December 2015

U.S. COINS

Implications of Changing Metal Compositions

GAO Highlights

Highlights of GAO-16-177, a report to congressional requesters

Why GAO Did This Study

The U.S. Mint, a bureau of the Treasury, produced about 13 billion coins in 2014. Since 2006, metal prices have risen to where the unit costs of a penny and nickel exceed their face value. The U.S. Mint was directed by statute to develop and evaluate the use of new metals that would reduce the costs of coin production while minimizing the impact on coin accepting equipment. Treasury is authorized to recommend coin changes to Congress based on the U.S. Mint's analysis and has not yet done so. GAO was asked to examine the U.S. Mint's efforts.

This report examines (1) what is known about potential government savings from changes to the metal composition of coins; (2) what is known about potential industry costs from changes to the metal composition of coins; and (3) how potential coin composition options could affect government savings and industry costs. GAO reviewed legislative provisions and U.S. Mint estimates of government savings; compared the U.S. Mint's estimating process to best practices; and reviewed cost estimates from associations that represent selected businesses that submitted estimates to the U.S. Mint, such as the vending and laundry industries. GAO interviewed U.S. Mint officials and industry representatives to understand how their estimates were developed.

GAO is not making recommendations in this report. In comments, the U.S. Mint questioned GAO's use of the *Cost Guide* to assess the U.S. Mint's estimates. GAO continues to believe it is appropriate to use the *Cost Guide* to assess the U.S. Mint's estimates.

View GAO-16-177. For more information, contact Lori Rectanus at (202) 512-2834 or RectanusL@gao.gov.

What GAO Found

The U.S. Mint estimated that the government could potentially save between $8 million and $39 million per year by changing the metal composition of the nickel, dime, and quarter. The estimated savings of $8 million would come from slightly changing the current metal in coins, which would decrease metal costs and retain the characteristics of existing coins. The savings of $39 million would come from changing the nickel and dime to a plated steel coin, which would change the coin's weight and other characteristics. While the U.S. Mint previously estimated potential savings of $83 million per year by changing the nickel, dime, and quarter to a plated steel-based coin, the U.S. Mint determined that it was not viable to change the quarter because less-valuable foreign coins would have similar characteristics to a steel quarter and could be used as counterfeit quarters. GAO found that the U.S. Mint's cost-estimating process does not fully align with best practices outlined in the *GAO Cost Estimating and Assessment Guide* (*Cost Guide*) and as such may not result in precise estimates. For example, U.S. Mint officials discussed but did not conduct a sensitivity analysis—a best practice— that would have allowed them to know how savings estimates could be affected by changes in metal prices. However, the U.S. Mint's estimates can provide insight into the general magnitude of potential savings.

Associations representing selected industries that use coin acceptance machines estimated a cost impact ranging from $2.4 billion to $10 billion to modify an estimated 22-million coin machines, such as vending machines, to accommodate steel-based coins. According to these associations, these costs would be incurred because coin machines would require modifications to accept new coins while continuing to accept current coins. However, GAO found that these estimates may be overstated for several reasons. For example, the vending industry assumed 7-million vending machines would require modification, but a 2015 industry study estimated that there are 4.5-million vending machines in the United States. Second, the cost estimates assumed steel changes to all coins, but the U.S. Mint has determined it is not viable to change the quarter. Therefore, machines that only accept quarters (such as coin laundry machines) would not require modification. However, any change in coin composition that requires changes to coin acceptance machines will result in some industry costs.

Although government savings and industry cost estimates may not be precise indicators of savings and costs, they nonetheless show that metal compositions that would increase government savings also increase industry costs. U.S. Mint estimates show that one change could result in no industry costs but show a savings of only $8 million annually. In contrast, changing the nickel and dime to multi-ply plated steel coins could save $39 million annually but result in substantial industry costs. The Coin Modernization, Oversight, and Continuity Act of 2010 requires that any new coins work in existing machines that accept coins "to the greatest extent practicable." U.S. Mint officials have not yet analyzed whether the options they are considering meet these criteria for making recommendations to Congress. U.S. Mint officials said when and if the Department of the Treasury (Treasury) makes recommendations to Congress, they will ensure that recommendations are within the framework of the Act.