

**Alternative Metals Study  
Phase II**

**Coin Industry  
Stakeholder Feedback**

**2014 Biennial Report to the Congress**



**United States Mint  
Department of the Treasury**

**FINAL**  
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## 1. Summary

### 1.1. Introduction

In July 2011, the United States Mint (the Mint) awarded Concurrent Technologies Corporation (CTC) a competitively bid contract to investigate various alternative compositions for all U.S. circulating coins. CTC's tasks included site visits, surveys, and telephone interviews with current and potential suppliers, merchants, vending machine and laundromat owners and operators, transit and parking officials, depository institutions, Federal Reserve Banks, and coin handling and acceptor manufacturers. In 2011, the Mint published a Federal Register Notice (FRN) for comment and received responses from interested parties regarding the impact of changes to the metallic composition of all circulating coins based on the factors specified in the Coin Modernization, Oversight, and Continuity Act of 2010, Public Law 111-302, section 2(b). Out of the 249 comments from this initial solicitation, only 7 percent (17 comments) were directly responsive to the request for comment.

In December 2012, the Department of the Treasury and the Mint delivered the first biennial report to Congress on the status of coin production costs and analysis of alternative content as required by the Coin Modernization, Oversight, and Continuity Act of 2010, Public Law 111-302 (Act). The Act requires that the Secretary of the Treasury shall consider:

*Factors relevant to the ease of use and ability to co-circulate new coinage materials, including the effect on vending machines and commercial coin processing equipment and making certain, to the greatest extent practicable, that any new coins work without interruption in existing coin acceptance equipment without modification.*

The Act also makes the stipulation to minimize conversion costs, mandating:

*...The Secretary of the Treasury, to the greatest extent possible, may not include any recommendation for new specifications for producing a circulating coin that would require any significant change to coin-accepting and coin-handling equipment to accommodate changes to all circulating coins simultaneously.*

## 1.2. Stakeholder Outreach

In July 2013, through the Department of the Treasury, the Mint organized the Office of Coin Studies to develop, using information collected by CTC and following further analysis, a more in-depth outreach to coin industry stakeholders in an effort to understand how circulating coins produced with alternative metal compositions may affect commerce.

The process included conference calls, webinars, conference presentations, and electronic outreach utilizing e-newsletters and e-magazines. The Office of Coin Studies (OCS) created and continues to maintain and expand a database of industry stakeholders; developed and implemented an industrywide stakeholder outreach meeting; fostered communication between industry groups; and created and sustained a continuous feedback loop between industry stakeholders and the Mint. In addition, Mint staff encouraged and participated in a number of meetings with associations, which represented industries that are dependent on circulating coins for their business operations.

On March 13, 2014, the Mint hosted an industry stakeholder meeting at headquarters to present and discuss research and development work in alternative metals and solicit input. Thirty-eight representatives from a diverse group of industry stakeholders were in attendance. The Mint heard from the parking industry, amusement industry, armored carriers, and financial institutions as well as those who process, wrap, and recycle coins. Participants learned of the Mint's research efforts, and engaged the Mint in a dialogue about the potential impact to their industries if new metals were to be used in circulating coins. Following this meeting, the Mint published a Federal Register Notice (FRN) for coin industry comments in April 2014.

Following the heightened outreach program, the April 2014 FRN generated 966 comments, of which 99 percent received were directly responsive to the request for comment. Only two industry stakeholders, Cummins Allison and the National Automatic Merchandising Association (NAMA), contributed comments for both the 2011 FRN and the 2014 FRN request for comment. Among the 966 contributors were the American Bankers Association (ABA), National Armored Carrier Association (NACA), Canadian Automatic Merchandising Association (CAMA), National Bulk Vending Association (NBVA), Coin Laundry Association (CLA), Multi-Housing Laundry Association (MHLA), American Amusement Machine Association (AAMA), Amusement & Music Operators Association (AMOA), National Parking Association (NPA), International Parking Institute (IPI), and a newly formed coalition, "Don't Change Our Change" (DCOC), representing 227 small businesses, and over

700 additional medium and small businesses primarily affiliated with the above-noted associations.

From responses received and initial analysis, Mint staff made a determination to segment feedback by the role each contributor plays within the industry. The three primary roles are: 1) manufacturers—companies involved in the manufacturer of coin processing and acceptance equipment; 2) logistics—those whose primary role involves the distribution, packaging, and storage of coins, and 3) commerce—any business that is dependent on coins in the conduct of business, to include retailers, vending machine operators, transit operators, and municipalities managing parking garages and/or meters.

Equipment manufacturers emphasized that altering the size, design, or content of a coin without consulting and coordinating with the industry, could be disastrous for the American economy. Specifically, if coin design or material content changes are orchestrated hurriedly without regard to the equipment and other stakeholders, the currently reliable United States coin circulation infrastructure could be adversely affected or fail altogether. In addition, co-circulating same denomination coins with different weights is ruinous for coin weighing technology, as co-circulating coins would have to be separated for counting. Finally, the importance for strong communication between industry stakeholders and the Mint in preparation of the introduction of the new coins is critical and the equipment manufacturers cited the success of the Canadian \$1 and \$2 coin transition as an example. This segment is represented by four manufacturers and a supplier.

The Mint will use this information to make recommendations to the Department of the Treasury, which will be included in the 2014 Biennial Report to Congress, as required by the Act. In the end, only Congress has the authority to make changes to the Nation's coins.

The OCS continues an extensive stakeholder outreach program to learn what it would mean to make changes to the nations circulating coins. Through webinars, speaking engagements, Federal Register Notices, and more, the OCS is staying busy listening to the Mint's industry stakeholders and the public.

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## 2. The Manufacturing Sector

The Manufacturing sector includes three manufacturers and one raw material supplier. Cashmaster International; Coin Mechanisms, Inc.; and Cummins-Allison Corp. are coin-equipment manufacturers, and Jarden Zinc Products is a supplier of raw materials for use in manufacturing coins. Collectively, the three manufacturers produce equipment for authenticating, accepting, and weighing coins. They sell these machines to businesses that conduct commerce throughout the United States.

### 2.1. Cashmaster International, Ltd.

Cashmaster International Ltd is a global manufacturer of combined note- and coin weighing equipment. Their customers include some of America's largest retailers, restaurant chains, and other businesses which require counting cash and reconciliation in house. Cashmaster's solutions are lightweight, portable and are applicable to counting notes, coins, tokens and many other types of media.

According to Cashmaster:

*A typical deployment of our technology is for till drawer reconciliation on a retailer's shop-floor. Cash reconciliation operations will carry one of our products from till to till, using it to count everything in the till drawer as they go. Instead of moving heavy till drawers, they can move our lightweight technology to where the cash is. This saves time and also reduces the probability of worker compensation claims for lifting injuries.*

Cashmaster asserts that "the crucial requirement for the weigh counting method is a standard coin weight. Co-circulation of coins having different weights is ruinous for coin weighing technology as co-circulating coins would have to be separated for counting." Cashmaster cites the experience of the co-circulation of the penny. "Pennies issued between 1909 and 1982 weigh 3.11g; pennies issued between 1982 and the present day weigh 2.50g each." The variation in weight contributes up to a 24 percent loss. Using a weigh counting machine, the best that can be achieved is an estimate of the number of pennies on the scale platform." While weighing the penny is still a viable option because of its low value, Cashmaster warns

that “co-circulation of higher value coins with different weights would make coin weighing technology untenable.”<sup>1</sup>

## 2.2. Coin Mechanisms, Inc.

Coin Mechanisms, Inc. manufactures both mechanical coin acceptors as well as electronic coin acceptors. Their products are used in a varied coin-op industry including Gaming, Amusement, Car Wash/Services, Vending, Transit, and other coin-op machines.

According to Coin Mechanisms Inc.:

*The quarter coin has been the workhorse of circulating coins in the coin-op world. At the current cost of goods, the dollar coin could become the next most used coin in the coin-op industry. Eliminating the one dollar paper currency can save the Treasury millions of dollars a year and allow the Mint to leave the quarter and one dollar coin as is or as close to its current EMS<sup>2</sup> signature as possible. If savings in coin production are necessary, the remaining coin denominations could be more viable to significant changes that would save cost in production of those coins.*

Coin Mechanisms Inc.’s mechanical coin mechanism relies heavily on coin diameter, thickness, weight, and the alloy mix. Changing the diameter, thickness, weight, and the alloy mix would require a new and separate mechanical coin mechanism because it would be nearly impossible to accept co-existing coins in the same mechanism. In addition, any new coins would need to possess a reeded edge as some mechanical mechanisms differentiate coins based on the reeded edge and the smooth edge of the same size coins. Adding a ferromagnetic<sup>3</sup> coin would also sacrifice the ability of the machines to reject many types of counterfeit coins.

Coin Mechanisms Inc.’s electronic coin comparator’s series of mechanisms uses an actual physical coin or token that is placed within the device and serves as a reference to compare against coins placed in the machines. The EMS of the incoming coins must match the reference coin in order for the mechanism to validate the incoming coins. The comparing circuitry will allow the coin to be accepted if there is an EMS match or mass conductivity

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<sup>1</sup> Exhibit #1: Cashmaster International, US Proposed Coin Change; FRN response

<sup>2</sup> Electromagnetic signature

<sup>3</sup> Ferromagnetic means the material is attracted to a magnet

match. The comparator cannot validate two different EMS signatures. “A redesign would be a drastic financial undertaking that is not desirable or possible at this time.”

Without such a redesign, the coin acceptor mechanisms would need to have their window of acceptance opened wider to accept both the current coins and the new coins, which would mean the mechanism would accept not only those two EMS’s, but all EMS’s between also, rendering the machines vulnerable to fraud. If the window were not opened far enough, customers would see their old or new coins (possibly both) rejected by the machines, which would cost the machine’s owners money. Finally, the process of opening the window of acceptance in every electronic coin acceptor in the Nation would be a costly undertaking.

Coin Mechanisms, Inc. says that “any change to coinage, particularly the quarter and dollar coins will result in increased costs to not only the manufacturers of the coin devices but also the makers of coin-op machines, the businesses who use these machines, and finally to the customer who buys the products from these machines. It will be very difficult for any of these groups to recoup the losses they may incur for: transition updates, difficulty in co-circulation of two different coins with the same value, fraud introduction if a more common and cheaper alloy is chosen, and vandalism from disgruntled customers who do not understand the problem using a machine in ‘transition.’ ”

Coin Mechanisms, Inc. “...appreciates the efforts the Mint is trying to save the government money. However, it appears changing our coinage may not be worth the effort in the long run if it ultimately kills jobs, punishes small business, angers consumers, and becomes an added expense to Americans as well as the government.”<sup>4</sup>

### 2.3. [Cummins-Allison Corp.](#)

Cummins-Allison Corp. is a global company that manufactures coin counting, validating, and sorting equipment. Cummins-Allison serves the majority of retail, gaming, law enforcement, and government entities. They also have subsidiaries in Australia, Canada, France, Germany, Ireland, and the United Kingdom. Cummins Allison’s coin counting, sorting, and authentication products are available in a variety of sizes and formats to meet the needs of its wide range of customers. For example, their smaller machines provide coin counting and sorting in retail operations such as McDonald’s, Home Depot, and Safeway.

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<sup>4</sup> Exhibit #2; Coin Mechanisms Inc., Coin Stakeholders Response, June 16, 2014, FRN response.

Cummins' larger, high-speed machines (which process coins at a rate of 10,000 per minute) are used in major U.S. banks, armored carriers, the gaming industry, governments, and more.

“Over a period of many years, **Cummins-Allison** has witnessed a variety of coin changes initiated by a number of countries. From our perspective, some changes have gone well and others have not.” Cummins cites the changes to the Canadian \$1 and \$2 coins that went well.<sup>5</sup> “Implementation of the coin changes was not difficult for Cummins Allison, namely because the Canadian Mint routinely consulted with industry and other stakeholders to ensure their decisions were industry compatible.” At the other end of the spectrum, as also noted by Cummins-Allison, “the introduction of low denomination coins in Mexico several years ago is an example of how a good intention to reduce the cost of coin manufacturing led to an undesirable result. With little-to-no industry communication and consultation, Mexico made changes to a number of their coins. In one instance they introduced a new coin that was the same size as an existing coin of a different value. Since many coin processing equipment manufacturers, including Cummins Allison, use coin dimensions to count and sort coins, the industry could not accurately process the new coin, or differentiate from an existing one.”

Cummins-Allison stated that

*...it is critical to note that any alteration to coin design, content, or size can impact the ability of our machinery to process high volumes of coins both quickly and accurately. If coin or material content changes are orchestrated hurriedly or without regard for our equipment and other stakeholder, the currently reliable US coin circulation infrastructure could be adversely impacted or fail altogether. To alter the size, design, or content of a coin without comprehensive consultation and coordination with our industry and others, could be disastrous for the American economy. In fact a poorly conceived or implemented change could impact the worldwide integrity and value of American currency, disrupt public confidence and commerce, and cost the American government many times more than what might be saved as a result of the initial cost saving alteration.*

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<sup>5</sup> In contrast the Canadian Automatic Merchandising Association noted a number of problems refer to page 11 of 15 this report and Exhibit #11.

In summarizing their comments, Cummins-Allison said, “To achieve cost savings through new manufacturing efficiencies or coin content changes will mean nothing if the coins cannot be utilized or processed, and expensive societal cost are incurred. In addition, it is essential for new coins to contain a proper level of technology and uniqueness. U.S. coins that are susceptible to countfeiting place our economic and national security at risk.”<sup>6</sup>

## 2.4. Jarden Zinc Products

Jarden Zinc Products has been the sole supplier of the U.S. Mint’s penny blanks since 1998 and is also an international supplier of plated-coinage products to more than 30 other countries.

According to Jarden Zinc:

*The Mint’s stakeholder outreach and the views of industry stakeholders appear to be in conflict with the goals and purpose of the The Coin Modernization, Oversight, and Continuity Act of 2010 (Pub. L. 111-302). It is difficult to make substantial reductions in the cost of circulating coins – which by definition will include plated coins or new alloys and say there will be no effect on vending and amusement machines and commercial coin counting equipment.*

Jarden mentions “that several innovative approaches have been adopted by other countries, including plated zinc-based coinage and the Canadian multi-ply steel coin, that include significant costs savings.”<sup>7</sup>

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<sup>6</sup> Exhibit #3: Cummins Allison Corp., Coin Stakeholders Response, June 3, 2014, FRN response.

<sup>7</sup> Exhibit #4 Jarden Zinc Products, Coin Stakeholders Response, June 9, 2014, FRN response.

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### 3. The Logistics Sector

The Logistics sector includes depository institutions (banks) and the armored carrier industry. The functional responsibilities include transportation, distribution, storing and bulk processing to include weighing and wrapping. The American Bankers Association (ABA) and the National Armored Car Association (NACA) responded for this segment of the industry. ABA supports four recommendations from the Mint's 2012 Alternative Metals Study submitted by Concurrent Technologies Corporation (CTC):

- 1) Maintain existing dimensions;
- 2) Maintain the current composition of the penny;
- 3) Consider alternative, copper-based alloy changes for all other coins in search of a composition that would lower productions costs and minimize conversion costs; and,
- 4) Continue R&D efforts to identify metallic alloys that mimic current EMS signatures.

NACA recommends no changes be made at this time to the sizes or metallic composition of currently circulating U.S. coins. Their comments addressed concerns regarding the changing of dimensions and weight and the corresponding impact on costs, labor, transportation, and storage. NACA further noted problems which surfaced during the Canadian transition noting the importance of an extended timeframe for industry to adapt.

#### 3.1. American Bankers Association

The American Bankers Association (ABA) is the voice of the Nation's \$14 trillion banking industry, which is composed of small, regional, and large banks that together employ more than 2 million people, safeguard \$11 trillion in deposits, and extend nearly \$8 trillion in loans. Through a broad array of information, training, staff expertise, and resources, ABA supports banks as they perform their critical role as drivers of America's economic growth and job creation.

##### 3.1.1. Impact on Banks

The ABA states that "Changing the weight or dimensions of a coin would present serious challenges to banks." Any changes to the weight or dimensions of coins would cause financial institutions to incur additional expenses through the upgrade of hardware and/or software. These expenses may also be passed on to the customers and or/vendors.

A change in the electromagnetic signature (EMS) of circulating coins would have a direct impact on the cost of handling coins. According to the ABA "Changing the EMS would require software programming upgrades to a very large number of devices beyond bank

oriented coin service providers and vending machines, including parking meters, car washes, toll booths, and video games.”

According to the ABA:

*Changing the color of the coins in circulations does not pose a significant challenge to the banking industry as long as the dimensions, weight, and EMS remain the same. However, color change would still require retraining employees of depository institutions to identify the coins and would require them to take more time to confirm the type of coins they are accepting for deposit or issuing in withdrawals.*

In addition, an extensive public information and education campaign would be warranted to ensure that the retail industry and consumers are aware of the new form of coins and understand that they are legal tender.

The ABA reiterates that the Act, requires the U.S. Mint to consider the potential impact of any changes to circulating coins on industry stakeholders. They define the industry stakeholder as very broad and include financial institutions, armored car services, manufacturers of coin handling equipment, municipal parking officials, toll booth operations, laundromat owners, vending machine operators, and many others. The ABA states that “Banks want to provide coins to customers that will work at all expected venues...”<sup>8</sup>

### 3.1.2.CTC Alternative Metals Study

The armored-car industry is most often a provider of coin handling services to the banking industry. These coin handling processes rely on the weight of coins. The ABA cites that the CTC study “estimated that these service providers would incur increased annual costs of \$21 million annually for counting nickels, dimes, quarters, half dollars, and dollars. This is not a one-time cost for equipment upgrades but will be an ongoing expense. This expense will be passed on to these service providers’ customers: banks.”

Another industry that would be impacted would be the large and small vending operations. According to the CTC report, there are approximately 5.3 million vending machines in the United States. ABA agrees with the study that significant expenses would be incurred by this industry if changes were made to the dimensions of the quarter, nickel, and dime. ABA

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<sup>8</sup> Exhibit #5 American Bankers Association, Coin Stakeholders Response, June 5, 2014, FRN response

reiterates the CTC study recommendations, based on its analysis of the cost of coin product and cost borne by the coin industry.

- Maintain existing coin dimensions for all future coins regardless of their materials for construction.
- Maintain the current composition of the one-cent and dollar coins.
- Consider alternative copper-based alloy changes for all other coins in search of a composition that would have lower production costs and that would minimize conversion costs to coin industry stakeholders with regard to changes in coin weight.
- Continue research and development efforts of metallic alloys that would mimic the current EMS signatures of the incumbent dime, quarter, and half dollar coins to avoid the need to upgrade coin processing equipment.

The ABA supports these CTC study recommendations.”

### 3.1.3. Conclusion

The ABA states that “significant changes to the weight, dimensions, or EMS may require a similarly lengthy implementation period.” “It is our view that a transition period of 24–30 months beginning when test samples are provided would be necessary, adding additional weight to the view that such changes would not be worth the costs and difficulties imposed.” ABA recommends “no changes be made to the metallic composition of U.S. Coinage in circulation” at this time.

## 3.2. National Armored Car Association

Utilizing the CTC report, industry-specific information, and the 2012 Biennial Report to Congress, NACA submitted recommendations and discussion points to be considered by the Mint as research and development continue. The issues of concern involved coin dimension, diameter, and thickness; electromagnetic signature; wrapping; weighing; vendor acceptance equipment; terminal equipment replacement costs; employee safety; and transition time.<sup>9</sup>

### 3.2.1. Dimensions of Circulating Coins

There are two primary pieces of equipment used to process coin at each of the 170 Federal-Reserve-contracted coin terminals, sorters, and wrapping machines. The high-speed coin sorters separate by denomination, based on size—diameter and thickness—and EMS. Once

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<sup>9</sup> Exhibit # 6 National Armored Car Association, Comments in Response to U.S. Mint’s Notice with Request for Comment, June 24, 2014, FRN response.

separated by denomination, coins are packaged by either wrapping or bagging; with coin bags verified by weight.

Automatic sorters are the primary method used for sorting coins. As noted in the NACA report, “they recognize the coins and push them through to the appropriate chute, resulting in separation of each denomination entered into the machine.” Each machine is calibrated to recognize different coins. Should dimensions change, each machine would have to be upgraded and reprogrammed. While the CTC report indicated the costs of those upgrades and reprogrammings to be in the mid-\$400K (gross) range, NACA believes that the costs would be considerably more, possibly exceeding \$50K per machine, with each processing terminal utilizing four machines (a total of over \$3.4 million).

