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U.S. CURRENCY

Treasury's Plans to Study Genuine and Counterfeit U.S. Currency Abroad



National Security and
International Affairs Division

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The Honorable Spencer Bachus
The Honorable John M. Spratt, Jr.
House of Representatives

Currencies are susceptible to counterfeiting, but the stability and worldwide acceptance of the U.S. currency, in particular, have made it a target for international counterfeiters. Although counterfeiters may engage in this activity for direct economic gain, counterfeiting is sometimes linked with other more nefarious criminal endeavors, such as drug trafficking, arms dealing, and alleged terrorist activities. Widespread counterfeiting of U.S. currency could undermine confidence in the currency. Further, if done on a large-enough scale, this activity could reduce international holdings of U.S. currency and have a negative effect on the U.S. economy.¹

While the extent of counterfeit U.S. currency produced and circulated in foreign countries is difficult to determine, an evaluation of the threat can be used to allocate scarce resources and to assess the effectiveness of measures to combat counterfeiting.² In the past, the Secret Service (a Treasury Department bureau) used its detection data³ to reflect the actual amount of counterfeits abroad. However, as we reported in February 1996, these data have limitations that raised questions about their usefulness for illustrating counterfeiting activity.⁴ In April 1996, Congress passed the

¹When U.S. currency remains in circulation, it essentially represents an interest-free loan to the U.S. government. The Federal Reserve has estimated that the U.S. currency held abroad effectively reduces the need for the government to borrow up to \$250 billion a year and thus may reduce the government's interest costs by over \$10 billion a year. If the confidence of the dollar were undermined, individuals might switch to other currencies, which would result in losses in the amount of this benefit to the United States.

²Other tools may include evaluating the quality or usage of the counterfeits, the type of equipment used, the type of perpetrator, and the connection with other crimes.

³Secret Service counterfeit-detection data include detections made by its agents and the Federal Reserve as well as detections made and reported by others, such as domestic and foreign law enforcement agencies and banks.

⁴In our prior work, you had asked us to assess the extent of the counterfeiting problem overseas. We reported that the available data presented many limitations, and we questioned whether the Secret Service had a sufficient basis to conclude either the approximate magnitude or the trend of counterfeiting activity abroad. Some specific limitations of the data are that they (1) included only those counterfeit detections that were reported to the Secret Service; (2) may have underreported the occurrence of high-quality notes because those notes are difficult to detect; (3) may have reflected factors other than increasing counterfeit activity, such as improvements in the ability to detect counterfeits or to determine their source; and (4) may have shown fluctuations over time that were skewed because of the occurrence of unusually large seizures. See Counterfeit U.S. Currency Abroad: Issues and U.S. Deterrence Efforts (GAO/GGD-96-11, Feb. 26, 1996) and Counterfeit U.S. Currency Abroad: Observations on Counterfeiting and U.S. Deterrence Efforts (GAO/T-GGD-96-82, Feb. 27, 1996).

Antiterrorism and Effective Death Penalty Act of 1996 (P.L. 104-132) which, among other things, requires that the Secretary of the Treasury develop an audit plan that is designed to enable the Secretary to (1) study the use and holding of U.S. currency in foreign countries and develop useful estimates of the amount of counterfeit U.S. currency that circulates outside the United States each year, (2) conduct audits based on this methodology, and (3) report triennially on the results.

In October 1996, the Secretary responded to the first requirement by submitting the Audit Plan of the Secretary of the Treasury on the Uses and Counterfeiting of U.S. Currency in Foreign Countries. At your request, we reviewed the plan, as submitted, to determine whether it will enable the Secretary of the Treasury to (1) study the use of U.S. currency in foreign countries, (2) study the holding of U.S. currency in foreign countries, and (3) develop useful estimates of the amount of counterfeit U.S. currency that circulates outside the United States each year. You also asked us to review any other information and materials that the Treasury intends to use to conduct the audits.

