

GAO

Report to the Ranking Member, Subcommittee
on Federal Financial Management,
Government Information, Federal Services,
and International Security, Committee on
Homeland Security and Governmental Affairs,
U.S. Senate

February 2012

U.S. COINS

Alternative Scenarios Suggest Different Benefits and Losses from Replacing the \$1 Note with a \$1 Coin



GAO

Accountability * Integrity * Reliability

Highlights of [GAO-12-307](#), a report to the Ranking Member, Subcommittee on Federal Financial Management, Government Information, Federal Services, and International Security, Committee on Homeland Security and Governmental Affairs, U.S. Senate

Why GAO Did This Study

In March 2011, GAO reported that replacing the \$1 note with a \$1 coin would provide a net benefit to the government of about \$5.5 billion over 30 years, or an average of about \$184 million per year. This benefit, which GAO estimated using an economic model based on a set of assumptions, was entirely attributable to “seigniorage,” a term defined as the difference between the cost of producing coins or notes and their face value. Seigniorage reduces government borrowing and interest costs, resulting in a financial benefit to the government. As GAO noted, the estimated net benefit could increase or decrease with changes in the assumptions.

GAO was asked to provide additional details on its 2011 analysis. Accordingly, GAO (1) updated its analysis to account for recent changes in note processing, among other things, and based on this update determined (2) the specific benefit or loss to the government for each of the first 10 years of its 30-year analysis; (3) the net benefit or loss to the government over 10 years if the interest savings due to seigniorage are excluded from the analysis; and (4) the net benefit or loss to the government over 10 years if it is assumed that each note will be replaced by 1 coin, rather than 1.5 coins, as GAO assumed in its 30-year analysis.

GAO used the economic model it developed for its 2011 report, updated certain factors, and varied the assumptions for seigniorage and the replacement ratio of coins to notes as requested.

View [GAO-12-307](#). For more information, contact Lorelei St.James at (202) 512-2834 or stjamesl@gao.gov.

February 2012

U.S. COINS

Alternative Scenarios Suggest Different Benefits and Losses from Replacing the \$1 Note with a \$1 Coin

What GAO Found

According to GAO’s updated analysis, replacing the \$1 note with a \$1 coin would provide a net benefit to the government of approximately \$4.4 billion over 30 years, or an average of about \$146 million per year. The overall net benefit was due solely to increased seigniorage and not to reduced production costs. This estimate differs from GAO’s 2011 estimate because it considers recent efficiency improvements in note processing that have extended the expected life of the \$1 note and other updated information. GAO’s estimate covered 30 years to be consistent with previous GAO analyses and because that period roughly coincides with the life expectancy of the \$1 coin.

Using the same model and assumptions used for its 30-year analysis, GAO found that replacing the \$1 note with a \$1 coin would provide a net loss to the government of about \$531 million in the first 10 years, or an average of about \$53 million per year. The cost of producing a large number of coins necessary for the transition would result in a net loss in 6 of the first 7 years. In the eighth year, and for the remaining 2 years, this situation is reversed: the interest savings outweigh the production costs and the net benefits would be positive. Overall, the net loss over 10 years compared with the net benefit GAO estimated over 30 years would occur because of large costs in the first few years to produce the initial supply of \$1 coins.

If the interest savings due to increased seigniorage are excluded from the analysis, the government would incur a total net loss of about \$1.8 billion over 10 years, or an average of \$179 million per year. With no interest savings to offset the costs of coin production, net losses would be incurred in 9 of the 10 years. As in the preceding scenario, these production costs are greatest in the first 4 years, when a large number of coins need to be produced for the transition. Although this scenario suggests there are no net benefits of switching to a \$1 coin, GAO believes that excluding the interest savings related to seigniorage omits a monetary benefit to the government.

If it is assumed that each \$1 note will be replaced by 1, rather than 1.5, \$1 coins, the government would incur a total net loss of about \$582 million over 10 years, or an average of about \$58 million per year. The costs of producing coins for the transition dominate in the first 3 years, followed by benefits in the fourth year due to the overproduction of coins during the transition. In this scenario, net losses continue to accrue through year 10. Net losses in this scenario are smaller than in the preceding scenario because fewer coins are produced and coin production costs are lower, but the one-to-one replacement does not provide increased seigniorage. Moreover, this lower replacement ratio is not consistent with the experiences of other countries that have switched from notes to coins and is likely to produce too few coins to meet demand, which could be disruptive to the economy.

In commenting on a draft of this report, the Federal Reserve and Treasury Department noted that GAO’s 30-year estimate does not consider the cost to the private sector or environmental impacts. GAO agrees that such costs and impacts are important considerations, but GAO identified no quantitative estimates that could be evaluated or modeled.