Coin-wrapping machines are used after the sorting process to package denominationally separated coins. These machines depend on segregation of coins according to size prior to bagging. CTC reported that “changes of more than 1 percent to either diameter or thickness from incumbent coins would result in all 2,000 machines needing upgrades.” NACA stated that changes of less than 1 percent would require retooling. CTC’s cost estimate of \$1.25 million for retooling is considered to be very low with NACA noting “the figure is much higher.”

The CTC report noted that some NACA members maintain JetSort coin sorters and Glory coin wrappers. It is believed that it would not be possible to continue to operate this equipment, forcing the equipment to be replaced. These pieces of equipment are widely used throughout the retail industry.

### 3.2.2. Weight of Coins

According to NACA:

*Altering the metal composition of coins would result in a change to the weight of coins. Such a change would not only force armored car companies to reprogram and redesign currently used machines but would result in other serious consequences, from decreasing productivity and output to increasing the volume of armored cars on the road and potential exposure to workplace hazards for employees.*

By using the weight-verification method, terminal operators save considerable time and expense as substantial efficiencies are recognized. A change in metal composition could impact coins’ weight, which could result in out-of-tolerance process conditions. In this case,

operators would have to return to piece verification, a much more costly alternative. A heavier coin could impact other downstream processing, requiring replacement of skids, bags, bins, and forklifts, adding again to processing costs. Transportation and safety would further be impacted. All of these costs could not be absorbed and eventually passed on to the consumer.

### 3.2.3. Canada's Recent Transition

In April 2012, Canada unveiled a new generation of 1- and 2-dollar coins; the \$1 coin remained a plated coin and the \$2 coin was kept bi-metallic, but the material for both changed to multi-ply-plated steel (MPPS). While the equipment manufacturing companies referred to the Canadian transition as being well planned and not problematic, NACA noted that a number of their operators were not as complimentary. "Several of NACA's member companies experienced the problems that arose during the transition.

#### *Transition Time*

The CTC report noted that an appropriate transition time would be 2–3 years to prepare for new coinage. NACA felt this would be inadequate; a more realistic timeframe would be 5 years.

### 3.2.4. Summary

The National Armored Carrier Association (NACA) recommends no changes be made at this time to the sizes or metallic composition of current U.S. coins. The NACA does not believe the United States Mint should alter the currently circulating coinage. As the CTC report expressly states, the costs associated and born by the stakeholders would dwarf any savings realized by the Mint. In addition, NACA stated that altering the metal composition of coins would result in a change to the weight of coins.<sup>10</sup> Such a change would not only force armored-car companies to reprogram and redesign currently used machines, but would result in other serious consequences, from decreasing productivity and output to increasing the volume of armored cars on the road and potential exposure to workplace hazards for employees. NACA also expressed concern that an alteration of coins' weight could eliminate weighing as an option for bulk verification and significantly influence productivity.

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<sup>10</sup> Actual testing of "seamless" materials indicates this may not be true.

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## 4. The Commerce Sector

The largest segment of responders to the FRN came from the commerce sector. This group is represented by associations, coalitions<sup>11</sup> and twelve independent businesses<sup>12</sup>. Their collective voices emphasized the cost impact to the small business person and the inability to withstand the change or to pass on to customers the increased cost associated with equipment upgrades.

The eleven responding associations are:

- American Amusement Machine Association (AAMA)
- Amusement & Music Operators Association (AMOA)
- Coin Laundry Association (CLA)
- Canadian Automatic Merchandising Association (CAMA)
- International Parking Institute (IPI)
- International Association of Amusement Parks and Attractions (IAAPA)
- Multi-housing Laundry Association (MLA)
- National Automatic Merchandising Association (NAMA)
- National Bulk Vending Association (NBVA)
- National Council of State Agencies for the Blind (NCSAB)
- National Parking Association (NPA)

**Don't Change our Change (DCOC)** is a coalition of members from the above responding organizations. This coalition was formed during the March 13, 2014, Stakeholder Outreach meeting at U.S. Mint headquarters, and actively participated in the Federal Register request for industry comments.

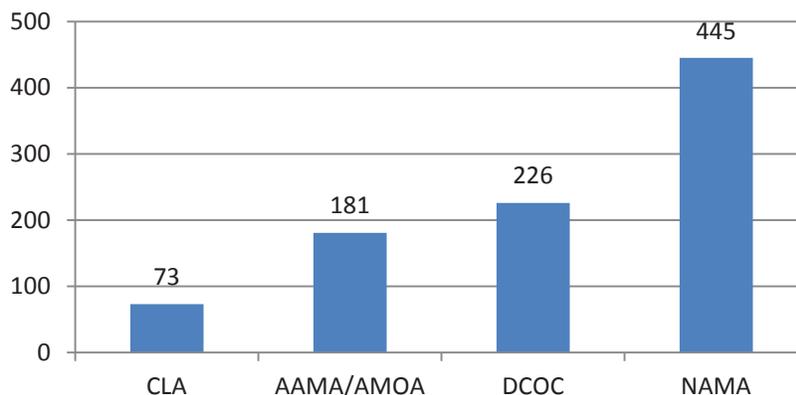
In addition, the following four groups launched public information and education campaigns to encourage their members to respond to the FRN:

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<sup>11</sup> Coalitions are independent business persons that responded as members of either one of the associations or the "Don't Change Our Change" coalition, formed during the March 13, 2014 Stakeholder Outreach meeting.

<sup>12</sup> Businesses that responded without declaring an affiliation with an association or coalition.

## Responses Received



### 4.1. Associations

**American Amusement Machine Association (AAMA)** is an international, non-profit trade association representing the manufacturers, distributors, and part suppliers of the coin-operated industry. AAMA was founded over thirty years ago by a small group of co-operated machine manufacturers concerned with the future of their industry. Today, the AAMA serves its membership through legislative efforts, promotional arenas, foreign business development, and much more.

AAMA noted challenges with changing the composition as well as the metallic content of circulating coins. The estimated cost to upgrade each piece of equipment would be between \$100 and \$500. “It is estimated that there are approximately 1 million coin operated amusement machines in the United States.”<sup>13</sup>

**Amusement & Music Operators Association (AMOA)** was established in 1948 by 68 jukebox owners from around the country who banded together to fight the repeal of the jukebox royalty exemption. Today, the AMOA is a diverse group of companies engaged in the coin-operated amusement industry. Members include those who own and operate machines such as jukeboxes, video games, pinball machines, and pool tables. Other members include suppliers of the industry, who provide parts or accessories, such as monitors, bill changers, and locks, as well as distributors who market in the industry supply chain. AMOA has approximately 1,000 members, which represent nearly 10,000 jobs.

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<sup>13</sup> Exhibit # 7 American Amusement Machine Association, Coin Stakeholders Response, June 3, 2014, FRN response

AMOA noted “serious concerns” to the Mint, recommending changes to the composition of coins. “Any changes to coins will require expensive modifications to coin mechanisms by the coin operated amusement industry.” AMOA went on to note that their experience with the Canadian transition was not as positive as others. “It was estimated the upgrades would cost the Canadian vending industry C\$40 million to recalibrate what it calls coin acceptance equipment.” AMOA said that “Changes in the metallic content of coins will cost coin-operated equipment operators between \$100-\$500 per machine in upgrade costs to accept new coins. With an estimated one million coin-operated amusement, music and vending machines in the United States, this equates to \$500 million added cost to an industry dominated by small to mid-sized entrepreneurial owners.”<sup>14</sup>

**Coin Laundry Association (CLA)** was established in 1960 to ensure a profitable and growing retail, self-service, laundry operation by providing superior education, products, and services to laundry owners. The coin-laundry industry is made up of more than 20,000 small business owners operating 30,000 self-service laundries throughout the United States; approximately 27,000 of these laundries accept the quarter for payment.

CLA requests that the quarter remain unchanged. “To replace and update these coin mechanisms with new ones designed to accommodate newly constituted quarters, along with legacy quarters, would put an enormous financial burden on the shoulders of mom and pop laundry owners across the country.” CLA noted that 90 percent of all transactions are conducted with quarters. It was further noted that “Our laundries provide a basic health service to more than 7 million families each week. These families are often among the lowest income members of the community and can ill-afford increases to the costs of doing laundry.”<sup>15</sup>

**Canadian Automatic Merchandising Association (CAMA)**, established in 1953, is the only association representing the interests of Vending Operators, Machine Manufacturers, and Product & Service Suppliers in Canada. CAMA services are designed to represent, support, and enhance the vending, office-coffee, and food-service industries.

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<sup>14</sup> Exhibit # 8 Amusement & Music Operators Association, Response to request for comments on potential alternative metal compositions for circulating coinage , June 25, 2014, FRN response

<sup>15</sup> Exhibit 9 Coin Laundry Association, Stakeholders Response, June 18, 2014, FRN response

CAMA said that “As the Canadian public has experienced several currency (Coin and Bank Note) changes over the past 18 years, there has been 3 distinct coinage change events, in 1996, 1999, and 2012.” CAMA explained that:

*The Canadian unattended business segment has bore all the cost of these changes, with some companies not being able to manage the conversion costs, resulting in bankruptcy or the sale of their business. This was reported during or shortly after mandated coinage changes in the 1990’s. The primary reason was associated to antiquated or less sophisticated coin recognition technology, which dictated the replacement to more modern electronic devices or the need to send those less sophisticated devices in for servicing, leaving machines out of order for several weeks, at a time. This had a significant impact on revenue earned by the business owner which limited cash flow and drove down the flexibility of their business to grow for a few years.<sup>16</sup>*

**International Association of Amusement Parks and Attractions (IAAPA)** represents more than 4,500 facilities, suppliers, and individual members from more than 90 countries. In the United States, IAAPA has members in all 50 states. Member facilities include amusement and theme parks, water parks, attractions, family entertainment centers, arcades, zoos, aquariums, museums, science centers, and resorts. Currently IAAPA estimates that the attraction industry in the U.S. employs 1.275 million people and it has a total economic impact of \$91.4 billion.

IAAPA said that:

*To date, no mechanism exists that can accept and process coins with different electronic signatures. Until this technology is created, operators and consumers will experience faulty machines. It is not out of the realm of expectations to assume that should breakdowns frequently occur, machines will be pulled from service, hurting business owners and limiting consumer choice.*

IAAPA noted that “Any change to coinage will result in increased cost to update equipment and address issues with co-circulation of the old and new currencies. These costs may affect

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<sup>16</sup> Exhibit 10 Canadian Automatic Merchandising Association, US Mint Coinage Change, June 9, 2014; FRN response

the attraction's industry's ability to grow and create jobs." IAAPA says that "there is no return on investment for these equipment upgrades."<sup>17</sup>

**International Parking Institute (IPI)** is the world's largest organization representing the parking industry. The association's diverse membership is comprised of organizations managing, owning, constructing, and operating parking programs in the United States and in 46 other countries. IPI membership includes municipalities, academic institutions, healthcare facilities, transportation agencies, entertainment facilities, parking-equipment manufacturers, and many others. The U.S. parking industry generates over \$30 billion in annual revenues.

IPI is concerned over potential changes to the composition of new coins relating to content, weight, dimension, and EMS. Specific concern was raised regarding conversion costs, "Not knowing the actual changes being considered to U.S. coins, it is estimated that retrofitting parking meters could cost \$200–\$300 per machine excluding labor." IPI stated that the burden for the parking-meter owners, both private and municipalities, could exceed \$400,000,000.

IPI further stated:

*Due to the significant number of parking meters that would require retrofitting to recognize both new and old coins, the parking industry requests three to five years to implement and upgrade our industry's equipment should a change be made to U.S. coins. Because, in many cases, revenue generated by parking management supports many other government functions (police, fire, emergency rescue, road maintenance), this transition period would also benefit the cities and local authorities to allocate their costs and adjust their budgets to minimize any disruption to service over a longer period of time.*

**Multi-housing Laundry Association (MLA)** is a trade association that represents the laundry service companies that operate laundry machines in central laundry rooms in multi-housing dwellings, such as apartment buildings, college dormitories, and military bases. MLA's

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<sup>17</sup> Exhibit 11 International Association of Amusement Parks and Attractions, Notice with Request for Comment on Effects of Changing the Metal Composition of Circulating United States Coinage, June 20, 2014, FRN response

member companies and other companies purchase and install washer and dryers in central laundry rooms throughout the United States.

MLA said “that if the quarter is altered in weight or electromagnetic signature, MLA believes that coin acceptance devices in the 1.8 million machines in central laundry rooms that now receive coin payments would need to be replaced.” The estimated total cost to the entire industry would total \$360 million.” This amount would be increased if the Mint chose to use a co-circulate option for the quarter. “Given the very substantial disparity between the savings to the Mint and the costs that any change in the weight or electromagnetic signature of the quarter coin would impose on MLA’s members other companies in this single industry alone, MLA strongly opposes any such change.”<sup>18</sup>

**National Automatic Merchandising Association (NAMA)** founded in 1936, is the association representing the \$42 billion U.S. vending and refreshment services industry. With 1,800 member companies—including many of the world’s most recognized brands—NAMA provides advocacy, education, and research to its membership.

NAMA reminded the Mint that the Act requires consideration be given to the impact on vending. The NAMA feedback indicated the most significant potential impact of a change to circulating coin composition would be to those industries that use machines that accept coins for automated payments. These machines rely on acceptors that discern the EMS, weight, and shape of each coin to identify its value. NAMA estimates there are seven million vending machines across the country and the cost of these changes could amount to \$3.5 billion for the vending industry, negatively impacting the entire vending and food service channel and its consumers.

Other concerns raised by NAMA include:

- 1) Canadian experience: “Canada’s just-released new loonies and toonies—its \$1 and \$2 coins—are slightly lighter than the old ones. And that’s causing a lot of headaches (and expense) for vending-machine operators and city governments who have to recalibrate their coin slots and local parking meters;”
- 2) Co-circulation: “NAMA strongly recommends that any recommendations for changes in coinage include that there be no co-circulation of different specification coins of the same denomination;” and,

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<sup>18</sup> Exhibit 12 Multi-housing Laundry Association, Stakeholders Response, June 12, 2014, FRN response

- 3) Cost to Federal Government: “If upgrades to coin acceptance equipment have a \$1 billion cost to business, the U.S. Treasury’s tax revenue will decrease by the amount of corporate tax it would collect on the \$1 billion in revenue. This cost to the government should be considered in any cost-benefit analysis performed.”<sup>19</sup>

**National Bulk Vending Association (NBVA)** is a national, not-for-profit, trade association comprised of the manufacturers, distributors, and operators of bulk vending machines (such as gumball machines) and products. The NBVA has represented the bulk vending industry since 1950. Its members extend beyond the borders of the United States and represent a great majority of the volume of the bulk vending business done in the United States. According to NBVA “Among their purposes, are to act to preserve and protect the bulk vending industry from detrimental legislation.”

NBVA shared that as an industry, they oppose changing the composition of the quarter-dollar (quarter). Specifically NBVA said that “changing the quarter’s weight, magnetic signature, or size would have immediate and devastating impacts on the bulk vending industry. Bulk vending machines have mechanical mechanisms, or “mechs” in industry parlance, that collect coinage and dispense product. The mechs are manufactured for the specific size, shape, and material content of specific coinage. There are millions of coin mechs being used today from car washes to bubble gum machines.” They went on to note “nearly all bulk vending machines in the United States rely on the quarter as their sole currency and changing the composition of the quarter would make all their machines obsolete as their current coin mechanisms could not accommodate a new coin.” In summary, “the NBVA pleads that we not change the composition of the quarter estimating the change would cost \$41,238,000; which could cost jobs and destroy an iconic American industry.”<sup>20</sup>

**National Council of State Agencies for the Blind (NCSAB)** promotes through advocacy, coordination, and education the delivery of specialized services that enable individuals who are blind and visually impaired to achieve personal and vocational independence.

NCSAB support the Randolph-Sheppard Act which provides entrepreneurial opportunities to blind vendors in the food service industry. According to the NCSAB, “Nationwide, there are 2,545 blind vendors participating in the Randolph-Sheppard program. These vendors operate 3,031 facilities on federal and state property. Most of the vending facilities in the

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<sup>19</sup> Exhibit 13 National Automatic Merchandising Association, Stakeholders Response, June 17, 2014, FRN response

<sup>20</sup> Exhibit 14 National Bulk Vending Association, Coin Stakeholders Response, June 17, 2014, FRN response

Randolph-Sheppard program include small “mom and pop” operations, with include one or two full-time employees in addition to the blind entrepreneur.” The NCSAB believes that the vending industry would suffer much greater financial consequences due to conversion cost than the U.S. Mint estimates. NCSAB states that “The Mint estimates that a one-time, standalone conversion of the nation’s vending machines could cost between \$380 and \$630 million. The vending machine industry, however, estimates a nationwide conversion cost ranging from \$700 million to \$3.5 billion.” Additionally, NCSAB noted “that Changes to U.S. coinage could adversely impact the ability of the blind or visually impaired to distinguish coins by touch. Certainly, the Mint is aware of and is working to comply with the October 2008 ruling by the U.S. District Court for the District of Columbia that the Department of the Treasury must provide meaningful access to U.S. currency for the blind or visually impaired. Changes in the metal composition and design of coins have important implications for the visually impaired community.”<sup>21</sup>

Additionally, two state delegates from the State of Georgia responded to the FRN on behalf of their constituents who rely on the Randolph-Sheppard program. Both letters noted the hardship a change of this nature would impose on these small business persons.

**National Parking Association (NPA)** is the nation's leading trade association, representing 2000 members and advancing the interests of public and private sector parking leaders and professionals.

NPA provided feedback relating to small business owners as well as public entities. NPA noted

The parking industry would be particularly disadvantaged by changes the majority of commercial operators are small to medium sized, privately held firms. These companies would be faced with costly decision to automate operations, or even close their doors. For larger operations, both public and private, the cost of new equipment, training, software, and changes to business systems across their operations would be a financial and operational burden.”<sup>22</sup>

NPA gathered member input and surveyed its members and found the following:

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<sup>21</sup> Exhibit 15 National Council of State Agencies for the Blind, Impacts of altering the metal composition of circulating United States coinage, June 9, 2014, FRN response

<sup>22</sup> Exhibit 16 National Parking Association, Coin Stakeholders Response, June 24, 2014, FRN response

- Industry suppliers would require 3–5 years to recapitalize operations, develop, and roll out new equipment.
- At a minimum, it would take parking operators (public and private) five years to plan, budget, and transition monetary metals—including securing capital, training staff, and upgrading equipment.
- To offset the cost of adopting changes in monetary metals, 50 percent of respondents reported that they would reduce staff and 55 percent would raise prices by up to 25 percent.
- 100 percent of respondents accept quarters.
- 91 percent of respondents accept nickels and dimes; 87 percent accept dollar coins; and 52 percent accept half dollars.

NPA does not recommend making any changes to the composition of the quarter as this would have the greatest impact to businesses. NPA supports the use of alternative metals, with a stipulation: “If changes can be made to monetary metals that allow for continued acceptance in existing equipment, this would significantly reduce the burden of any changes in monetary metals.”

**Additional Associations**--Members of three additional associations submitted signed letters which noted the potential negative impacts on their members’ industries. These three associations are AAMA,<sup>23</sup> NAMA<sup>24</sup>, and AMOA<sup>25</sup>.

## 4.2. Coalitions

The Mint received 226 copies of a letter from DCOC members, demonstrating a strong, united front. The coalition’s letter specifically stated, “Changes to coinage will create an added expense, at best, and could mean the difference between thriving or failing business for many coalition members.” The letter further noted that there are approximately 10 million coin-operated machines currently in existence nationwide, which could require a retrofit for new coins at a cost of \$100–\$500 per machine.

DCOC said that further impacts would include:

- Unknown consequences of co-circulating new coins

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<sup>23</sup> Exhibit #18 AAMA (note the text of the AAMA and AMOA are very similar as these two organizations have overlapping constituents and memberships)

<sup>24</sup> Exhibit #19 NAMA

<sup>25</sup> Exhibit #20 AMOA

- Uncertainty associated with the length of a transition period
- Increased service of equipment
- The savings recognized from the composition change would be offset by a reduction in tax revenue<sup>26</sup>

#### 4.3. Other Small-Business Owners

There are twelve unaffiliated business persons that provided input. Additionally, a number of small businesses provided specificity on how their operations would be impacted; examples are included in the emails copied into exhibit 21.<sup>27</sup>

#### 4.4. Other Industry Input

The Stakeholder Outreach group engaged and solicited input from the retail, grocery, big box, car wash, amusement parks, coin processors, and public transit business sectors via conference calls, webinars, and face-to-face meetings. Collectively, there was an expression of caution from those contacted. They encouraged Mint personnel to work to become aware of the interdependencies of processing systems and the potential “cascading impact” of what some might consider a minor change. Changes to the weight, dimension or EMS could require significant investment which would not provide for further efficiencies. In addition to upfront investment, handling and processing costs would likely increase. The gains forecasted by the bureau in the CTC report would be dwarfed by the cost to industry.

