviewing and comparing execution quality across competing markets) and connect to additional trading venues in order to search or expose retail customer orders more broadly across multiple trading venues, the execution quality of riskless principal trades for retail customers could improve. Broker-dealers could increase the use of RFQs across multiple trading venues to expose retail customer orders in order to obtain competitive prices. Furthermore, as another way to expose retail customer orders more broadly, broker-dealers could represent retail customer orders on limit order systems across multiple trading venues. For example, in case of a retail customer sell order, instead of conducting an RFQ on the bid side of the market, a broker-dealer could represent the customer order by placing a limit order on the offer side of the market for certain fixed income securities (*e.g.,* liquid on-the-run Treasury securities, liquid corporate debt securities) should the broker-dealer determine that the characteristics of the customer order are consistent with this type of order handling (*e.g.,* the customer is not demanding immediacy of execution). This would lower transaction costs of the retail customer because this customer would not pay the bid ask spread if the order is executed at the offer price (compared to executing at the bid price obtained via an RFQ).

In response to the proposed requirements with respect to conflicted transactions, retail broker-dealers could stop executing retail customer fixed income securities orders on a riskless principal basis. To the extent that it is

[557] Carrying brokers that qualified for relief under the FINRA/MSRB rules would not have relief from the requirements of the proposal unless these brokers restructure their business to become non-carrying brokers. Under the proposed rule 1101(c) with respect to regular review of execution quality, these carrying brokers would be required to review and compare the execution quality of their executing brokers with the execution quality they might have obtained from other executing brokers, and adjust their order handling and routing practices accordingly.

[558] The Commission acknowledges that some brokers could already be reviewing and comparing the execution quality, of which various executing brokers offer, in the selection of their executing brokers.

[559] Executing brokers would compete on, among other things, fees, markups/markdowns, and the quality of trading services.

[560] *See infra* section V.C.2.b for the discussion about how the proposal might adversely impact market liquidity. The Commission preliminarily believes that this benefit in the execution quality improvement for retail customer trades may be reduced to the extent that eliminating last-look practices in RFQ for the purpose of internalization adversely affects the principal trading activities of inventory carrying broker-dealers.

more cost effective for broker-dealers to handle retail customer orders on an agency basis rather than a riskless principal basis under the proposal, broker-dealers could change business practices to handle retail customer orders on agency basis and not incur the costs associated with the requirements under conflicted transactions (*e.g.,* trading venue subscription fees and implementation costs associated with changing order handling procedures).[561] In such case, execution quality may not change. In particular, a broker-dealer, whose primary business is retail self-directed trading conducted on riskless principal basis, could change its business practices to handle retail self-directed trading on agency basis to the extent that conducting its self-directed trading business on an agency basis would be less costly compared to doing so on a riskless principal basis.

(c) Non-NMS Stock Equity Securities

There are three possible channels through which benefits of the proposal to the non-NMS stock equities market may derive: (1) requirements with respect to conflicted transactions; (2) the regular review of execution quality of executing brokers used by introducing brokers; and (3) some broker-dealers implementing policies and procedures to comply with this proposal, which may offer improved execution quality to transactions effected by these broker-dealers.[562]

The Commission preliminarily believes that the documentation requirement with respect to conflicted transactions could help facilitate regulatory oversight and enforcement, as well as promote broker-dealer compliance, and thus, enhance investor protection in the non-NMS stock equity securities market. To the extent that the documented information includes additional information beyond what broker-dealers currently record, and which may not be currently available through public or regulatory data sources (*e.g.,* CAT), such as non-firm quotes on trading venues and factors (*e.g.,* immediacy, trade size) considered for the basis of best execution, the proposed documentation requirement would help facilitate Commission and SRO enforcement and examinations, and thus, result in better investor protection. Similarly, the Commission believes that documentation could enhance the internal review process (*e.g.,* a review by best execution committee). Documented information could inform broker-dealers in adjusting order handling procedures with respect to conflicted transactions, which could result in better execution quality.

The proposal would require additional policies and procedures, beyond FINRA Rule 5310 and related FINRA notices[563] that currently address non-NMS stock equities transactions, when engaging in transactions that are executed in a principal capacity, routed to an affiliate for execution, or involve PFOF. Conflicted transactions are ubiquitous in the non-NMS stock equities market. These enhanced policies and procedures may induce broker-dealers to more carefully consider and change routing behavior in handling customer orders. While this proposal does not mandate changes, the changes could arise as broker-dealers are required to maintain policies and procedures that dictate the handling of conflicted transactions. In some cases, this could induce broker-dealers to reduce or eliminate conflicted transactions they participate in due to heightened costs of procedures, such as the documentation requirement. While in other cases, there could be no such inducement of broker-dealers to change order routing behavior. Trading in non-NMS stock equity securities is heavily concentrated in two platforms; however, there are other sources of liquidity beyond those two. This proposal could induce broker-dealers to connect to additional liquidity sources due to the requirements of conflicted transactions of this proposal. To the extent that broker-dealers' enhanced policies and procedures determine that they should connect to additional liquidity sources for conflicted transactions, customers' transaction costs could be lowered through better prices found on the additional sources. Additionally, to the extent that broker-dealers are either no longer routing to wholesalers or internalizing orders based on policies and procedures that resulted in different routing decisions, customer orders could experience price improvement opportunities, as their orders would be exposed to external competition.

Introducing brokers, as defined in proposed Rule 1101(d), would be required to conduct regular reviews of executing brokers they use for their retail customer transactions. This review, which differs from the quarterly review[564] required by FINRA Rule 5310 for all brokers, could cause introducing brokers to seek out additional executing brokers to develop business relationships with. These additional options, from which introducing brokers could choose to route their customer orders, could promote competition among executing brokers in the non-NMS stock equities market. This increased competition could result in better execution quality to the introducing brokers' retail customers in the form of lower transaction costs and increased fill rates for illiquid securities.

(d) Crypto Asset Securities[565]

As mentioned above in Section V.B.3.c, the Commission lacks data on broker-dealer routing behavior, the frequency of crypto asset securities trading in both non-conflicted and conflicted transactions, and many details of trading protocols and crypto asset securities trading platforms. Also, as noted in Section V.B.3.c, this market features many vertically integrated trading platforms, which makes analogous comparison to other asset markets less exact. To the extent that broker-dealers operate in a fashion similar to other asset markets,[566] the Commission preliminarily believes the proposal could drive benefits in the crypto asset securities market through three possible channels: (1) the requirements with respect to conflicted

[561] *See infra* section V.C.2.(a) for discussions about trading venue subscription fees and costs associated with making changes to order handling procedures.

[562] *See* section V.C.1 introduction for more explanation of the general benefit to execution quality that retail customers could experience. In the non-NMS stock equity securities market, the Commission believes a majority of transactions would be subject to the Conflicts of Interest provisions in proposed Rule 1101(b); however, there may be some broker-dealers who could improve execution quality while implementing policies and procedures as explained in section V.C.1.

[563] *See supra* section II.C for details on FINRA rules and notices with respect to the concept of ''best execution.''

[564] When transacting in municipal securities, broker-dealers are subject to MSRB Rule G–18. The rule requires an annual review of policies and procedures, which could take into account execution quality review. The rule in this proposal is substantively different from FINRA Rule 5310 or MSRB Rule G–18.

[565] For purposes of measuring the benefits and costs of the proposed rule on a broker-dealer's duty of best execution in the crypto market, this analysis assumes that market participants are compliant with existing applicable Commission, FINRA, and MSRB rules, including those directly addressing the duty of best execution for the handling and execution of customer orders in securities and government securities. *See supra* section III.A.3. To the extent that some entities engaged in broker-dealer activities with regard to crypto asset securities are not FINRA or Commission registered entities, they may incur additional costs to comply with existing registration obligations that are distinct from the costs associated with the proposed rule and are not discussed in this analysis. Similarly, any benefits from coming into compliance with existing registration obligations are also not discussed in this analysis. *See id.*

[566] The Commission preliminarily believes the closest market comparison may be the non-NMS stock equity securities market; though, no exact comparison to any other asset market is likely with crypto asset securities.

transactions; (2) the regular review of execution quality of executing brokers used by introducing brokers [567]; and (3) some broker-dealers implementing policies and procedures to comply with this proposal, which could offer improved execution quality to all transactions conducted by these broker-dealers.

The Commission preliminarily believes that the documentation requirement with respect to conflicted transactions could help facilitate regulatory oversight and enforcement, as well as promote broker-dealer compliance, and thus, enhance investor protection in the crypto asset securities market. To the extent that documented information includes information or data that is not currently documented nor available through public or regulatory data sources, the proposed documentation requirement would help facilitate enforcement and examination, and thus, result in better investor protection. Furthermore, the Commission believes that documentation could enhance internal review process (*e.g.,* a review by the best execution committee). Documented information could inform broker-dealers in adjusting order handling procedures with respect to conflicted transactions, which would result in better execution quality.

The proposal would also require written policies and procedures beyond those required under FINRA Rule 5310,[568] when engaging in transactions that are executed in a principal capacity, routed to an affiliate for execution, or involve PFOF. While this proposal does not mandate changes, the enhanced policies and procedures required by this proposal may induce brokers to more carefully consider and change routing behavior in handling customer orders. Specifically, as broker-dealers are directed to write and maintain policies and procedures that dictate the handling of currently conflicted transactions, they may review their existing routing behavior. In some cases, this could induce broker-dealers to reduce or eliminate conflicted transactions, in which they participate due to heightened costs of procedures, such as the documentation requirement. To the extent that broker-dealers with enhanced policies and procedures determine that they should connect to additional liquidity sources for conflicted transactions, investors' transaction costs could be lowered through better prices being found on the additional sources. Additionally, to the extent that broker-dealers are either no longer routing to wholesalers or internalizing based on policies and procedures that resulted in different routing decisions, customer orders could experience price improvement opportunities, as their orders would be exposed to external competition.

Introducing brokers,[569] as defined in the proposed Rule 1101(d), would be required to conduct regular review of executing brokers they use to for their customer transactions. This review, which differs from the quarterly review [570] required by FINRA Rule 5310 for all brokers, could cause introducing brokers to seek out additional executing brokers with whom to develop business relationships. These additional options, from which introducing brokers could choose to route their customer orders, could promote competition among executing brokers in the crypto asset securities market. This increased competition could result in better execution quality to the introducing brokers' retail customers in the form of lower transaction costs and increased fill rates for illiquid securities.

2. Costs

In order to comply with the proposal, broker-dealers would collectively incur costs to: update their policies and procedures; review and update those policies and procedures annually; conduct and document regular reviews of best execution compliance; and possibly make operational changes in response to those regular reviews. Assuming all broker-dealers will need to perform each of these activities and do not do so already, and do not have policies and procedures in place that would be consistent with the proposed rules, the Commission estimates one-time compliance costs of up to $165.4 million and annual costs of $128.9 million. To the extent that broker-dealers already have policies and procedures and practices that are consistent with the proposed rules, aggregate implementation costs would be less than these estimates, and based on the Commission's experience, the Commission preliminarily believes these estimates overstate costs broker-dealers would bear in implementing the proposed rules.[571]

The proposal would entail other costs as well, as discussed below. Where possible, the Commission has attempted to estimate these costs. Other costs are discussed qualitatively. The Commission believes it is likely these costs would be passed to broker-dealer customers, and would ultimately be borne by customers.

(a) Compliance Costs for Broker-Dealers

i. Carrying Broker-Dealers

Under the proposal, broker-dealers would fall into three groups: (1) those that qualified for relief from the FINRA Regular and Rigorous Review of Execution Quality under FINRA Rule 5310.09(c) from primary analysis requirements under FINRA/MSRB rules previously and would meet the introducing broker requirements to qualify for the proposed relief under proposed Rule 1101(d); [572] (2) those that did not qualify for relief under FINRA Rule 5310.09(c) and would not qualify for the proposed relief under proposed Rule 1101(d); and (3) those that qualified for relief under FINRA Rule 5310.09(c) previously but would not qualify for the proposed relief under proposed Rule 1101(d). The third group, which may include as many as 144 [573] broker-dealers that carry customer accounts, would be required under the

[567] The Commission understands the crypto asset securities market has several large, vertically integrated platforms. The Commission lacks the data to determine whether entities analogous to introducing brokers are prevalent in this market. However, the discussed benefits are those which the Commission believes could accrue in cases where such market structure exists.

[568] *See supra* section II.C for details on FINRA rules and notices surrounding the concept of ''best execution.''

[569] As noted in the introduction of this section, the Commission lacks data on broker-dealer activities in this market. In this instance, the Commission does not have data on the prevalence of introducing brokers in the crypto asset securities market. This discussion applies to the extent these entities operate in this market.

[570] When transacting in municipal securities, broker-dealers are compelled by MSRB Rule G–18. The rule requires an annual review of policies and procedures, which could take into account execution quality review. The rule in this proposal is substantively different from FINRA Rule 5310 or MSRB Rule G–18.

[571] The one-time costs average $47,298 per broker-dealer; ongoing costs average $36,843 per broker-dealer annually. Again, these estimates assume that all broker-dealers will need to implement new or updated policies and procedures or practices to be consistent with the proposed rules. Based on its experience, the Commission preliminarily believes that some broker-dealers may already have policies and procedures and other practices that are consistent with proposed Rule 1101. If, for example, all 3,273 of the broker-dealers that the Commission estimates would choose to not engage in conflicted transactions have policies and procedures and other practices consistent with proposed Rule 1101, the aggregate total cost of the proposal to all broker-dealers would be $38.8 million in one-time costs and $48.1 million in annual costs. Because not all broker-dealers are likely to already have policies and procedures and other practices that are consistent with proposed Rule 1101, aggregate implementation costs would be higher than these estimates. Accordingly, it is likely that actual costs would fall between these estimates and those cited above.

[572] *See supra* section II.C for the discussion about FINRA Rule 5310.09(c) and *supra* Section IV.E for the discussion about introducing broker requirements under proposed Rule 1101(d).

[573] Based on April-June 2022 FOCUS data.

proposed rule to comply with the policies and procedures and regular review provisions of proposed Rules 1101(a), (b), and (c) because these broker-dealers would not qualify for the introducing broker exemption (because they carry customer accounts). Under the proposal, a broker-dealer that qualified for relief under FINRA Rule 5310.09(c) that does not meet the definition of introducing broker under proposed Rule 1101(d) would be required to incur costs to set up their own best execution policies and procedures, and it would likely no longer be able to rely on an executing broker for its analysis of execution quality, unless the broker-dealer were to revise their business model to no longer carry customer accounts. The Commission's cost estimates below assume that all broker-dealers will implement this review under the proposal. Based on the Commission's experience, the Commission preliminarily believes that many broker-dealers in the first two groups already conduct reviews of execution quality consistent with the requirements of the proposal. Consequently, the Commission believes its cost estimates for compliance overestimate costs broker-dealers will collectively bear to implement the proposal.

ii. Conflicted Broker-Dealers

Conflicted broker-dealers may comply with the proposed requirements in a number of ways. First, they may choose to engage in more rigorous analysis of the execution quality their orders receive than is required of unconflicted broker-dealers, comparing the execution quality of multiple possible broker-dealers that they could route order flow to for execution, as well as execution quality available on other venues where liquidity is reasonably available, and regularly update routing practices based on these analyses. Based on the Commission's experience, the Commission preliminarily believes that some broker-dealers already engage in these practices. However, particularly smaller broker-dealers who continue [574] to accept PFOF from an executing broker-dealer may have previously relied on the best execution obligations of broker-dealers they route to, and under the proposal, would no longer qualify for the relief from such analyses previously provided under FINRA/MSRB rules. For these broker-dealers, performing such analyses might require engaging external consultants to provide such analyses if the broker-dealer's staff does not possess the necessary expertise or if the broker-dealer's staffing is not adequate to support the additional duties required, and might also require engaging external consultants to obtain analyses incorporating the necessary data (such as information on alternative trading system liquidity) to which they may not currently have access. The Commission's cost estimates below assumes that smaller broker-dealers (those carrying less than $100MM in total assets) will incur costs to engage external parties for this review.

The Commission preliminarily believes that due to the prevalence of exchange rebates, many of the 2,440 retail broker-dealers [575] are likely to qualify as conflicted under the proposal. The Commission is able to preliminarily estimate an upper bound on potential implementation costs from these broker-dealers by assuming that all 2,440 retail broker-dealers would remain conflicted after implementation of the proposal,[576] but the Commission preliminarily believes the implementation costs for many broker-dealers are likely to be lower than this estimate because some conflicted broker-dealers receive payments from their conflicted order flow that are less than the implementation costs they would incur under the proposed rule; consequently, the Commission preliminarily believes that some broker-dealers will choose to de-conflict to avoid incurring these costs. For purposes of its analysis, the Commission assumes that broker-dealers with less than $100MM in total assets will comply with the proposal by removing their conflicts.[577] The Commission preliminarily believes that some broker-dealers may continue to use one or more clearing broker-dealers that have previously paid to receive their order flow, and in such cases the primary cost to the broker-dealer would be the lost PFOF revenue. However, if a broker-dealer needed to change the broker-dealer it routed to, or engage the services of another intermediary to handle its order flow in order to remove conflicts, the broker-dealer would likely incur switching costs such as staff time allocated to researching and negotiating with alternative providers of services.[578]

The Commission preliminarily believes that each broker-dealer that would be required under the proposed rules to comply with provisions of the proposal applicable to conflicted broker-dealers would consider its options under the proposed rules strategically. For some firms, the costs of staffing the activities required for compliance would exceed their expected profits from conflicted transactions. The Commission expects these firms would choose to alter their business models to reduce conflicts so compliance changes necessary for conflicted transactions are not required under the proposed rules. It is possible that a consolidation of business would result: some broker-dealers may exit the market, while others would invest further and compete to serve the customers of exiting broker-dealers. Some broker-dealers may reduce conflicts identified under the proposed rules and compete for customer order flow on the basis of their less-conflicted status. To the extent that exiting broker-dealers were able to offer lower-costs than broker-dealers that either reduce conflicts or comply with provisions of the proposal required of conflicted broker-dealers, direct costs such as commissions and fees for these firms' investor customers may increase.

[574] Resolving conflicts is discussed below.

[575] Based on Q2 2022 FOCUS data.

[576] If all 2,440 broker-dealers were to implement the more rigorous requirements required for broker-dealers engaging in conflicted transactions, these broker-dealers would collectively incur $155.3MM in implementation costs averaging $63,637 per broker-dealer. The Commission also assumes each would incur $9,000 per year in costs to update order-handling procedures in response to its annual review of execution quality, for ongoing annual costs of $22.0 MM.