Contents

Letter		1
	Our Updated Estimate Shows That Replacing the \$1 Note with a \$1 Coin Could Provide a Net Benefit of \$4.4 Billion to the Government over 30 Years	3
	Replacing the \$1 Note with a \$1 Coin Would Result in a \$531 Million Net Loss over the First 10 Years	6
	Without Counting Seigniorage, Switching to a \$1 Coin Would Result in a Net Loss	7
	Switching to a \$1 Coin Would Result in a Net Loss if Coins Replaced Notes on a 1-to-1 Basis	9
	Concluding Observations	10
	Agency Comments and Our Evaluation	10
Appendix I	Comments from the Board of Governors of the Federal Reserve System	13
Appendix II	Comments from the Department of the Treasury	15
Figures		
	Figure 1: Discounted Net Benefit to the Government of Replacing \$1 Notes with \$1 Coins over 30 Years, by Year	5
	Figure 2: Net Benefits and Net Losses to the Government over the First 10 Years	7
	Figure 3: Net Benefits and Net Losses to the Government Excluding Seigniorage	8
	Figure 4: Net Benefits and Net Losses to the Government Assuming a 1-to-1 Replacement Ratio	9

This is a work of the U.S. government and is not subject to copyright protection in the United States. The published product may be reproduced and distributed in its entirety without further permission from GAO. However, because this work may contain copyrighted images or other material, permission from the copyright holder may be necessary if you wish to reproduce this material separately.



G A O

Accountability * Integrity * Reliability

United States Government Accountability Office
Washington, DC 20548

February 15, 2012

The Honorable Scott P. Brown
Ranking Member
Subcommittee on Federal Financial Management,
Government Information, Federal Services,
and International Security
Committee on Homeland Security and Governmental Affairs
U.S. Senate

Dear Senator Brown:

Over the past 40 years, many countries have replaced lower-denomination notes with coins as a means to provide a financial benefit to their governments. We have reported five times over the past 22 years that replacing the \$1 note with a \$1 coin would provide a net benefit to the federal government of hundreds of millions of dollars annually. Most recently, in March 2011, we reported that such a replacement would result in a net benefit of about \$5.5 billion over 30 years, or an average of about \$184 million per year.¹ We found that this benefit was entirely attributable to an increase in seigniorage, which is the difference between the cost of producing coins or notes and their face value. To determine the estimated net benefit, we developed a model based on a set of assumptions and noted that changing these assumptions could increase or decrease the estimated net benefit. You asked us to provide additional details on our 2011 analysis and to conduct additional analyses changing two assumptions. To answer your request, we first updated our 2011 estimate because of recent changes by the Federal Reserve and Department of Treasury in note processing and \$1 coin production, the results of which are provided below. We then used this updated 30-year estimate to address your request that we provide

- the specific benefit or loss to the government for each of the first 10 years for our 30-year analysis;
- the net benefit or loss to the government over 10 years if the interest savings due to seigniorage is excluded from the analysis; and

¹GAO, *U.S. Coins: Replacing the \$1 Note with a \$1 Coin Would Provide a Financial Benefit to the Government*, [GAO-11-281](#) (Washington, D.C.: Mar. 4, 2011).

-
- the net benefit or loss to the government over 10 years if the replacement ratio is 1 coin to 1 note, rather than 1.5 coins for 1 note, as we assumed in our 30-year analysis.

To identify the benefit or loss of replacing the \$1 note with a \$1 coin, we updated the economic model developed for our 2011 report, and varied the assumptions for seigniorage and the replacement ratio of coins to notes as requested. Briefly, our model estimated net benefit or net loss to the government by subtracting the benefit of a status quo scenario from a replacement scenario. In the updated status quo scenario, notes remain the dominant form of currency at the \$1 denomination, the United States Mint (the Mint) ceases production of \$1 coins, the currently stored coins are gradually released into circulation to meet transactional demand, and production of \$1 coins resumes after the stored coins are released.² In the replacement scenario, we assumed, among other things, that the production of \$1 notes would stop immediately; no notes would be withdrawn from circulation, but because of their shorter life span, they would naturally fall out of circulation within a few years; the \$1 coins in storage would immediately be released into circulation; and the Mint would produce a large number of \$1 coins during the first 4 years of the transition. Using the updated economic model, we then varied the assumptions for seigniorage and the replacement ratio of coins to notes to determine the net benefits or losses over the first 10 years, as requested. We conducted this performance audit from November 2011 through February 2012 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

²As of September 30, 2011, approximately 1.4 billion \$1 coins were stored with the Federal Reserve.

Our Updated Estimate Shows That Replacing the \$1 Note with a \$1 Coin Could Provide a Net Benefit of \$4.4 Billion to the Government over 30 Years

The federal government realizes a financial gain when it issues notes or coins because both forms of currency usually cost less to produce than their face value. This gain, which is known as seigniorage, equals the difference between the face value of currency and its costs of production.³ Seigniorage reduces the government's need to raise revenues through borrowing, and with less borrowing, the government pays less interest over time, resulting in a financial benefit.