#### 4.5. Summary

The message from all sectors is clear; these groups voiced concern over any change, noting that the societal impact from a cost perspective could far exceed gains recognized by the Mint. One contributor requested that the financial analysis consider the direct reduction in tax receipts stemming from the required capital outlay multiplied by the business tax rate. The general vending community (parking, laundry and amusement association representatives and their constituents’ as a minimum baseline) reiterated specific mention of the importance not to change the quarter.

The manufacturers of processing equipment focused on transition time as equipment replacement and servicing their customer base would prove to be exceedingly challenging if there were an uncoordinated cutover to a alternative. The total cost estimate of the societal

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<sup>26</sup> Exhibit #17 Do Not Change Our Change, Coalition letter, Received 226 copies over 5 weeks, FRN response

<sup>27</sup> EXHIBIT 21 Compilation of select emails received from small business persons.

impact range from \$2.46B to \$5.0B. Some submissions were omitted as they represented potential double accounting. Association Societal Cost Estimates for capital improvements excludes ongoing recurring cost increases such as decreased throughput and newly introduced incumbencies.

What the bureau may take from this input is the understanding that a co-circulate option may offer more savings in materials, but those savings could be partially or wholly negated by the societal costs. As a result, “seamless” alternatives<sup>28</sup> (which could have lower savings in materials) are a superior choice for the Nation’s circulating coins.

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<sup>28</sup> “Seamless” refers to those materials that have a matching EMS and piece weight with the current coins. Two such materials were tested in Phase II, and more were identified for testing in Phase III, with even better potential savings.

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## 5. Appendices

### 5.1. Cashmaster, Inc.

#### U.S. Proposed Coin Change

##### Cashmaster International Limited

U.S. Proposed Coin Change – Discussion Paper

Cashmaster International Ltd. Page 1 of 7

This paper is in response to the Notice With Request For Comment by the United States Mint, included in the Federal Register, for comments on potential alternative metal compositions for circulating coinage pursuant to the Coin Modernization, Oversight, and Continuity Act of 2010 (Pub. L. 111-302).

#### **What is being considered?**

The U.S. Mint is considering a change to the composition of metals it uses to make the quarters, dimes and nickels. The Mint's motivation for this change is to reduce the expense of manufacturing these coins which cost the Mint nearly as much or more to manufacture and distribute than the face value of the coins. For example, the cost to the Mint of producing the nickel is 9.4 cents – losing the Mint 4.4 cents on every nickel produced.

If the Mint proceeds with its plans, new coinage would enter circulation in the next few years having different properties compared to the existing coinage. These coins might have a different hue (i.e. color), have a different electromagnetic signature, or be lighter in weight, or even have different dimensions.

#### **What are the implications of this proposal?**

Across America, coin acceptors installed in vending machines, laundromats, parking meters etc. could refuse genuine American coins until the businesses affected invest in upgrades.

The financial outlay necessary to resolve this circumstance would bring no return on investment to these businesses except to be able to continue to accept circulating U.S. coins. According to the Mint's own report to congress, modifying vending machines to accept coins with a different electromagnetic signature but having the same size and similar weight as the existing coins could cost industry as much as \$3.5 billion. Although the Mint would wish to minimize the burden of any change, it is certain that the cost to industry would greatly exceed the savings realized by the Mint. Affecting even more businesses are the consequences of any such change on their coin counting, sorting and verifying processes and equipment. Equipment used to count, sort or verify coins may also have to be upgraded or replaced. Upgrading equipment would be a burdensome expense for businesses; replacing equipment would involve much larger procurement costs. Where direct replacements are unavailable, further cost could be incurred for computer system integration. Whatever the actual amounts, the costs for American businesses would be significant. Money earmarked for sustaining or growing business would have to be diverted towards preparing for the new coinage. Inevitably job losses and business closures would occur as a direct result.

Some of our customers who will be directly affected by change to coin weight :-



### **Our special concern with the proposals**

We, Cashmaster International Ltd, are a global manufacturer of combined note and coin weighing equipment; our customers include some of America's largest retailers, restaurant chains, and other businesses requiring an affordable solution to counting cash on their own premises. Unlike other types of coin counting solutions, Cashmaster's solutions are lightweight, portable and are applicable to counting notes, coins, tokens and many other types of media.

Our popular Sigma 105 product, for example, is approximately 2lb in weight and has a capacity to weigh up to just over 3lbs of coinage. As a weigh counter, the Sigma 105 calculates the number of coins placed on it by dividing the total weight by the average weight of the denomination. This technology is quick, robust and offers advantages that other cash handling equipment can't – such as the ability to count wrapped coins.

A typical deployment of our technology is for till drawer reconciliation on a retailer's shop-floor. Cash reconciliation operatives will carry one of our products from till to till, using it to count everything in the till drawer as they go. Instead of moving heavy till drawers, they can move our lightweight technology to where the cash is. This saves time and also reduces the probability of worker compensation claims for lifting injuries. Other cash counting solutions are either too heavy to be portable or focus on only one aspect of counting.

### **The problems of co-circulation**

The crucial requirement for the weigh counting method is a standardized coin weight. Co-circulation of coins having different weights is ruinous for coin weighing technology as co-circulating coins would have to be separated for counting. The productivity gains currently enjoyed by Cashmaster's

customers would be largely negated by co-circulation of old and new coinage. No software upgrade, nor hardware upgrade, of our products can resolve this issue. Also it is not possible to easily discriminate between the new and old coinage, it would be impossible to employ weigh counting technology for accurate counting.

At present the U.S. Mint allows the co-circulation of the one penny coin and has done so since 1982. Pennies issued between 1909 and 1982 weigh 3.11g each; pennies issued between 1982 and the present day weigh 2.50g each. Thirty two old pennies therefore approximately weigh the same as twenty-five new pennies. Using a weigh counting machine, the best that can be achieved is an estimate of the number of pennies on the scale platform. Despite this, weigh counting operators have realized that the benefits of weigh counting are too great to ignore. The low value of the penny coin compared to the other coins has kept weigh counting as a viable method.

Co-circulation of higher value coins with different weights would make coin weighing technology untenable. This would be an ongoing damaging consequence of co-circulation.

### **What can you do to stop this?**

**AMERICAN DEALERS TO CONTRIBUTE TO THIS SECTION OF THIS DOCUMENT.**

Who should be contacted? Commercial customers, Legislators, Congress? Other actions?

### **Conclusion**

If the United States Mint proceeds with its proposal to change the coinage, there would be adverse direct consequences for many significant U.S. based retailers, the many thousands of American jobs which are supported by our business, and the wider American economy.

U.S. Proposed Coin Change – Discussion Paper

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## 5.2. Coin Mechanisms Inc.



**COIN MECHANISMS INC.**

*Innovation Through Technology*

PO Box 5128, 400 Regency Drive, Glendale Heights, IL 60139-5128 VOICE: 630/924-7070 1-800-323-6498 FAX: 630/924-7088  
[www.coinmech.com](http://www.coinmech.com)

16 June 2014

Coin Stakeholders Response  
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Washington, DC 20220  
[Coin.StakeholdersResponse@usmint.treas.gov](mailto:Coin.StakeholdersResponse@usmint.treas.gov)

The quarter coin has been the workhorse of circulating coins in the coin-op world. At the current cost of goods, the dollar coin could become the next most used coin in the coin-op industry. This will only happen if the Treasury eliminates the paper one dollar currency. Eliminating the one dollar paper currency can save the Treasury millions of dollars a year and allow the Mint to leave the quarter and one dollar coin as is or as close to its current EMS signature as possible. If savings in coin production are necessary, the remaining coin denominations could be more viable to significant changes that would save cost in production of those coins.

Coin Mechanisms Inc. manufactures both mechanical coin acceptors as well as electronic coin acceptors. Our products are used in a varied coin-op industry including Gaming, Amusement, Car Wash/Services, Vending, Transit, and other coin-op machines.

A mechanical coin mechanism relies heavily on coin diameter, thickness, weight, and the alloy mix. A significant change to any of these parameters would necessitate a new and separate coin mechanism because it would be very difficult or impossible to accept co-existing coins in the same mechanism. Visual changes such as plating color or stamping relief in the artwork typically do not affect operation of a mechanical mechanism. The reeded edge around a coin should remain on any new issue replacement coin, for some mechanical mechanisms detect this reed edge and separate a smooth edge coin of the same size. It is favorable the Mint dropped the Aluminum alloy in the study, for coins/tokens made from aluminum do not flow well through a mechanical mechanism.

If a current non-ferrous coin is re-introduced as an alternate coin with some degree of ferrous metal (iron) in its alloy mix, it will now have "magnetic" properties and be affected to differing degrees by the magnet in a current mechanical mechanism. The magnet installed in most mechanical mechanisms used on copper based coins such as the quarter and dollar performs a dual function. The magnet will attract any ferrous based coin/token/fraud and will not let the coin pass and has to be wiped from the magnet using the reject lever built into the mechanism. More importantly, when the copper based coin passes the magnet, an eddy current is created within the coin when the copper based material is moving through a strong magnetic field. The induced electromagnetic magnetic field in the coin bucks the stationary magnetic field and thus slows the speed of the moving coin to direct it to a proper path of acceptance or rejection depending on the amount of copper or ferrous material within the coin.

Therefore, if a ferrous based coin was introduced to coexist with a copper based coin, a conventional mechanical coin mechanism would not be able to accept both coins without greatly sacrificing its ability to reject many fraud coins. So two mechanisms each designed to accept the unique coin would be needed or one mechanism designed to take both at a cost of accepting many frauds.

Our electronic coin mechanism called the Coin Comparitor and "Comparitor" series of mechanisms operates using a unique comparing circuit unlike most electronic coin acceptors. The Comparitor uses an actual physical coin or token that is placed within a set of coils in the device. This "resident" coin is used as the reference coin to compare to. The resident coin also sets up a diameter sizing slot for the Comparitor to accept coins of that diameter. The comparing circuitry and resident coin will only allow a deposited coin to be accepted if its EMS signature or mass and conductivity "match" the resident coin. When an EMS match occurs, and instantaneous circuit null occurs, opening a gate to allow the deposited coin to be accepted. There are no look-up tables or memory cells used to store and validate a coin(s) as in most coin devices. The validation in a Comparitor is instantaneous. This allows the Comparitor to validate coins at a very high rate of speed which was very desirable in the Gaming Industry.

The Comparitor cannot compare two different EMS signatures with one set of coils. Multiple sets of coils each housing a different resident coin would be required to accept coins of different EMS signatures if they were to coexist for currency. Using multiple sets of coils to do this would require a complete re-design of the current Comparitor from how it has existed for many years. A re-design would be a drastic financial undertaking that is not desirable or possible at this time.

Any change to coinage, particularly the quarter and dollar coins will result in increased costs to not only the manufactures of the coin devices but also the makers of coin-op machines, the businesses who use these machines, and finally to the customer who buys the products from these machines. It will be very difficult for any of these groups to recoup the losses they may incur for; transition updates, difficulty in co-circulation of two different coins with the same value, fraud introduction if a more common and cheaper alloy is chosen, and vandalism from disgruntled customers who do not understand the problem using a machine in "transition". The latter introducing increased service costs to operators, and if we are to assume that machine breakdowns may occur more frequently with coexisting coins, machines pulled from service will hurt business owners and also limit consumer choices in using these machines.

The best recommendation we can give is to leave the quarter and dollar coins alone. If it becomes necessary to save cost in coin minting, the other denominations should be considered. An alternate way to save money is to eliminate the paper dollar bill which costs millions of dollars to reproduce because of its very short life span. This would allow the dollar coin to become more prevalent in day to day money transactions. Changing our coinage will be detrimental to many small businesses, operators, and manufacturers of devices related to this business. There is no return on investment for equipment upgrades which adds to business financial outlays and possibly leading to job losses in an economy that is trying to recover.

We appreciate the efforts the Mint is trying to save the government money. However, it appears changing our coinage may not be worth the effort in the long run if it ultimately kills jobs, punishes small business, angers consumers, and becomes an added expense to Americans as well as the government.

Regards,

*Joe Ferrantelli*

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Director of Engineering  
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### 5.3. Cummins-Allison Corp.



*Executive Offices*

852 Feehanville Drive  
Mt Prospect, IL 60056  
Telephone: 847/299-9550

June 3, 2014

Coin Stakeholders Response  
Office of Coin Studies  
United States Mint  
801 9<sup>th</sup> Street, N.W.  
Washington, D.C. 20220  
[Coin.stakeholdersresponse@usmint.treas.gov](mailto:Coin.stakeholdersresponse@usmint.treas.gov)

Dear United States Mint:

This letter is in response to your Request for Comment notice which was published in the *Federal Register* on April 10, 2014. All of us at the Cummins Allison Corporation appreciate the opportunity to provide you with our views on prospective changes to United States coins.

Cummins Allison is a global leader in developing solutions that quickly and accurately count, sort and authenticate currency, checks, and coins. We also sell and service a broad array of automatic teller machines. With a 125 year heritage of leadership in technology and product innovation, Cummins Allison serves the majority of financial institutions in the United States and worldwide, as well as, retail, gaming, law enforcement, and government. Our products are sold and serviced by an extensive network of nearly 50 branch offices located in the major US cities. We also have wholly owned subsidiaries in Australia, Canada, France, Germany, Ireland, and the United Kingdom. In addition, we have a worldwide dealer network which sells and services our products in more than 70 countries. The vast majority of Cummins Allison products are designed, developed and manufactured here in the United States. Cummins Allison has a portfolio of more than 350 patents which are utilized to protect our intellectual property and support our research and development investments. A strong US patent system is critical to our business model and our ability to continue to manufacture our products here in the United States.

The commercial coin counting, sorting, and authentication products developed and manufactured by Cummins Allison are available in a variety of sizes and formats to accommodate the varied needs of our diverse customer base. For example, our smaller machines provide coin counting and sorting in retail operations such as McDonalds, Home Depot, and Safeway. Our larger machines, which process at a rate upwards of 10,000 coins per minute, provide the major US banks, armored carriers, the gaming industry, governments, and others with exceptional dependability and accuracy for high volume coin processing. We also have a complete line of self-service machines, for public use, in some retail and banking locations. These machines enable the public to count the coins they have accumulated or collected at home.

One of the most critical features of our equipment is the ability to not only count and sort coins at a high rate of speed, but to also authenticate and identify counterfeits while doing so. Cummins Allison has a sensor research and development division near San Diego which provides state of the art coin and currency sensor technology for our equipment. When incorporated into our machinery, these sensors enable our customers to identify, reject, and cull coins that are illegal or foreign.

Cummins Allison supports efforts by the U.S. Government to identify new cost saving efficiencies, including methods for reducing production, manufacturing, and circulation costs associated with coin or paper currency. As an intellectual property intensive engineering and manufacturing company, we understand the challenges associated with an effort to reduce costs while providing innovative solutions, maintaining features and product quality. Often this is not an easy endeavor.

Over a period of many years, Cummins Allison has witnessed a variety of coin changes initiated by a number of countries. From our perspective, some changes have gone well and others have not. Based on our experience, we would like to offer the following points:

- The US penny has been through a number of changes since inception. Most of these changes involved alterations to the metallurgical content; the diameter and thickness was maintained. While all stakeholders were impacted by these changes, the implementation and transition to the new design was smooth, seamless, and of little impact for Cummins Allison products.
- Other countries have made changes to their coins. For example, not too long ago The Bank of Canada announced changes to the Canadian \$1 and \$2 coins. The changes were primarily to the coin material. The diameter and general appearance did not change. Implementation of the coin changes was not difficult for Cummins Allison, namely because the Canadian Mint routinely consulted with industry and other stakeholders to ensure their decisions were industry compatible.
- The introduction of low denomination coins in Mexico several years ago is an example of how a good intention to reduce the cost of coin manufacturing led to an undesirable result. With little to no industry communication and consultation, Mexico made changes to a number of their coins. In one instance they introduced a new coin that was the same size as an existing coin of a different value. Since many coin processing equipment manufacturers, including Cummins Allison, use coin dimensions to count and sort coins, the industry could not accurately process the new coin, or differentiate from an existing one.

Machinery manufactured by Cummins Allison can accommodate and process coins which contain varied metallurgical properties. It is much more difficult and expensive, however, to alter or retrofit machinery that will accommodate new or changed coins which have a different diameter or thickness. Changes to diameter or thickness may require significant, expensive changes to our equipment, or the outright replacement of equipment.

- Coin metallurgical content changes can impact how well a machine functions or the life of the coin. Not too long ago, this consideration was neglected in Japan. A very soft, all aluminum coinage was introduced creating expensive equipment and coin durability problems. In short, the metallurgical content of coins can impact a coin's durability. While coin manufacturing cost savings can occur with use of less expensive metals and methods, these savings will not be fully realized if the coins are not durable, or they cause equipment to fail, or deteriorate prematurely.

In addition, in order to provide a high level of security the design of the coin, including the dimensions, construction and metallurgical content, must be unique to every other coin in the world. For example, the United Kingdom has experienced a relatively high degree of one pound coin counterfeiting. The metallurgical properties of the current pound coin are nearly identical to coins from other countries that are significantly less in value. The United Kingdom has worked hard and is well on their way to addressing this matter. Importantly, their communication with Cummins Allison and other stakeholders about new technologies and potential changes to their coin set has been timely and thorough.

Cummins Allison is not opposed to the co-circulation of coins, like the penny, of the same value but of different weights. Our equipment can manage most of these differences. Some coin processing stakeholders, however, use scales and weigh coins as a method of valuating large volumes. Coin content changes which alter the weight of coins would make this method of coin counting and bulk valuation difficult or impossible if different coins, of the same value and physical appearance, are co-circulated.

- Finally, it is critical to note that **any** alteration to coin design, content, or size can impact the ability of our machinery to process high volumes of coins both quickly and accurately. If coin design or material content changes are orchestrated hurriedly or without regard for our equipment and other stakeholders, the currently reliable US coin circulation infrastructure could be adversely impacted or fail altogether. To alter the size, design, or content of a coin without comprehensive consultation and coordination with our industry and others, could be disastrous for the American economy. In fact, a poorly conceived or implemented change could impact the worldwide integrity and value of American currency, disrupt public confidence and commerce, and cost the American government many, many times more than what might be saved as a result of the initial cost saving alteration.

When introducing a new or altered coin, the transition must be nearly seamless for the coin circulation system and the public. While stakeholder input is essential for this to occur, stakeholder input will not help the process avoid critical issues if too little is requested too late. All stakeholders (banking, vending, armored carriers, retail, currency processors, government agencies and others that process and handle large volumes of coin and currency) must work collectively to fully raise and address issues that are vital to each and every component of the coin circulation system. Recently, Canada introduced new coins into circulation with ease and strong public acceptance. They were

able to succeed and achieve public buy-in because they fully communicated with and listened to all stakeholders early and often during the process... from conception through circulation.

For Cummins Allison, the ability to test and report on new material technologies or options, well prior to decision making, is very important. We would prefer to establish and maintain a strong partnership with Congress, the Treasury Department, and the United States Mint with the hope that all will benefit from the exchange of technical and marketplace expertise. Over the past several years, Cummins Allison has been working very closely with a number of Central Banks and Mints throughout the world to provide expertise and feedback in the development of new coins and banknotes.

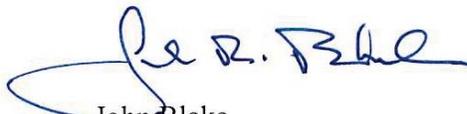
If a decision is made to introduce a new coin in the United States, we strongly encourage the development of a government – industry/stakeholder task force, very early in the process, to generate a seamless transition. That would allow all stakeholders to carefully review options and alternatives from conception through circulation. This task force would help to assure that all technical, scientific, commercial and public issues are thoroughly addressed early on and at every stage of the process.

We would also like to suggest that any legislation to alter American coins contain a provision requiring all new or changed coins to have a significant level of counterfeiting deterrence technology. No American coin, regardless of value, should be susceptible to counterfeiting or be too similar to another world coin.

We appreciate and support your efforts, and those of Congress, to reduce the cost of American coin production and circulation. However, we encourage everyone to proceed slowly and cautiously when making any decision which changes the appearance, weight, size, or metallurgical content of our nation's coins. To achieve cost savings through new manufacturing efficiencies or coin content changes will mean nothing if the coins cannot be utilized or processed, and expensive societal costs are incurred. In addition, it is essential for new coins to contain a proper level of technology and uniqueness. U.S. coins that are susceptible to counterfeiting place our economic and national security at risk.