[577] If a broker-dealer has revenue from conflicted transactions that over time sufficiently exceeds the $24,935 in additional implementation costs the Commission estimates conflicted broker-dealers will incur and the $9,000 annual cost to update order-handling procedures, the broker-dealer is likely to choose to continue to engage in conflicted transactions since its revenue from such activities exceeds the additional implementation and ongoing costs necessary to comply while engaging in conflicted transactions. Because the majority of PFOF revenues accrue to a small number of broker-dealers, the Commission preliminarily believes that smaller broker-dealers are unlikely to receive significant PFOF revenue that would justify the additional implementation costs. For some of these broker-dealers, passing the PFOF they receive on to their customers may suffice to de-conflict. *See* note 183, *supra.*

[578] *See infra* note 581 and text for discussion of related costs the broker-dealer would likely incur to operationalize changing a routing destination.

iii. All Broker-Dealers

Broker-dealers would incur costs to update policies and procedures to reflect the proposal. They would incur other costs to regularly review the execution quality of venues or other broker-dealers to which they route customer orders. To the extent that broker-dealers already have policies and procedures that comply with the proposal, aggregate implementation costs would be less than this estimate, and based on the Commission's experience, the Commission preliminarily believes these estimates overstate costs broker-dealers would bear in implementing the proposal. Implementation costs are summarized in Table 23 below.[579]

TABLE 23—TOTAL IMPLEMENTATION COSTS

Required Policies and Procedures	Per registrant ($)			Industry-wide ($)		
		Internal labor	External	Internal labor	External	Total
BDs excluding conflicted retail (3273):						
Update policies and procedures	One time	6,462	32,240	21,150,126	105,521,520	126,671,646
Annual review and update of P&P.	Annual	2,154	8,800	7,050,042	28,802,400	35,852,442
Conduct and document review of execution quality.	Annual	7,642	6,080	25,012,266	19,899,840	44,912,106
Conflicted BDs (225):						
Update policies and procedures	One time	55,701	7,936	12,532,725	1,785,600	14,318,325
Annual review and update of P&P.	Annual	6,421		1,444,725		1,444,725
Conduct and document review of execution quality.	Annual	20,840		4,689,000		4,689,000
Annual Report						
Unconflicted BDs (3273):						
Update procedures for reviewing best ex policies and procedures.	One time	1,795	4,960	5,875,035	16,234,080	22,109,115
Conduct and document regular reviews.	Annual	4,062	7,920	13,294,926	25,922,160	39,217,086
Conflicted BDs (225):						
Update procedures for reviewing best ex policies and procedures.	One time	8,952	1,488	2,014,200	334,800	2,349,000
Conduct and document regular reviews.	Annual	12,278		2,762,550		2,762,550
Total Implementation Costs				41,572,086	123,876,000	165,448,086
Total Annual Costs				54,253,509	74,624,400	128,877,909

Costs in this table are constructed from estimates in Section VI.D. In its economic analysis, the Commission assumes that the 225 retail broker-dealers with over $100MM in total assets are large and will continue to engage in conflicted transactions if the proposed rules are adopted, and follows the Section VI.D estimates for large broker-dealers. The remaining 3,273 broker-dealers are assumed to be unconflicted for purposes of the proposed rules, and this analysis follows the Section VI.D estimates for small broker-dealers. Section VI.D assumes that smaller broker-dealers are less likely to engage in conflicted transactions, but acknowledges some costs associated with conflicted transactions. Furthermore, Section VI.D cost estimates assume broker-dealers will outsource many compliance tasks and thus relies more upon external costs. To the extent that these broker-dealers elect to perform these tasks with internal personnel, their implementation costs are likely to be over-stated in this analysis. Consequently, this analysis is likely to over-estimate compliance costs for unconflicted broker-dealers.

Where internal burden hours appear in Section VI.D, the Commission employed hourly rates to monetize these costs. These hourly rates are based on SIFMA's Management & Professional Earnings in the Securities Industry 2013, modified by Commission staff to account for an 1,800-hour work-year and multiplied by 5.35 to account for bonuses, firm size, employee benefits and overhead, and adjusted with a factor of 1.27 for inflation based on the 27% change in the Consumer Price Index from December 2013 to September 2022. The Commission employed the following hourly rates, with the description employed in Section VI.D in parenthesis: Attorney (legal counsel) $483 per hour; Compliance Attorney (compliance counsel) $424 per hour; General Counsel (general counsel) $693 per hour; CCO (CCO) $616 per hour; Compliance Manager (compliance manager) $359 per hour; Paralegal (legal personnel) $253 per hour; Compliance Manager (compliance personnel) $359 per hour; Operational Specialist (business-line personnel) $159 per hour.

The previous table discusses the costs broker-dealers would incur to comply with the proposal.[580] In the case of conflicted broker-dealers that would be newly required to evaluate execution quality from multiple sources in evaluating execution quality, it is possible they would periodically need to change their routing practices to reflect changes they observe in their data analysis. The Commission preliminarily estimates that each conflicted broker-dealer that changes its routing practices will incur costs of approximately $9,000.[581] The Commission cannot estimate the number of broker-dealers that would need to make this change periodically,

[579] *See infra* Section VI.7 for detailed discussion of these estimates.

[580] *See infra* section VI.D.

[581] The Transaction Fee Pilot required reprogramming of SORs as well. For that pilot, the Commission estimated that the costs of a one-time adjustment to the order routing systems of a broker-dealer would $9,000 per broker-dealer. The Commission preliminarily believes that this estimate remains a reasonable estimate of costs associated with changes that broker-dealers would incur from having to update their routing systems. *See* Securities Exchange Act Release No. 84875 (Dec. 19, 2018), 84 FR 5202 (Feb. 20, 2019) (Transaction Fee Pilot for NMS Stocks).

but the Commission preliminarily estimates that the changes will be no more than $2 million [582] annually in aggregate.

iv. Additional Compliance Costs for NMS Stocks and Options

For NMS stocks, a broker-dealer engaging in conflicted transactions would currently be required to subscribe to SIP data under current SRO best execution rules. To consider a broader range of markets, such broker-dealers might add connections to one or more ATSs, subscribe to more detailed data or consider connecting to ''ping'' destinations (automated systems run by OTC liquidity providers that may elect to internalize any order routed to their system).[583] In making this choice, some broker-dealers may compare their current routing practices to a hypothetical competitor that does the bare minimum and consider their practices compliant with the proposal even if all competitors currently do more than this hypothetical minimum.[584] To the extent broker-dealers believe that their current routing practices are in compliance and do not make changes to routing practices, both the benefits and the costs of the proposed rules would be less than they would be otherwise.

v. Additional Compliance Costs Associated With Fixed Income Securities

With respect to fixed income securities trading, broker-dealers that engage in conflicted transactions could add subscription to one or more trading venues (*e.g.,* ATSs, RFQ platforms, single dealer platforms) to the extent that the benefit (*i.e.,* improvement in execution quality) from adding subscription to trading venue outweighs the costs (*e.g.,* venue subscription fees).[585] The Commission expects that a broker-dealer would subscribe to additional trading venues to take liquidity (as opposed to provide liquidity by posting quotes or responding to RFQs) in executing retail customer orders on riskless principal basis or to discover prices for the purpose of internalization. The Commission understands that subscription fees for liquidity takers are not significant. Furthermore, the broker-dealer would choose to connect to a trading venue via low cost means, for example, web-based graphical user interface (GUI) rather than via more costly application programming interface (API), which may include the costs associated with connectivity and systems reconfiguration (*e.g.,* reconfiguring to adjust API), to the extent that the broker-dealer does not expect to maintain constant connection to execute a large number of customer orders on the venue. To the extent that making changes to business practices to handle customer orders on an agency basis in fixed income securities trading is less costly than incurring costs to comply with the requirements with respect to conflicted transactions, broker-dealers may choose to handle retail customer orders on an agency basis rather than a riskless principal basis. In particular, a broker-dealer whose primary business is retail self-directed trading conducted on a riskless principal basis could change its business practices to convert its self-directed trading business to handling orders on an agency basis. The Commission preliminarily believes that the costs associated with such a conversion could include the costs related to changing risk management practices for intraday capital commitment, compliance systems, recordkeeping practices for orders and transactions, and accounting practices. However, the Commission is uncertain about these costs associated with the business practice changes needed to convert a self-directed trading business from a riskless principal to agency based model and requests comments on the costs.

vi. Additional Compliance Costs for Non-NMS Stock Equity Securities

In the case of non-NMS stock equities, liquidity on ATSs beyond those that specialize in non-NMS stock equities may be rare. For a broker-dealer that currently participates in the non-NMS stock market, adding additional markets may mean subscribing to additional ATSs, or possibly, contacting other broker-dealers that act as liquidity providers of last resort through direct messages thus seeking additional sources of liquidity manually. To the extent that broker-dealers are able to bear the costs of seeking this additional liquidity (through ATS subscriptions or manual negotiation) while maintaining a profitable trading service, broker-dealers in the non-NMS stock equities market could pursue these actions and pass on the costs to customers. In the case of very illiquid non-NMS stock equities, broker-dealers may be left with either no apparent options to add additional markets, or with markets which are prohibitively expensive to consider as additional liquidity sources (such as contacting other broker-dealers or block holders of the security to inquire about their interest in being a counterparty). In such cases, there may not be additional implementation costs for conflicted transactions because alternative markets may not be available.

vii. Additional Compliance Costs Associated With Crypto Asset Securities

Broker-dealers trading crypto assets that are securities may incur costs to comply with the proposed rule.[586] Because the Commission lacks data and other information on existing broker-dealers and their practices in the crypto asset securities market, it is difficult to precisely determine the costs of compliance for such broker-dealers. Generally, the Commission expects the costs of compliance to be most similar

[582] 225 conflicted broker-dealers × $9,000 per order-handling change = $2.025MM annually. The Commission assumes that order-handling changes would be annual because the proposal requires the annual review of the best execution policies and procedures, including order handling practices. Based on the Commission's experience, the Commission preliminarily believes that many broker-dealers, including many that the Commission believes will be unconflicted if the proposal is adopted and implemented, already change order-handling practices regularly for both best-execution and other operational reasons, such as reducing costs. Consequently, the Commission preliminarily believes that this estimate exceeds the annual costs that broker-dealers would bear under the proposal.

[583] The Commission preliminarily believes that larger broker-dealers that are likely to continue engaging in conflicted transaction if the proposed rules are adopted are likely to already connect to a broader range of venues than would be represented by SIP data. The Commission cannot predict how many broker-dealers that elect to engage in conflicted transactions would increase the range of venues to which they connect and what costs they would incur to do so because broker-dealers are diverse in business models and practices and each broker-dealer would need to evaluate its own operational procedures to make such a determination.

[584] Based on staff discussion with market participants, the Commission preliminarily believes that broker-dealers are often not certain what their competitors' routing practices are. Such information is proprietary and generally not publicly available.

[585] In their Form ATS submissions, 15 of 33 ATSs state they have no access, connectivity and/or subscription fees. The Commission preliminarily believes that most ATSs charge fees primarily based on transactions, and subscribers are responsible for any costs related to providing their connectivity. To the extent an ATS does charge subscription fees, broker-dealers are likely to consider those fees in making a determination of whether the liquidity on such an ATS is reasonably available.

[586] Affected parties that effect transactions in the crypto market may include some market participants that may not be currently registered as a broker-dealer but should be under existing regulations. As noted above, this analysis does not account for costs of such market participants to register as broker-dealers or otherwise come into compliance with existing applicable regulation.

to costs associated with trading non-NMS stocks. To the extent that the current market practices of market participants that would need to comply with the proposed rule differ significantly from the practices required under the proposed rule, the costs for compliance with the proposal may be large; this may be the case, for example, for market participants whose practices are not currently consistent with FINRA Rule 5310. On the other hand, market participants with existing best execution policies and procedures, such as those that operate across other asset classes (*e.g.,* NMS securities), may bear incremental lower costs of compliance.

For crypto asset securities that are traded on multiple platforms, conflicted broker-dealers may need to connect to additional platforms to comply with the proposal. In the case of crypto asset securities that are not traded on multiple platforms, broker-dealers would incur costs to directly contact liquidity providers of last resort, such as broker-dealers that might agree to trade the asset if contacted directly. Because transacting manually in this manner involves the time of a professional trader, the cost to make these additional inquiries required by the proposal might be uneconomical, particularly in the case of small trades.

(b) Other Costs

As discussed previously, currently many retail orders in NMS securities are executed without paying commissions.[587] The Commission preliminarily believes that the proportion of retail order flow being executed under PFOF agreements may decrease, although the Commission is uncertain of the magnitude of this reduction.[588] It is possible that reductions in the proportion of retail order flow being executed under such agreements could cause the prevalence of retail commissions to increase because revenues from these agreements may have previously offset retail broker dealer costs that would otherwise be covered by commissions collected from retail investors. This effect may be mitigated if broker-dealers elect to pass exchange rebates to their customers. The Commission preliminarily believes that it is unlikely that the proposal would significantly increase the prevalence of retail commissions because the market to provide retail broker-dealer services is competitive and many of the broker-dealers that the Commission believes will remove their conflicts receive relatively small payments for their order flow.[589]

The Commission further believes that the costs of the rule could advantage larger broker-dealers and may increase barriers to entry and disadvantage smaller broker-dealers, potentially resulting in some of them exiting the market. To the extent that smaller broker-dealers are more likely to provide specialized services and provide innovation, there may be less competition to provide specialized services and less innovation if the proposal is adopted. Investors whose broker-dealers exit the market would face search costs to find alternative broker-dealers that offer the same services; those services may be offered at inferior prices by remaining competitors. Some services may no longer be offered by any competitors if a specialized broker-dealer exits the market, although the Commission preliminarily believes that if there is sufficient demand for such a service, a broker-dealer may make it available to customers when demand is sufficient, as may be the case after one or more broker-dealers exit the market.

While the Commission cannot predict how many retail broker dealers will terminate PFOF arrangements, the Commission preliminarily believes that under the proposal, retail broker-dealers are likely to reduce their use of PFOF agreements for both NMS stocks and listed options because engaging in such agreements would cause the broker dealer to incur heightened best execution obligations under the proposal and satisfying those obligations may cause broker-dealers to incur costs in excess of their PFOF revenue.[590] Since most broker dealers that receive PFOF receive relatively small payments for routing their order flow,[591] smaller broker-dealers in particular may consider curtailing this practice to avoid incurring the additional compliance costs. Furthermore, broker-dealers that currently pay to receive order flow may adjust their business models[592] to rely less on these arrangements. The Commission preliminarily believes this is likely to reduce the share of retail customer order flow that is internalized because some broker-dealers that currently receive PFOF are likely to stop receiving it to become de-conflicted, and some broker-dealers that pay PFOF will internalize fewer of the orders they receive to comply with the proposal. If this occurs, broker-dealers that reduce their reliance on PFOF arrangements would also be likely to see commensurate decreases in their revenue. This increase in costs to execute customer orders may be passed on to retail investors as additional fees to trade, or in the form of commissions.

Similarly, the Commission preliminarily believes that firms that currently pay to receive retail order flow would likely receive less of such directed order flow. While this may be a cost savings to those firms, it is likely to represent a reduction in what was previously a profitable business operation, and the lost profit opportunities are not likely to offset any cost savings. It is possible such firms may choose to compete on other venues (ATSs and exchanges) to participate in this order flow, but the Commission preliminarily believes that profits from such a venture are unlikely to be comparable to the profits of internalization because, on other venues, other broker-dealers would be able to compete with these broker-dealers to provide liquidity to these orders which should reduce the cost of that liquidity to investors.[593] If these firms reduce the capital they currently allocate to providing liquidity, spreads could increase particularly in the short-term because fewer market participants would be competing to provide liquidity. However, the Commission preliminarily believes that the market to provide liquidity to retail orders is competitive and other competitors are

[587] *See supra* Section V.B.3.a

[588] *See supra* Section V.C.1.

[589] In the case of larger broker-dealers that derive significant revenue from PFOF, the Commission preliminarily believes that they will continue to do so and incur the additional compliance costs discussed previously in Table 23.

[590] The Commission lacks data on many broker-dealers' PFOF revenue, but acknowledges that some broker-dealers will realize an indirect cost from forgone PFOF revenue. In the case where a broker-dealer receives PFOF from another broker-dealer or trading venue, this will constitute a transfer from one registrant to another, and will not increase industry costs in aggregate. In cases where a broker-dealer passes PFOF on to its customers to avoid conflicts, this payment may reduce investor trading costs and increase industry costs in aggregate.

[591] Many broker-dealers receive PFOF, but the majority of PFOF is received by a small group of broker-dealers. Consequently, many broker-dealers receive relatively small PFOF payments, although for some broker-dealers these small payments may contribute significantly to profits, depending on other revenue sources. Regardless of this relative magnitude, the costs to comply with the proposal's heightened standards may be prohibitive for broker-dealers that receive relatively modest PFOF revenue, and their compliance costs may exceed the revenue the broker-dealer receives for engaging in conflicted transactions. *See supra* Section V.B.3 and Section V.C.2.(a)i.

[592] If broker-dealers choose to pass exchange rebates on to their customers, they may incur additional costs associated with updating systems to account for these payments.

[593] *See supra* Section V.C.1.

likely to increase their capital provision over time to satisfy demand.[594]

In addition to costs discussed previously, broker-dealers that engage in conflicted transactions would face heightened standards under the proposal. These standards would require them to obtain and assess information beyond what would be required of a broker-dealer that is not conflicted, including price, volume, and execution quality, in identifying a broader range of markets beyond those identified as material potential liquidity sources. The Commission preliminarily believes that this requirement may be interpreted very differently by different broker-dealers, and may prove challenging in markets for some asset classes where the number of potential markets is limited and broker-dealers may effectively be checking all reasonably available prices in current practice.

i. Additional Other Costs in NMS Stocks and Options

In equities, the Commission preliminarily believes that firms that internalize retail order flow provide liquidity to a wide range of securities, including those that are very thinly traded. In fact, fulfillment of these more difficult to fill orders may be part of a service bundle that internalizers provide to broker-dealers that route them their order flow. Generally, thinly traded securities are more risky for liquidity providers because quotation data are relatively sparse compared to more heavily traded securities, such quotations are more likely to be stale, and there may be no market makers that have a duty to maintain two-sided quotes in these securities.[595] It is possible that execution prices may be less favorable for retail investors under the proposal if liquidity providers that previously paid for order flow and fulfilled these difficult to execute orders under such arrangements dedicate less capital to making markets in these securities. It is possible that execution times for these securities may be significantly delayed as broker-dealers would need to search for liquidity to fill these orders, and this delay is an additional factor that a broker-dealer would need to consider in the order's execution quality. It is also possible that execution prices for these transactions may be less favorable than they might be under a PFOF arrangement because the price improvement statistics on these orders are currently included in the criteria retail broker dealers evaluate in choosing executing broker dealers.[596] However, the Commission preliminarily believes that the market to provide liquidity to retail orders, including orders in less liquid securities is competitive. If the proportion of such orders entering the market beyond internalizers increases, it is likely other broker-dealers that provide liquidity to asset markets would increase liquidity provision to this segment of the equities market. The costs realized by investors transacting in these securities may increase, however, because broker-dealers are unlikely to provide additional liquidity unless they can cover their costs and earn appropriate risk-adjusted returns.[597]

In addition to the costs discussed above, the Commission preliminarily believes that in the market for listed options, the NBBO spreads set by resting best displayed liquidity could be wider and the depths at the best market prices could be thinner because of the increasing order flow segmentation under the proposal. Specifically, liquidity providers could deploy less capital to provide the resting displayed liquidity in the limit order books in favor of price improvement auctions or price improving inside the NBBO. Because the proposed rules could result in potentially more efficient price improvement auctions and/or potentially more retail orders being routed to the auctions for price improvement opportunities, order flow routed there could become less impactful and more profitable. At the same time, the orders filled by the lit quotes would become more impactful and impose relatively more adverse selection risk on the liquidity providers who provide resting displayed liquidity, in part due to the increased level of order segmentation. Less capital from liquidity suppliers would make the liquidity in order books thinner and potentially widen the NBBO. Wider NBBO spread and thinner depth would inevitably lead to worse execution quality to the orders that are not exposed to price improvement opportunities. To the extent that the proposal would make a subset of retail customers better off by improving the prices those customers receive, it would correspondingly adversely affect other customers by harming prices and liquidity in displayed quotes.

ii. Additional Other Costs in Fixed Income Securities

With respect to fixed income securities trading, the Commission preliminarily believes that the proposal could adversely affect liquidity. To the extent that broker-dealers no longer practice last-look in conducting RFQs for the purpose of internalization, these broker-dealers could earn less profits from principal trading that relies on broker-dealers' capacity to commit capital for carrying inventory. A reduction in capital commitment for fixed income securities intermediation could result in lower liquidity, particularly for those trades that rely on broker-dealers' capacity to provide immediacy by trading on a principal basis (by taking fixed income securities into inventory). This would result in an increase in pre-arranged trades between a buyer and a seller (so that the broker-dealer can quickly offset its position in the opposite direction), which take a longer time to execute, increasing transaction costs of market participants.

To the extent that broker-dealers handling retail customer orders choose to conduct RFQs to fulfill the proposed requirements with respect to conflicted transactions, this could result in an increase of RFQs to a degree that RFQ messages would overwhelm market participants (*e.g.,* broker-dealers responding to RFQs). This could increase the number of RFQs with no or few responses resulting in less competitive prices and worse execution quality for retail customer trades. However, the Commission preliminarily believes that this effect would be mitigated as more market participants adopt automation in the process for responding to RFQ messages to be responsive to RFQs, and thus, attract more order flow.

3. Efficiency, Competition, and Capital Formation

The Commission has considered the effects of the proposed amendments on

[594] *See infra* Section V.D.3.

[595] *See,* for example, Menkveld, Albert J. and Wang, Ting, *How do designated market makers create value for small-caps?,* 16 Journal of Financial Markets 571 (2013), *available at https://www.sciencedirect.com/science/article/pii/S1386418112000535#aep-abstract-id6*; Craig, Louis, Kim, Abby, and Won Woo, Seung, *Pre-trade Information in the Municipal Bond Market,* (SEC Working Paper, July 2018), *available at dera_wp_pre-trade_information_in_the_municipal_bond_market.pdf (sec.gov)https://www.sec.gov/files/dera_wp_pre-trade_information_in_the_municipal_bond_market.pdf* and Craig et al, *supra* note 471.