Replacing the \$1 note with a \$1 coin would provide a net benefit to the government of approximately \$4.4 billion over 30 years, amounting to an average yearly discounted net benefit⁴ of about \$146 million.⁵ This benefit would occur because, based on differences in how notes and coins are used in the economy, more coins than notes would have to be circulated to meet demand, and therefore more seigniorage would be created. This estimate assumes a 4-year transition period beginning in 2012, during which the production of \$1 notes would stop immediately. On the basis of information provided by the Mint, we assumed that during the first year the Mint would convert existing equipment to increase its production capability for \$1 coins. We also assumed that it would take 4 years for the Mint to produce enough coins to replace the currently outstanding \$1 notes. Our assumptions cover a range of factors including a replacement ratio of 1.5 coins to 1 note to take into consideration the fact that coins circulate with less frequency than notes and therefore a larger number are required in circulation,⁶ the expected rate of growth in the demand for currency over 30 years, the costs of producing and processing both coins

³Traditionally, seigniorage is defined as the difference between the face value of coins and their cost of production. As long as there is public demand, the government creates this net value when it puts coins into circulation. Similarly, when the government issues notes, it creates an analogous net value, equal to the face value of the notes less their production costs. In this report, we use the term "seigniorage" to refer to the value created from the issuance of both coins and notes.

⁴A discounted net value uses a rate, known as the discount rate, to convert the value of payment or receipts expected in future years to today's value, taking into account that the further into the future an amount is paid or received, the smaller its value is today. Applying a discount rate establishes a consistent basis for comparing alternative investments that will have differing patterns of costs and benefits over many years.

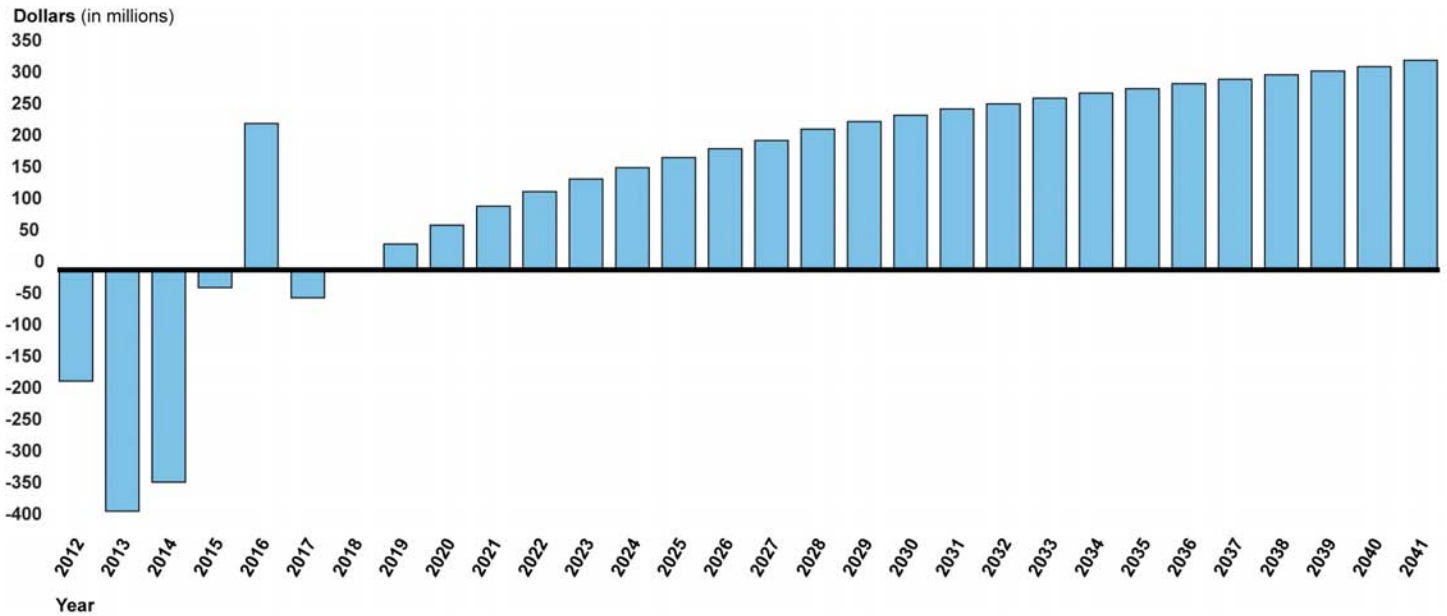
⁵Our estimate of the discounted net benefit to the government of replacing the \$1 note with a \$1 coin is not intended to replicate budget scoring that would be conducted by the Congressional Budget Office.

⁶As explained in more detail later, we used a 1.5-to-1 replacement ratio based on our analysis of the experiences of Canada and the United Kingdom.

and notes, and the differential life spans of coins and notes. Our analyses are projected over 30 years to be consistent with previous GAO analyses and because that period roughly coincides with the life expectancy of the \$1 coin.

As shown in figure 1, the annual benefit would vary over the 30 years—the government would incur a net loss in 6 of the first 7 years and then realize a net benefit in the remaining years. The early net loss would be due in part to the up-front costs to the Mint of increasing its coin production during the transition, together with the limited interest expense the government would avoid in the first few years after replacement began. The large net benefit in 2016 would occur because we assume that the Mint's production at maximum capacity during the 4-year transition period would lead to some overproduction and thus production would drop dramatically in 2016. Because of the far lower coin production costs, the net benefit to the government would temporarily spike in that year. We also found our net benefit estimate was due solely to increased seigniorage and not to reduced production costs. Like all estimates, this one is uncertain, particularly in the later years, and thus the benefit could be greater or smaller than estimated. Furthermore, inputs to our analysis, such as the costs to produce \$1 notes and \$1 coins, will change over time. Changes to the inputs and the assumptions used in the estimate could increase or decrease the estimated net benefit.