Results in Brief

The Secretary of the Treasury's submitted plan does not demonstrate how it will enable the Treasury to meet the audit plan objectives required under the act. The plan does not clearly state the audit's objectives or the methodologies to achieve those objectives. Although the Treasury's plan identifies some elements of a methodology that could be employed to study the use of genuine U.S. currency abroad, it does not explain how the Treasury intends to analyze the information that might be collected. The plan does not define the methodologies the Treasury expects to use to study the holding of genuine U.S. currency abroad and to develop estimates of counterfeit U.S. currency abroad.

The Treasury official responsible for developing the plan stated that the audit objectives of the plan are the same as those stated in the act. He acknowledged that the plan does not fully address the methods for achieving the objectives. This official and Federal Reserve officials said that the information obtained on genuine currency usage will be used to describe U.S. currency flows and will be reviewed to determine whether any of the information conflicts with their assumptions about the usage of genuine U.S. currency abroad. The Treasury official stated that the Treasury intends to use a recently published Federal Reserve methodology to develop an estimate of the total holdings of genuine U.S. currency abroad. The official also told us the Treasury would rely on an existing

Federal Reserve methodology to develop rough estimates or ranges of estimates of counterfeit U.S. currency circulating outside the United States each year.

After we outlined our concerns about the submitted audit plan to Treasury and Federal Reserve officials, the Treasury official responsible for the plan told us that the Treasury, with the assistance of the Federal Reserve, planned to submit a written addendum to Congress explaining the Treasury's proposed methodologies in more detail, with the caveat that these methodologies may change based on information obtained abroad during the course of the audits. The Treasury official also indicated that the addendum would explain the assumptions the Treasury made and discuss the limitations associated with these estimates.

Background

U.S. counterfeiting deterrence efforts are coordinated through the Advanced Counterfeit Deterrence Steering Committee, comprised of officials from the Department of the Treasury (including the Secret Service and the Bureau of Engraving and Printing) and the Federal Reserve. The Secretary of the Treasury is responsible for manufacturing and protecting U.S. currency. The Secret Service investigates counterfeiting and maintains counterfeit-detection data, and the Bureau of Engraving and Printing designs and prints U.S. currency. The Federal Reserve issues U.S. currency, pays U.S. currency to and receives U.S. currency from authorized financial institutions in the United States (some of which may have affiliates and/or customers outside the United States), and is responsible for substantiating the authenticity of all U.S. currency received. The Federal Reserve also maintains data on the amount of U.S. currency that its customers report as shipped to and from the United States and the amount that it detects as counterfeit.

Contents of the Treasury's Audit Plan

Developed in conjunction with the Advanced Counterfeit Deterrence Steering Committee, the Treasury's audit plan identifies data sources, sets forth site selection criteria, lists questionnaires to be used in interviews abroad, discusses what audit reports might contain, sets time frames, and states that the Federal Reserve will attempt to specify and test a model of currency usage abroad. The Treasury's plan draws heavily on information obtained from ongoing International Currency Awareness Program study trips. The purpose of those trips was to meet with foreign financial institution, government, and law enforcement officials to learn more about the uses, distribution, and counterfeiting of U.S. currency overseas and to

begin to inform those abroad about the U.S. currency redesign.⁵ In September/October 1996 and January 1997, first using the Treasury's draft and then the formally submitted audit plan, the Treasury and the Federal Reserve took two study trips similar to those done under the International Currency Awareness Program. As of February 1997, study trips under the International Currency Awareness Program and Treasury's audit plan had been made to 18 countries or entities where U.S. currency was used or distributed to a significant extent.⁶ Under the Treasury's audit plan, the first audit was to begin no later than April 24, 1997, and to be completed by September 1999. At least one audit is to be performed during each subsequent 3-year period through April 2006. The act requires the Secretary to submit a written report to certain congressional committees on the results of each audit within 90 days after completing the audit.