[596] Broker-dealers that pay to receive order flow may be providing better execution to difficult to fill orders because the execution in such orders is an element upon which their clients evaluate them. Consequently, outside of PFOF arrangements, such orders might receive inferior execution quality to what they would receive under such an arrangement.

[597] Securities for which it is more difficult to find trading counterparties often are characterized by infrequent trades, less frequent quotations and lower market capitalization. These factors are likely to increase the adverse selection risk liquidity providers face when providing liquidity to the market for these securities.

efficiency, competition, and capital formation, and discussed these effects below.

(a) Competition

i. Market for Trading Services

The Commission preliminarily believes that the proposal would improve competition among trading venues. The proposal requires that broker-dealers consider a wider range of trading venues. In the equity and option markets, the Commission also preliminarily believes that the proposal would reduce the proportion of retail order flow that is internalized. The Commission preliminarily believes that this would increase competitive opportunities for exchanges and other trading venues because more broker-dealers will consider exchanges and ATSs as potential execution venues. In the fixed income securities markets, the proposal could promote competition among trading venues to the extent that broker-dealers expose retail customer orders broadly across multiple trading venues for the purpose of executing riskless principal trades and for the purpose of internalization.

In the market for NMS stock and options trading services, the Commission preliminarily believes that competition would increase. To the extent that the proposal's requirement that broker-dealers incorporate material sources of liquidity into their order handling practices causes broker-dealers to consider additional execution venues such as additional exchanges or ATSs for their orders, competition between trading venues may increase. Other factors that may encourage broker-dealers to more frequently use exchanges and ATSs for trading include the heightened standards for conflicted transactions and the heightened standards for transactions where a PFOF arrangement is in place.

By considering more sources of liquidity and the heightened standards for broker-dealers in conflicted transactions, it allows for venues such as exchanges and ATSs to compete for order flow that may have been internalized by wholesalers before the effects of this rule. The requirement to consider price improvement from midpoint liquidity before internalizing a retail trade could increase competition by resulting in more trading venues competing to offer programs that offer midpoint liquidity to retail orders. There will be increased demand for the services of trading service venues. Given this increased demand, the venues will compete to acquire as much of it as possible. Given this increased demand, it is possible that the fees venues charge may rise, particularly if large venues capture most of the increased order flow.

The Commission preliminarily believes that the proposal would increase competition between broker-dealers to provide liquidity to retail orders by requiring broker-dealers that route to executing brokers to consider a wider range of executing venues. Currently, most retail order flow for which the customer has not specified an execution venue is routed first to an internalizer. Under the proposal, broker-dealers would need to consider a wider range of trading venues and programs (such as retail liquidity programs [598]) before routing customer orders.

The Commission preliminarily believes that the proposal would have limited impact on the market to provide liquidity to unlisted stocks and thinly traded NMS stocks. As the proposal requires brokers to check material sources of liquidity, there will be little change if these sources of liquidity are few to begin with.

The Commission preliminarily believes that the proposal would promote price competition and competition in price improvement mechanisms for listed options. Under current practice, in order to attract order flow from wholesalers, the exchanges that provide the price improvement auction mechanisms often establish asymmetric fee schedules charging the competing liquidity providers higher fees than the wholesaler for participating in the auction. This limits the ability of competing liquidity providers to provide more favorable pricing to compete with the wholesaler in those auctions, resulting in less than fully efficient price improvement offered to the customer. Under the proposal, when considering a price improvement auction, the wholesaler would be required to consider a broad range of price improvement auctions across the exchanges and evaluate the execution quality that may be received from these auctions and how that might be impacted by auction features such as asymmetric fee schedules after controlling for all the other factors such as the allocation model. Therefore, the option exchanges would have incentives to level the playing field by reducing the existing auction transaction fee gap to enhance competition in those auctions to attract the retail order flow.

Currently, there is no mid-point liquidity protocol available across the limit order books operated by the exchanges for listed options, but the Commission is aware that there is at least one option exchange which provides a protocol allowing market participants to provide liquidity on the limit order book within the NBBO prices to interact with incoming marketable orders and provide price improvement against NBBO at the same time. The Commission preliminarily believes that, under this proposal, more exchanges would have incentives to develop protocols which would facilitate liquidity provision within the prevailing NBBO spread because broker-dealers would be required to have policies and procedures that specifically address opportunities for price improvement and other order exposure opportunities. Thus, the wholesaler would need to check or reasonably estimate whether there could be substantial midpoint or within-NBBO liquidity available on the limit order books operated by other exchanges. Some exchanges may even consider establishing protocols to allow customer order flow executed at the midpoint of NBBO prices, which would further increase opportunities for retail orders to receive price improvements.

ii. Market for Broker-Dealer Services

The Commission preliminarily believes that the proposal could have mixed effects on competition in the market for broker-dealer services. Changes in order handling practices that could occur as part of the rule could promote competition between broker-dealers to attract customers. However, the costs of the rule could advantage larger broker-dealers and may increase barriers to entry and disadvantage smaller broker-dealers, potentially resulting in some of them exiting the market.

While modifying their policies and procedures, broker-dealers could change their order handling practices and also the services they utilize from other broker-dealers while handling customer orders. These changes in order handling practices could promote competition among broker-dealers, especially on the basis of execution quality, to attract customers. It could also promote competition among broker-dealers offering services to other broker-dealers to attract new clients.[599]

The Commission preliminarily believes that the proposal may increase barriers to entry and disadvantage smaller broker-dealers because of the increased compliance costs and resulting economies of scale that would result under the proposal. Furthermore,

[598] *See supra* Section V.B.3(a).i.

[599] *See infra* Section V.B.3.a.i for discussion about competition about market for market access.

the proposal could result in consolidation among smaller broker-dealers or these broker-dealers being absorbed (via merger) by larger broker-dealers to take advantage of the economies of scale. Such a change to the competitive landscape could also reduce competition in the market for trading services. In the case of broker-dealers that meet the definition of introducing broker under FINRA rules but do not do so under the proposal, compliance costs may be high.[600] Some of these broker-dealers may adjust their business models to no longer compete as introducing brokers, and new entrants may be discouraged due to elevated costs of complying with the proposal.

Additionally, the proposed rules for conflicted transactions for retail orders and on introducing brokers accepting PFOF may reduce the PFOF retail brokers receive in the equity and options markets. To the extent that these firms do experience a major reduction in their PFOF revenue, they may face pressure to develop other lines of revenue, including the addition of commissions and/or fees for trading and advisory services, although broker dealers that have heavily promoted their commission-free business model would be more reticent to add commissions and/or fees, despite the loss of PFOF.

To the extent that some retail brokers do resume charging commissions, they may be constrained by competitive pressures in the commission rates they can charge. Larger retail brokers that do not accept equity PFOF could continue to provide commission-free trading. This, in turn, would put competitive pressure on the extent to which retail broker-dealers could charge commissions and still retain customers. If the ability of smaller retail brokers to charge commissions is constrained by competition, it could increase the competitive advantage of larger retail brokers, which could raise the barriers to entry for new brokers and cause some smaller retail brokers to exit the market.

The Commission is unable to quantify the likelihood that one or more smaller brokers would cease operating. Even if one or more small brokers were to exit, while the Commission acknowledges that services to niche markets more likely served by smaller broker-dealers might decline, the Commission does not believe this would significantly impact competition in the larger market for generalized broker services because the market is served by multiple large competitors. Additionally, the market would likely still be served by many small competitors. Consequently, if a smaller retail broker were to exit the market, demand is likely to be swiftly met by existing competitors. The Commission recognizes that small brokers may have unique business models that are not currently offered by competitors, but the Commission believes a competitor could create similar business models previously offered by exiting firms if demand were adequate. Moreover, if the services generated by these business models are not provided by existing competitors, it seems likely new entrants would provide them if demand were sufficient.

iii. Market for Market Access

The Commission preliminarily believes that the proposal would increase competition in the market for market access. A number of aspects of the proposal could result in more broker-dealers utilizing the services of a routing or executing broker or engaging in more extensive comparisons of the services and execution quality of different routing or executing brokers. This would increase competition among broker-dealers offering order routing and execution services to other broker-dealers in order to attract new customers.

The introducing broker requirements under Rule 1101(d) would enhance competition the market for market access in two ways. The requirement for introducing brokers to regularly compare the execution quality of their executing broker to that of other executing brokers would promote competition between executing brokers. Broker-dealers that carry customer accounts that currently route their order flow to an executing broker to handle in an principal capacity would not be eligible for the introducing broker relief under Rule 1101(d) and would have to develop policies and procedures for handling customer orders. If they utilized a routing broker as part of developing these policies they would need to compare different routing brokers and develop the criteria for selecting a routing broker as part of their policies and procedures. They would have to also compare their routing broker to the other routing brokers as part of their regular review of their policies and procedures. This could enhance competition among routing brokers in order to attract these broker-dealers as clients.

The heightened standards for broker-dealers handling retail orders engaging in conflicted transactions may also promote competition in the market for market access. The additional requirements for broker-dealers handling retail orders engaging in conflicted transactions may lead to some retail brokers that currently route orders to wholesalers to instead utilize the services of a routing broker to handle their orders.[601] There could be increased competition among routing brokers to provide these conflict-free routing services to retail brokers. Additionally, the heightened standards for broker-dealers that accept PFOF may foster competition between broker-dealers to provide best-execution services to retail broker-dealers that continue to accept PFOF. Because the proposal would require these retail broker-dealers to document their compliance with the best execution standard for conflicted transactions, including all efforts to enforce their best execution policies and procedures for conflicted transactions and the basis and information relied on for their determinations that such conflicted transactions would comply with the best execution standard, this could increase competition among broker-dealers that pay for order flow to provide adequate information to broker-dealers routing to them, allowing those broker-dealers to improve their customers' execution quality. Without such assistance from broker-dealers that pay for order flow, the broker-dealers that provide order flow may be faced with the need to perform significant data analysis on multiple executing broker-dealers if they intend to continue receiving PFOF. For some broker-dealers, the expense of conducting such analysis is likely to exceed the revenue they receive for directing their order flow to executing broker-dealers that pay to receive their order flow. These broker-dealers may choose to stop receiving PFOF or pass all PFOF they receive through to their customers in order to avoid these expenses. Consequently, broker-dealers that pay for order flow are likely to be incentivized to assist their customer broker-dealers in complying with the rule to avoid losing their order flow. It is also possible that broker-dealers that currently receive PFOF may simply maintain their routing practices and stop accepting PFOF to reduce their compliance burden under the proposal.

With respect to fixed income securities trading, the proposed requirements with respect to introducing brokers and regular review of execution quality could promote competition in the market for market access (*i.e.,* amongst executing brokers). Brokers that outsource execution services for fixed income securities

[600] *See supra* Section V.C.2.

[601] *See supra* Section V.C.1.a.

would conduct regular reviews and compare execution quality in the selection of their executing brokers, which would promote competition and innovation in the fixed income market for market access. Executing brokers would compete on fees, efficiency in order handling procedures, and efficiency in the selection of trading venues or counterparties, which in turn, would result in better execution quality for retail customer trades.

(b) Efficiency

The Commission preliminarily believes the proposal would improve price efficiency in asset markets because broker-dealers will need to consider a wider range of markets and execution methodologies when routing customer orders. By facilitating competition between a larger pool of liquidity providers, more liquidity providers may be incentivized to compete to provide liquidity. This would provide a wider range of quotes and facilitate price efficiency to the extent that the expanded liquidity pool provides more informative quotes.

While the Commission preliminarily believes the proposal could improve retail order execution prices,[602] the Commission recognizes that it could take longer for conflicted orders to be executed because broker-dealers might need to consider additional venues before routing an order, and they may need to perform more routings before the order is fulfilled. It is possible that market prices could move unfavorably during this time.

(c) Capital Formation

The Commission preliminarily believes that the proposal may improve capital formation by incentivizing broker-dealers to allocate additional capital to the provision of liquidity. The proposal's requirement that broker-dealers consider additional pricing information and execution venues before routing customer orders and heightened standards for best execution for conflicted transactions may result in more order flow being routed to venues with competitive quotations. If such quotations are more likely to result in executions, particularly with retail order flow that usually carries lower adverse selection costs to broker-dealers,[603] broker-dealers would have greater incentives to provide such quotations.

The Commission also recognizes that liquidity provision in thinly traded and unlisted securities may decrease. Currently, broker-dealers with business models that specialize in internalizing retail order flow may be providing liquidity in very thinly traded securities as part of a bundle of services that they provide to their customers. If the internalization of retail orders decreases as the Commission preliminarily believes it might, broker-dealers may be faced with difficult liquidity searches when their customers wish to trade thinly traded or unlisted securities. It is possible that an increase in retail demand for liquidity in these securities may be met with an increase in liquidity supply from firms that are more willing under the proposal to make markets in these securities than they were when a greater proportion of retail flow was internalized. To the extent that broker-dealers' willingness to make markets in these securities decreases overall, this may increase trading costs for these securities and make it more difficult for companies to go public before they are eligible to be listed on registered exchanges.

D. Reasonable Alternatives

1. SEC Adopts FINRA Rule 5310 and MSRB Rule G–18 Best Execution Rules

As an alternative, the Commission could adopt existing FINRA Rule 5310 and MSRB Rule G–18 rules and associated guidance. This alternative would have lower costs and benefits compared to the proposal, because changes[604] in order handling practices would be unlikely to occur under this alternative compared to the proposal. Under this alternative, improvements to investor protection might be less than those from the proposed rules.

This alternative would not include the enhanced requirements within proposed Rule 1101(b) related to transactions with broker-dealer subject to specified conflicts of interest, which represent the majority of retail transactions in the equity, options, and fixed income markets.[605] Proposed Rule 1101(b) would require a broker-dealer engaging in conflicted transactions to address additional considerations in its best execution policies and procedures, and to document its compliance with the best execution standard for such transactions. To the extent that the proposal would have resulted in improved execution quality for the retail orders by reducing the inefficiencies[606] present in existing conflicted transactions, this alternative would result in less improvement in retail investor execution quality compared to the proposal.

Under this alternative, broker-dealers would still qualify for relief under FINRA Rule 5310.09(c), instead of having to meet the introducing broker requirements to qualify for the propose relief under proposed Rule 1101(d). Broker-dealers that meet the requirements of FINRA's relief but would not have met the requirements of proposed Rule 1101(d) would experience lower compliance costs under this alternative because they would not have to develop or update their own policies or procedures or adjust their business model to de-conflict from their executing broker.[607] The costs of the proposal could advantage larger broker-dealers, increase barriers to entry for new broker-dealers, and disadvantage smaller broker-dealers, which could potentially result in some of them existing the market.[608] The lower compliance costs under this alternative would increase competition among broker-dealers compared to the proposal by lowering barriers to entry for new broker dealers and decreasing the likelihood that smaller broker-dealers would exit the market.[609]

2. Require Order Execution Quality Disclosure for Other Asset Classes

Standardized information on the execution quality available at different market centers and for different executing brokers could aid broker-dealers in their best execution reviews. However, only market centers executing trades in NMS stocks are required to report standardized execution quality statistics under Rule 605.[610] This alternative would require execution quality disclosures from market centers and large broker-dealers in the options and fixed income markets. In addition to execution quality data at the individual security-level, similar to Rule 605 data, the execution quality disclosures would include aggregated

[602] *See supra* Section V.C.1.

[603] *See, e.g.,* Barber, Brad M., and Terrance Odean, *Trading is hazardous to your wealth: The common stock investment performance of individual investors?,* 55 J. Fin. 773 (2000).

[604] *See supra* Sections V.C.1, V.C.2, and V.C.3 for the Commission's projections on the effect of broker-dealers' order handling practices.

[605] *See supra* Section IV.C.1 and Section IV.C.2.

[606] The inefficiencies associated with existing conflicts of interest include, but are not limited to, the trade-off between payment for order flow and price improvement for equities (*See supra* Section V.B.3.a.iii.) and the less than fully competitive price improvement auction mechanisms for options (*See supra* Section V.B.3.a.II.b.).

[607] *See supra* Section V.C.1.

[608] *See supra* Section V.C.3.(a).ii for a discussion of the effects of the proposal on competition between broker-dealers.

[609] *See id.*

[610] The Commission also is proposing to amend the order execution quality disclosures required by Rule 605. *See* Securities Exchange Act Release No. 96494 (Dec. 14, 2022). The Commission encourages commenters to review that proposal to determine whether it might affect their comments on this proposing release.

standardized summary reports of key execution quality statistics, which would allow smaller and less sophisticated investors to analyze and make comparisons between their own broker-dealers and other broker-dealers. Compared to the proposal, these disclosures may better allow investors to evaluate execution quality for their orders within their broker-dealer's overall executions in a given security and facilitate broker-to-broker comparison of order execution beyond equities markets. Although the proposed rule would require each broker-dealer to establish policies and procedures with greater specificity, this does not necessarily mean that the order handling practices reach the same level of efficiency across the broker-dealers. It is possible that some broker-dealers would handle the customer orders less efficiently than others. Under the alternative, broker-dealers, which engage in less efficient order handling practices may recognize the inadequacy when comparing their own execution quality statistics with those disclosed by the more efficient broker-dealers, and improve the order handling practices accordingly to attract order flow. Therefore, increased transparency may reduce differences in execution quality within specific security-time intervals, particularly in the corporate and municipal bond markets. Broker-dealers may be able to incorporate these execution quality statistics into their best execution policies and procedures, which could improve their ability to identify market centers that offer better execution quality, resulting in potentially greater improvements in order handling compared to proposal. This alternative may increase competition among broker-dealers and trading centers in asset classes other than NMS stocks compared to the proposal by promoting competition based more on the basis of publicly available execution quality and less on other inducements to attract more customers/order flow.

However, developing these execution quality disclosures may cause market centers and large broker-dealers in the options and fixed income markets to incur higher startup costs relative to the proposal as market centers would need to develop systems to produce and post such reports. To the extent that certain market centers already have systems or infrastructures in place to produce execution quality metrics, they would incur costs to modify the current systems and/or the format of the reports in order to comply with the standards set forth in the execution quality disclosure requirements. Additionally, execution quality disclosures for the options and fixed income markets may be complex and difficult to produce for a number of reasons. First, the number of individual securities in the options and fixed income markets is significantly larger than in the equity markets. The corporate bond market has approximately 58,000 outstanding issues, more than fourteen times the number of NMS listed equities.[611] This number is small in comparison to the municipal bond market which has approximately one million outstanding issues.[612] Individual equities can have hundreds of individual outstanding options contract identifiers. Second, fixed income and options securities have defined maturities, which might be shorter than a disclosure interval (*i.e.,* a contract with a week expiration relative to a monthly reporting period). This security-level inconsistency may present complications in evaluating time series changes in execution quality. Finally, a broad lack of pre-trade information in fixed income markets make execution quality statistics such as effective-quoted spread ratios difficult, if not impossible, to calculate for many securities.

3. Utilize FINRA and MSRB Approach To Introducing Broker

The Commission could alternatively propose to remove the requirements for introducing and executing brokers related to PFOF, carrying firm status, and affiliation. This definition would more closely align with FINRA and MSRB approach to introducing brokers. FINRA Rule 5310.09(c) applies to a member that routes its order flow to another member that has agreed to handle that order flow as agent for the customer (*e.g.,* a clearing firm or other executing broker-dealer), whereas the proposal would additionally require the firm not to be a carrying firm, accept PFOF from an executing broker, or route customer orders to an affiliated executing broker. Under this alternative, it is likely that most brokers that qualify under FINRA Rule 5310(c) would qualify as introducing brokers under proposed Rule 1101(d). By categorizing more broker-dealers as ''introducing brokers,'' the overall compliance cost carried by the market would be lower as compared to the proposed rule. This alternative would likely cause fewer small broker-dealers, which currently qualify for relief under FINRA Rule 5310.09(c) and MSRB Rule G–18.08(b) and wish to remain conflicted or still carry customer accounts, to change business models to comply with the alternative rule.[613]

The brokers who benefit under this alternative are those who currently qualify for relief under FINRA Rule 5310.09(c) and MSRB Rule G–18.08(b) but fail at least one of the following criteria include in proposed Rule 1101(d): (i) does not carry customer accounts and does not hold customer funds or securities, (ii) has entered into an arrangement with an unaffiliated broker or dealer that has agreed to handle and execute on an agency basis the introducing broker's customer orders (''executing broker''), and (iii) has not accepted any monetary payment, service, property, or other benefit that results in remuneration, compensation, or consideration from the executing broker in return for the routing of the introducing broker's customer orders to the executing broker. Thus, many current broker-dealers that qualify for relief under the FINRA and MSRB rules, and to some extent their executing brokers, would have lower costs of compliance since there would be no need for those broker-dealers to change their business models. Also, this alternative may lower barriers to entry for some potential introducing brokers. However, under this alternative, the benefits of the proposal would also be diminished. With more broker-dealers meeting the proposal's definition of introducing broker, the benefits compared to the proposal would be lower. Specifically under this alternative, the Commission preliminarily believes that instead of changing their business models to stop being conflicted, introducing brokers and their executing brokers would be more likely to engage in conflicted transactions, and more introducing brokers would receive PFOF. Therefore, the execution quality benefits would be lower since the incentive created by the PFOF would persist, potentially leading to less efficient order routing which may benefit broker-dealers at the expense of retail customers.