Thank you again for providing the Cummins Allison Corporation with an opportunity to comment on potential changes to United States coins. Please contact us if you have comments or questions.

Sincerely,

A handwritten signature in blue ink, appearing to read "John Blake". The signature is stylized with a large loop at the beginning and a long horizontal stroke at the end.

John Blake  
Executive Vice President Engineering  
Cummins Allison Corporation

## 5.4. Jarden Zinc Products



Jarden Zinc Products | 2500 Old Stage Road | Greeneville, Tennessee 37745 | 423.639.8111

[jardenzinc.com](http://jardenzinc.com)

June 9, 2014

### Via Electronic Transmission

Coin Stakeholders Response  
Office of Coin Studies  
United States Mint  
801 9th Street, NW, 6th Floor  
Washington, DC 20220

### **RE: United States Mint Notice With Request for Comment To Supplement Information Regarding Alternative Metals for Circulating Coins**

Dear Sir or Madam:

Jarden Zinc Products, LLC (JZP) is submitting comments to the Department of Treasury Notice With Request for Comments related to the Mint's intention of collecting information from coin industry stakeholders on the effects of changing qualities such as weight, color and electromagnetic signature of our circulating coins.

JZP is a metals and electroplating company that has been the U.S. Mint's penny supplier since 1981 and its sole source supplier since 1998. It is an international supplier of plated coinage products to more than 30 countries. Given our extensive expertise with a variety of mints around the world, JZP is in a good position to comment on alternative metals coinage changes. While the Mint is soliciting comment on five specific topics, Jarden will focus its comments on three of these items: color and visual changes, electromagnetic signature, and transition implementation.

There are acceptable lower cost alternative coin metals designs available on the market today and in use by a multitude of countries, often for their full range of denominations. Jarden makes these coins today for many foreign mints. The predominant product is plated coinage, which utilizes approximately 6% of the more expensive metals on the top surface, with 94% of the coin being much less expensive materials. Such technology is available and in use, being accepted by vending and coin counting equipment. Canada utilizes such coin design across its full range of denominations.

### **1. COLOR AND VISUAL CHANGES**

Regarding color and visual changes to US circulating coins, electroplating technologies can achieve the typical coinage colors. These colors are achieved by utilizing a plating finish with the same color as the original coin. Our plated products are available in single or multiple layers, and a variety of colors and finishes, including:

- Copper
- Nickel
- Tin
- Brass
- Red Bronze
- Yellow Bronze
- White Bronze

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[jardenzinc.com](http://jardenzinc.com)

Jarden Zinc Products | 2500 Old Stage Road | Greeneville, TN 37745 | Reply to: PO Box 1890, Greeneville, TN 37744-1890 | 439.639.8111

Typically countries desire to maintain the same color as their more expensive existing coins. That is, we replace white or silver colored coins with an alternative white plated surface finish such as nickel, gold and yellow colors with a plated brass or bronze finish, and likewise red or copper coins with a plated copper finish.

As the Mint looks at new alloys for the 5-cent coin, including a copper-plated zinc alloy, cost savings would have to balance against public acceptance of a color change. Conversely, the 5-cent could retain its silvery color with nickel plating over a zinc or steel base.

Public acceptance falls into two categories - feel and look. There is a need for coins to "feel like money". For instance, aluminum coins the Mint tested were light, creating the perception of "play money" not worthy of its face value. When a new coin feels like "real" money, Jarden's experience has been the general public is not overly concerned with its composition, as long as they have confidence it works in transactions and doesn't look too different from the incumbent coin.

## 2. ELECTROMAGNETIC SIGNATURE/COMPETING INTERESTS

As noted, plated coin technology is quite common in the world today and has a proven track record of cost effectiveness and good performance in promoting day-to-day commerce. The desirability of copper, bronze, and nickel plating over a zinc substrate can be attributed to several factors including:

- Zinc is 8-10% lighter than typical circulation coinage materials, which also yields more pieces per pound or kilogram, making it more cost effective.
- Zinc based coins provide a very secure electro-magnetic signature as reported by Concurrent Technologies Corporation in the Mint's 2012 report to Congress. The report concluded that zinc based coins would be suitable for higher denominations. This is further reported in the May 2014 issue of Currency News, a leading industry magazine on currency.<sup>1</sup>
- Zinc based substrates require less plating than steel based substrates and with much better ductility of zinc, the coins are much less likely to experience corrosion problems as a result of damage during coining.

Under normal circulation handling, plated coins in general are very durable.

The Mint's stakeholder outreach and the views of industry stakeholders appear to be in conflict with the goals and purpose of The Coin Modernization, Oversight, and Continuity Act of 2010 (Pub. L. 111-302). It is difficult to make substantial reductions in the cost of circulating coins - which by definition will include plated coins or new alloys - and say there will be no effect on vending and amusement machines and commercial coin counting equipment.

On the one hand, the Mint and Congress can protect the status quo and defer achievable savings to the government through less expensive coins, thus avoiding any impact to the vending industry. Conversely, the Mint can pursue policies and lower cost technologies that work in most existing coin acceptance equipment, once re-programmed, and alleviate the coins' cost challenges.

Vending equipment relies on a coin's physical characteristics and electro-magnetic signature (EMS) to distinguish one denomination from another. The physical characteristics are rather easy to control. The metal or metals comprising a coin determine its EMS. A coin has an EMS whether it is solid alloy, multiple layers mechanically bonded together, or layers electro-plated onto an alloy.

Vending and counting equipment have the ability to distinguish a wide range of EMS profiles. Once a profile is established for a given denomination, the coin acceptor can be programmed to recognize it as such.

Obviously the challenge for the vending and coin acceptor industry would be the cost associated with such program changes. As with all equipment, over time there is the need for servicing. And as discussed at the March 13, 2014 Mint stakeholders meeting, should U.S. coins change materials, given a reasonable amount of time before release of the new coins, these industries could perform program changes during such normal maintenance activities, with much lower cost impact.

### 3. TRANSITION IMPLEMENTATION PERIOD/VENDING INDUSTRY ISSUES

The U.S. vending and amusement industries have raised concerns about the potential impact of any changes to coin or currency. These concerns are not unlike those mentioned by the Canadian vending industry early in the planned adoption of Multi-ply plated steel for Canada's \$1 and \$2 coins.<sup>ii</sup> However, the Royal Canadian Mint (RCM) worked closely with the vending industry to relieve those concerns.<sup>iii</sup>

The key factors in alleviating vending industry concerns appear to have been good communication between the RCM and the Canadian vending industry and sufficient time for the transition, including providing coin samples for testing and equipment calibration.

*"Throughout 2010 CAMA represented our industry in frequent dialogue with The Royal Canadian Mint. Questions were raised regarding potential security issues, and consistent and reliable reading of the new multi-ply plated steel coins by coin mechanisms across the country. Release of the new one and two dollar coins was originally scheduled for late 2010 and then the first quarter of 2011. We are pleased to report that The Mint heard the concerns raised, and has confirmed their intention to allow the industry ample time to calibrate their machines prior to the launch of the coins, which is now expected to be early in 2012.*

*While no one likes the monetary costs associated with this initiative, it should be recognized that it is not unlike other business expense related to technological upgrades. In fact, on the subject of coinage, Canada has fared well with only two significant changes in the past 40 years, while other countries have experienced changes with far greater frequency.*

*In closing, we are particularly gratified to see senior management at The Mint encouraging stakeholders to "communicate directly with CAMA, as they have been working closely with us on this important initiative".<sup>iv</sup>*

Like the RCM, the U.S. Mint and Congress could provide ample time for the vending industry and additional stakeholders including transit, telephone, parking, casinos and others, to test product and calibrate their machines.

With Canada's implementation schedule, CAMA cooperated with the coin alloy change and viewed any monetary costs equivalent to other technology upgrade business expenses.

According to CAMA President Kim Lockie, "The Royal Canadian Mint sought the input of CAMA and will ensure there has been sufficient time for testing followed by the necessary upgrade to coin acceptors by industry members." As per the Canadian Vending Magazine, CAMA was satisfied with how the Royal Canadian Mint worked with them on timelines for the new \$1 and \$2 coins, which hit the streets in early 2012.<sup>v</sup>

### CONCLUSION

Several innovative approaches have been adopted by other countries, including plated zinc-based coinage and the Canadian Multi-ply steel coin, that include significant costs savings. We believe the potential savings to the Treasury associated with coin material changes will ultimately outweigh legislative emphasis on vending industry costs.

Jarden looks forward to working with the Mint to reduce the costs of circulating coins.

Sincerely,



Mark Blizard  
Vice President

<sup>i</sup> Currency News, May 2014, Vol 12, No. 5, pg 1, "New Coins with Unique Electro Magnetic Signatures"

<sup>ii</sup> Canadian Vending Industry Upset with Coin Alloy Changes, Coin World, April 19, 2010, p. 68.

<sup>iii</sup> Modernizing Canada's Currency: Upcoming Changes to \$1 and \$2 Coins for CANA Members, Royal Canadian Mint Presentation, Updated October 5, 2010, pages 10 and 20

<sup>iv</sup> Canadian Automatic Merchandising Association Newsletter to members, February 2011, found at <http://www.vending-cama.com/INDUSTRY/notices-Feb07-2011.asp>

<sup>v</sup> Canadian Vending Magazine, Spring 2011, <http://www.canadianvending.com/content/view/2557/136/>

## 5.5. American Bankers Association



Building Success. Together.

**Stephen Kenneally**  
Vice President  
Center for Regulatory Compliance  
Phone: 202-663-5147  
E-mail: skenneal@aba.com

June 5, 2014

Coin Stakeholders Response  
Office of Coin Studies  
United States Mint  
801 Ninth Street, NW  
Washington, DC 20220

Dear Sir or Madam:

The American Bankers Association<sup>1</sup> (ABA) respectfully submits its comments to the United States Mint, regarding the Request for Comment (RFC) on developing alternative metal compositions for coinage in circulation on April 10, 2014. The RFC's intent is to gather information from coin industry stakeholders on the potential effects of changing the metallic composition of coins.

The U.S. Department of the Treasury (Treasury) is directed by the Coin Modernization Oversight and Continuity Act of 2010, Public Law 111-302<sup>2</sup> (the Act) to submit biennial reports to Congress to include an analysis of production costs for each coin in circulation, production cost trends, and recommendations for potential changes, including the introduction of new technologies in production to new metallic composition of coins. Treasury has delegated authority to conduct this research to the U.S. Mint. As part of this analysis, the U.S. Mint is required to consider the potential impact of any of these changes on merchants and other coin industry stakeholders. Upon consideration of the evidence and the options, ABA recommends no changes be made to the metallic composition of U.S. coinage in circulation at this time.

### **Discussion**

The scope of the businesses that are considered coin industry stakeholders is very broad. It includes financial institutions, armored card services, commercial coin handling equipment manufacturers, municipal parking officials, tollbooth operators, laundromat owners, vending machine operators, and others. Changing the metallic composition of U.S. coinage would have a significant effect on these industries and their customers who would be forced to absorb increased expenses related to any changes.

Banks in the United States manage coins in different ways. Large banks may use a vendor, such as an armored card service, to provide coin related services including delivery and counting of coins. Other banks may perform the service "in-house" with their own equipment. Others may use some combination of both. But, in all cases, potential changes to the metallic composition of coins would result in increased costs to banks whether it is absorbed directly through equipment modifications or indirectly through increased fees charged by vendors providing coin services.

The RFC is asking for input on the potential effects of changing the weight, dimensions, color, and electromagnetic signature of coins in circulation. In addition, the RFC asks for comment on how much time would be needed to facilitate these changes if they are to be made.

### **Impact on Banks**

Changing the weight or dimensions of a coin would present serious challenges to banks. Currently, bulk coinage is counted by weighing bags of coins. If the weight is changed in new coins in circulation they would need to be kept separate from coins issued earlier that are of different weights. For example, a bag of quarters with coins of mixed weights could not be counted accurately. Additional sorting would be required to put “old” quarters in one bag and “new” quarters in another. This would slow the counting process and would increase personnel costs if additional employees must manually sort the new coins from the old coins. There would also be costs if the “old” and “new” coins were separated through a new mechanical process instead of manual labor. Any alteration of the weight or dimensions of any coins would cause banks to incur additional expenses either by upgrading their own equipment and software or by paying increased fees to vendors that provide this service.

Changing the electromagnetic signature (EMS) of U.S. coinage would also affect the cost of handling coins. Counting and sorting equipment may use EMS to validate coin denominations. This is how most vending machines determine the value of coins presented for payment. Changing the EMS would require software programming upgrades to a very large number of devices beyond bank oriented coin service providers and vending machines, including parking meters, car washes, toll booths, and video games.

Changing the color of coins in circulation does not pose a significant challenge to the banking industry as long as the dimensions, weight, and EMS remain the same. However, color change would still require retraining employees of depository institutions to identify the coins and would require them to take more time to confirm the type of coins they are accepting for deposit or issuing in withdrawals. The cost of this type of retraining would be multiplied across all retail employees throughout the economy. A change in color may require more extensive consumer education to reassure the public that new coins are valid forms of payment.

### **Alternative Metals Study**

To assist the U.S. Mint in its analysis, Concurrent Technologies Corporation (CTC) was hired to conduct extensive study of the potential cost savings to the U.S. government of producing coins with different metallic compositions as well as the potential expenses making these changes would have on the public. The 378 page “Alternative Metals Study”<sup>3</sup> was issued to assist the U.S. Mint prepare its Biennial Report to Congress on coin matters, and it provides a vast amount of data on the potential effects of changing from the status quo.

According to the study, if changes to coin dimensions are made the cost to upgrade 250,000 passive coin sorters/counters would be \$62.5 million and could range up to \$125 million.<sup>4</sup> Banks that perform their own coin sorting and counting internally will be required to upgrade equipment and absorb the cost directly.

Coin handling services are often provided to banks through armored car services. These service providers process coins based on weight so changes in that feature are most important. The study estimated that these service providers would incur increased annual costs of \$21 million annually for counting nickels, dimes, quarters, half dollars, and dollars.<sup>5</sup> This is not a one-time cost for equipment upgrades but will be an ongoing expense. This expense will be passed on to these service providers' customers: banks.

An industry that would be powerfully affected by changes to coins in circulation would be large and small vending machine owners and operators. There are approximately 5.3 million vending machines in the United States.<sup>6</sup> The immediate out of pocket costs to large vending machine owners and operators for changing the dimensions of the quarter range from \$668 million to \$1.046 billion to upgrade existing equipment.<sup>7</sup> Similar expenses would be incurred for comparable changes to the nickel and dime. The study notes that these are significant expenses.

The CTC study makes several recommendations based on its analysis of the cost of coin production and the costs borne by coin industry participants. Among these recommendations are:

- Maintain existing coin dimensions for all future coins regardless of their materials for construction.
- Maintain the current composition of the one-cent and dollar coins.
- Consider alternative copper-based alloy changes for all other coins in search of a composition that would have lower production costs and that would minimize conversion costs to coin industry stakeholders with regard to changes in coin weight.
- Continue research and development efforts of metallic alloys that would mimic the current EMS signatures of the incumbent dime, quarter, and half dollar coins to avoid the need to upgrade coin processing equipment.

ABA supports these CTC study recommendations.

### **Transition Period**

It is clear that any change by the U.S. Mint to the metallic content of coins would necessitate providing the industry a significant and appropriate time period to prepare in order to avoid any disruption in services and/or confusion for customers. Bank preparations would include software and hardware changes to any coin sorting equipment maintained "in-house." The amount of time required to make these changes would be contingent on what those changes were. Significant changes to the

weight, dimensions, or EMS may require a similarly lengthy implementation period. For these and other reasons, the banking industry opposes any such changes.

Many banks rely upon outside vendors to provide coin services. Those vendors would also need an appropriate amount of time to upgrade their equipment.

It is important to note that any potential changes would affect a broad number of industries and millions of coin-based devices and the consumers that use them. Looking beyond the scope of banks, there are 5.1 million coin operated laundry machines,<sup>8</sup> 2 million parking meters,<sup>9</sup> 300,000 car washes accepting coins,<sup>10</sup> and 60,000 public buses accepting coins.<sup>11</sup> Banks want to provide coins to customers that will work at all of the expected venues, including those mentioned above.

To implement such changes with a minimum of disruption, the U.S. Mint would have to allow adequate amount of time for *all* industries to upgrade their coin sorting and accepting equipment. It is our view that a transition period of 24-30 months beginning when test samples are provided would be necessary, adding additional weight to the view that such changes would not be worth the costs and difficulties imposed.

## **Conclusion**

In conclusion, ABA supports the U.S. Mint's efforts to balance potential cost savings in coin production with the associated conversion costs for coin users. The research and outreach conducted by the U.S. Mint and CTC is extensive and demonstrates that changes to the current metallic composition of U.S. coinage is not currently achievable without increasing the costs of production and increasing the costs to coin industry stakeholders, especially to the hundreds of millions of users of U.S. coins. Neither of these outcomes is desired. Based on these findings ABA recommends no changes be made to the metallic composition of U.S. coinage in circulation be made at this time.

ABA appreciates the opportunity to comment on the U.S. Mint's RFC on developing alternative metal compositions for coinage in circulation. If you have any questions about these comments, please contact the undersigned at (202) 663-5147.

Sincerely,

Stephen K. Kenneally  
Vice President

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## 5.6. National Armored Car Association

VIA ELECTRONIC SUBMISSION

June 24, 2014

Director Jon Cameron  
Coin Stakeholder Response  
Office of Coin Studies  
United States Mint  
801 9<sup>th</sup> Street, N.W.  
Washington, D.C. 20220-1234

**Re: Comments in Response to United States Mint’s Notice With Request for Comment, Docket ID 2014-08022, Published in the April 10, 2014 Federal Register (79 Fed. Reg. 19971)**

Dear Director Cameron:

The National Armored Car Association (NACA) respectfully submits these comments to the United States Mint in response to the above-referenced request for comments, published in the *Federal Register* on April 10, 2014, at 79 Fed Reg 19971. NACA members request the Mint withdraw its consideration to alter the current coinage in circulation in the United States due to the significant costs of such changes to both the armored car industry and the economy as a whole.

Formed in 1929, NACA is a business association that brings together the four major companies of the armored car industry—Brink’s, Dunbar, Garda, and Loomis—with a focus on protecting and promoting the common interests of the industry. Our members are national and international publicly traded corporations and privately held companies that provide secure transportation and cash management services for the Federal Reserve, financial institutions, state and local governments, and private businesses and individuals across the nation. These four organizations comprise approximately 90% of the armored car industry in the United States, and NACA members have handled virtually every dollar and coin in circulation.

The Mint has issued a Request for Comment regarding the potential use of alternative metals in the production of U.S. coinage in order to save money in the process. The Mint has requested input from the public and relevant stakeholders as to the consequences of changing qualities, such as weight, diameter, thickness, and electromagnetic signature, of currently circulating coins. While NACA understands the Mint’s efforts with the proposal, changes to coinage will create a substantial burden and significant costs to the armored car industry, which outweigh any possible cost reductions in coin creation. Costs of upgrading or replacing current machinery as well as the resources necessary to establish and maintain a separation of the old and new coinage will significantly and negatively impact armored car companies’ abilities to perform their duties for their clients. Operations will be slowed, resources will be diminished, and every institution or entity that employs an armored car company will be affected.

As indicated by the 2012 Biennial Report on the Current Status of Coin Production Costs and Analysis of Alternative Content issued in December of 2012 to Congress by the Mint, the costs associated with such changes will overshadow the potential savings the changes would bring to the Mint. Not only will the immediate economic impact of such a proposal be significant for the armored

car industry, but circulating in new coinage and out incumbent coins will take several years, creating costs, complications and burdens for armored car companies and their clients (including the federal government) for at least a decade if the rate of integration and replacement of circulating coins remains at its current rate of 3% per year.

As stipulated by the 2010 Coin Modernization, Oversight, and Continuity Act of 2010, the Mint contracted Concurrent Technologies Corporation (CTC) to study possible alternative metal compositions of US coins and research the possible consequences any changes could have on individual stakeholders and the economy as a whole. The resulting report, the Alternative Metals Study, submitted to Congress on August 31, 2010, provided the legislature, the Mint, and stakeholders with considerable data on the costs of the proposed changes to various stakeholders, including NACA members and their clients. Using the CTC report as well as industry-specific information and the 2012 Biennial Report, NACA submits the following information as evidence the Mint should withdraw consideration of altering the composition and size of circulating US coinage.

