FEDERAL RESERVE SYSTEM
[Docket Number OP–1613]
New Message Format for the Fedwire® Funds Service

AGENCY: Board of Governors of the Federal Reserve System.

ACTION: Notice of proposed service enhancement; request for comment.

SUMMARY: The Board of Governors of the Federal Reserve System (Board) is requesting comment on a proposal to adopt the ISO® 20022 message format for the Fedwire® Funds Service. ISO 20022 is an international standard that would replace the Fedwire Funds Service’s current, proprietary message format. The migration to ISO 20022 would take place in three phases beginning in 2020 and ending in 2023.

DATES: Comment due date: September 4, 2018.

ADDRESSES: You may submit comments, identified by Docket No. OP–1613, by any of the following methods:

• Email: regs.comments@ federalreserve.gov. Include the docket number in the subject line of the message.
• Fax: (202) 452–3819 or (202) 452–3102.
• Mail: Address to Ann E. Misback, Secretary, Board of Governors of the Federal Reserve System, 20th Street and Constitution Avenue NW, Washington, DC 20551.

All public comments will be made available on the Board’s website at http://www.federalreserve.gov/generalinfo/foia/ProposedRegs.cfm as submitted, unless modified for technical reasons or to remove personal information at the commenter’s request. Accordingly, comments will not be edited to remove any identifying or contact information. Public comments may also be viewed electronically or in paper in Room 3515, 1801 K Street NW (between 18th and 19th Streets NW), between 9:00 a.m. and 5:00 p.m. on weekdays.

FOR FURTHER INFORMATION CONTACT: Evan Winerman, Counsel (202–872–7578), Legal Division; or Melissa Leistra, Manager (202–530–6285), Renuka Lakshmanan, Senior Financial Services Analyst (202–475–6633), Division of Reserve Bank Operations and Payment Systems. For users of Telecommunications Device for the Deaf (TDD) only, contact (202–263–4869).

SUPPLEMENTARY INFORMATION:

I. Background

The Fedwire Funds Service is a real-time gross settlement system owned and operated by the Federal Reserve Banks (Reserve Banks) that enables participants to make final payments using their balances held at Reserve Banks or intraday credit provided by the Reserve Banks. The Fedwire Funds Service and the CHIPS® funds-transfer system, which is owned and operated by The Clearing House Payments Company, L.L.C. (TCH), are the main large-value payment systems in the United States.1

A. Current Fedwire Funds Service Message Format

The Fedwire Funds Service uses a proprietary message format that supports multiple types of communications. Specifically, Fedwire Funds Service participants can send “value” messages that order the movement of funds and “nonvalue” messages that do not result in the movement of funds but rather communicate information or requests to other participants.2 The Fedwire Funds Service also includes messages that enable Fedwire participants to request account balance information and the processing status of payment orders.

Although the Fedwire Funds Service message format is proprietary, it can be mapped to—and be interoperable with—the CHIPS message format and the message type (MT) format of the SWIFT® messaging network.3 As a result, multi-step domestic and international funds transfers can involve payment orders sent over the Fedwire Funds Service, CHIPS, and the SWIFT Financial Message Service network.

B. ISO 20022

The International Organization for Standardization (ISO) is an independent, non-governmental organization comprised of 161 national standards bodies. ISO “brings together experts to share knowledge and develop voluntary, consensus-based, market relevant International Standards that support innovation and provide solutions to global challenges.”4 ISO publishes standards for a broad range of industries.

The ISO 20022 standard includes a suite of messages for the financial industry, including messages for payments, securities, trade services, cards, and foreign exchange. ISO 20022 messages use extensible markup language (XML) syntax and have a common data dictionary that can support end-to-end payment message flow, including payment initiation (i.e., customer to bank messages), interbank settlement (i.e., bank to bank messages), and cash management (i.e., bank to customer messages).

ISO 20022 messages include structured data elements that provide for potentially richer payment message data than the current Fedwire Funds Service message format. For example, ISO 20022 messages contain fields for three intermediary financial institutions while the current Fedwire Funds message format contains a field for only one intermediary financial institution. Similarly, ISO 20022 messages can include more structured and detailed information than the current Fedwire Funds message format (see example in Table 1).