The Treasury's Submitted Plan Is Unclear and Incomplete

The Secretary of the Treasury's submitted plan does not demonstrate how it will enable the Treasury to meet the audit plan objectives required under the act. A written plan should define the audit's objectives and the scope and methodology to achieve those objectives.⁷ The Treasury plan's audit objectives are not clearly stated and do not include the findings and reporting elements that the Treasury expects to develop. Concerning scope, the plan provides a time line for completing the audits, site selection criteria for regions of the world, and information and data sources. Although the plan provides some information on data gathering, it does not fully explain the analytical methods the Treasury intends to use to achieve the objectives. For example, the plan identifies data sources and provides questions that may be asked of foreign financial and law enforcement officials, but it does not fully explain how this information will be analyzed and synthesized to address each of the audit plan objectives under the act.

⁵In 1996, the Treasury Department began issuing a newly designed U.S. currency with more security features to deter counterfeiters both domestically and abroad.

⁶As of February 12, 1997, visits were made to 18 countries or entities under the International Currency Awareness Program and the Treasury's audit plan, including Argentina, Bahrain, Belarus, Cambodia, Egypt, England, Indonesia, Hong Kong, the Philippines, Russia, Saudi Arabia, Singapore, Switzerland, Taiwan, Thailand, Turkey, United Arab Emirates (Abu Dhabi, Dubai), and Vietnam.

⁷The objectives are what the audit is to accomplish and can be thought of as questions that auditors seek to answer. Objectives identify the audit subjects and performance aspects to be included, as well as the potential finding and reporting elements that the auditors expect to develop. "Scope" is the boundary of the audit. It addresses such things as the period and number of locations to be covered. The methodology comprises data-gathering and analytical methods auditors will use to achieve the objectives. See *Government Auditing Standards: 1994 Revision* (Washington, D.C.: U.S. General Accounting Office, June 1994).

The plan does not describe analytical methods for studying the holding of genuine U.S. currency abroad and developing estimates of counterfeit U.S. currency abroad. However, it describes elements of a methodology that might be used to study the use of genuine U.S. currency abroad. The plan indicates that the Federal Reserve will attempt to specify and test a model of how the U.S. currency that is held outside the United States is used to support or refute an assumption about currency movement outside the United States. The assumption to be tested is that currency moves between and among individuals and business firms in such a way that the portion of U.S. currency held abroad that is received by the Federal Reserve each year (at least 13 percent in 1995) through its foreign-origin currency receipts is representative of the total amount of U.S. currency abroad. The Federal Reserve's model is expected to place a special emphasis on the factors that cause certain amounts to (1) come into the possession of financial institutions abroad, (2) be regarded as surplus to the needs of those individual financial institutions, (3) be sold subsequently to correspondent banks,⁸ and, finally, (4) be deposited by a correspondent bank at the Federal Reserve.⁹ However, the plan does not fully explain how the Treasury intends to analyze the information obtained to reach conclusions about the use of U.S. currency abroad.

The Treasury Intends to Submit an Addendum to Better Explain How It Will Meet Its Audit Plan Objectives

After we highlighted some of the plan's shortcomings, particularly the absence of methodologies, Treasury and Federal Reserve officials acknowledged that the plan could be improved. The Treasury official responsible for developing the plan stated that the audit objectives—to study the use and holding of genuine U.S. currency in foreign countries and develop estimates of the amount of counterfeit U.S. currency circulating outside the United States each year—are the same as those stated in the act. Further, the official told us that, with the assistance of the Federal Reserve, the Treasury intends to submit a written addendum to Congress to better explain its proposed methodologies, with the caveat that these methodologies may change based on information obtained abroad during the course of the audits. The Treasury official also told us the Treasury intended to include in the addendum a description of its

⁸A correspondent bank is a financial institution that regularly performs services for another in a market inaccessible to the other. In banking there is usually a depository relationship that compensates for expenses and facilitates transactions.

⁹Information about how citizens and businesses, other than financial institutions, use U.S. currency abroad is likely to be addressed as part of the information on how and why financial institutions obtain U.S. currency. Financial institutions obtain U.S. currency for many reasons and from many sources; for example, in countries with unstable currencies, traders may deposit proceeds from sales transacted in U.S. currency.

assumptions and the limitations associated with the use of the resulting information.