4. Ban or Restrict Off-Exchange PFOF

Rather than requiring heightened best execution standards for transactions involving PFOF, alternatively the Commission could ban or restrict off-exchange PFOF in the equity and options markets. Under this alternative, registered exchanges would still be allowed to pay rebates.

[611] *See* O'Hara and Zhou, *supra* note 469.

[612] *See* Muni Facts, Municipal Securities Rulemaking Board, *available at https://www.msrb.org/News-and-Events/Muni-Facts.*

[613] *See supra* Section V.C.1.

Compared to the proposal, this alternative may further reduce conflicts of interest within and improve order handling practices by retail broker-dealers. A 2016 study sponsored by CFA Institute examined changes in equity market execution quality following the Financial Services Authority (FSA) 2012 guidance banning PFOF in the United Kingdom.[614] The study describes internalization under PFOF as a scenario that can increase the probability of conflicted equity and options transactions, particularly for retail investors, in the United Kingdom. The study finds that over the time period from 2010 to 2014, the proportion of retail-sized trades executing at the best quoted price increased from around 65% to more than 90%. The authors claim these findings suggest that the integrity of the order book improved.

Alternatively, rather than an outright ban on PFOF, the Commission could impose specific restrictions on PFOF that could allow retail broker-dealers to pass through payments to end customers in cases where it would permit best execution. For example, a retail broker-dealer may consider two order execution venues with different executable prices: the first venue has a more favorable price, and the second venue provides PFOF to the retail broker-dealer. If the difference in price between the two venues is smaller than the PFOF for the order in question, the retail-broker could return to the customer the portion of PFOF, which is greater than the venue price difference.

A ban or restriction on PFOF would increase the likelihood of higher commissions for retail investors or an increase in the cost of other services offered by retail broker-dealers compared to the proposal. It may also further reduce competition between broker-dealers compared to the proposal. Larger broker-dealers with more diversified business models may be more likely to expand their market share and smaller broker-dealers who are more dependent on PFOF revenue streams may be more likely to exit the market.

5. Require Broker-Dealers To Utilize Best Execution Committees

The Commission considered requiring each broker-dealer to maintain a best execution committee to regularly review the broker-dealer's best execution policies, procedures and the results of its efforts to secure best execution for its customers.

Requiring such a committee and defining its membership might improve execution quality by ensuring sufficient expertise is recruited to establish and monitor the broker-dealer's best execution efforts. Furthermore, requiring such a committee might increase executive attention to best execution, potentially improving execution quality for the broker-dealer's customers.

Requiring such a committee and defining its membership would entail certain costs in addition to those resulting from the proposed rules. First, if the Commission were to define the membership of the committee, it is likely that individual broker-dealers' organizational structures would vary in ways that would make a defined membership structure a poor fit because of, for instance, a single employee performing multiple roles, or individual roles handled by groups rather than a single individual. In addition, broker-dealers are diverse in their business plans and operations and a role that might be considered critical at one broker-dealer (such as managing fixed income executing brokers in thinly traded bonds) might be inapplicable at another broker-dealer that does not trade in these instruments.

If the Commission were to require the committee and not define its membership, broker-dealers might assign to the committee less senior staff or staff whose roles are not germane to achieving best execution for customer orders, significantly limiting the benefits of establishing such a committee. Furthermore, based on the its experience, the Commission believes that broker-dealers, particularly large broker-dealers that are more likely to continue to engage in conflicted transactions if the proposed rules are adopted, may have such a committee already established, further limiting the potential benefits of such a provision.

6. Require Order-by-Order Documentation for Conflicted or All Transactions

The Commission considered requiring each broker-dealer to document on an order-by-order basis, for conflicted or all transactions, the data that it considered as it handled the order. Such a requirement might offer two benefits beyond the benefits of the proposed rules. First, it might improve the quality of the broker-dealer's regular review of its execution practices compared to the proposed rules. Because the broker-dealer would analyze orders on a case-by-case basis, it might identify routing practices that could be changed to improve customer order execution quality. Second, it might improve regulators' ability to oversee the broker-dealer's efforts to provide best execution to its customers relative to the proposed rules as such records would be available to regulators during examinations of the broker-dealer or upon request.

The Commission preliminarily believes that such a requirement would offer greater potential benefits for conflicted transactions because broker-dealers engaging in such transactions have greater incentives to route orders in a manner that might not result in the best execution for customers.

Based on its experience, the Commission believes that some broker-dealers, particularly the largest broker-dealers that are likely to continue to engage in conflicted transactions if the proposed rules are adopted, already maintain this type of documentation for both internal review and operational purposes. Nevertheless, the requirement would be costly. Broker-dealers that do not already retain this data likely have chosen not to do so because the data are not operationally valuable to them for business purposes, and they believe that they are satisfying their best-execution obligations based on other data that they have available. For these broker-dealers, the requirement could impose considerable costs. They would need to alter information technology systems to capture this data, including contemporaneous pricing data and routing records, some of which (such as prices offered in response to a RFQ and much information related to fixed income and digital crypto assets) is not incorporated into other regulatory data sources such as CAT and thus might be stored on systems not integrated with other order routing systems, or systems that capture regulatory data. Processing this data might be computationally demanding, particularly for options, that have very high quotation traffic. Furthermore, creating and maintaining software to produce this documentation would require significant effort by highly skilled programmers, which would further increase the costs associated with such a requirement. As discussed previously,[615] the Commission preliminarily believes that broker-dealers that elect to refrain from conflicted transactions if the proposed rules are adopted are more likely to be smaller broker-dealers and these costs, many of which are fixed, are more likely to result in the broker-dealer changing

[614] *See* Sviatoslav Rosov, *Payment for Order Flow in the United Kingdom: Internalisation [sic], Retail Trading, Trade-Through Protection, and Implications for Market Structure,* CFA Institute (2016), *available at https://www.cfainstitute.org/en/advocacy/policy-positions/payment-for-order-flow-in-the-united-kingdom.*

[615] *See* Section V.C.2.ii, *supra.*

its business model or exiting the market, while the aggregate benefits to investors of such a requirement for smaller broker-dealers is likely to be smaller than for larger broker-dealers that handle more customer orders.

7. Staggered Compliance Dates

The Commission considered an alternative approach where smaller broker-dealers would be given more time to comply with the proposed rules. Having longer to comply might ease implementation for smaller broker-dealers that are less likely to have specialized staff to conduct tasks required for compliance. However, the later compliance date for smaller broker-dealers would also delay the realization of the proposed rules' benefits for investors.

The Commission preliminarily believes that the cost savings of the alternative could be small. Specifically, under the proposed rules, smaller broker-dealers would likely qualify as introducing brokers and would likely de-conflict rather than continue to engage in conflicted transactions and incur the additional costs associated with the rule requirements that introducing brokers are exempt from under Rule 1101(d).[616] Consequently, the Commission preliminarily believes smaller broker-dealers would have fewer requirements to implement under the proposal, mitigating the burden of implementation relative to larger broker-dealers. In addition, the Commission believes that smaller broker-dealers would likely engage external parties for review of proposed policies and procedures and for assistance in conducting annual reviews; this reliance on external resources for implementation activities would likely mitigate the burden of implementation on current staff.[617] These mitigations would limit the potential cost savings of delaying implementation for smaller broker-dealers.

E. Request for Comments

The Commission is sensitive to the potential economic effects, including costs and benefits, of the proposed rule. The Commission has identified certain costs and benefits associated with the proposal and requests comment on all aspects of its preliminary economic analysis, including with respect to the specific questions below. The Commission encourages commenters to identify, discuss, analyze, and supply relevant data, information, or statistics regarding any such costs or benefits. In addition to our general request for comments on the economic analysis associated with the proposed rules and proposed amendments, we request specific comment on certain aspects of the proposal:

159. What are commenters' views of the Commission's economic rationale for the proposed rule?

160. What are commenters' views of the Commission's characterization of the relevant baseline, against which it considered the effects of the proposal?

161. What are commenters' views of the Commission's characterization of the current legal and regulatory framework?

162. What are commenters' views of the Commission's characterization of the conflicts of interest in order handling and a need for heightened best execution requirements with respect to conflicted transactions?

163. What are commenters' views of the Commission's characterization of the conflicts of interest in order handling with respect to PFOF?

164. What are commenters' views of the Commission's characterization of the conflicts of interest in order handling with respect to principal trading?

165. What are commenters' views of the Commission's characterization of order handling and execution?

166. What are commenters' views of the Commission's characterization of retail customer order handling and execution for NMS stocks?

167. What are commenters' views of the Commission's characterization of retail customer order handling and execution for listed options? Do commenters believe that the majority of retail orders are routed to the wholesalers in exchange of payment for order flow by the retail brokers? Do commenters believe whether there is a trade-off between price improvement received for those retail orders and payment for order flow?

168. What are commenters' views of the Commission's characterization of retail customer order handling and execution for fixed income securities? The Commission requests information on the number of trading venues (*e.g.,* ATSs, RFQ platforms, broker's broker platforms, single platforms), to which broker-dealers currently maintain access, for the purpose of executing and exposing retail customer orders. The Commission requests information with respect to how broadly broker-dealers expose retail customer orders. The Commission requests information with respect to how many executing brokers, to which broker-dealers outsource their fixed income securities trading services. The Commission requests information on what broker-dealers currently document (*e.g.,* efforts to apply its best execution policies and procedures for conflicted transactions, the basis and information relied on for its determinations that such conflicted transactions would comply with the best execution standard, identifying the markets checked, internal quotes, external quotes, limit orders on trading venues) with respect to retail customer orders.

169. The Commission requests comments on retail customer order handling and execution for non-NMS stock equity securities. Please provide any relevant details and data on retail customer order handling and execution of non-NMS stock equity securities for assessing the effects of the proposal.

170. What are commenters' views of the Commission's characterization of retail customer order handling and execution for crypto asset securities?

171. What are commenters' views of the Commission's characterization of best execution review process?

172. What are commenters' views of the Commission's characterization of execution quality review?

173. What are commenters' views of the Commission's characterization of best execution committees?

174. What are commenters' views of the Commission's characterization of the competition in the market for broker-dealer services?

175. What are commenters' views of the Commission's characterization of the competition in the market for NMS stock trading services?

176. What are commenters' views of the Commission's characterization of the competition in the market for listed options trading services? Do commenters believe that the current features of price improvement auctions are favoring the wholesalers that bring the order flow and therefore not competitive?

177. What are commenters' views of the Commission's characterization of the competition in the market for fixed income securities trading services?

178. What are commenters' views of the Commission's characterization of the competition in the market for corporate debt securities trading services?

179. What are commenters' views of the Commission's characterization of the competition in the market for municipal securities trading services?

180. What are commenters' views of the Commission's characterization of

[616] *See supra* section V.C.2.a for discussion of carrying and conflicted broker-dealer costs.

[617] *See supra* section V.C.2.a).ii for the discussion about the cost associated with small broker-dealers utilizing external sources.

the competition in the market for U.S. Treasury securities trading services?

181. What are commenters' views of the Commission's characterization of the competition in the market for market access?

182. What are commenters' views of the Commission's assessment of the benefits of the proposal?

183. To what extent do commenters believe that broker-dealers will make changes to their order handling procedures due to regulatory risk? What kind of changes might they make? Does the proposal adequately reflect the costs they would bear? Please provide estimates of the costs if possible.

184. To what extent do commenters believe conflicted broker-dealers will add additional routing destinations to expose orders to venues beyond those identified as material potential liquidity sources for non-conflicted transactions?

185. Are there some markets, in which finding venues beyond those identified as material potential liquidity sources for non-conflicted transactions difficult? Please explain. To what extent will seeking such additional sources of liquidity be cost efficient?

186. What are commenters' views on the Commission's discussion of ATS connectivity charges?

187. What are commenters' views of the Commission's assessment of the effects stemming from changes in order handling procedures?

188. What are commenters' views on the extent to which investor execution quality will change under the proposal? Please explain.

189. To what extent will carrying broker-dealers face additional challenges and bear additional costs to comply with the proposal beyond those already discussed in the Economic Analysis? Will the additional restrictions on carrying broker-dealers improve investor execution quality?

190. To what extent do broker-dealers that would be categorized as ''conflicted'' under the proposal already comply with the heightened standards described by the proposal? Will these broker-dealers face additional challenges and bear additional costs complying with the proposal beyond those already discussed in the Economic Analysis? Please explain.

191. Do commenters agree with the Commission's preliminary belief that broker-dealers that receive relatively small payments for order flow or other incentives that would categorize them as conflicted, may choose to stop receiving those incentives to comply with the proposal? Does the Economic Analysis adequately reflect the cost of the proposal to these broker-dealers? Is the Commission's assumption that broker-dealers with less than $100MM in total assets are likely to de-conflict to avoid the heightened standards associated with conflicted transactions reasonable?

192. Are some broker-dealers likely to pass exchange rebates through to customers in order to avoid being conflicted under the proposal? Are there other ways for broker-dealers to deal with these rebates that would be less costly to implement? What costs would broker-dealers bear to pass exchange rebates through to their customers?

193. When a broker-dealer makes changes to its order routing in response to execution quality analysis, what costs does it incur? Are the Commission's estimates of these costs reasonable?

194. Do commenters believe that broker-dealers that currently pay to receive order flow may assist their broker-dealer clients in complying with the proposal by providing additional information on their policies and procedures to provide best execution? What information would they need to provide and how proprietary is this information?

195. Do commenters believe that broker-dealers that currently pay to receive order flow are significant contributors to the market for liquidity provision in thinly traded securities? Would the proposal disrupt liquidity provision to securities that are thinly traded? In which types of securities would these effects be most pronounced?

196. Do commenters believe that the proposal is likely to increase the prevalence of commissions in retail trading? In which asset classes would such changes be most likely?

197. What are commenters' views of the Commission's assessment of the effects stemming from changes in order handling procedures for NMS stocks?

198. What are commenters' views of the Commission's assessment of the effects stemming from changes in order handling procedures for listed options? Do commenters believe that more retail orders would be routed to price improvement auctions for execution? Do commenters believe that more retail orders would be routed to the exchanges that offer price improvement order types on the limit order books?

199. What are commenters' views of the Commission's assessment of the effects stemming from changes in order handling procedures for on-the-run U.S. Treasury securities?

200. What are commenters' views of the Commission's assessment of the effects stemming from changes in order handling procedures for fixed income securities (excluding on-the-run U.S. Treasury securities)?

201. With respect to fixed income securities trading, do commenters believe that the proposal (*e.g.,* the documentation requirement with respect to conflicted transactions) would enhance internal review (*e.g.,* internal review by best execution committee) of execution quality?

202. With respect to fixed income securities trading, do commenters believe that the proposal would improve the execution quality of retail customer trades by executing brokers? Please explain.

203. The Commission requests comments on the effects stemming from changes in order handling procedures for non-NMS stock equity securities.

204. What are commenters' views of the Commission's description of the non-NMS stock equity market? Please highlight any omitted or misunderstood elements on this market.

205. Do commenters agree with the Commission's characterization of internalization in the non-NMS stock equities market?

206. Do commenters agree with the assertion that the non-NMS stock equity market can offer a high degree of transparency in liquid securities? Please list any sources of pre-trade and post-trade information used when transacting in this market.

207. What are commenters' views on the necessity to connect to any given ATS when transacting in non-NMS stock equities? Please explain the rationale for connecting to an additional ATS in this market. If there are other non-ATS sources of liquidity, please describe them.

208. Do commenters believe the effects of the proposed rule on the non-NMS equity securities market will cause any brokers (introducing or otherwise) to reduce participation in or to exit this market? Please describe the rationale for any response.

209. Do commenters believe the requirements of this rule will have effects on the liquidity in the market for non-NMS stock equities? Please explain.

210. Do commenters believe that execution quality can be accurately measured in the non-NMS equity securities market? If so, please describe methods currently used to achieve execution quality analysis.

211. What are commenters' views of the Commission's assessment of the effects stemming from changes in order handling procedures for crypto asset securities?

212. The Commission requests more information regarding the proportion of

crypto asset security trading that is facilitated by introducing brokers.

213. The Commission requests more information regarding the level and variation of payment for order flow (*i.e.,* transaction rebates) rates in crypto asset security markets.

214. The Commission requests more information regarding the frequency of affiliated ATS routing in crypto asset security markets.

215. The Commission requests more information regarding the frequency of principal trading in crypto asset security markets.

216. What are commenters' views of the Commission's assessment of the costs of the proposal? Please provide as many quantitative estimates to support your position on costs as possible.

217. Does the Economic Analysis account for all compliance costs? If not, what other compliance costs would market participants incur? Please provide as many quantitative estimates to support your position on costs as possible.

218. With respect to fixed income securities trading, do commenters believe that broker-dealers would alter business practices to execute self-directed trades of retail customer on an agency basis rather than riskless principal basis to avoid being subject to the proposed requirements for conflicted transactions? If so, please provide quantitative cost estimates for converting retail self-directed trading business from riskless principal based to agency based.

219. The Commission requests comments on the costs associated with subscribing to a fixed income ATS (*e.g.,* subscription fees, connectivity fees, API). Please provide quantitative cost estimates if possible.

220. What are commenters' views of the Commission's assessment of the effects of the proposal on efficiency, competition and capital formation?

221. What are commenters' views of the Commission's assessment of the proposal's effects on competition?

222. What are commenters' views of the Commission's assessment of the proposal's effects on the competition in the market for trading services?

223. What are commenters' views of the Commission's assessment of the proposal's effects on the competition in the market for trading services for NMS stocks?

224. What are commenters' views of the Commission's assessment of the proposal's effects on the competition in the market for trading services for listed options? In particular, would the proposed rule result in the exchanges improving the level of competition and efficiency of the price improvement auction mechanisms by offering more symmetric fee schedule and allocation model? Would the proposed rule result in certain options exchanges starting to introduce order types to allow liquidity provision at the midpoint of the NBBO spread?

225. What are commenters' views of the Commission's assessment of the proposal's effects on the competition in the market for trading services for fixed income securities?

226. The Commission requests comments on the proposal's effects on the competition in the market for trading services for non-NMS stock equity securities.

227. What are commenters' views of the Commission's assessment of the proposal's effects on the competition in the market for trading services for crypto asset securities?

228. What are commenters' views of the Commission's assessment of the proposal's effects on competition in the market for broker-dealer services?

229. What are commenters' views of the Commission's assessment of the proposal's effects on the competition in the market for broker-dealer services for NMS stocks?

230. What are commenters' views of the Commission's assessment of the proposal's effects on the competition in the market for broker-dealer services for listed options?

231. What are commenters' views of the Commission's assessment of the proposal's effects on the competition in the market for broker-dealer services for fixed income securities?

232. The Commission requests comments on the proposal's effects on the competition in the market for broker-dealer services for non-NMS stock equity securities.

233. What are commenters' views of the Commission's assessment of the proposal's effects on the competition in the market for broker-dealer services for crypto asset securities?

234. What are commenters' views of the Commission's assessment of the proposal's effects on the competition in the market for market access?

235. What are commenters' views of the Commission's assessment of the proposal's effects on the competition in the market for market access for NMS stocks?

236. What are commenters' views of the Commission's assessment of the proposal's effects on the competition in the market for market access for listed options?

237. What are commenters' views of the Commission's assessment of the proposal's effects on the competition in the market for market access for fixed income securities?