### **Costs Associated with Changes to the Dimensions of Circulating Coins**

NACA member organizations and other armored car companies currently use two machines that will be significantly impacted by the proposed changes. In order to fulfill orders placed by clients, armored car companies need to separate all coins received at their coin terminals into separate denominations. This process involves the use of coin sorters, high-speed coin handling machines that separate coins based on both the size—diameter and thickness—and electromagnetic signature, into denominations. The separated coins can then either be shipped to clients in coin bags or entered into coin wrapping machines, which package a fixed amount of the same coins. These machines are vital to the industry, but the changes being considered by the Mint would require significant upgrades to or complete replacement of both the coin sorting and coin wrapping machines.

#### *Coin Sorters:*

Sorters are the primary method used by the armored car industry and other private and government entities for sorting coins. The machines use the coin's thickness and diameter to determine where the coin should be distributed. They recognize the coins and push them through to the appropriate chute, resulting in separation of each denomination entered into the machine. The CTC report estimated there are four such sorting machines at each of the two hundred Federal Reserve-contracted coin terminals.

Sorters are calibrated to recognize a specific number of different coins and to separate the coins by dimension. Should dimensions of coins change, armored car companies would be required to upgrade every one of these coin sorters and reprogram them to recognize the new dimensions. The CTC report estimates upgrades will cost \$500 per coin sorter owned and operated by armored car companies, but NACA members expect the costs would be several thousand dollars per machine after taking into consideration the research and development also needed to accommodate the changes. While this would be a one-time cost, NACA estimates the cost will drain the armored car industry of hundreds of thousands, if not millions, of dollars (CTC estimates the costs will be between \$160,000 and \$400,000, but NACA believes the costs will reach well above this estimate).

These machines would also need to be adjusted to handle the larger variety of coinage, an issue that would arise from the co-circulation of both incumbent and new coins of the same denomination. Most sorters currently have six chutes, one of which is reserved for non-coins. If the Mint chooses to alter enough currently circulating coins, the sorters would no longer be operational due to the lack of

adequate parts to separate the quantity of coins. The armored car industry would need to replace these machines at a CTC estimated cost of up to \$50,000 per machine plus research and development costs.

*Coin Wrapping Machines:*

Coin wrapping machines are used by the armored car industry to package coins already separated into denominations. The CTC report estimates there are 2,000 coin wrapping machines currently being used throughout the country. These machines currently have six to eight chutes through which coins are pushed to the appropriate section in order to be wrapped. The machines then rely on the coins' diameter and thickness to properly wrap the appropriate quantity of coins.

CTC's report analyzed the implications changes to the diameter and thickness of US circulating coins would have on the coin wrapping machines currently being used. They explained that changes of more than 1% to either diameter or thickness from incumbent coins would result in all 2,000 machines needing upgrades. NACA members believe that changes of even less than 1% would require a retooling, given the precision required for the coin wrapping machines. Every coin wrapping machine would need to be recalibrated to identify the appropriate quantity of coins to wrap and readjusted to increase the quantity of coin denominations the ATL can process at a given point in time. CTC's estimate for the cost of the coin wrapping machines' upgrades should the size of coins be changed is estimated to be between \$250,000 and \$1.25 million. NACA believes the figure is much higher.

*Vendor Equipment:*

NACA members also maintain some vendor equipment in their coin terminals. These machines, including but not limited to Glory coin wrappers and JetSort coin sorters, would also need the capability to handle any changes to circulating coins. It is anticipated that reprogramming many of these machines will not be possible, forcing the industry and their vendors to replace the machines entirely and resulting in a substantial cost to the industry.

All of the machinery in a coin terminal and used by NACA members would require upgrades, replacements, and substantial service to accommodate the changes. Such a strain on resources would force armored car companies to redistribute funds and resources, significantly limiting the organizations' abilities to fulfill their duties and responsibilities on behalf of their clients.

### **Consequences of Changing the Weight of Coins through the Use of Alternative Metals**

Altering the metal composition of coins would result in a change to the weight of coins. Such a change would not only force armored car companies to reprogram and redesign currently used machines but would result in other serious consequences, from decreasing productivity and output to increasing the volume of armored cars on the road and potential exposure to workplace hazards for employees.

*Weight Verification Method:*

Currently used throughout the industry is a weight verification method which relies on the weight of a bag of coins of a specific denomination to identify the quantity of coins within the bag. A certain weight range, which is established by the U.S. Government, is tolerated in the calculation. The weight verification method frees up substantial amounts of time for the armored car industry by allowing companies to bypass the process of counting coins individually within each coin bag. The

process is used throughout the industry but will no longer be an option for armored car companies should changes be made to the metal composition and weight of circulating coins.

By changing the metal composition of the coins, bags of a certain denomination will contain both incumbent and new coinage, forcing armored car companies to consider a larger weight range to identify the quantity of coins in the bag. These ranges would be too large for an armored car company to accurately assess the quantity of coins in the given bag. The result would be the forced elimination of the weight verification technique, requiring armored car companies to count out every bag that enters their coin terminals and facilities. The loss of productivity and efficiency would slow down operations and lead to an increase in annual operating costs, hurting the industry every year. The industry cannot absorb these costs on their own and would have to be passed on to the companies' clients, including the government and banks.

#### *Changes Needed for Equipment:*

Changes to weight of circulating coin would require adjustments to coin sorters and coin handling equipment, such as fork lifts, bins, skids, and coin bags. Along with a coin's dimensions, sorters use the coin's metal composition to identify its denomination. Proximity sensors in the sorters detect changes to an electric field that is generated around the coin; this is the electromagnetic signature of the coin. If the Mint chooses to circulate coins of alternative metals, sorters will have to be reprogrammed to accurately identify and differentiate between the coins.

Heavier coins would also cause more wear and tear on all of the equipment, forcing armored car companies to update and/or replace machinery more quickly than is currently required. These consequences would result in a far larger demand on the armored car industry, hurting operations and the economy and forcing the industry to pass on the new costs to clients, including the federal government.

#### *Transportation Concerns:*

An increase in weight would also significantly impact armored cars' transportation costs. Many of NACA's trucks already reach the weight limit when carrying a standard order for a client. Should the weight of coins increase, trucks will only be capable of transporting smaller orders. Such changes will result in armored car companies' needing to use more trucks to carry the same quantity of coins. The heavier coins will result in substantially higher fuel costs and additional trucks on the road, impacting both traffic and the environment – the latter of which would be counter to federal policy to reduce greenhouse gases. Transportation costs would be significantly higher than is currently experienced. Heavier coins and more trips will take their own toll on the trucks, causing more wear and tear and leading to more common and more costly maintenance on the vehicles. These costs will be passed on to customers, including the federal government.

#### *Safety for Employees:*

Increases in weight add injury risk to employees of armored car companies. Heavier coins fall out of sorters, coin wrapping machines, and other coin handling machinery. The coins fall out of the drum, leaving operators and maintenance personnel at risk when trying to remove the coins and repair the machine. Such issues are already experienced by coin processing employees. Currently circulating nickels, which are heavier coins compared to their diameter, already fall through the machine, leaving employees at risk when attempting to fix the machines.

In addition to these risks, heavier coins could lead to injuries for employees who handle boxes and bags of coins during operations. Armored car companies would either be susceptible to and liable for

workplace injuries and would likely need to establish maximum weights for coin containers. Such a limit would lead to more coin containers as well as more employees needed to move the same quantity of coins, slowing down operations and possibly requiring additional employees. Once again, we can see that changes to coin composition and weight would easily lead to higher costs for the armored car industry and the clients who require their services.

### **Labor and Storage Costs to be Considered**

Should the Mint decide to change any of the coins currently in circulation, the CTC report estimates at least one additional full-time employee making \$50 per hour would be needed at every one of the two hundred terminals nationwide if diameter, weight, or both dimensions are changed. The estimated cost for these hires is expected to reach \$21 million per year for the industry, a gross figure that would greatly diminish the armored car companies' resources and immediately depress their ability to hire new employees in other areas of their operations that are lacking adequate personnel. Even though the figure is substantial, NACA considers it a very low estimate and believes one fulltime employee would not be capable of the separation and sorting responsibilities at each terminal. More than one employee would be required at coin terminals, resulting in a far larger cost to the industry than the estimated \$21 million annual payout.

The separation of denominations and incumbent versus new coins required during the transition period would decrease production and slow down operations. These space and separation requirements would overwhelm coin terminals throughout the country, many of which are already at their maximum capacity. Should new coins be introduced, the space necessary to prevent the coins from mixing would substantially increase the cost of maintenance and safety concerns for employees in the terminals. Some locations would no longer be able to serve as coin terminals for the Federal Reserve due to lack of floor space.

### **Experiences during Canada's Recent Transition to Steel-Plated Coins**

In 2012 Canada introduced steel-plated one- and two-dollar coins into circulation. Several of NACA's member companies experienced the problems that arose during the transition. In order to successfully separate incumbent and newly introduced coins, one member had to modify the sorters to be capable of handling the transition. Currently the company has two coin sorters in Canada performing this function. The company did not have coin wrapping machines in operation at the time of the transition, so accurate assessments of the effects of the transition are not available.

### **Transition Time Needed to Accommodate for New Coinage**

The CTC report recommended a two- to three-year transition period for relevant industries to prepare for the new coinage. NACA believes this would not be an adequate period of time to fully prepare machinery and operations for the introduction of new coinage. We therefore recommend that if the Mint does recommend any changes to the coinage, it extend the transition period to a minimum of five years. This would allow armored car companies the time to fully analyze any new coinage being introduced, comprehend the effects of the transition in its entirety, and identify and implement the least costly upgrades for machinery and restructuring of operations and personnel.

We also urge the Mint to include the armored car industry in the designing of new coinage and testing of the prototypes prior to publication of any final product. Armored car companies are vital to the free flow of currency, and excluding them from the process would invite unnecessary costs in

implementation. NACA members should have the opportunity to provide input to the Mint on the consequences, both positive and negative, of any coin that may be introduced.

The industry should have as much time as possible to adjust its machinery, operations, and personnel as needed. Should the Mint choose to move forward with new coinage, NACA recommends providing the armored car industry with a final product early in the process in order to have the most time possible to best adapt to the new coinage.

### **Conclusion and Final Thoughts to be Considered**

The National Armored Car Association does not believe the United States Mint should alter the currently circulating coinage. As the CTC report expressly states, the costs associated and born by the stakeholders “would dwarf any savings realized by the United States Mint.” CTC estimated a probable conversion cost of \$1.45 billion, a figure that cannot be ignored in an already stagnant economy.

The armored car industry cannot handle the costs of the changes being considered. The changes will not only result in a one-time cost for machinery upgrades and reprogramming. As the report explains, the Treasury currently introduces newly minted coins into circulation at a rate of 3%, meaning the armored car industry, as well as every other industry that deals with coinage in daily operations, will be dealing with the costs associated with the transition for decades to come. More employees will be needed to sort out the new coins from the incumbents, count every coin bag that comes to the coin terminals, carry and move coin bags, and drive the necessary trucks to complete deliveries. Machinery in coin terminals and trucks on the road will be an annual concern and require maintenance on a more frequent basis. Space in coin terminals will be on short supply and increasingly larger demand. In conclusion the industry’s costs of the transition will greatly diminish its resources and hinder its ability to fulfill its obligations to clients, including the federal government.

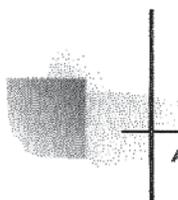
Based on the findings above, NACA recommends no changes be made at this time to the sizes or metallic composition of currently circulating US coins. We appreciate the opportunity to comment on the Mint’s Request for Information and thank the agency for its consideration of our position.

Sincerely,

A handwritten signature in black ink, appearing to read "Jennifer Ortega". The signature is fluid and cursive, with the first name being more prominent.

Jennifer Ortega  
Manager, Government Relations  
National Armored Car Association

## 5.7. American Amusement Machine Association



# AAMA

AMERICAN AMUSEMENT MACHINE ASSOCIATION

Tuesday, June 3, 2014

Coin Stakeholders Response  
Office of Coin Studies  
United States Mint  
801 9th St NW, 2nd Floor  
Washington, DC 20001

These comments are submitted for the record to the United States Mint, on behalf of the American Amusement Machines Association (AAMA) in response to your recent request, included in the Federal Register, for comments on potential alternative metal compositions for circulating coinage pursuant to the Coin Modernization, Oversight, and Continuity Act of 2010 (Pub. L. 111- 302).

We appreciate the opportunity to comment.

The AAMA is a domestic non-profit trade organization representing the manufacturers, distributors, and part suppliers of the coin-operated amusement industry. AAMA was founded in 1981 by a small group of amusement coin-operated machine manufacturers concerned with the future of their industry. A Board of Directors, selected by its members, governs the AAMA. Committees work with the Association staff to develop programs to promote and protect the industry. Members donate their time, effort, and expertise on a voluntary basis. Today we have a staff of three who are responsible for the day-to-day activities of the organization as well as following the strategic direction set by our Board of Directors

Now in its 33th year, the AAMA serves its membership through legislative efforts, promotional arenas, trade shows coordination and much more. It is the AAMA's job to serve as the voice for these segments of the coin-operated and out-of-home entertainment amusement machine industry.

The coin-operated amusement industry has its roots in the city of Chicago. The first popular "arcade games" were early amusement park midway games such as shooting galleries, ball toss games, and the earliest coin-operated machines, such as those that claim to tell a person their fortune or played mechanical music. The old midways of 1920s-era amusement parks provided the inspiration and atmosphere of later arcade games.

In the 1930s, the first coin-operated pinball machines were made. These early amusement machines were distinct from their later electronic cousins in that they were made of wood, also they did not have plungers or lit-up bonus surfaces on the playing field, and used mechanical instead of electronic scoring readouts.

Today, a game (or coin-op) is a coin-operated entertainment machine, usually installed in public businesses, such as restaurants, bars, and particularly in family entertainment centers. Most games are video games, pinball machines, electro-mechanical games, pool tables, redemption games, and merchandisers. Furthermore, the industry encompasses the jukebox segment of the market. Across the United States there are over 200,000 coin-operated jukeboxes, ranging from the old 45's, CD's and the latest version, the internet Juke Box.

In addition to restaurants and family entertainment centers, these devices are also found in bowling alleys, college campuses, dormitories, laundromats, movie theaters, supermarkets, shopping malls, airports, ice rinks, corner shops, truck stops, bar/pubs, hotels, and even bakeries. In short, coin-operated games are popular in places open to the public where people are likely to have free time. The owners of this equipment, for the most part, are small family run, multi-generational businesses, located in every state across America. They are Main Street businesses.



President's "E" Award Recipient

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✉ [information@coin-op.org](mailto:information@coin-op.org)

[www.coin-op.org](http://www.coin-op.org)

We estimate that there are over 1 million coin operated amusement machines currently in "play" in the United States. Today we believe there are over 250,000 coin-operated pool tables across the country. We estimate that these pool tables accept over 4 billion quarters each year. These pool tables will not accept two different types of quarters and thus, would become obsolete.

Changing the composition of coins will require expensive modifications to coin mechanisms by the coin-operated amusement industry. For example, if changes to the metallic content occur, this will require expensive reprogramming or replacement of most coin acceptors. Such reprogramming or replacement will require a technician to visit all the locations to service coin-operated machines and reprogram or replace the coin acceptors. Further, if mechanical changes are made to the coins, such as changes in sizes or weights, then even more expensive changes to coin acceptors will be needed. In almost every case, the coin acceptors will then need to be replaced at significant expense.

Our assumption is that the older coins will be kept in circulation for a period to time as well. This will lead to a much more time consuming and labor intensive process for sorting, counting and weighing the coin. This will affect the entire economy across the United States.

A change in the metallic content will also increase the risk of the fraudulent use of counterfeit coins ("slugs") or tokens in our machines, again leading to a loss in revenues.

Changes in metallic content would force coin acceptor manufacturers to increase the verification security level of coins thereby restricting and lowering the acceptance rate of the genuine coins to protect against counterfeiting or misreading of the coins. This could lead to customer dissatisfaction occurring by apparently good coins being rejected and revenues will be negatively affected by this rejection.

Changes in the metallic content of coins will cost coin-operated amusement machine operators between \$100-\$500 per machine in upgrade costs to accept new coins. It is estimated that there are approximately 1 million coin-operated amusement machines in the United States. This equals an estimated burden on the coin operated amusement industry of close to one half a billion dollars. Furthermore, this costly upgrade will provide no return on investment (ROI) for amusement machine operators. We anticipate this business financial burden will lead to job losses and for some enough to close their doors, thus having a negative impact on America's recovering economy.

We appreciate the underlying theme of this study; that the American government should look for ways to save taxpayers dollars. This notion is shared, not just by our members, but also by taxpayers across the country. Yet for our members and the industry we work in, proposed changes to the size and content of coinage will result in severe economic harm, for very little economic gain to the American taxpayer.

Thank you, once again for the opportunity to comment.

Sincerely yours,  
American Amusement Machine Association



John Schultz, Executive Vice President



Pete Gustafson, President of the Board of Directors

CC: Board of Directors, AAMA

## 5.8. Amusement & Music Operators Association



This letter is in response to your recent request, included in the Federal Register, for comments on potential alternative metal compositions for circulating coinage pursuant to the Coin Modernization, Oversight, and Continuity Act of 2010 (Pub. L. 111- 302).

My name is Jack Kelleher, executive vice president of the Amusement & Music Operators Association (AMOA). I acknowledge the proactive outreach efforts the Office of Coin Studies has made during this process and appreciate the opportunity to provide input from my membership on the proposed changes to coin content.

AMOA was born January 21, 1948, when 68 jukebox owners from around the country banded together to fight the repeal of the jukebox royalty exemption. The modest beginning, created by a common cause, revealed the fierce passion that many of this industry's small business owners shared about their industry.

Today, the AMOA is a diverse group of companies engaged in the coin-operated amusement industry. Our products are jukeboxes, video games, pinball machines, pool tables, electronic soft tip dart boards, foosball, redemption and merchandising equipment, as well as other attractions activated by the insertion of coins, currency or other means of payment. Our members include: operators who own, place and service currency-activated equipment in a location; manufacturers of coin-operated equipment; suppliers of the industry who provide parts or accessories, such as monitors, bill changers, locks, etc.; and distributors who market and add value in the industry supply chain.

We have approximately 1,000 members across the United States. These members represent close to 10,000 jobs.

On the Mint's plan to recommend changes to the composition of coins, our industry has serious concerns. Any changes to coins will require expensive modifications to coin mechanisms by the coin-operated amusement industry. For example, if changes to metallic content occur, it will result in expensive reprogramming or replacement of most coin acceptors. Such reprogramming or replacement will require a technician to visit all the locations where coin-operated machines are operated and serviced. Further, if mechanical alterations are made to the coins, such as changes in sizes or weights, then even more expensive modifications to coin acceptors will be needed. In such cases, the coin acceptors will most likely need to be replaced at significant expense.

Changes in the metallic content of coins will cost coin-operated equipment operators between \$100-\$500 per machine in upgrade costs to accept new coins. With an estimated one million coin-operated amusement, music and vending machines in the United States, this equates to \$500 million in added cost to an industry dominated by small to mid-sized entrepreneurial business owners.

Furthermore, there is no return on investment for operators on such equipment upgrades. It simply places an added financial outlay that stymies investment in the enterprise, leads to job losses and ultimately hinders our recovering economy.

A change in the metallic content will also increase the risk of the fraudulent use of counterfeit coins ("slugs") or tokens in our machines, again leading to a loss in revenues

This, in turn, would force coin acceptor manufacturers to increase the verification security level of coins, thereby restricting and lowering the acceptance rate of the genuine coins to protect against counterfeiting or misreading of the coins. This will cause our customers—the users and players of our equipment—to become frustrated when apparently good coins are rejected. We cannot afford—figuratively and literally—dissatisfied patrons/voters.

And these revenue losses will not be confined to our businesses, but since we generally share our revenues with the locations where operator members place machines, there are literally hundreds of thousands of other small businesses that will be negatively impacted as well.

I ask you to look at the Canadian experience. In a cost-savings effort, the new Canadian coins used multi-ply steel technology, which makes them cheaper to mint than their alloy predecessors. It was estimated the upgrades would cost the Canadian vending industry C\$40 million to recalibrate what it calls "coin-acceptance equipment." Changes to the metallic content of circulating coins in Canada have had a negative impact for many in the Canadian coin-acceptance industry. Following the Canadian coin updates, a May 2012 *Wall Street Journal* article cites the "headaches (and expense) for vending-machine operators and city governments who have to recalibrate their coin slots and local parking meters."