### Table 1

<table>
<thead>
<tr>
<th>Current Fedwire Funds Service format</th>
<th>ISO 20022 format</th>
</tr>
</thead>
<tbody>
<tr>
<td>Free-text lines for address information:</td>
<td>Discrete fields for specific address information:</td>
</tr>
</tbody>
</table>

1 In 2017, the Fedwire Funds Service processed 152,649,633 payments with a total value of approximately $740 trillion and CHIPS processed 112,597,088 payments with a total value of approximately $393 trillion.

2 Value messages can be used for multiple types of funds transfers, e.g., “bank transfers” in which the originator and beneficiary are both banks and “customer transfers” in which the originator and/or beneficiary is not a bank. Nonvalue messages include, e.g., “requests for reversal” in which a Fedwire participant requests that another Fedwire participant send a funds transfer that would return the amount of a previously accepted payment order.

3 SWIFT is a member-owned cooperative headquartered in Belgium that provides its users (including banking and securities organizations, market infrastructures, and corporate customers) a global service for financial messages, such as payments and securities transactions.

4 See https://www.iso.org/about-us.html.
### TABLE 1—Continued

<table>
<thead>
<tr>
<th>Current Fedwire Funds Service format</th>
<th>ISO 20022 format</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address Line 1 (up to 35 characters)</td>
<td>Postal Address &lt;PstAdr&gt;.</td>
</tr>
<tr>
<td>Address Line 2 (up to 35 characters)</td>
<td>&lt;AdrTp&gt; (4 characters).</td>
</tr>
<tr>
<td>Address Line 3 (up to 35 characters)</td>
<td>&lt;Dept&gt; (up to 70 characters).</td>
</tr>
<tr>
<td></td>
<td>&lt;SubDept&gt; (up to 70 characters).</td>
</tr>
<tr>
<td></td>
<td>&lt;StrtNm&gt; (up to 70 characters).</td>
</tr>
<tr>
<td></td>
<td>&lt;BldgNb&gt; (up to 16 characters).</td>
</tr>
<tr>
<td></td>
<td>&lt;PstCd&gt; (up to 16 characters).</td>
</tr>
<tr>
<td></td>
<td>&lt;TwnNm&gt; (up to 35 characters).</td>
</tr>
<tr>
<td></td>
<td>&lt;CtrySubDvsn&gt; (up to 35 characters).</td>
</tr>
<tr>
<td></td>
<td>&lt;Ctry&gt; (2 characters).</td>
</tr>
</tbody>
</table>

Table 2 shows how ISO 20022 messages correspond to messages in the current Fedwire Funds Service message format. The full catalogue of ISO 20022 messages is available on the ISO 200022 website.5

### TABLE 2

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
<th>ISO 20022 Message</th>
<th>Comparable message in current fedwire funds service format</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business application header ..........</td>
<td>Processing information placed at the beginning of each message (e.g., sender, receiver, input message accountability data or output message accountability data).</td>
<td>BusinessApplicationHeaderV01_head.001.001.01.</td>
<td>This information is contained in various data elements of the current format.</td>
</tr>
<tr>
<td>Value messages ........................</td>
<td>Used by Fedwire Funds Service participants to order the movement of funds.</td>
<td>Financial Institution To Financial Institution Customer Credit Transfer (pacs.008.001.0x). Financial Institution Credit Transfer (pacs.009.001.0x). Payment Return (pacs.004.001.0x). Customer Credit Transfer Initiation (pain.001.001.09). FToFI Payment Cancellation Request (camt.056.001.07). FToFI Payment Status Report (pacs.002.001.09). Note: This message will also be used for a Return Refusal, but there is currently no comparable message. Proprietary Format Investigation (camt.035.001.04).</td>
<td>Customer transfers. Bank transfers. Returns. Drawdown request. Return request. Drawdown refusal.</td>
</tr>
<tr>
<td>Nonvalue messages .....................</td>
<td>Used by Fedwire Funds Service participants to request that a funds transfer be made, to refuse to honor those requests, or to share free-format information.</td>
<td></td>
<td>Service message.</td>
</tr>
<tr>
<td>Reporting messages ....................</td>
<td>Used to request or report on transaction activity or account balance information.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