Figure 1: Discounted Net Benefit to the Government of Replacing \$1 Notes with \$1 Coins over 30 Years, by Year



Source: GAO analysis.

This estimate differs from our 2011 estimate, which found that replacement would result in a net benefit of about \$5.5 billion over 30 years, or an average of about \$184 million per year, because it takes into account two key actions that occurred since our 2011 report.

- In April 2011, the Federal Reserve began using new equipment to process notes, which has increased the expected life of the \$1 note to an average of 56 months, according to the Federal Reserve, compared with the 40 months we used in our 2011 analysis. The longer note life reduces the costs of the status quo scenario and thus reduces the expected net benefits of replacing the \$1 note with a \$1 coin.
- In December 2011, the Treasury Department announced that it would take steps to eliminate the overproduction of dollar coins by relying on the approximately 1.4 billion \$1 coins stored with the Federal Reserve as of September 30, 2011, to meet the relatively small transactional demand for dollar coins. This new policy will reduce the cost of producing \$1 coins that we estimated in the status quo scenario and thus reduces the expected net benefits of replacing the \$1 note with a \$1 coin.

In addition, our updated analysis used a start date of 2012 rather than 2011 and used the Congressional Budget Office's most recent estimates for future government borrowing costs, which are lower than the figures used in our 2011 analysis. The reduced borrowing costs reduced the net benefits of switching to a \$1 coin.⁷

Finally, as in our 2011 report, we considered only the fiscal effect of this change on the government. We did not consider other factors, such as the relative environmental and societal costs and benefits of the status quo and a replacement. Further analysis would be needed to determine, for example, whether the net effects of a replacement would be positive or negative for the environment,⁸ or how the costs to industry would compare with the net benefit to the government. As we noted in our 2011 report, the costs to industry of a replacement are difficult to quantify and, according to stakeholders we spoke to, would include both near-term transition costs, such as the costs of retooling cash drawers, and longer-term costs from structural changes to ways of doing business, such as higher transportation costs incurred by armored carriers since coins are heavier than notes.

Replacing the \$1 Note with a \$1 Coin Would Result in a \$531 Million Net Loss over the First 10 Years

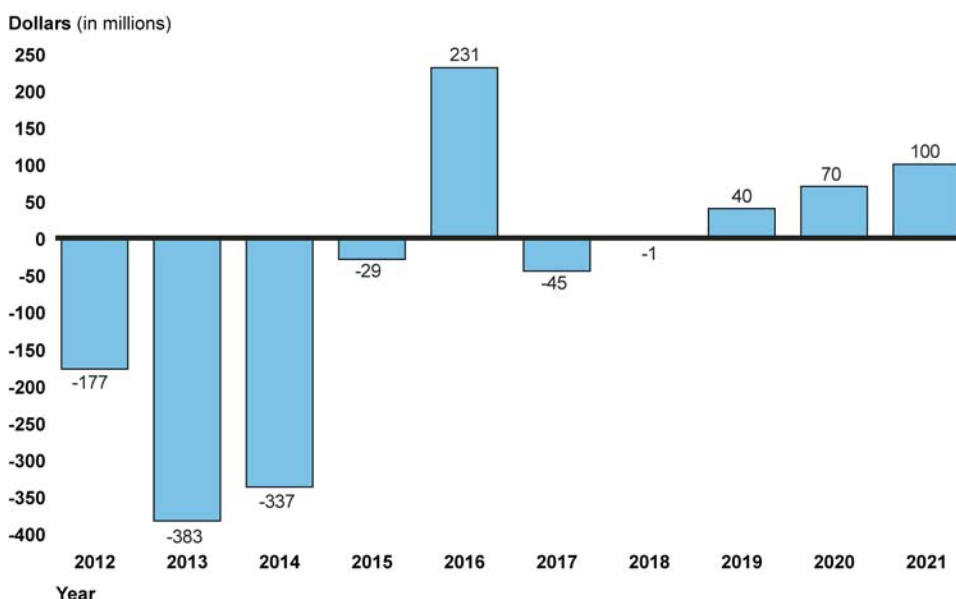
Across the first 10 years of our 30-year analysis, replacing the \$1 note with a \$1 coin would result in \$531 million in net loss, or approximately \$53 million per year in net loss to the government. For this analysis, we maintained all the key assumptions of our 30-year analysis—notably that 1.5 coins would be produced to replace each \$1 note and that the demand for \$1-denominated currency continues to grow each year. As shown in figure 2, the cost of producing coins would result in a net loss in 6 of the first 7 years when the Mint produced \$1 coins at high levels to enable the transition. Net benefits would occur in each of the remaining years. Overall, the net loss over the first 10 years compared with the benefits we estimated over 30 years would occur because of large costs during the first 4 years to produce the initial supply of \$1 coins, while the

⁷In addition to the changes listed above, we revised the level of transactional demand for coins that is assumed to exist in the status quo scenario. On the basis of updated information from the Federal Reserve, we assumed a smaller transactional demand for coins. This change had only a minimal impact on the findings.