238. The Commission requests comments on the proposal's effects on the competition in the market for market access for non-NMS stock equity securities.

239. What are commenters' views of the Commission's assessment on the competition in the market for market access for crypto asset securities?

240. What are commenters' views on the likelihood of broker-dealers reducing their participation in or leaving certain markets due to compliance costs of the proposal? Which markets would be most affected? Are there particular groups of investors that may be underserved by these markets if the proposal is adopted?

241. What are commenters' views of the economic effects on the market structure or order handling practices in the markets for securities based swaps, asset-backed securities, and repurchase and reverse repurchase agreements?

242. What are commenters' views of the Commission's assessment of the effects of the proposal on efficiency?

243. What are commenters' views of the Commission's assessment of the effects of the proposal on capital formation?

244. What are commenters' views of the Commission's assessment of the effects of an alternative to adopt FINRA Rule 5310 and MSRB Rule G–18 best execution rules?

245. What are commenters' views of the Commission's assessment of the effects of an alternative to require order execution quality disclosure for other asset classes?

246. What are commenters' views of the Commission's assessment of the effects of an alternative to utilize FINRA's and MSRB's definition of introducing brokers?

247. What are commenters' views of the Commission's assessment of the effects of an alternative to ban or restrict off-exchange PFOF?

248. Are there any additional reasonable alternatives that the Commission should consider? If so, please discuss that alternative and provide the benefits and costs of that alternative relative to the baseline and to the proposal.

VI. Paperwork Reduction Act

Certain provisions of proposed Rules 1101 and 1102, as well as proposed Rule 17a–4(b)(17), contain ''collection of information requirements'' within the meaning of the Paperwork Reduction Act of 1995 (''PRA'').[618] The

[618] 44 U.S.C. 3501 *et seq.*

Commission is submitting these collections of information to the Office of Management and Budget (''OMB'') for review in accordance with 44 U.S.C. 3507(d) and 5 CFR 1320.11. The titles for these collections of information are: (1) ''Regulation Best Execution''; and (2) Rule 17a–4—Records to be Preserved by Certain Exchange Members, Brokers and Dealers (OMB control number 3235–0279).[619] An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless the agency displays a currently valid control number.

A. Summary of Collection of Information

Proposed Rules 1101 and 1102, as well as proposed Rule 17a–4(b)(17), would include a collection of information within the meaning of the PRA for broker-dealers, as described below in this section VI.A. Further, the proposed Rule 17a–4(b)(17) would impose new record retention obligations on broker-dealers subject to Regulation Best Execution.

1. Required Policies and Procedures and Related Obligations

As detailed above,[620] proposed Rule 1101 would require that a broker-dealer that engages in any transaction for or with a customer or a customer of another broker-dealer establish, maintain, and enforce written policies and procedures reasonably designed to comply with the proposed best execution standard. These policies and procedures would be required to address: (1) how a broker-dealer will comply with the best execution standard; (2) how the broker-dealer will determine the best market and make routing or execution decisions for customer orders; (3) additional considerations applicable to conflicted transactions with retail customers; and (4) to the extent applicable, the obligations of introducing brokers that meet the definition in proposed Rule 1101(d).

In particular, these policies and procedures must address how the broker-dealer will comply with the best execution standard, including by obtaining and assessing reasonably accessible information, including information about price, volume, and execution quality, concerning the markets trading the relevant securities; identifying markets that may be reasonably likely to provide the most favorable prices for customer orders; and incorporating these material potential liquidity sources into the broker-dealer's order handling practices and ensuring that the broker-dealer can efficiently access each such material potential liquidity source.[621] The policies and procedures must also address how the broker-dealer will determine the best market and make routing or execution decisions for customer orders, including by: (1) assessing reasonably accessible and timely information with respect to the best displayed prices, opportunities for price improvement, including midpoint executions, and order exposure opportunities that may result in the most favorable price; (2) assessing the attributes of customer orders and considering the trading characteristics of the security, the size of the order, the likelihood of execution, the accessibility of the market, and any customer instructions in selecting the market most likely to provide the most favorable price; and (3) in determining the number and sequencing of markets to be assessed, reasonably balancing the likelihood of obtaining a better price with the risk that delay could result in a worse price.[622]

For conflicted transactions, as described in more detail above,[623] proposed Rule 1101(b) would require written policies and procedures to address additional considerations.[624] The broker-dealer's policies and procedures would need to additionally address: (1) how the broker-dealer will obtain and assess information beyond that required by proposed Rule 1101(a)(1)(i), including additional information about price, volume, and execution quality, in identifying a broader range of markets beyond those identified as material potential liquidity sources and (2) how the broker-dealer will evaluate a broader range of markets, beyond those identified as material potential liquidity sources, that might provide the most favorable price for customer orders, including a broader range of order exposure opportunities and markets that may be smaller or less accessible than those identified as material potential liquidity sources. The broker-dealer must additionally document, in accordance with written procedures, its compliance with the best execution standard for conflicted transactions, including all efforts taken to enforce the policies and procedures required by proposed Rule 1102(b) for conflicted transactions, and the basis and information relied on for its determination that such conflicted transactions would comply with the best execution standard. The broker-dealer would also have to document any arrangement, whether written or oral, concerning payment for order flow, including the parties to the arrangement, all qualitative and quantitative terms concerning the arrangement, and the date and terms of any changes to the arrangement.

A broker-dealer would also have to, no less frequently than quarterly, review the execution quality of its transactions for or with customers or customers of another broker-dealer and how such execution quality compares with the execution quality the broker-dealer might have obtained from other markets, revise its best execution policies and procedures, including its order handling practices, accordingly, and document the results of this review.[625]

To the extent that it has an arrangement with an executing broker for the handling of is customer orders, an introducing broker, as defined in proposed Rule 1101(d), would not have to comply with all of the requirements of proposed Rule 1101. Instead, as described above,[626] proposed Rule 1101(d) would provide that an introducing broker that routes customer orders to an executing broker would not need to separately comply with proposed Rules 1101(a), (b), and (c), so long as the introducing broker establishes, maintains, and enforces policies and procedures that require the introducing broker to regularly review the execution quality obtained from its executing broker, compare that execution quality with the execution quality it might have obtained from other executing brokers, and revise its order handling practices, accordingly. An introducing broker would additionally be required to document the results of its review.

Finally, any broker-dealer subject to proposed Rule 1101 would be required under proposed Rule 17a–4(b)(17) to preserve the records made under proposed Rule 1101.[627] Accordingly, a broker-dealer would be required to preserve those records for a period of not less than three years, the first two years in an easily accessible place.

[619] *See* 17 CFR 240.17a–4. The proposed amendment to Rule 17a–4(b)(17) would amend the existing PRA for Rule 17a–4.

[620] *See supra* sections IV.B–IV.E.

[621] *See* proposed Rule 1101(a)(1).

[622] *See* proposed Rule 1101(a)(2).

[623] *See supra* section IV.C.

[624] *See* proposed Rule 1101(b).

[625] *See* proposed Rule 1101(c).

[626] *See supra* section IV.E.

[627] Any written policies and procedures developed pursuant to proposed Rule 1101 would be required to be preserved pursuant to existing Rule 17a–4(e)(7).

2. Annual Report

As detailed above,[628] proposed Rule 1102 would require that a broker-dealer that effects any transaction for or with a customer or a customer of another broker-dealer, no less frequently than annually, review and assess the design and overall effectiveness of its best execution policies and procedures, including its order handling practices. The broker-dealer must prepare a written report detailing the results of such review and assessment, including a description of all deficiencies found and any plan to address deficiencies, and the report must be presented to the broker-dealer's board of directors (or equivalent governing body). The broker-dealer would be required to preserve a copy of each such report, and the documentation for each such review and assessment, pursuant to proposed Rule 17a–4(b)(17).[629]

B. Proposed Use of Information

Generally, the collections of information required under proposed Rules 1101 and 1102, as described below in this section VI.B, would enable a broker-dealer to comply with its obligations under proposed Regulation Best Execution, allow the broker-dealer to identify any inadequacies and make any revisions to its policies and procedures, including order handling practices, as appropriate to ensure the broker-dealer's continued effective compliance with the best execution standard, and create documentation that the Commission and SROs could use for purposes of examinations and investigations.

Records retained in accordance with proposed Rule 17a–4(b)(17) would assist a broker-dealer in supervising and assessing internal compliance with Regulation Best Execution and assist the Commission and SROs in connection with examinations and investigations.

1. Required Policies and Procedures and Related Obligations

The collection of information pursuant to proposed Rule 1101 would require written documentation of a broker-dealer's policies and procedures reasonably designed to comply with the best execution standard in proposed Rule 1100. Generally, these policies and procedures would provide a documented process for handling customer orders that a broker-dealer would use to ensure its ongoing compliance with the best execution standard. In addition, these written policies and procedures would assist the Commission and SROs in conducting examinations and investigations for compliance with the proposed rules, including the proposed best execution standard. Any ongoing collections of information pursuant to proposed Rule 1101, including a conflicted broker-dealer's documentation of its best execution determinations and its payment for order flow arrangements in accordance with written procedures, a broker-dealer's documentation of the results of its execution quality reviews, and an introducing broker's documentation of its executing broker execution quality reviews, would assist the broker-dealer in its ongoing efforts to transact for or with customers consistent with its best execution policies and procedures, and in turn ensure compliance with the best execution standard. Ongoing collections of information would also assist the Commission and SROs in examinations and investigations by ensuring that appropriate documentation is available to determine whether a broker-dealer is adhering to its best execution policies and procedures and otherwise in compliance with all applicable requirements of proposed Regulation Best Execution.

2. Annual Report

The collection of information pursuant to proposed Rule 1102 would also provide appropriate documentation of a broker-dealer's continued efforts to comply with the best execution standard and would help to ensure that the broker-dealer's best execution policies and procedures remain effective. In particular, the requirement of proposed Rule 1102 to document the results of a broker-dealer's annual review of its best execution policies and procedures would enable the broker-dealer, including its governing body, to identify any inadequacies and make any changes to the broker-dealer's best execution policies and procedures, including its order handling practices, as appropriate in order to further its compliance with the proposed rules. The collection of information pursuant to proposed Rule 1102 would also create documentation of such compliance that the Commission and SROs could use for purposes of investigations and examinations.

C. Respondents

The respondents to proposed Rules 1101, 1102, and 17a–4(b)(17) would be broker-dealers that engage in securities transactions for or with a customer, or a customer of another broker-dealer. Based on FOCUS Report data,[630] the Commission estimates that, as of June 30, 2022, there were 3,498 broker-dealers.[631] The Commission preliminarily believes that nearly all of these broker-dealers would engage in customer transactions and be subject to these rules. Accordingly, for purposes of the PRA, the Commission estimates 3,498 respondents. The Commission requests comment on the accuracy of these estimated figures.

D. Total Initial and Annual Reporting and Recordkeeping Burdens

1. Required Policies and Procedures and Related Obligations

(a) Initial Costs and Burdens

The Commission preliminarily believes that broker-dealers generally already have policies and procedures in place to achieve compliance with the best execution rules of FINRA and the MSRB, as applicable, although these policies and procedures differ based on each broker-dealer's business model. For purposes of the PRA, the Commission must consider the burden on respondents to bring their best execution policies and procedures into compliance with the proposed rule, which in certain cases would impose additional and more specific obligations. The extent to which a respondent would be burdened by the proposed collection of information under the proposed rule would depend on the best execution policies and procedures that have already been established by a respondent as well as the respondent's business model. To the extent broker-dealers' existing best execution policies and procedures already substantially address the requirements of proposed Rule 1101, these broker-dealers likely would only require limited updates to their policies and procedures to meet the additional obligations specified in the proposed rule. To initially comply with this obligation, the Commission preliminarily believes that broker-dealers would employ a combination of in-house and outside legal and compliance counsel to update existing policies and procedures. The Commission assumes that, for purposes of this analysis, the associated costs and burdens would differ between small and large broker-dealers, as large broker-

[628] *See supra* section IV.F.

[629] Any written procedures developed pursuant to proposed Rule 1102 would be required to be preserved pursuant to existing Rule 17a–4(e)(7).

[630] FOCUS Reports, or ''Financial and Operational Combined Uniform Single'' Reports, are monthly, quarterly, and annual reports that broker-dealers are generally required to file with the Commission and/or SROs pursuant to Exchange Act Rule 17a–5. *See* 17 CFR 240.17a–5.

[631] The data are obtained from FOCUS Reports, Part II filed for the second quarter of 2022.

dealers generally offer more products and services and are more likely to engage in conflicted transactions, and therefore would need to develop a more extensive set of policies and procedures. Based on FOCUS Report data, the Commission estimates that, as of June 30, 2022, approximately 761 broker-dealers are small entities under the Regulatory Flexibility Act.[632] Therefore, the Commission estimates that 2,737 broker-dealers would qualify as large broker-dealers for purposes of this analysis.[633]

Although the exact nature and extent of the policies and procedures that a broker-dealer would be required to establish likely would vary depending upon the business model of the broker-dealer,[634] the Commission broadly estimates that a large broker-dealer, which the Commission assumes is more likely to need to satisfy the heightened requirements applicable to conflicted transactions, would incur a one-time average internal burden of 85 hours for in-house legal and in-house compliance counsel to update existing policies and procedures to comply with proposed Rule 1101.[635] The Commission additionally estimates a one-time burden of 12 hours for a general counsel at a large broker-dealer and 12 hours for a Chief Compliance Officer to review and approve the updated policies and procedures, for a total of 109 burden hours.[636] In addition, the Commission estimates a cost of approximately $7,936 for outside counsel to review the updated policies and procedures on behalf of a large broker-dealer.[637] The Commission therefore estimates the aggregate burden for large broker-dealers to be 298,333 burden hours,[638] and the aggregate cost for large broker-dealers to be approximately $21.72 million.[639]

In contrast, the Commission preliminarily believes small broker-dealers would primarily rely on outside counsel to update existing policies and procedures, as small broker-dealers generally have fewer in-house legal and compliance personnel. Moreover, the Commission believes small broker-dealers would be less likely to engage in conflicted transactions subject to the additional procedural obligations of proposed Rule 1101(b), and would be more likely to qualify as introducing brokers and be exempt from complying with proposed Rule 1101(a), (b), and (c), and therefore would need to develop a less extensive set of policies and procedures. Accordingly, the Commission estimates that only 65 hours of outside legal counsel services would be required to update such small broker-dealers' policies and procedures, for a total one-time cost of approximately $32,240 per small broker-dealer,[640] and an aggregate cost of approximately $24.53 million for all small broker-dealers.[641] The Commission additionally estimates in-house compliance personnel would require 18 hours to review and approve the updated policies and procedures, for an aggregate burden of 13,698 hours.[642]

The Commission preliminarily believes that broker-dealers would utilize their existing recordkeeping systems to preserve any documents necessary to comply with proposed Rule 17a–4(b)(17). Accordingly, the Commission estimates that broker-dealers will incur no new initial burdens or costs to retain the records made pursuant to proposed Rule 17a–4(b)(17). Nevertheless, the Commission requests comment on this assumption and whether the requirements of proposed Rule 17a–4(b)(17) would pose additional initial burdens or costs on broker-dealers.

The Commission therefore estimates the total initial aggregate burden to be 312,031 hours,[643] and the total initial aggregate cost to be approximately $46.25 million.[644]

(b) Ongoing Costs and Burdens

On an ongoing basis, a respondent would have to maintain and review its best execution policies and procedures to ensure their effectiveness as well as to address any deficiencies found and to accommodate the addition of, among other things, new products or services, new business lines, or new markets or trading characteristics for a particular security. Proposed Rule 1101(c) would also require a broker-dealer to, no less frequently than quarterly, review the execution quality of its transactions for or with customers or customers of another broker-dealer, and how such execution quality compares with the execution quality the broker-dealer might have obtained from other markets, and to revise is best execution policies and procedures accordingly. Broker-dealers would also have to document the results of this review. Additionally, proposed Rule 1101(b) would require broker-dealers that engage in conflicted transactions to document, in accordance with written procedures, their compliance with the best execution standard for conflicted transactions, including all efforts to enforce their best execution policies and procedures for conflicted transactions and the basis and information relied on for their determinations that such conflicted transactions would comply with the best execution standard, as well as to document their payment for order flow arrangements. Moreover, in lieu of the requirements of proposed Rules 1101(a), (b), and (c), proposed Rule 1101(d) would require an introducing broker relying on that rule to establish, maintain, and enforce policies and procedures that require the introducing broker to regularly review the execution quality obtained from its executing broker, compare it with the execution quality it might have obtained from other executing brokers, and revise its order handling practices, accordingly. The introducing broker would have to document the results of this review.

Once a broker-dealer has established written policies and procedures reasonably designed to achieve best execution, the Commission estimates

[632] *See infra* note 691 (describing the definition of the term ''small entity'').

[633] This calculation was made as follows: (3,498 total broker-dealers) − (761 small broker-dealers) = 2,737 large broker-dealers.

[634] For purposes of the PRA, the burden to establish policies and procedures means those a respondent is required to establish pursuant to proposed Rules 1101(a), (b), and (d).

[635] This estimate would be broken down as follows: 67 hours for in-house legal counsel + 18 hours for in-house compliance counsel to update existing policies and procedures = 85 burden hours.

[636] This estimate is based on the following calculation: (85 hours of review for in-house legal and in-house compliance counsel) + (12 hours of review for general counsel) + (12 hours of review for Chief Compliance Officer) = 109 burden hours.

[637] The Commission's estimates of the relevant wage rates for outside legal services of $496/hour take into account staff experience, a variety of sources including general information websites, and adjustments for inflation. This cost estimate is therefore based on the following calculation: (16 hours of review) × ($496/hour for outside counsel services) = $7,936 in outside counsel costs.

[638] This estimate is based on the following calculation: (109 burden hours of review per large broker-dealer) × (2,737 large broker-dealers) = 298,333 aggregate burden hours.

[639] This estimate is based on the following calculation: ($7,936 for outside counsel costs per large broker-dealer) × (2,737 large broker-dealers) = $21.72 million in outside counsel costs.

[640] This cost estimate is based on the following calculation: (65 hours of review) × ($496/hour for outside counsel services) = $32,240 in outside counsel costs.

[641] This cost estimate is based on the following calculation: ($32,240 for outside attorney costs per small broker-dealer) × (761 small broker-dealers) = $24.53 million in outside counsel costs.

[642] This estimate is based on the following calculation: (18 burden hours) × (761 small broker-dealers) = 13,698 aggregate burden hours.

[643] This estimate is based on the following calculation: (298,333 aggregate burden hours for large broker-dealers) + (13,698 aggregate burden hours for small broker-dealers) = 312,031 total aggregate burden hours.

[644] This estimate is based on the following calculation: ($21.72 million in aggregate costs for large broker-dealers) + ($24.53 million in aggregate costs for small broker-dealers) = $46.25 million total aggregate costs.

that large broker-dealers would each annually incur an internal burden of 25 hours to review and update existing policies and procedures:[645] 9 hours for legal personnel, 8 hours for compliance personnel, and 8 hours for business-line personnel. The Commission further estimates that large broker-dealers would each annually incur an internal burden of 100 hours to conduct and document their reviews of execution quality pursuant to proposed Rule 1101(c) and document their efforts to obtain best execution for any conflicted transactions and their payment for order flow arrangements pursuant to proposed Rule 1101(b): 10 hours for legal personnel, 20 hours for compliance personnel, and 70 hours for business-line personnel. The Commission therefore estimates an ongoing, aggregate burden for large broker-dealers of approximately 342,125 hours.[646] Because the Commission assumes that large broker-dealers would rely on internal personnel, rather than outside counsel, to update their policies and procedures on an ongoing basis, to conduct and document their execution quality reviews, and to document their efforts to obtain best execution for conflicted transactions, the Commission estimates large broker-dealers would not incur additional ongoing costs.