To put it bluntly, if you change the content of the quarter, the vast majority of my members will be forced to make drastic changes to their companies that, at best, will negatively affect their ability to grow, and at worst, serve as one more body blow that leads to employee layoffs and possibly even business closure.

Thank you for your consideration of our members' concerns. I repeat our industry's mantra on this matter: "Don't Change Our Change!"

Sincerely,



Jack Kelleher  
Executive Vice President  
Amusement & Music Operators Association

## 5.9. Coin Laundry Association



June 18, 2014

Coin Stakeholders Response  
Office of Coin Studies  
United States Mint  
801 9<sup>th</sup> St. NW, 2<sup>nd</sup> Floor  
Washington, D.C. 20001

These comments are submitted for the record to the United States Mint, on behalf of the Coin Laundry Association (CLA) in response to the recent request, included in the Federal Register, for comments on potential alternative metal compositions for circulating coinage pursuant to the Coin Modernization, Oversight and Continuity Act of 2010 (Pub.L.111-302).

The Coin Laundry Association (CLA) supports the U.S. Mint's efforts to research ways to improve the cost-efficiency with which it manufactures coinage. As an industry made up of more than 20,000 small-business owners operating 30,000 self-service laundries throughout the United States, we applaud all efforts to save taxpayers' dollars. We believe that these efforts ought to be focused on the denominations whose costs to manufacture exceed their face values.

Transactions in our industry are conducted via the quarter more than 90% of the time. We understand that the quarter is efficient to manufacturer at a cost of less than 11 cents, according to the United States Mint. If the quarter were to be changed in a non-seamless manner, it may require a broad and expensive re-tooling of the approximately 27,000 laundries in the U.S. that use quarters.

These 27,000 laundries each feature an average of 58 washers and dryers per location – of course, some have many more machines. That math produces a conservative estimate of 1,566,000 coin mechanisms in our laundries today.

To replace and update these coin mechanisms with new ones designed to accommodate newly constituted quarters (along with the legacy quarter) would put an enormous financial burden on the shoulders of Mom and Pop laundry owners across the country. With parts costs combined with labor expenses, each coin mechanism would carry a replacement cost of at least \$100 to \$300 each – or a total re-equipping cost of \$156,000,000 to \$470,000,000 for our businesses. This conservative estimate does not include the millions in expenditures to retrofit coin changers, coin counters, soap venders – along with soda and snack machines. This estimate also doesn't account for the very large, multi-housing laundry industry, which provides laundry services in apartments and dormitories.

Facing re-equipping costs like these would force many laundries to close their doors. Others would be compelled to raise vend prices to offset the costs.

1

Your Coin Laundry Experts  
1660 Midwest Road, Suite 206 Tel (630) 953-7920 [www.coinlaundry.org](http://www.coinlaundry.org)  
Oakbrook Terrace, IL 60181 Fax (630) 953-7925 [www.plenzlaundry.com](http://www.plenzlaundry.com)

Our customers are an important stakeholder as well. Our laundries provide a basic public health service to more than 7 million families each week. These families are often among the lowest income members of the community and can ill-afford increases to the costs of doing laundry. The typical laundromat customer comes from a household income of just \$30,000 per year – just a notch above the poverty level.

As small-business owners, our members rely on gaining any efficiency possible in operating the business. With that goal in mind, many of our members weigh their weekly collections as an efficient way to process the coins collected. If in the future two quarters with two different weights were to co-circulate, this very important operational efficiency would be lost, costing business owners valuable time and effort. In fact, a new requirement to sort quarters would likely result in the need to invest in additional coin-sorting equipment.

When considering the potential for hundreds of millions of dollars of costs to our industry – and with many of our members still struggling through a sluggish economic recovery, **The Coin Laundry Association** requests that the **U.S. quarter remain unchanged**.

The CLA is also proud to be part of the Don't Change Our Change coalition and the collective effort to educate the United States Mint and legislators. Any change to U.S. coinage that would require a wholesale re-equipping of coin mechanisms would exact a devastating cost to these small businesses.

On behalf of the retail, self-service laundry industry, I would like to thank the United States Mint and its Office of Coin Studies for including us in this important process. You have been excellent partners in educating self-service laundry owners about this complex issue. We stand ready to provide whatever additional information or input might be helpful to you in this endeavor.

Sincerely,



Brian R. Wallace, President/CEO

Coin Laundry Association

15660 Midwest Road, Suite 205

Oakbrook Terrace, IL 60181

[www.coinlaundry.org](http://www.coinlaundry.org)

## 5.10. Canadian Automatic Merchandising Association

To whom it may concern,

As part of our long-term relationship with NAMA, the Canadian Automatic Merchandising Association will fully support NAMA's position on potential coinage changes in the US.

As the Canadian public has experienced several currency (Coin and Bank Note) changes over the past 18 years, there has been 3 distinct coinage change events, in 1996, 1999, and 2012. In all of these events, the financial burden was more impactful on businesses that provide unattended commerce. The traditional attended retail environments felt little to no financial effect on a change in weight, Electromagnetic Signature, diameter, or thickness of coins.

The Canadian unattended business segment has bore all the cost of these changes, with some companies not being able to manage the conversion costs, resulting in bankruptcy or the sale of their business. This was reported during or shortly after mandated coinage changes in the 1990's. The primary reason was associated to antiquated or less sophisticated coin recognition technology, which dictated the replacement to more modern electronic devices or the need to send those less sophisticated devices in for servicing, leaving machines out of order for several weeks, at a time. This had a significant impact on revenue earned by the business owner which limited cash flow and drove down the flexibility of their business to grow for a few years. As it related to the 1996 change from the \$2 bank note to the \$2 coin, many business owners leveraged the physical transition from paper to alloy as a justification to increase selling price to the consumer. This allowed the operator to reclaim some of the loss associated from the conversion of the equipment and in eyes of the public was acceptable. However, most operators believed, this strategy could not be done with a like-for-like transition, such as, a change in alloys used. The Canadian consumer views a 25 cent **coin** as a 25 cent **coin** which should be accepted on a vending machine easily. The consumer does not look at the mintage year on a coin before putting it into a vending machine to see if it will work or gain understanding why it did not accept. In fact, some less informed or less interested Canadian operators, took years to upgrade their systems to accept the 1999 issued multiply plated steel coins that were circulation. They waited until the circulation based tilted in favor of the MPPS coins before converting. I consider this a less than optimal business decision to deal with the change but it illustrates the long term financial impact this can have. Conversions that spread over years, result is a reduced confidence in the consumer that the vending machine is a reliable source to purchase product from and becomes a greater industry problem.

The largest challenge with making a coin change on the Canadian unattended industries was the cost to move from antiquated coin accepting devices to new modern devices which have in-field / in-machine upgrading options. It is not just the replacement costs, but the labor to execute an upgrade program and the potential costs to modernize the machines themselves to accept the newer coin accepting devices. Once new technology is in place, the upgrade process is easier for the next time a coin change is needed, but still has significant labor cost to execute. This is an important point to understand, as it relates to selecting secure materials or a unique blend of materials to produce a new iteration of a coin. If the fraud potential increases because less secure materials are used, the likelihood of reprogramming increases as well. Although frauds tend to be a local to regional problem (not nationwide), the costs would be similar to address a fraud as it would be for a new coin on business owner.

Regardless of when a coin change occurs, continued open dialogue is necessary with all stakeholders throughout the process and roll out programs require significant communication plans to minimize economic impact to the industry business owners and maximize public awareness.

*Ed Kozma*

*President*

*Canadian Automatic Merchandising Association*

*2233 Argentia Road, Suite 100*

*Mississauga, ON L5N 2X7*

*Tel.: 905-826-7695 | Fax: 905-826-4873*

*ekozma@vending-cama.com*

*www.vending-cama.com \_*

## 5.11. International Association of Amusement Parks and Attractions

### International Association of Amusement Parks and Attractions

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Alexandria, VA 22314 USA

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Fax: +1 703/836-1192  
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[www.IAAPA.org](http://www.IAAPA.org)



Office of Coin Studies  
United States Mint  
801 9th Street N.W.  
Washington, DC 20220  
Via email: [Coin.StakeholdersResponse@usmint.treas.gov](mailto:Coin.StakeholdersResponse@usmint.treas.gov)

June 20, 2014

### Re: Notice with Request for Comment on Effects of Changing the Metal Composition of Circulating United States Coinage

The International Association of Amusement Parks and Attractions (IAAPA) represents more than 4,500 facility, supplier, and individual members from more than 90 countries. In the United States, IAAPA has members in all 50 states. Member facilities include amusement and theme parks, water parks, attractions, family entertainment centers, arcades, zoos, aquariums, museums, science centers, and resorts. The attractions industry in the United States directly provides 1.275 million jobs, and has a total direct economic impact of \$91.4 billion.

IAAPA is writing in response to the recent Notice with Request for Comments on the effects of changing qualities such as weight, color and electromagnetic signature of our circulating coinage. IAAPA's members appreciate the desire to reduce the costs associated with manufacturing coins, however changing the make-up or size of coins would have negative financial ramifications for their businesses.

#### Costs to Update Equipment

Any change to coinage will result in increased costs to update equipment, and address issues with co-circulation of the old and new currencies. These costs may affect the attractions industry's ability to grow and create jobs. It is estimated changes in the metallic content or size of coins will cost coin operated machine operators between \$100 and \$500 per machine in upgrade costs to accept new coins. There are approximately ten million coin-operated machines in the United States, which leads to an estimated burden of close to \$5 billion. There is no return on investment for these equipment upgrades.

#### Challenge with co-circulation

Co-circulation, and the uncertainty associated with the length of period established by the government, poses a significant technological and financial burden on the industry. To date, no mechanism exists that can accept and process coins with different electronic signatures. Until this technology is created, operators and consumers will experience faulty machines. It is not out of the realm of expectations to assume that should

#### Regional Offices:

IAAPA Asia Pacific  
Hong Kong SAR, China

IAAPA Europe  
Brussels, Belgium

IAAPA Latin America  
México City, México

breakdowns frequently occur, machines will be pulled from service, hurting business owners and limiting consumer choice.

IAAPA appreciates the opportunity to discuss the challenges the industry will face if the Mint alters the qualities of coinage. Should you have additional questions, please do not hesitate to contact me at [rdavis@IAAPA.org](mailto:rdavis@IAAPA.org) or 703.836.4800.

Sincerely,

A handwritten signature in cursive script that reads "Randy Davis".

Randy Davis  
SVP, Safety & Advocacy

## 5.12. International Parking Institute



### **Comments from the International Parking Institute to the United States Mint's Federal Register Notice of April 10, 2014**

The International Parking Institute (IPI), the world's largest organization representing the parking industry, is providing the following comments regarding the April 10, 2014 Notice regarding factors identified as a result of the Bureau's research and development efforts on alternative metals for circulating United States coinage.

#### Background

For more than 50 years, IPI has provided leadership, information, and training to advance the parking profession. The association's membership is comprised of organizations managing, owning, constructing and operating parking programs here in the United States and in 46 countries across the globe. IPI members include cities, academic institutions, commercial operators, port authorities, hospitals and healthcare facilities, airports, corporate complexes, transit and transportation agencies, retail, entertainment and sports centers, architects, engineers, urban planners, as well as all of the companies manufacturing or providing equipment, software or services to the parking industry.

The average automobile stays parked approximately 96 percent of its life. In the United States, parking is considered a service to customers traveling to work, shop, business, social, recreational, entertainment, education, medical and many other purposes. Parking is provided by a broad spectrum of public and private companies and in many cases, fees are collected to pay for this service.

Parking inventories are typically categorized by space type, including on-street, surface lot, multi-story garage/structure, and private. It is estimated that the United States has more than 220 million commercial parking spaces. IPI estimates that, at a minimum, half this number is provided on a for-pay basis, with this percentage anticipated to increase every year.

The U.S. parking industry generates over \$30 billion in annual revenues.

#### Metered Parking

Since the development of the parking meter in 1935, both public and private entities have been able to manage on- and off-street parking. The total number of parking meter spaces is estimated to be approximately two million metered spaces.

The construction of the parking meter has evolved since 1935. The outside shell has gone from steel to cast iron or zinc alloy offering greater durability and a reduction in vandalism. The mechanisms inside the meter have evolved from spears and gears to electronic components.

1330 Braddock Place  
Suite 350  
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F: 703.566.2267

**parking.org**

Parking meters have been calibrated to accept various U.S. coins (primarily quarters). Precise calibration of the meter's mechanism can detect and avoid fraudulent, counterfeit coins (slugs). Therefore, a coin's material, construction, dimension, thickness and electrical/magnetic properties play an important role in whether the coin will be accepted for payment.

### Technology Improvements

#### Mechanical to Digital

Over the past decade, parking control systems have transitioned from mechanical, electro-mechanical, and electronic-only to computer-based systems, with access and revenue management software offering central reporting and control of a facility. This offers the ability to provide enhanced functionality and handle scenarios such as credit card in/credit card out, debit cards, etc., in real time. New generations of IP-based addressable "smart" equipment are able to report their operational status and be controlled via Ethernet networks and existing internet infrastructure. These technologies also allow the support and monitoring of multiple facilities across town, around the country, or across the globe. Wireless communications are also playing an ever-increasing role.

#### Cash to eMoney

eMoney (electronic payment) is a non-cash payment that is exchanged electronically. It involves the use of a computer network, the internet and, in some cases, stored value systems. This takes advantage of varied and new technologies, with use and acceptance starting in Europe.

eMoney does have costs associated with processing fees, but generally these are less than cash handling. It is also a more secure payment method with greatly-reduced possibilities for theft as compared with a cash-based system.

The most widely-used media for electronic payment is the credit/debit card. These can be accepted in most locations, even as "payment on the go" with the addition of card readers that attach directly to many smartphones and use the cellular network for communication to a clearinghouse. This combination allows customers to pay for any good or service any time, anywhere.

Mobile commerce is a growing area of technology. A smartphone device can be used to make payments for all kinds of goods and services. Most commonly, the device is used as a credential which is linked to a credit card or bank account from which funds are drawn and transferred to the merchant (parking operation). Sometimes the payment application is generic and can be used for any purpose; in other cases, the payment is tied to a transaction in parking (such as pay-by-cell). Pay-by-cell merges the phone with contactless credit card and gives the customer the ability to communicate with devices locally.

#### On- and Off-Street Parking

On-street parking is also becoming high-tech. Single space meters can take credit cards, making payment easier. The multi-space meter reduces both the hardware and the revenue collection time and personnel needed. A pay-and-display multi-space meter typically manages 15-20 spaces and is great for short-term studies of parking use. Pay-by-cell (PBC) is now available in more than 250 locations in North America.

#### Effect of Using Alternative Metals in U.S. Coins

Potential changes to current coin construction, content, weight, dimension or EMS will affect how effectively the parking meter operates and, ultimately, the customer's experiences parking their car. As currently stated, change to the coin [U.S. Mint calculates that coins can stay in circulation for up to 30 years] will require that parking meters be retrofitted to accept current and proposed new coins for the foreseeable future.

Not knowing the actual changes being considered to U.S. coins and after discussions with vendors and suppliers of parking equipment, it is estimated that retrofitting parking meters could cost \$200-\$300 per machine (excluding labor costs). These costs, in addition to the labor required, will be directly absorbed by the meters' owners (cities/municipalities). Retrofitting or replacing meters to recognize new coins could cost the meters' owners more than \$400,000,000.

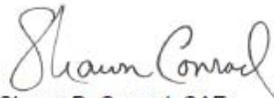
#### Transition & Implementation Period

Due to the significant number of parking meters that would require retrofitting to recognize both new and old coins, the parking industry requests three to five years to implement and upgrade our industry's equipment should a change be made to U.S. coins. Because, in many cases, revenue generated by parking management supports many other government functions (police, fire, emergency rescue, road maintenance), this transition period would also benefit the cities and local authorities to allocate their costs and adjust their budgets to minimize any disruption to service over a longer period of time.

The International Parking Institute applauds the U.S. Mint's efforts to provide open communications and dialogue among all key stakeholders during this notice period.

Thank you for considering the International Parking Institute's comments.

Sincerely,



Shawn D. Conrad, CAE  
Executive Director

## 5.13. Multi-housing Laundry Association

**LAW OFFICES**  
**SONOSKY, CHAMBERS, SACHSE,**  
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LLOYD BENTON MILLER  
DOUGLAS B. L. ENDRESON  
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MYRA M. MUNSON (AK)\*  
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JAMES E. GLAZE  
GARY F. BROWNELL (NM)\*  
COLIN C. HAMPSON  
RICHARD D. MONKMAN (AK)\*  
MARISSA K. FLANNERY (AK)\*  
MATTHEW S. JAFFE  
WILLIAM F. STEPHENS  
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SAMUEL E. ENNIS (CA)\*  
LIA C. CARPENETI (AK)\*  
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ARTHUR LAZARUS, JR  
ROGER W. DUBROCK (AK)\*  
KAY E. MAASSEN GOUWENS (AK)\*  
JOAN M. WILSON (AK)\*

\*NOT ADMITTED IN D.C.

Coin Stakeholder Response  
Office of Coin Studies  
United States Mint  
801 9th Street, N.W.  
Washington, D.C. 20220

### Gentlepersons:

We serve as counsel to the Multi-housing Laundry Association (MLA), and submit these comments to the United States Mint on MLA's behalf in response to the April 10, 2014 Federal Register notice seeking comments of coin industry stakeholders on the impacts of changing the metal composition of United States coinage. We understand from the Federal Register notice that the Mint is especially interested in impacts of changing the weight and electromagnetic signature of existing coinage.

MLA is the trade association that represents the laundry service companies that operate laundry machines in central laundry rooms in multi-housing dwellings – such as apartment buildings, college dormitories and military bases. MLA's member companies and other companies in this industry purchase and install washers and dryers in central laundry rooms throughout the United States. Companies in this industry maintain, repair, service and replace these machines and regularly collect the coins paid into the coin boxes. There are approximately

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ALBUQUERQUE, NM OFFICE  
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ALBUQUERQUE, NM 87102  
(505) 247-0147  
FAX (505) 843-6912

137203-1

1.8 million machines nationwide in central laundry rooms that receive cash payments, almost all in quarters.

If the quarter coin is altered in weight or electromagnetic signature, MLA believes that coin acceptance devices in the 1.8 million machines in central laundry rooms that now receive coin payments would need to be replaced. MLA estimates the one-time cost of paying for new devices would be about \$100 per machine, and that the one-time labor cost of installing them would be about \$100 per device – totaling \$360 million in one-time costs for the entire industry.

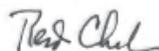
This amount could be increased if the Mint were to change the weight or electromagnetic signature of the quarter coin while also leaving existing quarter coins in circulation. (MLA understands from the stakeholders meeting held at the Mint on March 13, 2014 that an existing quarter coin currently remains in circulation for an average of thirty years). In that event, coin acceptance devices would need to be adapted to accommodate both types of quarters (differing in weight or magnetic characteristics) and the expense to the industry MLA represents would be even greater.

By contrast, MLA understands that the Alternative Metals Study commissioned by the U.S. Mint concluded that altering the quarter coin would save the Mint in the range of only \$10 million a year (see Alternative Metals Study, pp. 166-169 and Table 3-6). Given the very substantial disparity between the savings to the Mint and the costs that any change in the weight or electromagnetic signature of the quarter coin would impose on MLA's members and other companies in this single industry alone, MLA strongly opposes any such change.

Please do not hesitate to contact me if you have any questions of MLA or wish to discuss this matter further.

Kind personal regards.

Sincerely,



Reid Peyton Chambers

cc (by email):

Robert Doyle  
Penney DePas  
Harvey Gitlin  
Mike Marsden  
Len Samela  
Rodd Schaffer  
Allen Stanwix

## 5.14. National Automatic Merchandising Association



Serving the Vending and Refreshment Services Industry

June 17, 2014

Coin Stakeholders Response  
Office of Coin Studies  
United States Mint  
801 9th Street NW.  
Washington, DC 20220

RE: Coin Modernization, Oversight, and Continuity Act of 2010 Federal Register Request for Comments

Dear Sir or Madame,

This letter is in response to your recent request, included in the Federal Register, for comments on potential alternative metal compositions for circulating coinage pursuant to the Coin Modernization, Oversight, and Continuity Act of 2010 (CMOCA) (Pub. L. 111-302). The CMOCA authorized the Secretary of the Treasury to conduct research and development (R&D) on alternative metallic materials for all circulating coins with the goal of reducing production costs.