⁸For example, officials from the Bureau of Printing and Engraving pointed out that replacing the \$1 note with a \$1 coin would also have environmental impacts relating to obtaining raw materials and carbon dioxide emissions, among others.

benefits of reduced interest expense due to increased seigniorage would occur more heavily in later years.

Figure 2: Net Benefits and Net Losses to the Government over the First 10 Years



Source: GAO analysis.

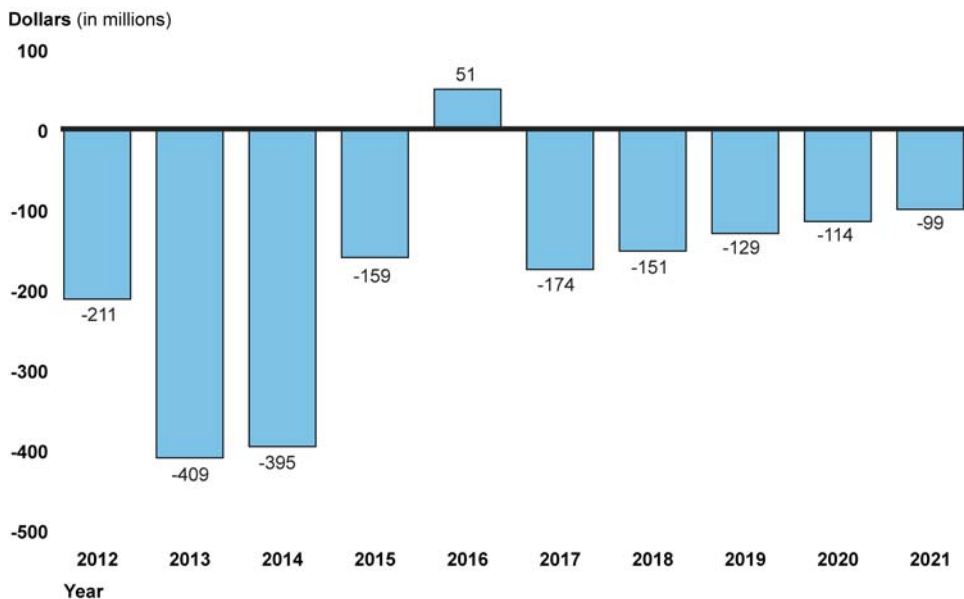
Note: The large net benefit in 2016 occurs because we assume that the Mint's production at maximum capacity during the 4-year transition period will lead to some overproduction and production drops dramatically in 2016. Because of the far lower coin production costs, the net benefit to the government will temporarily spike in that year.

Without Counting Seigniorage, Switching to a \$1 Coin Would Result in a Net Loss

Under a scenario that does not consider interest savings due to seigniorage, a net loss of approximately \$1.8 billion would accrue during the 10-year period for an average cost of \$179 million per year. As shown in figure 3, net losses would be incurred in 9 of the 10 years. In particular, large costs would be incurred in each of the first 4 years because of the large number of coins that would need to be produced for the transition, as was the case in the scenario discussed above. As in the previous analysis, in year 5, there would be a temporary net benefit because coins would be overproduced during the previous 4 years and coin production would fall to zero in that year—and the cost is therefore less than the cost of producing \$1 notes that would have been incurred had the transition not taken place. After year 5, net losses would continue to be incurred because, although the life of a \$1 coin is longer than the life of a \$1 note,

coins cost more than notes to produce. All of the scenarios assume that additional currency would need to be produced not only to replace worn out or lost currency, but also to support a growing economy. Thus, in this scenario, we found that even with the longer life of the \$1 coin, the cost of producing coins for the growing economy after the transition would exceed the cost of producing \$1 notes in each of those years that would have been incurred without the replacement. While this scenario suggests that there would be no net benefits from switching to a \$1 coin, we believe that not including the interest savings related to seigniorage omits a monetary benefit to the government.

Figure 3: Net Benefits and Net Losses to the Government Excluding Seigniorage



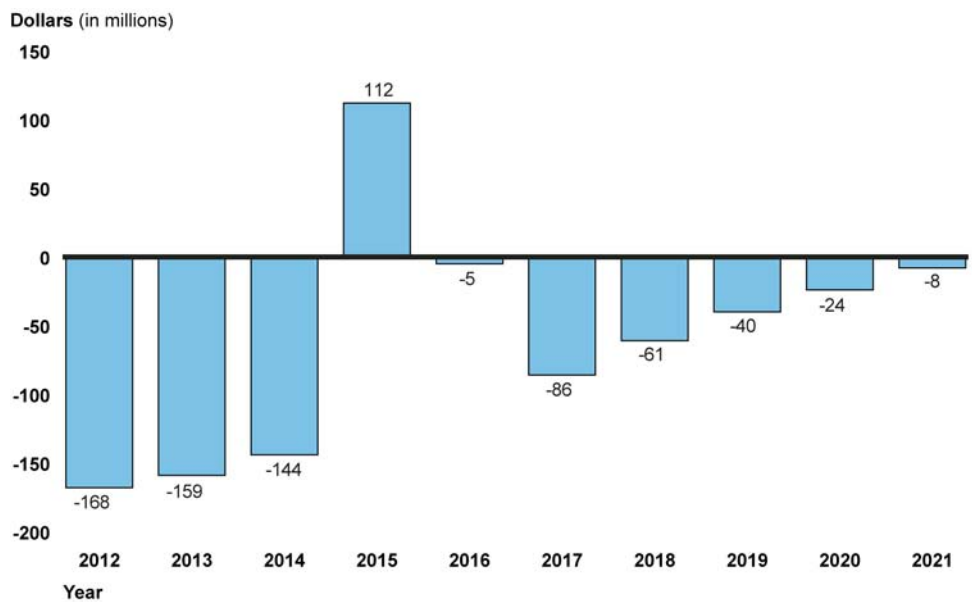
Source: GAO analysis.