The Commission assumes for purposes of this analysis that small broker-dealers would mostly rely on outside legal counsel and outside compliance consultants for review and update of their policies and procedures.[647] The Commission preliminarily estimates that outside legal counsel would require approximately 11 hours per year to update policies and procedures, for an annual cost of approximately $5,456 for each small broker-dealer.[648] The estimated aggregate, annual ongoing cost for outside legal counsel to update policies and procedures for all small broker-dealers would be approximately $4.15 million.[649] In addition, the Commission estimates that small broker-dealers would require 11 hours of outside compliance services per year to update their policies and procedures, for an ongoing cost of approximately $3,344 per year,[650] and an aggregate ongoing cost of approximately $2.54 million.[651] The Commission further estimates that small broker-dealers would require 20 hours of outside compliance services per year to conduct and document their reviews of execution quality and document their efforts to obtain best execution for conflicted transactions and payment for order flow arrangements, for an ongoing cost of approximately $6,080 per year,[652] and an aggregate ongoing cost of approximately $4.63 million.[653] The total aggregate, ongoing cost for small broker-dealers is therefore estimated at approximately $11.32 million per year.[654] For purposes of this analysis, the Commission assumes that small broker-dealers would engage in fewer conflicted transactions than large broker-dealers and be more likely to comply with the regular review required by proposed Rule 1101(d) for introducing brokers in lieu of the regular review required by proposed Rule 1101(c).

In addition to the ongoing costs described above, the Commission additionally estimates small broker-dealers would incur an internal burden of approximately 6 hours for an in-house compliance manager to review and approve the updated policies and procedures per year. The Commission further estimates that small broker-dealers would incur an internal burden of approximately 30 hours per year for in-house business-line personnel to conduct and document their reviews of execution quality and document their efforts to obtain best execution for conflicted transactions and payment for order flow arrangements. In addition, the Commission estimates that small-broker dealers would incur an internal burden of approximately 8 hours per year for in-house compliance personnel to review the execution quality reviews and documentation of efforts to obtain best execution for conflicted transactions and payment for order flow arrangements. The Commission estimates that the ongoing burden for business-line personnel, in-house compliance personnel and in-house compliance manager review for each small broker dealer would be 44 hours and the ongoing, aggregate burden for all small broker-dealers would be 33,484 hours for business-line personnel, in-house compliance personnel, and in-house compliance manager review.[655]

The Commission estimates that the approximate ongoing burden associated with the recordkeeping requirements of proposed Rule 17a–4(b)(17) for any records made in compliance with proposed Rule 1101 would be 15,968 burden hours per year.[656] The Commission does not believe that the ongoing costs associated with ensuring compliance with the retention schedule would change from the current costs of ensuring compliance with existing Rule 17a–4. However, the Commission requests comment regarding whether there would be additional costs relating to ensuring compliance with record retention and retention schedules pursuant to Rule 17a–4.

The Commission therefore estimates the total ongoing aggregate burden to be 391,577 hours,[657] and the total ongoing

[645] *See supra* note 634.

[646] This estimate is based on the following calculation: (125 burden hours per large broker-dealer) × (2,737 large broker-dealers) = 342,125 aggregate ongoing burden hours.

[647] *See supra* note 640.

[648] This estimate is based on the following calculation: (11 hours per small broker-dealer) × ($496/hour for outside counsel services) = $5,456 in outside counsel costs.

[649] This estimate is based on the following calculation: ($5,456 in outside counsel costs per small broker-dealer) × (761 small broker-dealers) = $4.15 million in aggregate, ongoing outside legal costs.

[650] The Commission believes that performance of this function will most likely be equally allocated between a senior compliance examiner and a compliance manager. Based on industry sources, Commission staff preliminarily estimates that the costs for these positions in the securities industry are $264 and $344 per hour, respectively, for an average of $304 per hour. This cost estimate is based on the following calculation: (11 hours of review) × ($304/hour for outside compliance services) = $3,344 in outside compliance service costs.

[651] This estimate is based on the following calculation: ($3,344 in outside compliance costs per small broker-dealer) × (761 small broker-dealers) = $2.54 million in aggregate, ongoing outside compliance costs.

[652] This cost estimate is based on the following calculation: (20 hours of review) × ($304/hour for outside compliance services) = $6,080 in outside compliance service costs.

[653] This estimate is based on the following calculation: ($6,080 in outside compliance costs per small broker-dealer) × (761 small broker-dealers) = $4.63 million in aggregate, ongoing outside compliance costs.

[654] This estimate is based on the following calculation: ($4.15 million for outside legal counsel costs) + ($2.54 million for outside compliance costs for policies and procedures) + ($4.63 million for outside compliance costs for regular reviews and documentation) = $11.32 million total aggregate ongoing costs.

[655] This estimate is based on the following calculation: (6 hours in-house compliance manager review per small broker-dealer) + (30 hours business-line personnel review per small broker-dealer) + (8 hours in-house compliance personnel review per small broker-dealer) = 44 hours per small broker dealer × (761 small broker-dealers) = 33,484 aggregate ongoing burden hours.

[656] Because the Commission assumes broker-dealers would utilize their existing recordkeeping systems to preserve any records made in compliance with proposed Rule 1101, the Commission estimates that the burdens associated with such record retention would be minimal. Accordingly, the Commission estimates the aggregate ongoing burden based on the following calculation: (5 burden hours in-house compliance personnel per large broker-dealer × 2,737 large broker-dealers) + (3 burden hours in-house compliance personnel per small broker-dealer × 761 small broker-dealers) = 15,968 aggregate ongoing burden hours.

[657] This estimate is based on the following calculation: (342,125 aggregate ongoing burden hours for large broker-dealers for proposed Rule 1101) + (33,484 aggregate ongoing burden hours for small broker-dealers for proposed Rule 1101) + (15,968 aggregate ongoing burden hours for all

aggregate cost to be approximately $11.32 million per year.[658]

The Commission acknowledges that policies and procedures required by proposed Rule 1101 may vary greatly by broker-dealer, given the differences in size and the complexity of broker-dealer business models. Accordingly, the need to update policies and procedures might also vary greatly. The Commission requests comment regarding the accuracy of the estimated burden hours and costs necessary to comply with the proposal.

2. Annual Report

(a) Initial Costs and Burdens

Proposed Rule 1102 would require a broker-dealer to, no less frequently than annually, review and assess the design and overall effectiveness of its best execution policies and procedures, including its order handling practices. A broker-dealer would be required to conduct the review and assessment in accordance with written procedures, as well as document the review and assessment. The broker-dealer would also have to prepare a written report detailing the results of such review and assessment, including a description of all deficiencies found any plan to address deficiencies, and the report would be required to be presented to the board of directors (or equivalent governing body) of the broker-dealer. The broker-dealer would be required to preserve a copy of each such report and documentation for each such review and assessment pursuant to proposed Rule 17a–4(b)(17).

The Commission preliminarily believes that a respondent should currently have written compliance procedures reasonably designed to review its business activity. Proposed Rule 1102 would initially require a respondent to update such written compliance procedures to document the method in which the respondent plans to conduct its review and assessment pursuant to proposed Rule 1102.

The Commission broadly estimates that a large broker-dealer would incur a one-time average internal burden of 15 hours for in-house legal and in-house compliance counsel to update its existing compliance procedures for reviewing and assessing the design and overall effectiveness of its best execution policies and procedures.[659] The Commission additionally estimates a one-time burden of 2 hours for a general counsel at a large broker-dealer and 1 hour for a Chief Compliance Officer to review and approve the updated compliance procedures, for a total of 18 burden hours per large broker-dealer.[660] In addition, the Commission estimates a cost of approximately $1,488 for outside counsel to review the updated compliance procedures on behalf of a large broker-dealer.[661] The Commission therefore estimates the aggregate burden for large broker-dealers to be 49,266 burden hours,[662] and the aggregate cost for large broker-dealers to be approximately $4.1 million.[663]

In contrast, the Commission believes small broker-dealers would primarily rely on outside counsel to update existing compliance procedures, as small broker-dealers generally have fewer in-house legal and compliance personnel. The Commission estimates that a small broker-dealer would require an average of 10 hours of outside legal counsel services to update the compliance procedures, for a total one-time cost of approximately $4,960 per small broker-dealer,[664] and an aggregate cost of approximately $3.77 million for all small broker-dealers.[665] The Commission additionally believes in-house compliance personnel at each small broker-dealer would require 5 hours to review and approve the updated compliance procedures, for an aggregate burden of 3,805 hours.[666]

The Commission preliminarily believes that both large and small broker-dealers would utilize their existing recordkeeping systems to preserve any documents necessary to comply with proposed Rule 17a–4(b)(17). Accordingly, the Commission estimates that broker-dealers will incur no new initial burdens or costs to retain the records made pursuant to proposed Rule 1102. Nevertheless, the Commission requests comment on this assumption and whether the requirements of proposed Rule 17a–4(b)(17) would pose additional initial burdens or costs on broker-dealers.

The Commission therefore estimates the total initial aggregate burden to be 53,071 hours,[667] and the total initial aggregate cost to be approximately $7.87 million.[668]

(b) Ongoing Costs and Burdens

Proposed Rule 1102 would require a broker-dealer to review and assess, no less frequently than annually, the design and overall effectiveness of its best execution policies and procedures, including its order handling and routing practices. Such review and assessment would be required to be conducted in accordance with written procedures and would be required to be documented. A broker-dealer would be required to prepare a written report detailing the results of such review and assessment, including a description of all deficiencies found and any plan to address deficiencies, and the report would have to be presented to the board of directors (or equivalent governing body) of the broker-dealer. The broker-dealer would be required to preserve a copy of each such report and documentation for each such review and assessment pursuant to proposed Rule 17a–4(b)(17).

The ongoing burden of complying with proposed Rule 1102 would include a respondent's documentation of its reviews and assessments of the design and overall effectiveness of its best execution policies and procedures and the preparation of its written reports.

broker-dealers for proposed Rule 17a–4(b)(17)) = 391,577 total aggregate ongoing burden hours.

[658] This estimate is based on the following calculation: ($11.32 million per year in total aggregate ongoing costs for small broker-dealers) + ($0 ongoing costs for large broker-dealers) = $11.32 million per year in total aggregate ongoing costs.

[659] This estimate would be broken down as follows: 10 hours for in-house legal counsel + 5 hours for in-house compliance counsel to update existing policies and procedures = 15 burden hours.

[660] This estimate is based on the following calculation: (15 hours of review for in-house legal and in-house compliance counsel) + (2 hours of review for general counsel) + (1 hour of review for Chief Compliance Officer) = 18 burden hours.

[661] The Commission's estimates of the relevant wage rates for outside legal services of $496/hour take into account staff experience, a variety of sources including general information websites, and adjustments for inflation.'' This cost estimate is therefore based on the following calculation: (3 hours of review) × ($496/hour for outside counsel services) = $1,488 in outside counsel costs.

[662] This estimate is based on the following calculation: (18 burden hours of review per large broker-dealer) × (2,737 large broker-dealers) = 49,266 aggregate burden hours.

[663] This estimate is based on the following calculation: ($1,488 for outside counsel costs per large broker-dealer) × (2,737 large broker-dealers) = $4.1 million in outside counsel costs.

[664] This cost estimate is based on the following calculation: (10 hours of review) × ($496/hour for outside counsel services) = $4,960 in outside counsel costs.

[665] This cost estimate is based on the following calculation: ($4,960 for outside attorney costs per small broker-dealer) × (761 small broker-dealers) = $3.77 million in outside counsel costs.

[666] This estimate is based on the following calculation: (5 burden hours) × (761 small broker-dealers) = 3,805 aggregate burden hours.

[667] This estimate is based on the following calculation: (49,266 aggregate burden hours for large broker-dealers) + (3,805 aggregate burden hours for small broker-dealers) = 53,071 total aggregate burden hours.

[668] This estimate is based on the following calculation: ($4.1 million in aggregate costs for large broker-dealers) + ($3.77 million in aggregate costs for small broker-dealers) = $7.87 million total aggregate costs.

The Commission estimates that large broker-dealers would each annually incur an internal burden of 40 hours to conduct and document its annual reviews and assessments (5 hours for legal personnel, 15 hours for compliance personnel, and 20 hours for business-line personnel). The Commission estimates that large broker-dealers would each annually incur an internal burden of 8 hours to prepare the annual report (4 hours for legal personnel and 4 hours for compliance personnel) for a total ongoing burden of 48 hours per large broker-dealer. The Commission therefore estimates an ongoing, aggregate burden for large broker-dealers of approximately 131,376 hours.[669] Because the Commission assumes that large broker-dealers would rely on internal personnel to prepare the annual report, the Commission estimates that large broker-dealers would incur no ongoing costs.

The Commission assumes for purposes of this analysis that small broker-dealers would mostly rely on outside legal counsel and outside compliance consultants to conduct the annual reviews and assessments and prepare the annual report, with final review and approval from an in-house compliance manager. The Commission preliminarily estimates that outside counsel would require approximately 5 hours per year to conduct and document its annual reviews and assessments, for an annual cost of approximately $2,480 for each small broker-dealer.[670] The estimated aggregate, annual ongoing cost for outside legal counsel to conduct and document the annual reviews and assessments for small broker-dealers would be approximately $1.88 million.[671] In addition, the Commission expects that small broker-dealers would require 10 hours of outside compliance services per year to conduct and document its annual reviews and assessments, for an ongoing cost of approximately $3,040 per small broker-dealer per year,[672] and an aggregate ongoing cost of approximately $2.31 million.[673] The Commission preliminarily estimates that outside counsel would require approximately 3 hours per year to prepare the annual report, for an annual cost of approximately $1,488 for each small broker-dealer.[674] The estimated aggregate, annual ongoing cost for outside legal counsel to prepare the annual report for small broker-dealers would be approximately $1.13 million.[675] In addition, the Commission preliminarily estimates that each small broker-dealer would require 3 hours of outside compliance services per year to prepare the annual report, for an ongoing cost of approximately $912 per year,[676] and an aggregate ongoing cost of approximately $694,032 for all small broker-dealers.[677] The total aggregate, ongoing cost for small broker-dealers is therefore estimated at approximately $6.01 million per year.[678]

In addition to the costs described above, the Commission additionally estimates each small broker-dealer would incur an internal burden of approximately 12 hours for business-line personnel to conduct and document the annual reviews and assessments, and 4 hours per year for in-house compliance personnel to review the reviews and assessments and preparation of the annual report. The Commission further estimates small broker-dealers would incur an internal burden of approximately 2 hours for an in-house compliance manager to review and approve the annual report. The ongoing, aggregate burden for small broker-dealers would be 13,698 hours for in-house business-line personnel, compliance personnel, and compliance manager review.[679]

The Commission estimates that the approximate ongoing burden associated with the recordkeeping requirement of proposed Rule 17a–4(b)(17) for any records made in compliance with proposed Rule 1102 would be 6,235 burden hours per year.[680] The Commission does not believe that the ongoing costs associated with ensuring compliance with the retention schedule would change from the current costs of ensuring compliance with existing Rule 17a–4. However, the Commission requests comment regarding whether there would be additional costs relating to ensuring compliance with record retention and retention schedules pursuant to Rule 17a–4.

The Commission therefore estimates the total ongoing aggregate burden to be 151,309 hours,[681] and the total ongoing aggregate cost to be approximately $6.01 million per year.[682]

The Commission acknowledges that policies and procedures may vary greatly by broker-dealer, given the differences in size and the complexity of broker-dealer business models. Accordingly, the need to update policies and procedures and conduct an annual review and assessment might also vary greatly. The Commission requests comment regarding the accuracy of the estimated burden hours and costs necessary to comply with the proposal.

[669] This estimate is based on the following calculation: (48 burden hours per large broker-dealer) × (2,737 large broker-dealers) = 131,376 aggregate ongoing burden hours.

[670] This estimate is based on the following calculation: (5 hours per small broker-dealer) × ($496/hour for outside counsel services) = $2,480 in outside counsel costs.

[671] This estimate is based on the following calculation: ($2,480 in outside counsel costs per small broker-dealer) × (761 small broker-dealers) = $1.88 million in aggregate, ongoing outside legal costs.

[672] This cost estimate is based on the following calculation: (10 hours per small broker-dealer) × ($304/hour for outside compliance services) = $3,040 in outside compliance service costs.

[673] This estimate is based on the following calculation: ($3,040 in outside compliance costs per small broker-dealer) × (761 small broker-dealers) = $2.31 million in aggregate, ongoing outside compliance costs.

[674] This estimate is based on the following calculation: (3 hours per small broker-dealer) × ($496/hour for outside counsel services) = $1,488 in outside counsel costs.

[675] This estimate is based on the following calculation: ($1,488 in outside counsel costs per small broker-dealer) × (761 small broker-dealers) = $1.13 million in aggregate, ongoing outside legal costs.

[676] This cost estimate is based on the following calculation: (3 hours per small broker-dealer) × ($304/hour for outside compliance services) = $912 in outside compliance service costs.

[677] This estimate is based on the following calculation: ($912 in outside compliance costs per small broker-dealer) × (761 small broker-dealers) = $694,032 in aggregate, ongoing outside compliance costs.

[678] This estimate is based on the following calculation: ($1.88 million for outside legal counsel costs to conduct and document the annual review and assessment) + ($2.31 million for outside compliance costs to conduct and document the annual review and assessment) + ($1.13 million for outside legal counsel to prepare the annual report) + ($694,032 for outside compliance costs to prepare the annual report) = $6.01 million total aggregate ongoing costs.

[679] This estimate is based on the following calculation: (12 hours business-line personnel review per small broker-dealer) + (4 hours compliance personnel review per small broker-dealer) + (2 hours compliance manager review per small broker-dealer) × (761 small broker-dealers) = 13,698 aggregate ongoing burden hours.

[680] Because the Commission assumes broker-dealers would utilize their existing recordkeeping systems to preserve any records made in compliance with proposed Rule 1102, the Commission estimates that the burdens associated with such record retention would be minimal. Accordingly, the Commission estimates the aggregate ongoing burden based on the following calculation: (2 burden hours in-house compliance personnel per large broker-dealer × 2,737 large broker-dealers) + (1 burden hour in-house compliance personnel per small broker-dealer × 761 small broker-dealers) = 6,235 aggregate ongoing burden hours.

[681] This estimate is based on the following calculation: (131,376 aggregate ongoing burden hours for large broker-dealers for proposed Rule 1102) + (13,698 aggregate ongoing burden hours for small broker-dealers for proposed Rule 1102) + (6,235 aggregate ongoing burden hours for all broker-dealers for proposed Rule 17a–4(b)(17)) = 151,309 total aggregate ongoing burden hours.

[682] This estimate is based on the following calculation: ($6.01 million per year in total aggregate ongoing costs for small broker-dealers) + ($0 ongoing costs for large broker-dealers) = $6.01 million per year in total aggregate ongoing costs.

A. Total Paperwork Burden

Based on the foregoing, the Commission preliminarily estimates that the total initial aggregate burden for all broker-dealers to comply with proposed Rules 1101 and 1102, as well as proposed Rule 17a–4(b)(17), would be 365,102 hours,[683] and the total initial aggregate cost would be approximately $54.12 million.[684] The Commission preliminarily estimates that the total ongoing aggregate burden for all broker-dealers to comply with proposed Rules 1101 and 1102, as well as proposed Rule 17a–4(b)(17), would be 558,854 hours per year,[685] and the total ongoing aggregate cost would be approximately $17.33 million per year.[686]

PRA SUMMARY TABLE

	Initial PRA burden hours	Ongoing annual PRA burden hours (after first year)	Total PRA burden hours in first year	Initial PRA costs (million)	Ongoing annual PRA costs (after first year) (million)	Total PRA costs in first year (million)
Industry-Wide Burden due to Policies and Procedures under Proposed Rule 1101	312,031	72,991	385,022	$46.25	$6.69	$52.94
Industry-Wide Burden due to Regular Review and Documentation under Proposed Rule 1101	0	302,618	302,618	0	4.63	4.63
Total Industry-Wide Burden due to Proposed Rule 1101	312,031	375,609	687,640	46.25	11.32	57.57
Industry-Wide Burden due to Compliance Procedures under Proposed Rule 1102	53,071	0	53,071	7.87	0	7.87
Industry-Wide Burden due to Annual Review and Documentation, under Proposed Rule 1102	0	118,612	118,612	0	4.19	4.19
Industry-Wide Burden due to Annual Report under Proposed Rule 1102	0	26,462	26,462	0	1.82	1.82
Total Industry-Wide Burden due to Proposed Rule 1102	53,071	145,074	198,145	7.87	6.01	13.88
Total Industry-Wide Burden due to Proposed Rule 17a–4(b)(17)	0	22,203	22,203	0	0	0

B. Collection of Information is Mandatory

All of the collection of information would be mandatory.

C. Confidentiality of Responses to Collection of Information

The collection of information would not be required to be made public but would not be confidential.