Founded in 1936, NAMA is the association representing the \$42 billion U.S. vending and refreshment services industry. With 1800 member companies – including many of the world's most recognized brands – NAMA provides advocacy, education and research to its membership.

Each day, millions of American consumers choose vending to purchase a broad range of products with the use of U.S. coin currency. Consumers are able to make their purchases with confidence, as the industry has a very high trouble-free vend rate due to consistencies in coin composition and currency-reading technology.

Paper and metallic currency continue to be the main form of payment used for buying food and beverages from vending machines representing over 90% of industry transactions. This fact further emphasizes the impact that recommended changes to coins will have on the vending channel and why they must be carefully researched and considered before being presented to Congress.

The vending and refreshment services industry understands and appreciates the U.S. Mint's concern with cost containment for the production and distribution of circulating coinage, especially as it relates to the penny and nickel denominations. However the Mint is reminded that its overall coin production and distribution system creates a net profit and that its own data has shown that costs of metals fluctuate frequently within the commodity markets.<sup>40</sup>

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When passed, NAMA supported the Coin Modernization, Oversight, and Continuity Act (CMOCA) because it was believed that the bill language protected vending operators and the coin acceptance community from potentially billions of dollars of unnecessary new coin validation costs. However, as a result of the Mint's 2012 Biennial Report to the Congress on the Current Status of Coin Production Costs and Analysis of Alternative Content and recent developments, NAMA is concerned it will be difficult for the Mint to recommend a metallic content that significantly reduces the costs to produce circulating coins while balancing the bill's requirement that the Mint must consider factors relevant to the ease of use and ability to co-circulate of new coinage materials, including the effect on vending machines and commercial coin processing equipment and making certain, to the greatest extent practicable, that any new coins work without interruption in existing coin acceptance equipment without modification.<sup>41</sup>

In addition to the costs concerns, there are other issues that should be considered during the Mint's research and development efforts.

### **Impact on Small Business**

There are an estimated 7 million food, beverage, and product vending machines in the U.S. and the costs to accommodate changes in these machines for new coins would range from \$100-\$500 per machine. As highlighted in the Mint's 2012 Biennial Report to Congress, changes in the metallic content of coins could create a financial burden on the vending industry, which is comprised of over 90% small businesses.<sup>42</sup>

"The vending machine industry estimates that the best and worst case cost scenarios to modify the vending machines in the United States to accept coins of the same size and similar weight as existing coinage but with a different electro-magnetic signature would be between \$700 million and \$3.5 billion, assuming a one-time, standalone, universal upgrade. CTC's analysis includes consideration of the refresh and maintenance cycles of existing vending machines and places the conversion estimate at between \$380 to \$630 million."

NAMA is opposed to any changes in coins that would place a financial burden on the vending industry or cause an interruption of service to existing coin acceptance equipment without modification.

### **Changes to Acceptance Rates of Coins**

Metallic content updates could change the acceptance rates of coins causing customer frustration resulting in lower sales and decreased revenue to all levels of government. A May 2012 Wall Street Journal article cites examples of this phenomenon following the release of Canada's new loonies and toonies—its \$1 and \$2 coins.

"Canada's just-released new loonies and toonies—its \$1 and \$2 coins—are slightly lighter than the old ones. And that's causing a lot of headaches (and expense) for vending-machine operators and city governments who have to recalibrate their coin slots and local parking meters. Ottawa may be saving money with the new loonies and toonies, but the Toronto Parking Authority says it will cost more than C\$1 million to recalibrate the city's 3,000 parking meters, about C\$345 per machine. And Calgary says it's budgeted over C\$30,000 to convert its meters. Vending-machine operators, not surprisingly, are not pleased, either. The Canada Gazette, the government's official newsletter, estimated earlier this year that it'll cost the vending industry C\$40 million to

recalibrate what it calls “coin-acceptance equipment.” Canadian media are already carrying reports of vending-machine abuse as the new coins keep returning to the slot at the bottom of machines. One Laundromat owner in Toronto says she’s having to spend C\$5000 just to recalibrate the machines in her place of business.”<sup>43</sup>

Changes in metallic content may force coin validator manufacturers to increase the verification security level of coins thereby restricting and lowering the acceptance rate of the genuine coins to protect against counterfeiting or misreading of the coins. This could lead to customer dissatisfaction when apparently good coins are rejected and vending sales are negatively affected.

Reductions in sales could also create a negative impact on jobs, and less corporate taxes being collected from the vending channel at every level of government from local to federal. This impact on government receipts should be included in any cost-benefit analysis performed.

### **Impact on Vending Must be Considered**

We remind the Mint that it must consider the impact on the vending industry in any recommendation that it presents to Congress. We applaud the Mint’s excellent stakeholder outreach effort and hope that it will provide the needed information and data to meet the requirements of the CMOCA bill language concerning the impact on the vending industry on any recommendation(s). However, we remain concerned that technology and metallic content costs and other factors may make this a difficult requirement for the Mint to balance the impact to the vending channel and meet the cost savings intent of this directive.

The vending industry also has concerns with the impact that co-circulation of coins would have on the industry and its consumers. This issue was raised related to changes made in Canada, by Andrew Mills the Director of Circulating Coin for The Royal Mint, during a recent hearing before the U.S. House of Representatives Subcommittee on Monetary Policy and Trade.

“[T]he smaller 50p was introduced in September 1997 ready for coin demand leading up to Christmas that year. The larger 50p was removed from circulation in 6 months to assist the vending industry ***as co-circulation of different specification coins of the same denomination can lead to lower reliability of their machines.***”<sup>44</sup>

As noted by Mr. Mills, co-circulation could lead to reliability issues. Furthermore, it would also create the need to expand the size of the coin acceptance device. The current configuration of vending machines, that accept U.S. coins, does not allow space for extra tubes to be added in its traditional location in vending machines. New vending machines and apparatus would have to be developed to create space for the extra tubes needed to provide acceptance and change functionality within the coin device. This would cripple the industry and NAMA strongly recommends that any recommendations for changes in coinage include that there be no co-circulation of different specification coins of the same denomination.

### **Transition and Compliance Period**

If changes can be made that don’t negatively impact the vending industry, NAMA recommends that a long notice, transition and compliance period must be part of any recommendation that is presented to Congress. Changes without a limit on co-circulation may require that multiple versions of coins be accepted for many years. Circulation time periods of coins and the capability of coin acceptance devices

and vending machines that accept multiple co-circulating coins, should be considered when assessing the transition and compliance period. The impact of co-circulation of coins should be fully vetted with coin acceptance device manufacturers before any recommendation as to transition and compliance period is made. The Mint's 2012 Biennial Report to Congress emphasizes that the industry should be provided with significant advance notice of two to three years.<sup>45</sup>

## Reduction in Federal Government Revenue

Changes in coins that create an expense for vending operators will lower revenues to the U.S. Treasury and add costs to the government. Business expenses for upgrading equipment have no return on investment (ROI). Therefore, those expenses reduce profit, lowering the amount of profit for the corporation and the corporate income taxes that the federal government will receive from the industry. For example, if upgrades to coin acceptance equipment have a \$1 billion cost to business, the U.S. Treasury's tax revenue will decrease by the amount of corporate tax it would collect on the \$1 billion in revenue. This cost to the government should be considered in any cost-benefit analysis performed.

## Costs to Mint and Federal Government

Any updates to coins will have a tremendous financial impact on the Mint and federal government agencies through the need to educate the public on the new coins. If coins are changed, massive amounts of public education and awareness campaigns would have to be created and performed. This tremendous effort will produce a financial commitment from the U.S. Mint and federal government agencies that must be considered in any financial analysis portion of a recommendation that purports to create savings.

Also, changes in the metallic contents of coins may have impacts on the production cost by impacting the die life of the equipment used to forge and create coins. Different metals could increase the frequency of die changes, which can be disruptive to the production process and create increased manufacturing costs for coins. This impact should be assessed as well.

## Federal Register Notice

The Federal Register Notice presents specific statements for comments. Below are our responses to these statements:

- a. *A change to the diameter or thickness of U.S. coins would have a significant negative impact.*

**Comment:** Size and shape of coins is very important to the vending industry and its coin acceptance devices. The vending industry would oppose any change to the diameter or thickness of coins, as that would have the largest potential financial impact on the industry and cause interruption in existing coin acceptance equipment due to the extensive modification or replacement needed to accept coins with a different diameter or thickness.

- b. *The quarter-dollar coin is the workhorse of circulating coins. Across stakeholders, any change to the quarter-dollar coin would bring about the most costly conversion to a new alternative metal quarter-dollar coin.*

**Comment:** The quarter-dollar coin is very important to the vending industry. Any substantial change to the quarter-dollar coin would have a significant financial impact on the vending industry. The Mint should closely survey vending and coin acceptance equipment to determine its ability to accept and make change for customers, with co-circulating quarter-dollar coins of differing specifications. As stated earlier, the current configuration of coin acceptors in vending

machines does not allow physical space for expansion of the size of the coin acceptance device, a need that would have to be met with the co-circulation of quarter-dollar coins; especially due to their being the largest sized circulating coin.

- c. *Aluminum alloy coins do not perform well at high speeds and high pressures of coin sorting and handling equipment.*

**Comment:** Aluminum alloy coins present significant problems for coin changers in the vending industry. The reduced weight of an aluminum coin, particularly smaller ones like dimes, could present difficulty with the coin properly traveling through the coin chute and the acceptor module for analyzing of value and authentication.

Furthermore, when faced with a similar rise in commodity prices on the world markets in the early 1970's the Mint tested alternative metals, including aluminum and bronze-clad steel. A composition of 96% aluminum with trace elements of stability was chosen for the new one-cent pieces. The proposal for this new one-cent piece was rejected in Congress mainly because of issues raised by industries who felt the coins would cause mechanical problems.<sup>46</sup> The Mint is urged to review their Congressional recommendation and research from the 1974 Aluminum Cent proposal and refrain from moving forward with another attempt at aluminum alloy coins.

- d. *A generous amount of communication and education is both needed and expected before implementing the use of alternative materials for the nation's circulating coins.*

**Comment:** For any changes in the metallic content of coins to be successful, the American public, international community and impacted industry must be fully educated on the new coins before they are released into circulation. This education will take time and financial resources. This time should be taken into account when determining transition periods and the costs should be considered in any cost/benefit analysis.

- e. *If new coin handling equipment or software is needed, manufacturers of coin handling equipment need six to 12 months with production sample coins before they can begin shipping the new updated equipment to end users.*

**Comment:** A six to twelve month lead time for equipment or software manufacturers to begin shipping the new updated equipment to end users is acceptable as it relates to the limited issue of manufacturers lead time needed for shipping. However, the time needed for vending operators to update each machine, and to update the coin acceptance units, is much longer than the six to twelve months needed by the manufacturer to deploy the new equipment or software.

- f. *The transition period for end users to implement an alternative material coin should be at least 18 months from the date the alternative material coin is announced and before it is put into circulation.*

**Comment:** Eighteen months is not nearly enough time for the transition period needed for end users to implement an alternative material coin. This is primarily due to the requirement of vending operators, and their limited staff of service technicians, to visit each machine to manually update them with the new equipment or software to accept the new coins. It is estimated that technicians could update 10-15 machines per day if the machines are widely dispersed geographically. Therefore if an operator owns or services 1000 machines, it could take 100 work days or roughly five to six months to update those machines. This estimate also assumes that the

technicians are not responsible for answering other maintenance and repair calls at the same time, which is not a fair assumption in the industry.

Many vending operators classified as small businesses by the Small Business Administration, own between 1000 and 3000 machines. It could take a small business with 3000 machines nearly eighteen months to update their machines. There are many operators in the industry that own more than 300 vending machines. Therefore to ensure full adoption, a more reasonable time period for the transition period for end users should be a minimum of 30 months from the date the alternative material coin is announced and before it is put into circulation.

*g. The total time period needed for a smooth transition is 18 to 30 months.*

**Comment:** The Mint's 2012 Biennial Report to Congress emphasizes that the industry should be provided with significant advance notice of two to three years. Therefore, we agree with the Mint that a transition period of 18 months is not acceptable for the industry and consumers and that it is closer to three years.

Assuming there is no co-circulation of different specification coins of the same denomination, NAMA recommends the time period needed for a smooth transition be set at between four and five years. This provides the six months lead time for manufacturers to disperse the new equipment and technology to operators, three years for vending operators to update equipment, and one to one and a half years for public education on the new coins. We are concerned that the industry and consumers will suffer greatly if the American public is not properly educated on the new coins before they are in circulation.

Thank you for allowing NAMA to comment on behalf of the vending and refreshment services industry. Please do not hesitate to contact me if you should have further questions regarding these comments or the impact of the potential change of coins on the vending industry.

Sincerely,



Carla Balakgie, FASAE, CAE  
President & CEO

**The National Automatic Merchandising Association • [www.vending.org](http://www.vending.org)**

**Headquarters:** 20 N. Wacker Drive, Suite 3500 • Chicago, IL 60606-3102 • Voice: 312/ 346-0370 • Fax: 312/ 704-4140

**Eastern Office:** 1600 Wilson Blvd., Ste. 650 • Arlington, VA 22209 • Voice: 571/346-1900 • Fax: 703/836-8262

**Southern Office:** P.O. Box 4110 • Alpharetta, GA 30023 • Mary Lou Monaghan: Voice: 678/ 232-7941 or Sheree Edwards: Voice: 313/673-7875

**Western Office:** 80 South Lake Avenue, Suite 538 • Pasadena, CA 91101 • Voice: 626/229-0900 • Fax: 626/229-0777

## 5.15. National Bulk Vending Association

### NBVA Stakeholder Outline – Second Revision

*“First and foremost, the Mint is all about facilitating commerce.”  
– Mr. Richard Peterson, Deputy Director of the US Mint*

The National Bulk Vendors Association has represented the bulk vending industry since 1950. Among our purposes, we act to preserve and protect the bulk vending industry from detrimental legislation. As an industry, we oppose changing the composition of the US Quarter.

The outline below from the US Mint's 2011 Annual Report shows the manufacturing costs of U.S. coins. The evidence below does not support changing the composition of the Quarter. The Penny and the Nickel, perhaps, but not the Quarter:

\$1 Coin	Quarter	Dime	Nickel	Penny
18.03 cents	11.14 cents	5.65 cents	11.18 cents	2.41 cents

*(United States Mint, 2011 Annual Report, pg. 11)*

Changing the Quarter's weight, magnetic signature, or size would have immediate and devastating impacts on the bulk vending industry. Bulk vending machines (Examples pictured below) have mechanical mechanisms, or "mechs" in industry parlance, that collect coinage and dispense product. The mechs are manufactured for the specific size, shape and material content of specific coinage. There are millions of coin mechs being used today from car washes to bubble gum machines.

The Quarter is the workhorse of the bulk vending industry. Nearly all bulk vending machines in the United States rely on the Quarter as their sole currency. Changing the composition of the Quarter would make all these machines obsolete as their current coin mechanisms could not accommodate a new coin. Changing the Quarter would destroy the livelihood of many small business owners. This change in the Quarter would also affect the larger supply companies that sell products and machines to these smaller businesses. In short – the decision to change the Quarter would cost jobs, which goes directly against Mr. Peterson's statement above.

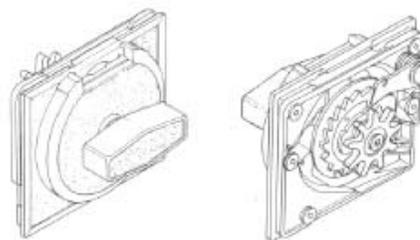
The National Bulk Vendors Association supports you in your goals to save the U.S. taxpayer money. One of the ways this could be accomplished is to support the dollar coin. These coins are already made, but are waiting for legislators to release them from political purgatory. The Government Accountability Office estimated that switching to a dollar coin would save the American people \$5.5 billion<sup>1</sup>. This is real change.

In summation, the NBVA pleads that you do not change the composition of the US Quarter coin. This change would cost \$41,238,000; this change will cost jobs and destroy an iconic American industry.

Bulk Vending Machine



Bulk Vending Mechanism or "Mech"



We respectfully thank you for your consideration,

The National Bulk Vendors Association

1. <http://www.gao.gov/new.items/d11281.pdf>

## 5.16. National Council of State Agencies for the Blind

# NCSAB

## National Council of State Agencies for the Blind, Inc.

4600 Valley Road, Suite 100

Lincoln, NE 68510-4844

Telephone: 402-471-8100 or 402-471-8101

Fax: 402-471-3009

Robert Doyle, President  
Pearl Van Zandt, Treasurer

Sue Schaffer, President-Elect  
Katy Morris, Secretary

June 9, 2014

Beverly Ortega Babers, Chief Administrative Officer  
Office of Coin Studies, United States Mint  
801 9<sup>th</sup> Street NW  
Washington, DC 20220

Dear Ms. Babers:

Thank you for the opportunity to offer comments on the impacts of altering the metal composition of circulating United States coinage. I am writing on behalf of the National Council of State Agencies for the Blind (NCSAB), the national body representing the State Licensing Agencies that administer the Randolph-Sheppard Act in the various states, to provide cost estimates and relay concerns over possible changes to U.S. coin composition.

The Randolph-Sheppard Act provides entrepreneurial opportunities to blind vendors in the food service industry. Nationwide, there are 2,545 blind vendors participating in the Randolph-Sheppard program. These vendors operate 3,031 facilities on federal and state property. Most of the vending facilities in the Randolph-Sheppard program are small “mom and pop” operations, with one or two full-time employees in addition to the blind entrepreneur. In 2012, the last year for which figures are available, vendors in the Randolph-Sheppard program earned, on average, about \$56,000 per year from their vending facilities.

1. Vendors would benefit from a longer transition period for implementing costly adaptations. Our member agencies agreed that a shorter conversion period would increase the cost of a nationwide conversion. Manufacturers, technicians, and operators need a 30-month transition period to analyze the new coins, develop new equipment for vending machines, and upgrade all machines before the new coins enter circulation.
2. The vending machine industry anticipates a much steeper nationwide conversion cost than the U.S. Mint estimates. The Mint estimates that a one-time, standalone conversion of the nation’s vending machines could cost between \$380 and \$630 million. The vending machine industry, however, estimates a nationwide conversion cost ranging from \$700 million to \$3.5 billion.

3. Technological issues present unpredictable variables that make potential costs difficult to calculate. The U.S. Mint has not stated whether the new coinage will differ only in electromagnetic signature, or also in weight, size, and color. The specifications for the new coins will determine whether the state's vending machines will require a recalibration, or all new coin-accepting equipment. The vending machine industry is also uncertain that a modification exists that will allow vending machines to accept current and new coins simultaneously. This means the conversion cost estimate must reflect both the cost of a nationwide recalibration, and the cost of new equipment to accurately reflect all contingencies.
4. Direct conversion costs vary by state. A small, rural state like Kansas, for example, can expect statewide conversion costs between \$75,000 and \$150,000 for the nearly 300 vending machines in its Randolph-Sheppard program. A large state like California, however, has closer to 3,000 vending machines operated by blind entrepreneurs. A state of that size can anticipate a statewide conversion costing anywhere from \$286,000 to \$1,430,000.
5. Indirect costs could double the overall costs of adapting machines to the new coinage. If new coins are already in circulation during the conversion period, the unconverted machines will be vulnerable to jams. These jams will require service calls, and the machines will lose revenue while they are out of order and awaiting maintenance. The Kansas BEP, for instance, estimates that these indirect costs could double the direct cost of the conversion and potentially cripple the state's Randolph-Sheppard program.
6. Changes to U.S. coinage could adversely impact the ability of the blind or visually impaired to distinguish coins by touch. Certainly, the Mint is aware of and is working to comply with the October 2008 ruling by the U.S. District Court for the District of Columbia that the Department of the Treasury must provide meaningful access to U.S. currency for the blind or visually impaired. Changes in the metal composition and design of coins have important implications for the visually impaired community. The national organizations representing the blind stand ready and willing to work with the Mint to ensure that changes do not adversely affect persons who are blind or visually impaired.

Thank you, again, for the opportunity to offer feedback on potential changes to the metal composition of U.S. coinage. We look forward to working with you to preserve the livelihoods of the blind entrepreneurs who operate vending businesses under the Randolph-Sheppard Act.