Note: The net benefit in 2016 occurs because we assume that the Mint's production at maximum capacity during the 4-year transition period will lead to some overproduction and production drops dramatically in 2016. Because of the far lower coin production costs, the net benefit to the government will temporarily spike in that year.

Switching to a \$1 Coin Would Result in a Net Loss if Coins Replaced Notes on a 1-to-1 Basis

Under this scenario, we include the net benefits of interest savings related to seigniorage, but assume that a single \$1 coin would be produced to replace each \$1 note. In total, across the 10 years the total net loss of switching to \$1 coins would be \$582 million, or just over \$58 million per year. As shown in figure 4, net losses would be incurred in 9 of 10 years of this scenario. The costs of producing coins for the transition are highest in the first 3 years, followed by benefits in the fourth year because of the overproduction of coins during the transition. In this scenario, net losses would continue through year 10.

Figure 4: Net Benefits and Net Losses to the Government Assuming a 1-to-1 Replacement Ratio



Source: GAO analysis.

Note: The large net benefit in 2015 occurs because we assume that the Mint's production at maximum capacity during the transition period will lead to some overproduction and production drops dramatically in 2015. Because of the far lower number of coins produced in a one coin to one note replacement scenario and the corresponding lower production costs, the net benefit to the government will temporarily spike 1 year earlier than in the other scenarios.

In this scenario, far fewer coins would be produced because of the low replacement ratio, and thus the costs associated with their production would be much less than in the previous scenarios. However, this scenario also involves no gains to the government because of seigniorage because only one coin would be produced to replace each note that will fall out of circulation. In fact, the replacement case in this

scenario results in reduced seigniorage relative to the status quo because the cost of producing a note is less than the cost of producing a coin, so each \$1 coin has less seigniorage associated with its issuance than the \$1 note it is replacing.

A caution concerning a 1-to-1 replacement of coins to notes is that under this scenario, there would likely not be enough coins to meet demand. A shortage of currency could have significant negative consequences for the economy, such as hampering cash transactions. As we noted in our 2011 report, other countries that have switched from notes to coins have found that, because people use notes and coins differently, the number of coins needed for a replacement is greater than the number of notes to be replaced. While the actual replacement ratio needed is not known ahead of any transition, our 2011 analysis of the transition to a \$1 coin in Canada and the £1 coin in the United Kingdom led us to decide that a 1.5-to-1 ratio was a reasonable level.

Concluding Observations

Estimating whether the government would derive benefits from replacing the \$1 note with a \$1 coin requires an analysis with many assumptions. As is clear from the findings in this report, not accounting for the benefits related to increased seigniorage can substantially affect the estimate. While we identified and updated a few factors used in these analyses that changed since our 2011 report, other factors could also change over time, such as the cost of inputs for notes and coins or changes in the use of cash by the public, among other things. As such, these analyses are highly affected by changing conditions as well as by conceptual views on certain key issues, such as seigniorage and replacement ratios.

Agency Comments and Our Evaluation

We provided a draft of this report to the Federal Reserve and the Department of the Treasury for review and comment. Their written comments are reprinted in appendixes I and II, respectively. The Federal Reserve noted that it believes our 30-year estimate may overstate the net financial benefit to the government because it (1) does not adequately address the costs to the private sector, state and local government, and the Federal Reserve and (2) does not consider potential increases in the cost of raw material for coins or possible future changes in discount rates. Similarly, the Treasury Department noted that our analysis should consider the cost to the private sector and the impact on the environment. We agree that the benefits and costs to the private sector and the impact on the environment are important considerations. However, we found no quantitative estimates of the costs to the private sector or environmental

impacts that could be evaluated or modeled. We did not assess potential environmental impacts because these concerns were beyond the scope of our analysis and we did not identify quantitative estimates of such impacts. We included all relevant costs to the Federal Reserve that the agency provided to us and found no data on the cost to state and local governments. We used the best data available on coin production costs, which accounts for the cost of raw materials, and we used the most current discount rate. Furthermore, we recognize that our analyses are highly affected by changing conditions, such as changes in the cost of coins and notes, which may alter the total cost savings associated with replacing the \$1 note with a \$1 coin.