The Treasury Intends to Describe the Uses of Genuine U.S. Currency Abroad

Treasury and Federal Reserve officials explained that rather than develop and test a model of currency usage, as discussed in the submitted plan, they will summarize information obtained from foreign officials to describe the uses of U.S. currency in the countries visited. They said that it is not possible to develop a single model of how U.S. currency is used abroad because of the numerous reasons why U.S. currency is used and the many channels through which U.S. currency is distributed. However, by determining and describing the process by which U.S. currency is used in individual countries under specific conditions, they said that they may be able to understand U.S. currency usage in other countries in similar situations. They said that they need to interview foreign officials to obtain information on currency usage and flows because little written data exist. They told us that the information obtained on genuine currency usage will also be reviewed to determine whether any of the information conflicts with their assumptions about the usage of genuine U.S. currency abroad. By determining how currency is used and how it flows within and between particular regions and countries, the Treasury and the Federal Reserve intend to support or refute the assumption that the sample of U.S. currency returned to and reviewed by the Federal Reserve is representative of the amount that is not returned to the Federal Reserve.

The Treasury Intends to Develop Estimates of Genuine U.S. Currency Held Abroad

According to the Treasury official responsible for developing the plan, the Treasury plans to address holdings by establishing estimates of the total amount of genuine U.S. currency abroad. To do this, the Treasury intends to use the Federal Reserve methodology outlined in its 1996 study.¹⁰ Synthesizing several methods and data sources, the Federal Reserve estimated that about \$200 billion-\$250 billion of U.S. currency, or up to two-thirds of the roughly \$375 billion in circulation outside of banks in 1995, was abroad. As described in the study, because of the inadequacy of measurement tools, the Federal Reserve used a range of direct and indirect methods that provided an estimate of foreign and domestic currency holdings.

The Federal Reserve study points out that because the data on currency flows abroad are incomplete, cumulating them does not provide a good

¹⁰See Richard D. Porter and Ruth A. Judson, "The Location of U.S. Currency: How Much Is Abroad?" Federal Reserve Bulletin, Board of Governors of the Federal Reserve System (Washington, D.C.: Federal Reserve System, Oct. 1996), pp. 883-903.

estimate of the amount of currency held abroad. Thus, the authors combined flow data with estimates from other methods. The estimates of foreign holdings vary depending upon which method is used. The study concluded that between 55 percent and 70 percent of U.S. currency is held abroad. We reviewed the study and found the method to be reasonable, based on the given assumptions. Treasury and Federal Reserve officials told us they intend to support or modify the estimate with information obtained during the studies abroad and to update and publish estimates periodically.

The Treasury Intends to Establish Estimates of Counterfeit U.S. Currency Abroad

According to the Treasury, it intends to use an existing Federal Reserve method to establish estimates of counterfeit U.S. currency circulating abroad. The Treasury indicated that it is confident the data it already collects are sufficient for developing these estimates. The method that has been in use over the past few years is based on a number of assumptions that cannot be either fully validated or disproved. Treasury and Federal Reserve officials said that information they have obtained to date validates the assumptions, yet they may modify this method if the information obtained through their trips abroad make them question their assumptions. Although they recognize that the estimates cannot be definitive or statistically validated due to the nature of the activity, they believe the method should provide a rough estimate or range that the Treasury can use to assess the counterfeiting threat when taken into consideration with other factors.

According to the Treasury, the most significant and detailed measures of counterfeit U.S. currency circulating abroad are already contained within the Federal Reserve's currency receipt data and the Secret Service's counterfeit-detection statistics, upon which the Treasury's estimate is based. The Federal Reserve indicated that through its foreign-origin currency receipts it is able to examine a significant portion of the U.S. currency estimated to be circulating outside of the United States. Such receipts amounted to at least 13 percent of the currency that was likely to be outside of the United States in 1995 and may amount to 20 percent in 1996, according to the Federal Reserve. The Treasury official also stated that the Treasury understands the limitations of the Secret Service's counterfeit-detection statistics and realizes that these actual detections do not capture all of the U.S. currency counterfeit-activity that occurs worldwide. Nevertheless, the Treasury believes that its data and supporting evidence on actual detections suggest that the amount of

counterfeit U.S. currency in circulation is not much larger than Federal Reserve statistics indicate.