II. Payments Industry Efforts Related to ISO 20022

In late 2012, the Federal Reserve Bank of New York and other key entities involved in the U.S. payments industry formed a “Stakeholder Group” to assess the merits of adopting the ISO 20022 standard in the U.S. The Stakeholder Group engaged an independent external consultant to evaluate the business case for adopting ISO 20022. The consultant identified certain strategic reasons to consider adopting ISO 20022 in the U.S. for cross-border wire and Automated Clearing House (ACH) payments and then, if appropriate, for domestic wire and ACH payments. For example, the consultant emphasized that adopting ISO 20022 in lieu of proprietary standards would improve interoperability between domestic and global payment systems. In accordance with the findings of the Stakeholder Group, the Federal Reserve recommended in its 2015 Strategies for Improving the Payment System paper that the U.S. payments industry “[d]evelop an implementation strategy for the application of the ISO 20022 standard to U.S. payment transactions.”

Since 2015, the Reserve Banks have worked with TCH on plans to adopt ISO 20022 for the Fedwire Funds Service and CHIPS. While the Reserve Banks and TCH decided independently to pursue implementation of ISO 20022, they intend to align ISO 20022 implementation for the Fedwire Funds Service and CHIPS to the extent possible. The Reserve Banks and TCH have indicated that aligning ISO 20022 implementation for their respective wire transfer systems would create efficiencies that would benefit their common customers. The Reserve Banks’ specific proposed timeline for adopting ISO 20022 for the Fedwire Funds Service is discussed in greater detail below.

The Reserve Banks have also engaged in extensive public outreach regarding ISO 20022. For example, the Reserve Banks and TCH conducted a survey in 2015 of over 2,300 Fedwire Funds Service customers, Fedwire and CHIPS advisory group banks, vendors, and industry groups on the potential scope, approach, and timing of ISO 20022 implementation. The Reserve Banks have also presented at industry conferences, published webinars, and established websites to educate market participants about ISO 20022 and to solicit direct informal feedback on plans to implement ISO 20022. Finally, the Reserve Banks have established advisory groups that include banks, software vendors, and other stakeholders to provide input on how to implement ISO 20022 for the Fedwire Funds Service.

SWIFT has initiated a study to consider the migration of cross-border traffic in its proprietary MT format to ISO 20022. The SWIFT study includes a community consultation to help determine the timing and practicalities of migration. SWIFT has indicated that the “consultation will run until early June, with results analysed over the following months and a final report produced before the end of 2018. The report will draw on the feedback from the consultation to propose a detailed roadmap for migrating cross-border MT traffic to ISO 20022.”

Similarly, many foreign wire transfer systems, including those for currencies of key U.S. trading partners, have adopted ISO 20022 (e.g., China, India, Japan, Switzerland) or have announced plans to adopt ISO 20022 (e.g., Canada, European Union, Hong Kong, United Kingdom). For further discussion of payment systems that have adopted ISO 20022 or have announced plans to adopt ISO 20022, see section 7.3.3, WIFT’s ISO 20022 Consultation paper, https://www.swift.com/resource/iso-20022-migration-study.

III. Potential Benefits of Adopting ISO 20022 for the Fedwire Funds Service

The Board believes that adopting ISO 20022 for the Fedwire Funds Service could be beneficial for a number of reasons. As described above, the ISO 20022 message format would allow Fedwire Funds Service participants to include richer and more structured data in their messages—for example, increased character lengths for name data elements and discrete elements for address information, including a country code. This data could help banks and other entities meet evolving requirements to screen payments for sanctions and anti-money laundering purposes.

Adopting ISO 20022 messages could also improve domestic and cross-border interoperability between the Fedwire Funds Service and other messaging systems. As noted above, TCH has announced plans to adopt ISO 20022 messages for the CHIPS system and SWIFT has initiated a study to consider the migration of cross-border MT traffic to ISO 20022. Similarly, as noted above, many foreign wire transfer systems, including those for currencies of key U.S. trading partners, have adopted or have announced plans to adopt ISO 20022. Adopting ISO 20022 as a common, global standard could reduce operating costs for banks and their customers by reducing the need to map payment information from one message format to another. This could improve the efficiency of end-to-end processing of multi-leg domestic and international funds transfers.