In addition, the Federal Reserve noted an increased risk of counterfeiting associated with replacing the \$1 note with a \$1 coin. We reported in 2011 that counterfeiting of U.S. coins is currently minimal, according to the U.S. Secret Service.⁹ The Federal Reserve also noted that we did not provide a sensitivity analysis that varies key assumptions such as possible increases in the public's use of electronic payments. In 2011, we reported the results of our sensitivity analyses, including one in which replacement leads to a decrease in the demand for currency as people switch to electronic payments. The Treasury also provided technical comments, which we addressed as appropriate.

We are sending copies of this report to the appropriate congressional committees, the Secretary of the Treasury, and the Chairman of the Federal Reserve. The report will also be available at no charge on the GAO Web site at <http://www.gao.gov>.

If you or your staff have any questions about this report, please contact me at (202) 512-2834 or by e-mail at stjamesl@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff that made key

⁹GAO-11-281.

contributions to this report include Teresa Spisak (Assistant Director), Amy Abramowitz, Lindsay Bach, Patrick Dudley, Bess Eisenstadt, and David Hooper.

A handwritten signature in black ink that reads "Lorelei St. James". The signature is written in a cursive style with a large initial "L" and a distinct "St." before the last name.

Sincerely yours,
Lorelei St. James
Director, Physical Infrastructure Issues

Appendix I: Comments from the Board of Governors of the Federal Reserve System



BOARD OF GOVERNORS
OF THE
FEDERAL RESERVE SYSTEM
WASHINGTON, D.C. 20551

JEFFREY C. MARQUARDT
DEPUTY DIRECTOR
DIVISION OF
RESERVE BANK OPERATIONS
AND PAYMENT SYSTEMS

February 9, 2012

Ms. Lorelei St. James
Director
Physical Infrastructure Issues
U.S. Government Accountability Office
441 G Street, N.W.
Washington, D.C. 20548

Dear Ms. St. James:

Thank you for the opportunity to comment on the GAO's draft report "Alternative Scenarios Suggest Different Benefits and Losses from Replacing the \$1 Note with a \$1 Coin." Under the alternative scenarios analyzed by the GAO in this report (limiting the analysis to 10 years, excluding seigniorage, and reducing the number of coins needed to replace each note from 1.5 to 1) the government would experience losses of between \$531 million and \$1.8 billion over the first 10 years of the program. The GAO projects a financial benefit to the government of about \$4.4 billion over 30 years; we are concerned that the 30-year savings projection may overstate the net financial benefit to the government, perhaps substantially.

Overall, the report states that the cost of producing sufficient coins to replace all \$1 notes is never fully recovered during the 30-year analysis; all savings are attributable to increased seigniorage income.¹ In fact, there is no year in the study in which estimated non-seigniorage benefits exceed costs. Moreover, the analysis does not adequately address the costs to the Federal Reserve of such a replacement and does not address at all the broader societal costs to consumers, retailers and other businesses, and state and local governments.

The analysis also does not address the counterfeiting risks associated with replacing the \$1 note with a \$1 coin. The current low rate of counterfeiting helps maintain global confidence in U.S. currency. Unlike the \$1 note, the \$1 coin does not have any effective machine-readable or publicly-usable counterfeit deterrent features. Several countries that have converted low denomination notes to coins have reported higher levels of counterfeiting for low-denomination coins than previously observed for low-denomination notes, and the U.S. Sacagawea \$1 coin was counterfeited in some Latin American countries soon after the U.S. Mint issued it.

¹ The Congressional Budget Office does not score seigniorage in its budget calculations.

Email: jeffrey.marquardt@frb.gov
Phone: (202) 452-2360 • Fax: (202) 452-6474

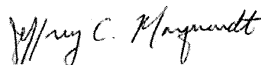
-2-

Finally, the GAO did not provide a sensitivity analysis that reflects some possibly significant risks to its assumptions, such as possible changes in the public's means of making payments over the decades in which seigniorage benefits are highest. Although the value of Federal Reserve notes in circulation increased more than 7 percent annually over the past several years, the growth rate for \$1 notes has been on average only 2 percent per year. It is possible that the elimination of the \$1 note could accelerate the ongoing shift of consumer payments to debit cards and other electronic payment alternatives. In addition to potential shifts in consumer payment methods, the analysis did not consider potential increases in raw material costs for coins, or changes in discount rates. Given the near-term expenses associated with the transition and uncertainty of the long-term forecasted benefits, it is possible that no savings will ever be realized from the replacement of \$1 notes with \$1 coins. Sensitivity analysis for these factors would help provide a greater confidence level around long-term savings projections, which are highly dependent on discount rate and other assumptions. In fact, changes in assumptions have reduced the GAO's 30-year average annual net benefit projections from \$550 million in its 2000 study, to \$186 million in its 2011 study, to \$146 million in the 2012 Duplication and Cost Savings report; in this study, 10-year average annual net costs to the government ranged from \$53 million to \$179 million.