D. Retention Period for Recordkeeping Requirements

A broker-dealer would be required to preserve a copy of its policies and procedures under proposed Regulation Best Execution in a manner consistent with, and for the periods specified in, Rule 17a–4(e)(7). A broker-dealer would be required to preserve a copy of its other records under proposed Regulation Best Execution in a manner consistent with, and for the periods specified in, the proposed amendments to Rule 17a–4(b).

E. Request for Comment

Pursuant to 44 U.S.C. 3506(c)(2)(B), the Commission solicits comments to:

- Evaluate whether the proposed collections of information are necessary for the proper performance of the functions of the agency, including whether the information shall have practical utility;
- Evaluate the accuracy of our estimates of the burden of the proposed collection of information;
- Determine whether there are ways to enhance the quality, utility, and clarity of the information to be collected; and
- Evaluate whether there are ways to minimize the burden of collection of information on those who are to respond, including through the use of automated collection techniques or other forms of information technology.

Persons submitting comments on the collection of information requirements should direct them to the Office of Management and Budget, Attention: Desk Officer for the Securities and Exchange Commission, Office of Information and Regulatory Affairs, Washington, DC 20503, and should also send a copy of their comments to Secretary, Securities and Exchange Commission, 100 F Street NE, Washington, DC 20549–1090, with reference to File Number S7–32–22. Requests for materials submitted to OMB by the Commission with regard to this collection of information should be in writing, with reference to File Number S7–32–22 and be submitted to the Securities and Exchange Commission, Office of FOIA/PA Services, 100 F Street NE, Washington, DC 20549–2736. As OMB is required to make a decision concerning the collection of information between 30 and 60 days after publication, a comment to OMB is best assured of having its full effect if OMB receives it within 30 days of publication.

VII. Consideration of Impact on the Economy

For purposes of the Small Business Regulatory Enforcement Fairness Act of 1996 (''SBREFA''),[687] the Commission must advise the OMB as to whether the proposed regulation constitutes a ''major'' rule. Under SBREFA, a rule is considered ''major'' where, if adopted, it results or is likely to result in: (1) an annual effect on the economy of $100 million or more (either in the form of an

[683] 365,102 hours = 312,031 hours (Required policies and procedures) + 53,071 hours (Annual review).

[684] $54.12 million = $46.25 million (Required policies and procedures) + $7.87 million (Annual review).

[685] 558,854 hours = 391,577 (Required policies and procedures) + 145,074 hours (Annual review) + 22,203 hours (Rule 17a–4(b)(17)).

[686] $17.33 million = $11.32 million (Required policies and procedures) + $6.01 million (Annual review).

[687] Public Law 104–121, Title II, 110 Stat. 857 (1996) (codified in various sections of 5 U.S.C., 15 U.S.C., and as a note 5 U.S.C. 601).

increase or decrease); (2) a major increase in costs or prices for consumers or individual industries; or (3) significant adverse effect on competition, investment, or innovation. If a rule is ''major,'' its effectiveness will generally be delayed for 60 days pending Congressional review. The Commission requests comment on the potential impact of Regulation Best Execution on the United States economy on an annual basis, on any potential increases in costs or prices for consumers or individual industries, and any potential effect on competition, investment, or innovation. Commenters are requested to provide empirical data and other factual support for their views to the extent possible.

VIII. Initial Regulatory Flexibility Act Analysis

The Regulatory Flexibility Act (''RFA'')[688] requires Federal agencies, in promulgating rules, to consider the impact of those rules on small entities. Section 603(a)[689] of the Administrative Procedure Act,[690] as amended by the RFA, generally requires the Commission to undertake a regulatory flexibility analysis of all proposed rules, or proposed rule amendments, to determine the impact of such rulemaking on ''small entities.''[691] Under Section 605(b) of the RFA, a Federal agency need not undertake a regulatory flexibility analysis of proposed rules where, if adopted, they would not have a significant economic impact on a substantial number of small entities.[692]

A. Reasons for and Objectives of the Proposed Action

As discussed above in section III.B, the Commission is proposing Regulation Best Execution to further the goals of the national market system and reinforce broker-dealer best execution obligations.

The proposed rule would set forth the standard of best execution, and proposed Rule 1101 would require a broker-dealer to establish, maintain, and enforce written policies and procedures that address specific elements that are designed to promote the best execution of customer orders, and comply with certain execution quality review and documentation requirements.[693] More specifically, proposed Rule 1101(a)(1) would require that a broker-dealer's policies and procedures address how it will: (1) obtain and assess reasonably accessible information concerning the markets trading the relevant securities; (2) identify markets that may be material potential liquidity sources; and (3) incorporate the material potential liquidity sources into its order handling practices and ensure efficient access to each such material potential liquidity source. Proposed Rule 1101(a)(2) would require a broker-dealer's policies and procedures to address how it will: (1) assess reasonably accessible and timely information, including information with respect to the best displayed prices, opportunities for price improvement, and order exposure opportunities that may result in the most favorable price; (2) assess the attributes of customer orders and consider the trading characteristics of the security, the size of the order, the likelihood of execution, the accessibility of the market, and any customer instructions in selecting the market most likely to provide the most favorable price; and (3) reasonably balance the likelihood of obtaining a better price with the risk that delay could result in a worse price when determining the number and sequencing of markets to be assessed.

Proposed Rule 1101(b) would require a broker-dealer's policies and procedures for conflicted transactions to address how it will: (1) obtain and assess information beyond that required by proposed Rule 1101(a)(1)(i) in identifying a broader range of markets beyond the material potential liquidity sources; and (2) evaluate a broader range of markets beyond the material potential liquidity sources. Proposed Rule 1101(b) would also require broker-dealers that engage in conflicted transactions with retail customers to document in accordance with their written procedures their compliance with the best execution standard for conflicted transactions, including all efforts to enforce their best execution policies and procedures for conflicted transactions and the basis and information relied on for its determinations that such conflicted transactions would comply with the best execution standard. Additionally, proposed Rule 1101(b)(3) would require broker-dealers that engage in conflicted transactions to document their payment for order flow arrangements.

Proposed Rule 1101(c) would require broker-dealers to no less frequently than quarterly review the execution quality of customer orders, and how such execution quality compares with the execution quality that might have been obtained from other markets, and revise their best execution policies and procedures, including order handling practices, accordingly.

Proposed Rule 1101(d) would exempt an introducing broker that routes customer orders to an executing broker from separately complying with proposed Rules 1101(a), (b), and (c), so long as the introducing broker establishes, maintains, and enforces policies and procedures that require the introducing broker to regularly review the execution quality obtained from its executing broker, compare it with the execution quality it might have obtained from other executing brokers, and revise its order handling practices accordingly. An introducing broker would additionally be required to document the results of its review.

Proposed Rule 1102 would require each broker-dealer no less frequently than annually to conduct a review and assessment of the design and overall effectiveness of its best execution policies and procedures, and document such review and assessment in a report that would be provided to the broker-dealer's governing body.

Proposed amendments to Rule 17a–4 under the Exchange Act would specify the record preservation requirements for records made under proposed Regulation Best Execution.

B. Legal Basis

Pursuant to the Exchange Act, 15 U.S.C. 78a *et seq.,* and particularly sections 2, 3(b), 5, 10, 11A, 15, 15A, 17, 23(a), 24, and 36 thereof, 15 U.S.C. 78b, 78c(b), 78e, 78j, 78k–1, 78o, 78o–1, 78q, 78w(a), 78x, and 78mm, the Commission is proposing amendments to § 240.17a–4 and new §§ 242.1100 through 242.1102.

C. Small Entities Subject to the Proposed Rule

For purposes of a Commission rulemaking in connection with the RFA, a broker-dealer will be a small entity if it: (1) had total capital (net worth plus subordinated liabilities) of less than $500,000 on the date in the prior fiscal year as of which its audited financial statements were prepared pursuant to Rule 17a–5(d) under the Exchange Act,[694] or, if not required to file such statements, had total capital (net worth plus subordinated liabilities) of less than $500,000 on the last business day of the preceding fiscal year (or in the

[688] 5 U.S.C. 601 *et seq.*

[689] 5 U.S.C. 603(a).

[690] 5 U.S.C. 551 *et. seq.*

[691] Although section 601(b) of the RFA defines the term ''small entity,'' the statute permits agencies to formulate their own definitions. The Commission has adopted definitions for the term small entity for the purposes of Commission rulemaking in accordance with the RFA. Those definitions, as relevant to this proposed rulemaking, are set forth in Rule 0–10 under the Exchange Act, 17 CFR 240.0–10.

[692] *See* 5 U.S.C. 605(b).

[693] *See supra* section III.B.

[694] *See* 17 CFR 240.17a–5(d).

time that it has been in business, if shorter); and (2) is not affiliated with any person (other than a natural person) that is not a small business or small organization.[695]

As discussed in section VI, the Commission estimates that approximately 3,498 broker-dealers would be subject to proposed Regulation Best Execution. Based on FOCUS Report data, the Commission estimates that as of June 30, 2022, approximately 761 of those broker-dealers might be small entities for purposes of this analysis. For purposes of this RFA analysis, the Commission refers to broker-dealers that might be small entities under the RFA as ''small entities,'' and the Commission continues to use the term ''broker-dealers'' to refer to broker-dealers generally, as the term is used elsewhere in this release.

D. Projected Compliance Requirements of the Proposed Rule for Small Entities

The RFA requires a description of the projected reporting, recordkeeping, and other compliance requirements of proposed Regulation Best Execution, including an estimate of the classes of small entities that would be subject to the requirements and the type of professional skill necessary to prepare the required reports and records. Following is a discussion of the associated costs and burdens of compliance with proposed Regulation Best Execution, as incurred by small entities. As described above in section IV, the proposed rules would require a broker-dealer to establish, maintain, and enforce written policies and procedures reasonably designed to comply with the proposed best execution standard, as well as additional policies and procedures for conflicted transactions and tailored policies and procedures applicable to introducing brokers. The proposed rules would also set forth documentation requirements related to conflicted transactions and execution quality reviews. Moreover, the proposed rules would require a broker-dealer to review and assess, no less frequently than annually, the design and overall effectiveness of its best execution policies and procedures, including its order handling practices, and prepare a written report that is provided to its board of directors or equivalent governing body detailing the results. Finally, proposed amendments to Rule 17a–4 would set forth record preservation requirements for records made under proposed Regulation Best Execution.

1. Required Policies and Procedures and Related Obligations

To initially comply with these requirements, the Commission preliminarily believes that small entities would primarily rely on outside counsel to update existing policies and procedures, as small broker-dealers generally have fewer in-house legal and compliance personnel. As discussed in section VI above, the Commission preliminarily believes the initial costs associated with this requirement for small entities would be $32,240 per small entity (reflecting an estimated 65 hours of outside legal counsel services), and an aggregate cost of $24.53 million for all small entities.[696] The Commission additionally estimates in-house compliance personnel would require 18 hours to review and approve the updated policies and procedures, for an aggregate burden of 13,698 hours.[697]

The Commission preliminarily believes that small broker-dealers would mostly rely on outside legal counsel and outside compliance consultants to review and update their policies and procedures on a periodic basis. The Commission preliminarily estimates that outside legal counsel would require approximately 11 hours per year, totaling approximately $5,456 annually for each small entity for an estimated aggregate ongoing cost of approximately $4.15 million. In addition, the Commission estimates that small entities would require 11 hours of outside compliance services per year to update their policies and procedures for an ongoing cost of approximately $3,344 per year, and the estimated aggregate ongoing cost to be $2.54 million. In addition, the Commission estimates that small entities would require 20 hours of outside compliance services per year to conduct and document their review of execution quality and document all their efforts to obtain best execution for conflicted transactions, including the basis and information relied on for its determinations, and payment for order flow arrangement for an ongoing cost of approximately $6,080 per year, and an aggregate ongoing cost of approximately $4.63 million. The total aggregate ongoing cost for small entities is therefore estimated at approximately $11.32 million per year. Separately, the Commission estimates that small entities would incur approximately six internal burden hours for an in-house compliance manager to review and approve the updated policies and procedures per year and incur an internal burden of approximately 30 hours per year for in-house business-line personnel to conduct and document their execution quality reviews and document all their efforts to obtain best execution for conflicted transactions and payment for order flow arrangements. The Commission further estimates that small entities would incur an internal burden of approximately 8 hours per year for in-house compliance personnel to review the regular reviews of execution quality and documentation of efforts to obtain best execution for conflicted transactions and payment for order flow arrangements. Thus, the Commission estimates that the ongoing burden for each small entity would be 44 hours and the ongoing, aggregate annual burden for all small entities to be 33,484 hours.[698]

Finally, the Commission preliminarily believes that small entities would utilize their existing recordkeeping systems to preserve any documents necessary to comply with proposed Rule 1101. Thus, the Commission estimates that broker-dealers will incur no new initial burdens or costs to retain the records made pursuant to proposed Regulation Best Execution. Separately, the Commission estimates that the approximate ongoing burden associated with the recordkeeping requirements of proposed Rule 17a–4(b)(17) for any records made in compliance will proposed Rule 1101 pursuant to the proposed rule would be three burden hours per small entity for an ongoing aggregate annual burden for all small entities of approximately 2,283 hours. The Commission does not believe that the ongoing costs associated with ensuring compliance with retention schedule would change from the current costs of ensuring compliance with existing Rule 17a–4.

2. Annual Report

As discussed above in sections VI, the Commission believes small entities would primarily rely on outside counsel to update their existing compliance procedures for the annual reviews and assessments under proposed Rule 1102. The Commission estimates that small entities would require approximately 10 hours of outside legal counsel services to update the compliance procedures, for total one-time costs of $4,960 per small entity, and an aggregate cost of $3.77 million for all small entities.[699]

Additionally, the Commission believes that the in-house compliance personnel would require approximately

[695] *See* 17 CFR 240.0–10(c).

[696] *See supra* notes 640–641.

[697] *See supra* note 642.

[698] *See supra* note 655.

[699] *See supra* notes 664–665.

five hours to review and approve the updated compliance procedure for an aggregate burden of 3,805 hours.[700]

The Commission preliminarily estimates that outside legal counsel would require approximately five hours to conduct and document annual reviews and assessments for an approximate cost of $2,480 per year for each small entity.[701] The estimated aggregate, ongoing cost for outside legal counsel to conduct and document the annual reviews and assessments would be approximately $1.88 million.[702] Additionally, the Commission expects that an additional 10 hours of outside compliance services would be required to conduct and document its annual reviews and assessments, for an ongoing cost of approximately $3,040 per small entity each year and an aggregate ongoing cost of approximately $2.31 million.[703] Separately, the Commission preliminarily estimates that outside counsel would require approximately three hours to prepare the annual report, resulting in an annual cost of $1,488 per year, and an aggregate ongoing cost of approximately $1.13 million per year.[704] In addition, the Commission preliminarily estimates that outside compliance services would require three hours per year to prepare the annual report, for an ongoing cost of approximately $912 per small entity each year and an aggregate ongoing cost of approximately $694,032 per year.[705] Together the aggregate, ongoing cost for small entities subject to the proposed rule is estimated at approximately $6.01 million per year.[706]

In addition to these costs, the Commission additionally estimates each small entity would incur an internal burden of approximately 12 hours for business-line personnel to conduct and document the annual reviews and assessments, and four hours per year for in-house compliance personnel to review the reviews and assessments and preparation of the annual report. The Commission further estimates an internal burden of approximately two hours for an in-house compliance manager to review and approval the annual report for an ongoing, aggregate burden of 13,698 hours.

Finally, the Commission estimates that small entities would incur no new initial burdens or costs to retain the records made pursuant to proposed Rule 1102. Additionally, the Commission estimates that the approximate ongoing burden associated with the recordkeeping requirement of proposed Rule 17a–4(b)(17) for any records made in compliance with proposed Rule 1102 would be one burden hour per small entity for an ongoing aggregate burden of 761 hours.

E. Duplicative, Overlapping, or Conflicting Federal Rules

An analysis under the RFA requires a Federal agency to identify, to the extent practicable, all relevant Federal rules that may duplicate, overlap, or conflict with the proposed rules. The Commission believes that there are no Federal rules that duplicate, overlap, or conflict with proposed Regulation Best Execution and the proposed amendments to Rule 17a–4.

F. Significant Alternatives

An RFA analysis requires a discussion of alternatives to the proposed rule that would minimize the impact of small entities while accomplishing the stated objectives of the applicable statutes. The analysis should include: (1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance and reporting under the rule for such small entities; (3) the use of performance rather than design standards; and (4) an exemption from coverage of the rule, or any part thereof, for such small entities.

The Commission considered whether it would be necessary or appropriate to establish different compliance or reporting requirements or timetables; or to clarify, consolidate, or simplify compliance and reporting requirements under the proposed rule for small entities. Because proposed Regulation Best Execution is designed to further enhance broker-dealers' ability to maintain robust best execution practices and result in more vigorous efforts by broker-dealers to achieve best execution, including in situations where broker-dealers have order handling conflicts of interest with retail customers, the Commission preliminarily believes that small entities should be covered by the proposed rules. The proposed rule includes performance standards. The Commission also preliminarily believes that the proposed rules are flexible enough for small broker-dealers to comply without the need for the establishment of different compliance or reporting requirements or timetables[707] for small entities, or exempting them from the proposed rule's requirements.

However, the Commission is proposing that broker-dealers that meet the definition of introducing broker would be subject to different and more tailored requirements under proposed Rule 1101. Specifically, under proposed Rule 1101(d), an entity that meets the definition of introducing broker and routes customer orders to an executing broker would not need to separately comply with proposed Rules 1101(a), (b), and (c), so long as the introducing broker establishes, maintains, and enforces policies and procedures that require the introducing broker to regularly review the execution quality obtained from such executing broker, compare it with the execution quality it might have obtained from other executing brokers, and revise its order handling practices accordingly. As discussed above,[708] the Commission believes that small broker-dealers would be more likely to qualify as introducing brokers. As such, certain small entities would be exempt from complying with proposed Rules 1101(a), (b), and (c). To the extent a small broker-dealer does not qualify as an introducing broker, the Commission believes a small broker-dealer would be less likely to engage in conflicted transactions and be subject to the additional obligations of proposed Rule 1101(b) than a large broker-dealer.

The Commission also considered a number of potential regulatory alternatives to proposed Regulation Best Execution, including: (1) adoption of FINRA Rule 5310 and MSRB Rule G–18 best execution rules; (2) requiring order execution quality disclosure for other asset classes; (3) defining ''introducing broker'' to include those entities that quality for relief under FINRA and MSRB rules; (4) banning or restricting off-exchange payment for order flow; (5) requiring broker-dealers to utilize best execution committees; (6) requiring order-by-order documentation for conflicted or all transactions; and (7) providing staggered compliance dates for certain broker-dealers. For a more detailed discussion of these regulatory alternatives, *see* Section V, *supra.*

[700] *See supra* note 666.

[701] *See supra* note 670.

[702] *See supra* note 671.

[703] *See supra* note 672–673.

[704] *See supra* notes 674–675.

[705] *See supra* notes 676–677.

[706] *See supra* note 678.

[707] Proposed Regulation Best Execution does not include different timetables for small broker-dealers because the Commission preliminarily believes that customers of small broker-dealers would benefit from the protections offered by proposed Regulation Best Execution, just as customers of broker-dealers that are not small entities.

[708] *See supra* section VI.

1. Adopt FINRA Rule 5310 and MSRB Rule G–18 Concerning Best Execution

As discussed above, the Commission considered adopting FINRA Rule 5310 and MSRB Rule G–18 regarding best execution and their associated guidance.[709] Under this alternative, the overall costs and benefits to small entities would be lower than compared to the proposal. This alternative would not include the additional requirements related to transactions with broker-dealer conflicts of interest, which represent the majority of retail transactions in the equity, options, and fixed income markets.[710] Under this alternative, conflicted broker-dealers that would qualify for relief under the current FINRA rule would experience lower compliance costs as they would not be required to develop or update their own policies and procedures or adjust their business model to de-conflict from their executing broker. The cost of the proposal could provide an advantage to larger broker-dealers as compared to smaller broker-dealers. The lower compliance cost under this alternative would increase competition among broker-dealers compared to the proposed rule by lowering barriers to entry for new broker-dealers and decrease the likelihood that smaller broker-dealers would exit the market.