Relatedly, adopting ISO 20022 as a common, global standard could allow banks to provide useful services to their customers. For example, ISO 20022 would support a structured format for including extended remittance information (ERI) in business-to-business payment messages. While the current proprietary message formats for the Fedwire Funds Service and CHIPS support ERI, usage of ERI by depository institutions and their customers has been limited. Widespread adoption of
ISO 20022 would create a common, global format for ERI that could encourage depository institutions and their customers to invest in the changes needed to support the end-to-end flow of ERI for business-to-business payments.

**IV. Proposed Timeline for Adopting ISO 20022 for the Fedwire Funds Service**

The Reserve Banks would transition from the current Fedwire Funds Service message format to ISO 20022 in three phases.

**Phase 1: ISO 20022 Preparation (Target Implementation Date of November 23, 2020)**

In phase 1, the Reserve Banks would make a number of changes to the current Fedwire Funds Service message format to address existing interoperability gaps with SWIFT’s proprietary MT format. The Reserve Banks would also eliminate the free-text format option for the originator and beneficiary fields in customer transfer messages and instead require Fedwire Funds Service participants to use a structured format for these fields; SWIFT is making a similar change to its MT format in November 2020.

Although the Reserve Banks would need to make most of the changes in phase 1 even if the Reserve Banks were not planning to adopt ISO 20022, all of the changes in this phase would simplify the Fedwire Funds Service’s migration to ISO 20022 messages.

**Phase 2: ISO 20022 “like-for-like” Implementation (Target Implementation Period From March 2022 to August 2023)**

In phase 2, the Reserve Banks would migrate Fedwire Funds Service participants in waves to send and receive ISO 20022 messages that have elements and character lengths that are comparable to the current Fedwire Funds Service message format. Table 2, supra, shows how ISO 20022 messages correspond to messages in the current Fedwire Funds Service message format.

While the syntax for the phase 2 like-for-like ISO 20022 messages would be XML, the content of the messages would be limited to data elements and character lengths comparable to those that are supported in the current Fedwire Funds Service message format. For example, like-for-like ISO 20022 messages in phase 2 could include only one field for an intermediary financial institution (similar to the current Fedwire Funds Service message format) even though ISO 20022 messages can generally accommodate up to three such fields. Similarly, while ISO 20022 messages can support structured data elements for address information (see Table 1, supra), like-for-like ISO 20022 messages in phase 2 would (similar to the current Fedwire Funds Service message format) be limited to three lines of 35 characters each for free-text address information.

Because the Reserve Banks would transition Fedwire Funds Service participants to ISO 20022 in waves, the Fedwire Funds Service would translate the current message format to ISO 20022 and vice versa when necessary to accommodate Fedwire senders and receivers that are not using the same format. At the end of phase 2, the Fedwire Funds Service would move into a stability period lasting at least three months (from August 2023 to November 2023) in which all Fedwire Funds participants would send and receive ISO 20022 like-for-like messages. During the stability period, the Reserve Banks would retain the current, proprietary Fedwire Funds Service format as a fallback option in case one or more participants encounter issues and the Reserve Banks determine that such participants need to revert back to the proprietary format.

The Reserve Banks would also use phase 2 to prepare for full implementation of ISO 20022 in phase 3. Specifically, the Reserve Banks would require Fedwire Funds Service participants to test their ability to receive full ISO 20022 messages.

**Phase 3: ISO Enhancements (Target Implementation Date of November 2023)**

In phase 3, the Reserve Banks would fully implement ISO 20022 by enabling Fedwire Funds Service participants to send ISO 20022 messages that contain enhanced data as noted in Table 3. Although it would be optional for participants to send the enhanced data, all participants would need to be capable of receiving enhanced data. Participants would also need to determine, consistent with any legal obligations, how to handle enhanced data that they receive—for example, whether (and how) to provide enhanced data to the next receiving bank in the funds transfer or to the beneficiary (if the Fedwire Funds Service participant is the beneficiary’s bank).