Proponents of replacing \$1 notes with \$1 coins often cite similar steps that have been taken in other economies in recent decades as an indication that such a change has strong financial benefits. In general, the low-denomination note that was replaced in those economies had a far shorter useful life (typically three to six months) than is the case with the \$1 note, which currently has a useful life of about 56 months. Further, these decisions were typically made when electronic payment substitutes for cash were less mature than in the current U.S. environment. Therefore, the decisions of other economies have been based on very different circumstances than exist in the United States.

We continue to believe that a fuller societal cost-benefit analysis and a sensitivity analysis that varies key assumptions that are subject to material uncertainty would provide policy-makers with a more complete basis for considering the future of the \$1 note and \$1 coin.

Sincerely,



Appendix II: Comments from the Department of the Treasury



ASSISTANT SECRETARY

DEPARTMENT OF THE TREASURY
WASHINGTON, D.C.

February 10, 2012

Ms. Teresa Spisak
Assistant Director, Physical Infrastructure
Government Accountability Office
441 G Street, NW
Washington, DC 20548

Dear Ms. Spisak:

Thank you for the opportunity to review and comment on the Government Accountability Office (GAO) draft report, "*Alternative Scenarios Suggest Different Benefits and Losses from Replacing the \$1 Note with a \$1 Coin*" (GAO-12-307R).

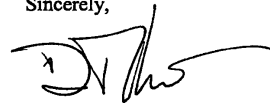
We have reviewed the draft report, which updates an analysis GAO performed last year. As you know, the Department of the Treasury has not taken a position on whether the \$1 note should be replaced by the \$1 coin. We welcome the GAO's analysis as Congress continues to consider this issue and have the following comments:

First, as we noted in our response to the GAO's report on this subject, the GAO has not considered the total cost associated with replacing the \$1 note with the \$1 coin, including transportation, production, environmental, and other costs. In our view, policymakers should consider both the direct financial benefit to the Government *and* the cost impact on the private sector and the environment.

Second, as your draft report notes, in December 2011, Secretary Geithner ordered the suspension of production of new Presidential \$1 coins for circulation. There is very limited transactional demand for \$1 coins so long as the \$1 note and \$1 coin co-circulate. A supply of more than 1.4 billion surplus \$1 coins had built up in the vaults of Federal Reserve Banks – enough to meet current levels of circulating demand for more than a decade. In light of this, Treasury sought to reduce taxpayer costs by eliminating the unnecessary production of additional surplus \$1 coins. Regular circulating demand will be met through the Federal Reserve Banks' existing inventory of nearly 1.4 billion \$1 coins, which will be drawn down over time. We estimate that this action will save taxpayers at least \$50 million annually. If Congress decided to eliminate the \$1 note and replace it with the \$1 coin, however, then the demand for dollar coins would increase and the Secretary would direct the United States Mint to produce enough dollar coins to meet the demand.

Again, thank you for the opportunity to review and comment on this draft report. Technical comments are provided for your consideration under separate cover.

Sincerely,

A handwritten signature in black ink, appearing to read 'Dan Tangherlini', with a stylized flourish extending to the right.

Dan Tangherlini
Assistant Secretary for Management
and Chief Financial Officer

GAO's Mission

The Government Accountability Office, the audit, evaluation, and investigative arm of Congress, exists to support Congress in meeting its constitutional responsibilities and to help improve the performance and accountability of the federal government for the American people. GAO examines the use of public funds; evaluates federal programs and policies; and provides analyses, recommendations, and other assistance to help Congress make informed oversight, policy, and funding decisions. GAO's commitment to good government is reflected in its core values of accountability, integrity, and reliability.

Obtaining Copies of GAO Reports and Testimony

The fastest and easiest way to obtain copies of GAO documents at no cost is through GAO's website (www.gao.gov). Each weekday afternoon, GAO posts on its website newly released reports, testimony, and correspondence. To have GAO e-mail you a list of newly posted products, go to www.gao.gov and select "E-mail Updates."

Order by Phone

The price of each GAO publication reflects GAO's actual cost of production and distribution and depends on the number of pages in the publication and whether the publication is printed in color or black and white. Pricing and ordering information is posted on GAO's website, <http://www.gao.gov/ordering.htm>.

Place orders by calling (202) 512-6000, toll free (866) 801-7077, or TDD (202) 512-2537.

Orders may be paid for using American Express, Discover Card, MasterCard, Visa, check, or money order. Call for additional information.

Connect with GAO

Connect with GAO on [Facebook](#), [Flickr](#), [Twitter](#), and [YouTube](#). Subscribe to our [RSS Feeds](#) or [E-mail Updates](#). Listen to our [Podcasts](#). Visit GAO on the web at www.gao.gov.

To Report Fraud, Waste, and Abuse in Federal Programs

Contact:

Website: www.gao.gov/fraudnet/fraudnet.htm

E-mail: fraudnet@gao.gov

Automated answering system: (800) 424-5454 or (202) 512-7470

Congressional Relations

Katherine Siggerud, Managing Director, siggerudk@gao.gov, (202) 512-4400, U.S. Government Accountability Office, 441 G Street NW, Room 7125, Washington, DC 20548

Public Affairs

Chuck Young, Managing Director, youngc1@gao.gov, (202) 512-4800 U.S. Government Accountability Office, 441 G Street NW, Room 7149 Washington, DC 20548