The Commission preliminarily believes that adopting FINRA or the MSRB's best execution rules would be less effective than the proposed rule because broker-dealers (including small entities) would not be required to establish the comprehensive and detailed policies and procedures relating to all aspects of a broker-dealer's best execution practices, including additional requirements for broker-dealers with conflicts of interest, that would be required under the proposal. The Commission preliminarily believes that the proposed policies and procedures-based best execution framework, along with regular reviews and related documentation, would help broker-dealers maintain robust best execution practices and result in vigorous efforts by broker-dealers to achieve best execution, including in situations where broker-dealers have order handling conflicts of interest with retail customers. The Commission also preliminarily believes that detailed policies and procedures, regular reviews, and related documentations would allow broker-dealers to effectively assess their best execution practices and assist the Commission and SROs to effectively examine and enforce broker-dealers' compliance with the proposed rules.

2. Require Order Execution Quality Disclosure for Other Asset Classes

As discussed in section V, as an alternative, the Commission could require execution quality disclosures from market centers and broker-dealers in the options and fixed income markets. In addition to execution quality data at the individual security-level, similar to Rule 605 data, the execution quality disclosures could include aggregated standardized summary reports of key execution quality statistics, which could permit smaller and less sophisticated investors to analyze and compare their broker-dealers against other broker-dealers. This alternative may permit investors to better evaluate execution quality for their orders within their broker-dealer's overall executions in a given security and facilitate broker-to-broker comparisons of order execution beyond just the equities markets.

Under the alternative, broker-dealers that engage in less efficient order handling practices may recognize the inadequacy when comparing their own execution quality statistics with those disclosed by more efficient broker-dealers, and improve the order handling practices accordingly to attract order flow.

However, developing these execution quality disclosures may cause market centers and broker-dealers in the options and fixed income markets to incur higher startup costs relative to the proposal as market centers would need to develop systems to produce and post such reports. To the extent that certain market centers already have systems or infrastructures in place to produce execution quality metrics, they would incur costs to modify their current systems and/or the format of their current reports in order to comply with the potential execution quality disclosure requirements. Additionally, execution quality disclosures for the options and fixed income markets may be complex and difficult to produce for a number of reasons.[711]

3. Define ''Introducing Broker'' To Include Those Entities That Qualify for Relief Under FINRA and MSRB Rules

The Commission could alternatively propose to remove the requirements for introducing and executing brokers related to remuneration, carrying firm status, and affiliation.[712] This alternative would more closely align with the FINRA and MSRB rules concerning a broker-dealer that routes its order flow to another broker-dealer that has agreed to handle that order flow as agent or riskless principal for the customer. Under this alternative, it is likely that most broker-dealers that currently qualify for relief under the FINRA and MSRB rules would continue to do so. By categorizing to allow more broker-dealers to be classified as ''introducing brokers,'' the overall compliance cost carried by the market would be lower as compared to the proposal. This alternative would likely cause fewer small broker-dealers that currently qualify for relief under the FINRA or MSRB rule, and wish to continue to receive remuneration, carry customer accounts, or route to affiliates, to incur the expenses associated with the full obligations of proposed Regulation Best Execution.

The broker-dealers who could benefit under this alternative are those that currently qualify for relief under the FINRA and MSRB rules but fail at least one of the criteria in proposed Rule 1101(d). Thus, current ''introducing brokers,'' and to some extent their executing brokers, would have lower compliance costs since there would be no requirement to change their business models or set-up their own best execution policies and procedures to comply with the proposal. Additionally, this alternative may lower barriers to entry for some potential introducing brokers. However, under this alternative, as discussed in section V above, the benefits of the proposed rule would be diminished. The Commission preliminarily believes that instead of changing their business models, introducing brokers would be more likely to receive payment for order flow from their executing brokers or route customer orders to affiliated executing brokers. Therefore, the benefits of the alternative would be lower since the incentive created by the payment for order flow or routing to an affiliated executing broker would still exist, leading to order routing which may benefit the broker-dealers at the expense of retail customers.

4. Ban or Restrict Off-Exchange Payment for Order Flow

Rather than requiring heightened best execution standards for transactions involving payment for order flow, alternatively the Commission could ban or restrict off-exchange payment for order flow in the equity and options markets. Under this alternative, registered securities exchanges would still be allowed to pay rebates. In

[709] *See supra* section V.

[710] *See* section IV.C.2.a.

[711] *See supra* section V.

[712] *See supra* section IV.E.

contrast to the proposed rule, this alternative may reduce conflicts of interest and improve order handling practices by retail broker-dealers. Separately, the Commission could impose specific restrictions on payment for order flow that could allow retail broker-dealers to pass through payments to end customers in cases where it would permit best execution. A ban or restriction on payment for order flow could increase the likelihood of higher commissions for retail investors or an increase in the cost of other services offered by retail broker-dealers. It may also reduce competition between broker-dealers as larger broker-dealers with more diversified business models may be more likely to expand their market share and smaller broker-dealers who are more dependent on payment for order flow revenue streams may be more likely to exit the market.

5. Require Broker-Dealers To Utilize Best Execution Committees

The Commission considered requiring each broker-dealer to maintain a best execution committee to regularly review the broker-dealers' best execution policies, procedures and the results of its efforts to secure best execution for its customers. Requiring such a committee and defining its membership might improve execution quality by ensuring sufficient expertise is recruited to establish and monitor the broker-dealer's best execution efforts. Furthermore, requiring such a committee might increase executive attention on best execution, potentially improving execution quality for the broker-dealer's customers.

Requiring such a committee and defining its membership would entail certain costs. First, if the Commission were to define the membership of the committee, it is likely that individual broker-dealers' organizational structures would vary in ways that would make a defined membership structure a poor fit because of, for instance, a single employee performing multiple roles, or individual roles handled by groups rather than a single individual. In addition, broker-dealers are diverse in their business plans and operations and a role that might be considered critical at one broker-dealer (such as managing fixed income executing brokers in thinly traded bonds) might be inapplicable at another broker-dealer that does not trade in these instruments. If the Commission were to require the committee and not define its membership, broker-dealers might assign to the committee less senior staff or staff whose roles are not germane to achieving best execution for customer orders, significantly limiting the benefits of establishing such a committee. Furthermore, based on its experience, the Commission believes that many broker-dealers, particularly large broker-dealers that are more likely to continue to engage in conflicted transactions if the proposed rules are adopted, often have such a committee already established, further limiting the potential benefits of such a provision.

6. Require Order-by-Order Documentation for Conflicted or All Transactions

The Commission considered requiring each broker-dealer to document, for conflicted or all transactions, the data that it considered as it handled the order. Such a requirement might offer two benefits. First, it might improve the quality of the broker-dealer's regular review of its execution practices compared to the proposed rules. Because the broker-dealer could analyze orders on a case-by-case basis, it might identify routing practices that could be changed to improve customer order execution quality. Second, it might improve regulators' ability to supervise the broker-dealers efforts to provide best execution to its customers relative to the proposed rules as such records would be available to regulators during examinations of the broker-dealer or upon request for other regulatory purposes.

The Commission preliminarily believes that such a requirement would offer greater potential benefits for conflicted transactions because broker-dealers engaging in such transactions have greater incentives to route orders in a manner that might not result in the best prices for customers. Based on its experience, the Commission believes that some broker-dealers, particularly the largest broker-dealers that are likely to continue to engage in conflicted transactions if the proposed rules are adopted, already maintain this type of documentation for both internal review and operational purposes. Nevertheless, the requirement would be costly. Broker-dealers that do not already retain this data likely have chosen not to do so because the data are not operationally valuable to them for business purposes, and they believe that they are satisfying their best-execution obligations based on other data that they have available for review. For these broker-dealers, the requirement could impose considerable costs. For example, they would need to alter their information technology systems to capture this data, including contemporaneous pricing data and routing records, some of which (such as prices offered in response to a RFQ and information related to fixed income and crypto asset securities) is not incorporated into other regulatory data sources such as CAT and thus might be stored on systems not integrated with other order routing systems, or systems that capture regulatory data. Processing this data might be computationally demanding, particularly for broker-dealers who trade options, as they have very high quotation traffic. Furthermore, creating and maintaining software to produce this documentation would require significant effort by highly skilled programmers which would further increase the costs associated with such a requirement. As discussed previously,[713] the Commission preliminarily believes that broker-dealers that elect to refrain from conflicted transactions if the proposed rules are adopted are more likely to be smaller broker-dealers and these costs, many of which are fixed, are more likely to result in the broker-dealer changing its business model or exiting the market, while the aggregate benefits to investors of such a requirement for smaller broker-dealers is likely to be smaller than for larger broker-dealers that handle more customer orders.

7. Staggered Compliance Dates

The Commission also considered whether there should be staggered compliance dates that take into consideration the concerns of smaller broker-dealers that may need additional time to comply with the proposed rule. Because the Commission preliminarily believes that smaller broker-dealers would primarily rely on outside legal counsel to update existing policies and procedures and outside compliance services to conduct and document their quarterly reviews of execution quality and document their efforts to obtain best execution for conflicted transactions and payment for order flow arrangements, the Commission does not believe that the proposal would unduly burden a smaller broker-dealer's internal resources. Furthermore, the Commission believes small broker-dealers would be less likely to engage in conflicted transactions subject to the additional procedural obligations of proposed Rule 1101(b), and would be more likely to qualify as introducing brokers and be exempt from complying with proposed Rules 1101(a), (b), and (c), and therefore would need to develop a less extensive set of policies and procedures.

[713] *See supra* section V.C.2.ii.

G. General Request for Comment

The Commission encourages written comments regarding this initial regulatory flexibility analysis. In particular, the Commission seeks comment on the number of small entities that would be affected by proposed Regulation Best Execution, and whether the effect on small entities would be economically significant. The Commission requests that commenters describe the nature of any impact on small entities and provide empirical data to support the extent of such impact. The Commission also requests comment on the proposed compliance burdens and the effects these burdens would have on small entities.

Statutory Authority and Text of the Proposed Rule

Pursuant to the Exchange Act, 15 U.S.C. 78a *et seq.,* and particularly sections 2, 3(b), 5, 10, 11A, 15, 15A, 17, 23(a), 24, and 36 thereof, 15 U.S.C. 78b, 78c(b), 78e, 78j, 78k–1, 78o, 78o–1, 78q, 78w(a), 78x, and 78mm, the Commission is proposing amendments to § 240.17a–4 and new §§ 242.1100 through 242.1102.

List of Subjects in 17 CFR Parts 240 and 242

Brokers, Reporting and recordkeeping requirements, Securities.

Text of the Proposed Rules

In accordance with the foregoing, Title 17, Chapter II of the Code of Federal Regulations is proposed to be amended as follows:

PART 240—GENERAL RULES AND REGULATIONS, SECURITIES EXCHANGE ACT OF 1934

■ 1. The authority citation for part 240 continues to read as follows:

Authority: 15 U.S.C. 77c, 77d, 77g, 77j, 77s, 77z–2, 77z–3, 77eee, 77ggg, 77nnn, 77sss, 77ttt, 78c, 78c–3, 78c–5, 78d, 78e, 78f, 78g, 78i, 78j, 78j–1, 78k, 78k–1, 78l, 78m, 78n, 78n–1, 78o, 78o–4, 78o–10, 78p, 78q, 78q–1, 78s, 78u–5, 78w, 78x, 78dd, 78ll, 78mm, 80a–20, 80a–23, 80a–29, 80a–37, 80b–3, 80b–4, 80b–11, and 7201 *et seq.,* and 8302; 7 U.S.C. 2(c)(2)(E); 12 U.S.C. 5221(e)(3); 18 U.S.C. 1350; Pub. L. 111–203, 939A, 124 Stat. 1376 (2010); and Pub. L. 112–106, sec. 503 and 602, 126 Stat. 326 (2012), unless otherwise noted.

■ 2. Amend § 240.17a–4 by adding a new paragraph (b)(17) to read as follows:

§ 240.17a–4 Records to be preserved by certain exchange members, brokers and dealers.

* * * * *

(b) * * *

(17) All records made pursuant to §§ 242.1101 and 242.1102, other than required policies and procedures, as applicable.

* * * * *

PART 242—REGULATIONS M, SHO, ATS, AC, NMS, SBSR, AND BEST EXECUTION, AND CUSTOMER MARGIN REQUIREMENTS FOR SECURITY FUTURES

■ 3. The authority citation for part 242 is amended to read as follows:

Authority: 15 U.S.C. 77g, 77q(a), 77s(a), 78b, 78c(b), 78e, 78g(c)(2), 78i(a), 78j, 78k–1, 78l, 78m, 78n, 78o(b), 78o(c), 78o(g), 78o–1, 78q, 78w(a), 78x, 78dd–1, 78mm, 80a–23, 80a–29, and 80a–37.

■ 4. The heading of part 242 is revised to read as set forth above.

■ 5. Part 242 is amended by adding Regulation Best Execution, §§ 242.1100 through 242.1102, to read as follows:

Regulation Best Execution

Sec.
242.1100 The best execution standard.
242.1101 Required policies and procedures; related obligations.
242.1102 Annual report.

§ 242.1100 The best execution standard.

In any transaction for or with a customer, or a customer of another broker, dealer, government securities broker, government securities dealer, or municipal securities dealer (collectively, for purposes of Regulation Best Execution, ''broker or dealer''), a broker or dealer, or a natural person who is an associated person of a broker or dealer, shall use reasonable diligence to ascertain the best market for the security, and buy or sell in such market so that the resultant price to the customer is as favorable as possible under prevailing market conditions (for purposes of Regulation Best Execution, ''most favorable price''). A broker or dealer, or a natural person who is an associated person of a broker or dealer, is not subject to this standard when:

(a) Another broker or dealer is executing a customer order against the broker or dealer's quotation;

(b) An institutional customer, exercising independent judgment, executes its order against the broker or dealer's quotation; or

(c) The broker or dealer receives an unsolicited instruction from a customer to route that customer's order to a particular market for execution and the broker or dealer processes that customer's order promptly and in accordance with the terms of the order.

§ 242.1101 Required policies and procedures; related obligations.

A broker or dealer that engages in any transaction for or with a customer or a customer of another broker or dealer shall establish, maintain, and enforce written policies and procedures reasonably designed to comply with the best execution standard as set forth in § 242.1100 (for purposes of Regulation Best Execution, ''best execution policies and procedures'').

(a) *Requirements.* Such policies and procedures shall address:

(1) How the broker or dealer will comply with the best execution standard by:

(i) Obtaining and assessing reasonably accessible information, including information about price, volume, and execution quality, concerning the markets trading the relevant securities;

(ii) Identifying markets that may be reasonably likely to provide the most favorable prices for customer orders (''material potential liquidity sources''); and

(iii) Incorporating material potential liquidity sources into its order handling practices, and ensuring that the broker or dealer can efficiently access each such material potential liquidity source.

(2) How the broker or dealer will determine the best market and make routing or execution decisions for customer orders that it receives by:

(i) Assessing reasonably accessible and timely information with respect to the best displayed prices, opportunities for price improvement, including midpoint executions, and order exposure opportunities that may result in the most favorable price;

(ii) Assessing the attributes of customer orders and considering the trading characteristics of the security, the size of the order, the likelihood of execution, the accessibility of the market, and any customer instructions in selecting the market most likely to provide the most favorable price; and

(iii) In determining the number and sequencing of markets to be assessed, reasonably balancing the likelihood of obtaining better prices with the risk that delay could result in a worse price.

(b) *Conflicts of Interest.* In any transaction for or with a retail customer, where the broker or dealer executes an order as principal, including riskless principal; routes an order to, or receives an order from, an affiliate for execution; or provides or receives payment for order flow as defined in § 240.10b–10(d)(8) of this chapter (each, a ''conflicted transaction''):

(1) The broker or dealer's best execution policies and procedures additionally shall address how the

broker or dealer will obtain and assess information beyond that required by paragraph (a)(1)(i) of this section, including additional information about price, volume, and execution quality, in identifying a broader range of markets beyond those identified as material potential liquidity sources;

(2) The broker or dealer's best execution policies and procedures additionally shall address how the broker or dealer will evaluate a broader range of markets, beyond those identified as material potential liquidity sources, that might provide the most favorable price for customer orders, including a broader range of order exposure opportunities and markets that may be smaller or less accessible than those identified as material potential liquidity sources; and

(3) The broker or dealer shall document its compliance with the best execution standard for conflicted transactions, including all efforts to enforce its best execution policies and procedures for conflicted transactions and the basis and information relied on for its determinations that such conflicted transactions would comply with the best execution standard. Such documentation shall be done in accordance with written procedures. The broker or dealer shall also document any arrangement, whether written or oral, concerning payment for order flow, including the parties to the arrangement, all qualitative and quantitative terms concerning the arrangement, and the date and terms of any changes to the arrangement.

(4) For purposes of this paragraph (b):

(i) ''Any transaction for or with a retail customer'' means any transaction for or with the account of a natural person or held in legal form on behalf of a natural person or group of related family members. For purposes of this definition, a ''group of related family members'' means a group of natural persons with any of the following relationships: child, stepchild, grandchild, great grandchild, parent, stepparent, grandparent, great grandparent, spouse, domestic partner, sibling, stepbrother, stepsister, niece, nephew, aunt, uncle, mother-in-law, father-in-law, son-in-law, daughter-in-law, brother-in-law, or sister-in-law, including adoptive and foster relationships; and any other natural person (other than a tenant or employee) sharing a household with any of the foregoing natural persons;

(ii) A broker or dealer executes an order as ''riskless principal'' if, after having received an order to buy from a customer, the broker or dealer purchases the security from another person to offset a contemporaneous sale to the customer or, after having received an order to sell, the broker or dealer sells the security to another person to offset a contemporaneous purchase from the customer; and

(iii) ''Affiliate'' means, with respect to a specified person, any person that, directly or indirectly, controls, is under common control with, or is controlled by, the specified person. For purposes of this definition, ''control'' means the power, directly or indirectly, to direct the management or policies of the broker or dealer whether through ownership of securities, by contract, or otherwise. A person is presumed to control a broker or dealer if that person is a director, general partner, or officer exercising executive responsibility (or having similar status or performing similar functions); directly or indirectly has the right to vote 25 percent or more of a class of voting securities or has the power to sell or direct the sale of 25 percent or more of a class of voting securities of the broker or dealer; or in the case of a partnership, has contributed, or has the right to receive upon dissolution, 25 percent or more of the capital of the broker or dealer.

(c) *Regular Review of Execution Quality.* A broker or dealer shall, no less frequently than quarterly, review the execution quality of its transactions for or with customers or customers of another broker or dealer, and how such execution quality compares with the execution quality the broker or dealer might have obtained from other markets, and revise its best execution policies and procedures, including its order handling practices, accordingly. The broker or dealer shall document the results of this review.

(d) *Introducing Brokers.* An introducing broker that routes customer orders to an executing broker does not need to separately comply with paragraphs (a), (b), and (c) of this section so long as the introducing broker establishes, maintains, and enforces policies and procedures that require the introducing broker to regularly review the execution quality obtained from such executing broker, compare it with the execution quality it might have obtained from other executing brokers, and revise its order handling practices accordingly. The introducing broker shall document the results of this review. For purposes of this provision, introducing broker means a broker or dealer that:

(1) Does not carry customer accounts and does not hold customer funds or securities;

(2) Has entered into an arrangement with an unaffiliated broker or dealer that has agreed to handle and execute on an agency basis all of the introducing broker's customer orders (''executing broker'') (For purposes of this paragraph, principal trades by an executing broker with the introducing broker's customer to fill fractional share orders in NMS stocks and riskless principal trades (as defined in paragraph (b)) by an executing broker in fixed income securities will be considered to be handled on an agency basis); and

(3) Has not accepted any monetary payment, service, property, or other benefit that results in remuneration, compensation, or consideration from the executing broker in return for the routing of the introducing broker's customer orders to the executing broker.

§ 242.1102 Annual report.

A broker or dealer that effects any transaction for or with a customer or a customer of another broker or dealer shall, no less frequently than annually, review and assess the design and overall effectiveness of its best execution policies and procedures, including its order handling practices. Such review and assessment shall be conducted in accordance with written procedures and shall be documented. The broker or dealer shall prepare a written report detailing the results of such review and assessment, including a description of all deficiencies found and any plan to address deficiencies. The report shall be presented to the board of directors (or equivalent governing body) of the broker or dealer.

By the Commission.

December 14, 2022.

J. Matthew DeLesDernier,

Deputy Secretary.

[FR Doc. 2022–27644 Filed 1–26–23; 8:45 am]

BILLING CODE 8011–01–P