With this in mind, the Federal Reserve, using its counterfeit-detection data and taking into account the extent to which counterfeits are detected and reported to the Secret Service by financial institutions and others before deposits are received by the Federal Reserve, formed a rough estimate of the value of counterfeits that may have been in circulation abroad. Some of the figures used in this calculation are considered “restricted information” by the Federal Reserve and thus are not provided in this report. In general, the method used for 1996 was as follows:

- As discussed previously, the Federal Reserve estimated that two-thirds of genuine U.S. currency circulates abroad—approximately \$174 billion in 1996.
- It determined the value of all \$100 notes¹¹ processed through New York, Miami, and Los Angeles¹² Federal Reserve banks during the year from abroad as a percentage of the value of notes estimated to be in circulation abroad—approximately 18.6 percent.
- It established a Federal Reserve counterfeit-detection rate by determining the number of counterfeit \$100 notes detected per million notes processed at Federal Reserve banks from abroad.
- It determined the estimated value of counterfeits in circulation abroad based solely on the Federal Reserve detection rate for \$100 notes from abroad.
- The Federal Reserve assumed that the ratio of counterfeit \$100 notes in circulation detected by the Federal Reserve domestically compared to those detected by financial institutions, retailers, and others domestically (as reported to the Secret Service) is the same ratio as would be found for counterfeit \$100 notes detected abroad.
- It applied the resulting percentage to the number of counterfeits in circulation abroad based on its own detections to come up with its estimate of the total value of counterfeits in circulation abroad—roughly a range centering on \$21.2 million in 1996.¹³

¹¹According to the Federal Reserve, the \$100 note is the most heavily used abroad and has been used in the past couple of years to estimate the total value of counterfeit U.S. currency circulating abroad.

¹²According to the Federal Reserve, the majority of notes from overseas come through these three banks.

¹³The Federal Reserve concluded that this amount was insignificant from a macroeconomic perspective and has no discernible effect on public confidence in U.S. currency.

This method relied on some assumptions that can neither be fully validated nor disproved, due to the nature of the activity. For example, it relied on (1) assumptions about presumed overseas currency flows, (2) counterfeit-detection data derived from currency shipments reported as originating overseas, and (3) assumptions about detections and reporting made prior to shipments of currency back to the Federal Reserve from overseas. According to the Federal Reserve, information obtained during the previous International Currency Awareness Program trips abroad did not indicate a need to revise its assumptions. The Treasury official told us that the evidence gathered during future trips abroad should help reduce the risk factors associated with these assumptions and either support or refute the Treasury's belief in the efficacy of its statistics. According to the Treasury, interviews with foreign officials will provide insight, as will examination of record-keeping procedures and local counterfeit-detection statistics. The Treasury and Federal Reserve said that, at the very least, they may modify these methods should they find anything in their studies of use and holdings abroad to make them question their assumptions.

The Treasury and the Federal Reserve agree that this method, which has been employed for the past few years, cannot be used to give the definitive answer due to the complex nature of currency flows and the criminal nature of counterfeiting. Rather, the results of this method may be used to provide a rough estimate or range that the Treasury can use in its assessment of the counterfeiting threat. Both the Treasury and the Federal Reserve agree that this rough estimate cannot be used in isolation. They say it must be considered with other pieces of the threat assessment such as seizures of counterfeits and intelligence information including the quality of the counterfeits, the types of equipment used to produce counterfeits, the types of perpetrators, any connections with other crimes, and other data.

Recommendation

Without a clear description of the audit plan objectives, the methods to be used to achieve these objectives, and the associated limitations, the Treasury's submitted plan does not have all the requisite elements of an audit plan. More complete documentation of the audit plan would provide a greater opportunity to determine whether the proposed plan is likely to result in a useful report. To help assure that the Treasury corrects the deficiencies in the submitted audit plan, we recommend that the Secretary of the Treasury develop and submit an addendum to more fully explain the

objectives and the methods the Treasury intends to use, including a discussion of assumptions and limitations associated with the use of the resulting information.