**Table 3**

<table>
<thead>
<tr>
<th>ISO 20022 Enhancements</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. New data elements for additional persons or entities identified in payment messages:</td>
</tr>
<tr>
<td>• initiating party</td>
</tr>
<tr>
<td>• two additional previous instructing agents</td>
</tr>
<tr>
<td>• two additional intermediary agents</td>
</tr>
<tr>
<td>• ultimate debtor</td>
</tr>
<tr>
<td>• ultimate creditor</td>
</tr>
<tr>
<td>2. New purpose code data element to help explain the business purpose of the funds transfer</td>
</tr>
<tr>
<td>3. New data element that participants can use to determine how they handle or process a message (e.g., SWIFT global payments innovation service level).</td>
</tr>
<tr>
<td>4. New data element to provide information about a bilateral processing agreement.</td>
</tr>
<tr>
<td>5. Longer character lengths for certain fields (e.g., Name can be up to 140 characters).</td>
</tr>
<tr>
<td>6. Structured postal address data elements, including a country code.</td>
</tr>
<tr>
<td>7. Contact details for certain persons/entities in the funds transfer.</td>
</tr>
</tbody>
</table>

---


19 As noted above, the Reserve Banks would require Fedwire Funds Service participants to test their ability to receive full ISO 20022 messages during phase 2.

20 ISO 20022 employs terminology that differs in key respects from that used in U.S. funds-transfer law, including subpart B of the Board’s Regulation J (12 CFR 210), which governs funds transfers through the Fedwire Funds Service. The Board has proposed an amendment to subpart B of Regulation J that would clarify that terms used in financial messaging standards, such as ISO 20022, do not confer or connote legal status or responsibilities. See 83 FR 11431 (Mar. 15, 2018).
TABLE 3—Continued

8. New regulatory reporting data elements to provide regulatory information (e.g., OFAC license) related to customer transfers.
9. New tax component to provide remittance information related to tax payments.

The target implementation date for phase 3 could be delayed if SWIFT has not yet implemented a solution for its network to support ISO 20022 messages that contain enhanced data.

V. Fedwire Funds Service Message Format Documentation and Testing

The Reserve Banks are using a restricted page on the MyStandards web-based application as a tool to store and share documentation related to the ISO 20022 project with authorized Fedwire Funds Service participants and software vendors.21 In March 2018, the Reserve Banks published the final message format documents for phase 1, which would provide the industry over two years to prepare for the proposed phase 1 target implementation date in November 2020. The Reserve Banks also published draft message format documents for phases 2 and 3 in March 2018 and will publish the final documents for these phases by the end of June 2018; this would provide the industry nearly four years to prepare for the proposed phase 2 migration (which is targeted to begin in March 2022) and over five years to prepare for the proposed phase 3 target implementation date in November 2023.

The Reserve Banks plan to provide nine months for testing the phase 1 changes in their Depository Institution Testing (DIT) environment prior to the proposed implementation date in November 2020.22 Similarly, the Reserve Banks plan to provide at least one year for testing the phase 2 and phase 3 changes in their DIT environment. The Reserve Banks plan to publish a final testing plan by the end of 2018.

VI. Impact on Fedwire Funds Service Participants and Service Providers

The Board believes that the impact of ISO 20022 implementation on Fedwire Funds Service participants would vary depending on how each participant accesses the Fedwire Funds Service. Certain Fedwire Funds Service participants or service providers develop their own software (or rely on software from vendors) to access the Fedwire Funds Service. These institutions include (1) Fedwire Funds Service participants and service providers that access the Fedwire Funds Service via the FedLine Direct® solution and (2) Fedwire Funds Service participants that use the import/export feature of FedPayments® Manager-Funds over the FedLine Advantage solution. FedLine Direct access to the Fedwire Funds Service is an unattended, IP-based computer interface. It is typically used by participants conducting larger volumes of funds transfers. FedPayments Manager is a web-based application that midsize and smaller participants typically use to create, send, and receive payment orders and nonvalue messages. The import functionality built into FedPayments Manager enables participants to upload payment files from separate payment applications (e.g., those that interface with customer-facing systems) so the participants do not have to enter the messages one by one into the application. Similarly, the export functionality allows participants to download files from FedPayments Manager into other applications (e.g., so payments can post to customer accounts in the reserve bank's deposit systems). The Board believes that participants and service providers accessing the service through FedLine Direct or using the import/export feature of FedPayments Manager would need to make significant changes to their payment applications or processes to be able to send and receive messages (or import and export files) in the revised proprietary format in phase 1 and in the new ISO 20022 format in phases 2 and phase 3.

Other Fedwire Funds Service participants access the Fedwire Funds Service manually through FedPayments Manager-Funds.23 These participants would need to become familiar with the terminology used in, and information required by, the ISO 20022 format and the updated appearance of the graphical user interface in FedPayments Manager. The Reserve Banks would make the necessary changes to FedPayments Manager, however, and would provide training regarding the updates.

Finally, some Fedwire Funds Service participants access the Fedwire Funds Service through an offline, telephone-based service that requires a Reserve Bank employee to enter payment order information into a Reserve Bank application. The Board does not believe that these participants’ current processes for submitting payment orders would materially change, though the participants would need to become familiar with the terminology used in, and information required by, the ISO 20022 format so they could provide it to the Reserve Bank employees.

VII. Request for Comment

The Board requests comment on this proposal to replace the current Fedwire Funds Service message format with ISO 20022.

A. Potential Benefits and Drawbacks of Adopting ISO 20022

1. Would adopting ISO 20022 for the Fedwire Funds Service produce the benefits discussed above?
2. Would adopting ISO 20022 for the Fedwire Funds Service produce any other benefits?
3. What drawbacks (if any) would adopting ISO 20022 for the Fedwire Funds Service entail and how might they be addressed?

B. Proposed Timeline for Adopting ISO 20022

1. Is the timeline that the Reserve Banks proposed for adopting ISO 20022 for the Fedwire Funds Service (including the proposed timeframes for publishing final message format documents and testing changes in the Reserve Banks’ DIT environment) reasonable? If not, how much time would Fedwire Funds Service participants and service providers (including software vendors) need to adjust their applications and processes for each phase?
2. Should the Reserve Banks delay the implementation date for phase 3 of the proposal if SWIFT has not yet implemented a solution on its network to support ISO 20022 for cross-border messages?
3. Would the proposal to migrate to ISO 20022 in phases mitigate any risks associated with implementing ISO 20022?

C. Impact on Fedwire Funds Service Participants and Service Providers

1. How does your institution access the Fedwire Funds Service? If your institution accesses the Fedwire Funds


22 For more information on the DIT environment, see https://www.frbservices.org/financial-services/wires/testing/di-testing.html.

23 Specifically, these Fedwire Funds Service participants enter messages individually into FedPayments Manager-Funds over the FedLine Advantage solution through a graphical user interface.
Service via the FedLine Direct solution or uses the import/export feature of FedPayments Manager-Funds over the FedLine Advantage solution, do you develop your own software or rely on a software vendor?

2. What costs would your institution incur if the Reserve Banks adopt ISO 20022 for the Fedwire Funds Service? If possible, please provide dollar estimates or ranges.

3. Would the benefits of adopting ISO 20022 for the Fedwire Funds Service outweigh any associated costs for your institution?

VIII. Competitive Impact Analysis

The Board conducts a competitive impact analysis when it considers a rule or policy change that may have a substantial effect on payment system participants. Specifically, the Board determines whether there would be a direct or material adverse effect on the ability of other service providers to compete with the Federal Reserve due to differing legal powers or due to the Federal Reserve’s dominant market position deriving from such legal differences.24

The Board does not believe that the proposal to adopt ISO 20022 for the Fedwire Funds Service would have an adverse impact on other service providers. As described above, the current, proprietary message format for the Fedwire Funds Service is interoperable with the proprietary message format for the CHIPS system. As further described above, the Reserve Banks have worked with TCH on plans to align ISO 20022 implementation for the Fedwire Funds Service and CHIPS where possible; the Reserve Banks and TCH have indicated that such coordination will benefit their common customers. If the Reserve Banks and TCH each adopt ISO 20022 for the Fedwire Funds Service and CHIPS, respectively, the message formats for the two systems will remain interoperable.


Michele Taylor Fennell.

Assistant Secretary of the Board.

[F.R. Doc. 2018–14351 Filed 7–3–18; 8:45 am]

BILLING CODE P

---