Agency Comments

The Department of the Treasury, with the input of the Federal Reserve Board, provided oral comments on a draft of this report. The Treasury agreed with most of the information presented and supported our recommendation that it develop an addendum to the plan to more fully document the objectives and methods it intends to use, including a discussion of the assumptions and limitations associated with the use of the resulting information. The Treasury acknowledged that certain aspects of the submitted plan were left vague, but said that this was done in order to leave options open for the further development of the methodology. According to the Treasury, it, with the input of the Federal Reserve, was in the process of developing the addendum and planned to submit the addendum to Congress by April 18, 1997.

The Treasury indicated that the uses of genuine U.S. currency abroad are so diverse that it cannot develop one worldwide model, and therefore it planned to develop descriptions of U.S. currency usage in the countries it visits. The Treasury believes this methodology is a straightforward exercise whereby it compares responses from foreign officials. The Treasury stated that it may use these descriptions to better understand the usage of U.S. currency in other countries in similar situations. The Treasury's planned approach for studying the uses of genuine U.S. currency abroad is less quantitative in nature than the methodologies the Treasury plans to use to develop estimates of genuine and counterfeit U.S. currency abroad. It relies primarily on testimonial evidence provided by foreign officials, and it is unclear how the Treasury will reconcile any differences in data gathered. Therefore, the methodology is dependent upon the quality and reliability of that testimonial evidence and the context in which it is presented.

The Treasury noted that although the methodology to be used in developing estimates of counterfeit U.S. currency abroad may be refined, it felt the methodology was based upon reasonable assumptions that have been validated by all of the evidence it had collected to date and it had no evidence to suggest that any of the assumptions were not valid. Our position on this methodology is that the assumptions cannot be either fully validated or disproved, and therefore caution needs to be exercised to

ensure that information and estimates resulting from this methodology are provided in the proper context.

The Treasury's comments also included technical changes and clarifications that have been incorporated in this report where appropriate.

Scope and Methodology

We reviewed the Antiterrorism and Effective Death Penalty Act of 1996 to determine its requirements for the Treasury's audit plan. We then assessed the Audit Plan of the Secretary of the Treasury on the Uses and Counterfeiting of U.S. Currency in Foreign Countries (Oct. 1996) using criteria for an audit plan as set forth under generally accepted government auditing standards. In doing so, we determined whether the plan would enable the Secretary of the Treasury to (1) study the use and holding of U.S. currency in foreign countries and (2) develop useful estimates of the amount of counterfeit U.S. currency that circulates outside the United States each year. We collected and reviewed documents, such as currency shipment and receipt data and counterfeiting statistics, from and interviewed officials of the Federal Reserve, the Department of the Treasury, and the Secret Service. We submitted written questions to the Department of the Treasury to clarify information in the audit plan and obtained and reviewed the written responses. We reviewed International Currency Awareness Program summaries of trips abroad and interviewed officials who participated in those trips and who prepared the written summaries. We also evaluated the reasonableness of the Federal Reserve's paper detailing its method for estimating the total amount of genuine U.S. currency abroad. In doing this, we reviewed the relevant literature, the study's methods, applications of the methods, and the study's assumptions; and interviewed the study's authors.

We conducted our review from October 1996 to February 1997 in accordance with generally accepted government auditing standards.

As agreed, unless you publicly announce the contents earlier, we plan no further distribution of this report until 30 days from its issue date. At that time, we will provide copies of the report to interested congressional committees, to the Secretary of the Treasury, and to the Chairman of the Board of Governors of the Federal Reserve System. We will also make copies available to others on request.

Please contact me at (202) 512-8984 if you or your staff have any questions concerning this report. The major contributors to this report were John P. Hutton; Kathleen M. Monahan; Cheryl L. Goodman; Arthur L. James, Jr.; and Geoffrey R. Hamilton.

A handwritten signature in black ink, reading "JayEtta Z. Hecker". The signature is fluid and cursive, with a large initial "J" and "H".

JayEtta Z. Hecker
Associate Director, International Relations
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