Sincerely,  
Catriona Macdonald  
Policy Advisor  
National Council of State Agencies for the Blind

## 5.17. National Parking Association



1112 16th Street NW, Suite 840  
Washington, DC 20036

T 800.647.PARK  
P 202.296.4336  
F 202.296.3102  
[www.npapark.org](http://www.npapark.org)

June 24, 2014

Coin Stakeholders Response  
Office of Coin Studies, United States Mint  
801 9th Street NW, Washington, DC 20220  
[Coin.StakeholdersResponse@usmint.treas.gov](mailto:Coin.StakeholdersResponse@usmint.treas.gov)

To Whom It May Concern:

We appreciate the U.S. Mint's willingness to gather additional feedback on the business impact of changes to coin production. We understand that coin production has a cost and that periodically the U.S. Mint, U.S. Treasury and the U.S. Congress review monetary metals. The National Parking Association (NPA) represents more than 2,800 members and 800 member companies that own, manage, supply and service parking facilities across the United States and worldwide. There are approximately 143,000 employees in this industry in Canada and the United States.

We recognize the importance of evaluating alternate metals for the efficient production of coins, and appreciate the open comment period, which allows us to highlight how the good intent of rulemaking can have detrimental impacts on business operations. NPA and its members have significant concerns that the potential changes will require excessive conversion costs, pressure already tight public sector budgets and ultimately resulting in job loss, as well as the closing of small businesses.

We see the issues as:

1. Business burden to acquire capital to meet changes in accepting payments due to any changes in monetary metals.
2. Opportunity cost of capital that could be deployed for compliance with any changes required in equipment vs. investment in growth or service improvements.
3. Cost pressures that may cause a reduction in employment.
4. Process and transition issues, including timing.

The parking industry would be particularly disadvantaged by the changes because the majority of commercial operators are small to medium-sized, privately held firms, many of which are principally cash businesses. These companies would be faced with the costly decision to automate operations, or even close their doors.

For larger operations, both public and private the cost of new equipment, training, software and changes to business systems across their operations would be a financial and operational burden. This burden could accelerate automation and reduce employment.

For industry suppliers, the cost to redesign equipment, retool machinery, and produce new coin acceptors, produce new software and to convert facilities—would create significant upfront costs and opportunity costs to address any changes made to monetary metals.

The costs of new equipment design, conversion, machinery and production of equipment, training and software would be tens of millions of dollars within the supplier sector. The cost for parking operators

public and private would range from several hundred thousand to tens of millions of dollars depending upon size of operations. This could accelerate automation and reduce employment rapidly. An unintended consequence could be an increase in parking costs for consumers, as a result of increased operating overhead costs.

NPA gathered member input and surveyed its members and found the following:

- Industry suppliers would require 3-5 years to recapitalize operations, develop and roll out new equipment.
- At a minimum, it would take parking operators public and private five years to plan, budget and transition monetary metals—including securing capital, training staff and upgrading equipment.
- To offset the cost of adopting changes in monetary metals, 50 percent of respondents reported that they would reduce staff and 55 percent would raise prices by up to 25 percent.
- 100 percent of respondents accept quarters.
- 91 percent of respondents accept nickels and dimes; 87 percent accept dollar coins; and 52 percent accept half dollars.

Given these findings, we would recommend that if any changes to monetary coins are made that the adoption period for compliance should be a minimum of five-seven years, with an extension for small businesses of up to 10 years.

Furthermore, we do not recommend making any changes to the quarter as this would affect the largest number of businesses negatively. If changes can be made to monetary metals that allow for continued acceptance in existing equipment, this would significantly reduce the burden of any changes in monetary metals.

Thank you for the opportunity to engage in an open dialogue on this issue.

Sincerely,



Christine Banning, MA, CAE  
President, National Parking Association  
Washington, D.C.

## 5.18. Additional Associations

### 5.18.1. AAMA

Coin Stakeholders Response  
Office of Coin Studies  
United States Mint  
801 Ninth Street NW, 2nd Floor  
Washington, DC 20001

Dear Mr. Cameron,

This letter is in response to your recent request, included in the Federal Register, for comments on potential alternative metal compositions for circulating coinage pursuant to the Coin Modernization, Oversight, and Continuity Act of 2010 (Pub. L. 111- 302).

I am the owner of a small business, committed to my employees and my community. To put it bluntly, if you change the metallic content of the quarter I will be forced to make drastic changes to my business that will negatively affect my ability to grow at best, and may cause me to lay off employees and at worst cause me to exit the business.

Changing the composition of coins will require expensive modifications to coin mechanisms by the vending industry. For example, if changes to the metallic content occur, this will require expensive reprogramming of most coin validators. Such reprogramming requires a technician to visit all vending machines and transfer new data to the coin validators. Further, if mechanical changes are made to the coins, such as changes in sizes or weights, then even more expensive changes to coin validators will be needed. Expensive redesigns to the coin validators in addition to reprogramming will be required.

Changes in the metallic content of coins will cost vending operators \$100-\$500 per machine in upgrade costs to accept new coins. It is estimated that there are approximately 1 million coin-operated amusement machines in the United States. This equals an estimated burden on the coin operated entertainment industry of close to one half a billion dollars. Furthermore, there is no return on investment for vending operators on equipment upgrades, adding to business financial outlays and leading to job losses in America's recovering economy.

Changes in metallic content would force coin validator manufacturers to increase the verification security level of coins thereby restricting and lowering the acceptance rate of the genuine coins to protect against counterfeiting or misreading of the coins. This could lead to customer dissatisfaction occurring by apparently good coins being rejected and vending sales will be negatively affected by this rejection.

I ask you to look at the Canadian experience. In a cost-savings effort, the new Canadian coins used multi-steel technology, which makes them cheaper to mint than their alloy predecessors. It was estimated that the upgrades will cost the Canadian vending industry C\$40 million to recalibrate what it calls "coin-acceptance equipment." Changes to the metallic content of circulating coins in Canada have had a negative impact for many in the Canadian coin-acceptance industry. Following the Canadian coin updates, a May 2012 Wall Street Journal article cites the "headaches (and expense) for vending-machine operators and city governments who have to recalibrate their coin slots and local parking meters."

Once again, I thank you for the opportunity to offer comment. And I leave you with this thought: As a small business our costs grow every month and making ends meet gets harder every year. I note that the overall currency produced by the Mint made a profit last year. I would then ask, since you are profitable today, please don't try to increase your margins by eliminating mine. We don't need more Americans in the unemployment line.

Thank you

*John Schultz*  
*American Amusement Machine Association*  
*847-290-9088*  
*jschultz@coin-op.org*

***AAMA'S MISSION:  
TO PRESERVE, PROTECT AND PROMOTE THE COIN-OPERATED ENTERTAINMENT  
INDUSTRY***

### 5.18.2. NAMA

United States Mint 801 9th Street, NW Washington, DC 20001

This letter is in response to your recent request, included in the Federal Register, for comments on potential alternative metal compositions for circulating coinage pursuant to the Coin Modernization, Oversight, and Continuity Act of 2010 (Pub. L. 111- 302). I am a businessperson in the vending and refreshment services community and am concerned with the negative impact on my industry and our consumers of any change in circulating coinage.

The industry and my concerns are as follows:

1. **Metallic Content Changes Could Create a Financial Burden on Small Business:** Changes in the composition of circulating coins has an impact on America's small businesses, especially in the vending and refreshment services industry. Changes will require expensive reprogramming of most coin validators. These changes could cost an estimated \$100-\$500 per machine in upgrade costs, equaling an estimated burden on the vending industry of between \$700 million to \$3.5 billion.
2. **Metallic Content Updates Could Change the Acceptance Rates of Coins:** Changes in metallic content may force coin validator manufacturers to increase the verification security level of coins thereby restricting and lowering the acceptance rate of the genuine coins to protect against counterfeiting or misreading of the coins. This could lead to customer dissatisfaction occurring by apparently good coins being rejected and vending sales will be negatively affected by this rejection.
3. **The Mint Must Consider Impact on the Vending Industry in any recommendation to Congress:** The Mint's authority to provide research and development for alternative coinage materials is derived from Congress by the CMOCA. This Act requires that in the Mint's research and development it must specifically take into account the impact on the vending industry.
4. **The Mint Should Provide a Long Transition and Compliance Period with any Recommendation:** If coins changes are recommended by the Mint, the Mint should consider the impact of such changes on affected industries, specifically the vending and refreshment services industry. Changes may require that multiple versions of coins be accepted for many years. Circulation time periods of coins should be considered by the mint when assessing their recommendation on transition and compliance period.

Thank you for the opportunity to participate in this request for comments and our industry looks forward to working together on this and other issues in the future. Please do not hesitate to contact me if I can provide further information as to our industry's concerns.

5.18.3. AMOA



Coin Stakeholders Response  
Office of Coin Studies, United States Mint  
801 Ninth Street NW, 2nd Floor  
Washington, DC 20001

Dear Mr. Cameron:

This letter is in response to your recent request, included in the Federal Register, for comments on potential alternative metal compositions for circulating coinage pursuant to the Coin Modernization, Oversight, and Continuity Act of 2010.

I am a small businessperson, and a member of the Amusement & Music Operators Association, committed to my employees and my community. To put it bluntly, if you change the content of the quarter, I will be forced to make drastic changes to my business that, at best, will negatively affect my ability to grow, and at worst, cause me to close my business and lay off my current employees.

Changing the composition of coins will require expensive modifications to coin mechanisms by the coin-operated amusement industry. For example, if changes to the metallic content occur, this will require expensive reprogramming or replacement of most coin acceptors. Such reprogramming or replacement will require a technician to visit all the locations where I service coin-operated machines and reprogram or replace the coin acceptors. Further, if mechanical changes are made to the coins, such as changes in sizes or weights, then even more expensive changes to coin acceptors will be needed. In almost every case, the coin acceptors will then need to be replaced at significant expense.

Changes in the metallic content of coins will cost coin-op amusement operators between \$100-\$500 per machine in upgrade costs to accept new coins. It is estimated there are approximately 1 million coin-operated amusement machines in the United States. This equals an estimated burden on the coin-op amusement industry of close to one half a billion dollars. Furthermore, there is no return on investment (ROI) for amusement machine operators on equipment upgrades, causing increased business financial outlays and leading to job losses in America's recovering economy.

A change in the metallic content will also increase the risk of the fraudulent use of counterfeit coins ("slugs") or tokens in our machines, again leading to a loss in revenues.

These losses in revenue not only affect our businesses, but since we generally share our revenues with the locations where we place our machines, there are literally hundreds of thousands of other small businesses which will be negatively impacted as well.

I ask you to look at the Canadian experience. In a cost-savings effort, the new Canadian coins used multi-ply steel technology, which makes them cheaper to mint than their alloy predecessors. It was estimated the upgrades will cost the Canadian vending industry C\$40 million to recalibrate what it calls "coin-acceptance equipment." Changes to the metallic content of circulating coins in Canada have had a negative impact for many in its coin-acceptance industry.

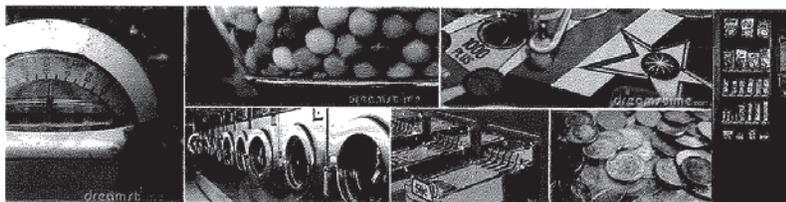
Once again, I thank you for the opportunity to offer comment. And I leave you with this: as a small business, we work on thin margins and our costs grow every month, which means making ends meet gets harder every year. I note that the overall currency produced by the Mint made a profit last year. Since you are seemingly profitable now, please don't try to increase your margins by eliminating mine. We don't need more Americans in the unemployment line.

Signed: *Satinder Bhutani*  
Name: SATINDER BHUTANI

Company: ANDAMIRO USA CORP  
Address: 17230 S. MAIN STREET  
GARDENA, CA - 90248

## 5.19. Don't Change Our Change

**DON'T  
CHANGE  
OUR CHANGE**



June 5, 2014

Coin Stakeholders Response  
Office of Coin Studies  
United States Mint  
801 9th St NW, 2nd Floor  
Washington, DC 20001

These comments are submitted for the record to the United States Mint, on behalf of the Don't Change Our Change Coalition (DCOC) in response to the recent request, included in the Federal Register, for comments on potential alternative metal compositions for circulating coinage pursuant to the Coin Modernization, Oversight, and Continuity Act of 2010 (Pub.L.111- 302).

Our coalition, Don't Change Our Change, is made of up associations and organizations that primarily represent small business owners, their suppliers, distributors, employees and customers. All of whom will be directly impacted by a change in the composition of circulating coinage. DCOC membership represents all facets of the vending and coin-operated industry. American's enjoy using our machines and equipment in every corner of the country.

Our businesses rely on predictable, standardized coins. Changes to coinage will create an added expense, at best, and could mean the difference between a thriving or failing business for many of our coalition members.

Changes in the metallic content could call for anything from a simple recalibration in vending machines to the installation of new coin-accepting equipment, with a cost that would range from \$100-\$500 per machine to the outright disposal of the unit. It is estimated that there are approximately 10 million coin operated machines in the United States. This equals an estimated burden to our combined industries of nearly five billion dollars. Furthermore, there is no return on investment for vending operators on equipment upgrades, adding to business financial outlays and leading to job losses in America's recovering economy.

With an introduction of a new composition the issue of co-circulation becomes of great

**DON'T  
CHANGE  
OUR CHANGE**

concern. Also, the uncertainty associated with the length of the transition period recommended by the Mint, poses a significant technological and financial burden on the industry. Within our existing equipment, no mechanism exists that can accept and process coins with different electronic signatures. Do to this, operators and customers will experience faulty machines and these same operators will have to significantly increase their service operations without seeing a direct financial benefit. It is not out of the realm of expectations to assume that should breakdowns frequently occur, machines will be pulled from service harming business owners and limiting consumer choice.

It is important to recognize that the U.S. Mint produces a profit from its overall coin manufacturing business; and therefore shouldn't make imprudent changes at the expense of small businesses that rely on predictable, standardized coinage. In fact, changes made without careful consideration, in an attempt to cut costs, could actually lead to a net loss with loss of business tax revenue and increased cost for educating the public on the new coins.

We appreciate the underlying theme and goal of this study; that the American government should look for ways to save taxpayers dollars. This notion is shared, not just by our members, but also by taxpayers across the country. Yet for our members and the industry we represent, proposed changes to the size and content of coinage will result in severe economic harm, for very little, if any, economic gain to the American taxpayer and government.

Thank you, once again for the opportunity to comment.

## 5.20. Small Businesses

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**From:** Michael Finkelstein [mailto:michaelfinkelstein717@gmail.com]  
**Sent:** Thursday, April 10, 2014 7:19 PM  
**To:** Coin.StakeholdersResponse@usmint.treas.gov  
**Subject:** testimony by Michael Finkelstein of Associated Services Corporation Laundromat operator

Associated Services Corporation has been in business since 1959 operating coin laundries in the states of Virginia and North Carolina. We are considered one of the larger operators of coin laundries in the area.

I am the President and CEO of this corporation and have been in this position for over the past 10 years. We strive to make our laundries the cleanest, nicest, safest laundries in the towns we operate in.

In 2005 we elected to have all of our equipment operate only on quarters and in increments of 25 cents. This includes Washing machines, dryers, soft drink machines, video games, and snack machines.

We offer change machines in all of our stores which give out only quarters.

This strategy has served us well and a lot of the other coin laundries who I have talked to have adapted a similar strategy(accepting quarters only and pricing in 25 cent increments).

I believe over 90% of all Laundromat operators in the US work on coins(mostly quarters) according to the Coin Laundry Association.

Over the past couple years we implemented in about 15% of our locations a system that also takes both credit card/debit card payments in addition to quarters. The credit/debit card system currently account for about 3% of our total revenue but is growing. It is not accepted universally and demographics do play a part. Limited internet access in rural counties also plays a part in the ability to provide this service.

I think there are about 5% of Laundromat operators(according to the Coin Laundry Association) that use a loyalty card system and accept only bill currency in a central machine. The washers dryers etc. operate off of a card that is purchased at the kiosk where the bills are deposited. Some of these systems can also accept credit/debit payments.

There are also some laundry operators that work only on dollar coins(less than operators who use quarters or loyalty card use according to the Coin Laundry Association), and their changers give out dollar coins and the machines operate in increments of a dollar.

Currently from my perspective the only thing that pennies, nickels, and dimes do is jam up my machines. The information I have provided is based not only on my locations, but also in discussions as a current board member volunteer of the Coin Laundry Association. This observation is based on the information I have been able to determine from discussing this matter with other CLA members.

Based on our conference call in February with the US Mint it appears that there is deficit spending on producing pennies and nickels. This should be the only area the mint should focus on as if the dime and quarter are not broken the mint should not try to fix it !

If the mint were to eliminate this form of currency it would have virtually no impact on my business or impact my customers.

If however the US Mint were to eliminate quarters, or change the weight, diameter, or its metal contents in a quarter then that would have a HUGE impact on me and my customers as well as my suppliers. It would also negatively impact most other Laundromat operators throughout the US too!

The way a quarter either drops in a washer or dryer or slides in a top load washer is critical to the operation of the equipment. If the US Mint were to alter this coin in any of the ways mentioned(weight, size or component make up) it could cause a machine to malfunction.

If the quarter coin is altered requiring me to retrofit all our equipment it would be terrible.

I project that the labor, and parts needed(that are not yet produced so this is a guesstimate) would cost my company about \$1,250,000 to adjust over 4000 machines(if it could be done with a new part, drop, or slide). This does not include retrofitting or purchasing new counters in order to get the quarters fed ready for collection.

This is a HUGE expense to us and since most Laundromat operators are 1 or 2 store small business folks it would cause extreme hardship on them and on our industry.

It also impacts companies who transport coin currency such as Brinks, Loomis, us, and other Laundromat operators if new quarters were phased in. It would also pose a HUGE problem as these coins are weighed as a security option when transporting currency. These bags of quarters need to be "fed ready" when these companies pick up for bank deposit.

In closing if there is one thing that is taken away from this testimony it is to PLEASE DO NOT CHANGE THE QUARTER (in size shape weight or component) as it is not losing money for the mint! Focus on the problem at hand which are pennies and nickels which are losing money!

Thank You

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From: [koa4fun@gmail.com](mailto:koa4fun@gmail.com) [mailto:[koa4fun@gmail.com](mailto:koa4fun@gmail.com)]

Sent: Wednesday, June 04, 2014 1:47 PM

To: Inquiries

Subject: Response to request for comments on potential changes to coin content

Donna Bridges

15020 Hwy 187 S

Eureka Springs, AR 72631-9115

June 4, 2014

Acting Director Richard A. Peterson

801 9th Street, NW

Washington, DC 20220

Dear Acting Director Peterson:

As a small business owner I am writing in response to the recent Notice with Request for Comments on the effects of changing qualities such as weight, color and electromagnetic signature of our circulating coinage.

I appreciate the desire to reduce the costs associated with manufacturing coins, however changing the make-up or size of coins would have a detrimental impact to my business.

Any change to coinage will result in increased costs to update equipment, and address issues with co-circulation of the old and new currencies.

These costs may affect my business's ability to grow and create jobs.

It is estimated changes in the metallic content or size of coins will cost coin operated machine operators between \$100 and \$500 per machine in upgrade costs to accept new coins. For my business alone that could mean \$10-15,000 in expenses.

Finally, while I have spoken to the effects a proposed change would have on our industry, I would also like to comment on the loss to the US Treasury such a change in content would cause. As I understand it, any mechanical or software upgrade to machines in our industry would be counted against ordinary income that small businesses pay taxes on. The ability to write these expenses off would result in a significant shortfall in tax revenues to the Federal Government and would add to our deficit.

Every American taxpayer appreciates your efforts to find ways to save the government money. But this change to our change is simply not worth it. It will kill jobs, punish small business and ultimately result in an added expense to government not a savings.

Sincerely,

Donna Bridges  
4792538036

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**From:** Wash & Spin Coin Laundry <washnspin@gmail.com>  
**Sent:** Thursday, May 22, 2014 12:10 PM  
**To:** Coin.StakeholdersResponse  
**Subject:** Effect of Change to Our Quarter

To Whom It May Concern,

I am an owner of a large coin operated laundromat in Atlanta, GA. I am writing to share information about how any alteration of the existing quarter would affect our business. We are very concerned about a potential change since it would adversely affect us. We have a total of 91 washers and dryers, a soap dispensing machine, a quarter dispensing machine and gumball/candy machines that all utilize quarters. The cost to modify or to even replace this equipment would represent an enormous hardship to our struggling business.

The cost to modify the washers and dryers could be hundreds of dollars each, making that total cost \$27,000 (assuming \$300 times 91 machines). Purchasing a new change machine would be approximately \$3,000. We would need to add another \$600 to change the soap dispenser and the gumball/candy machines, but possibly more if the manufacture of the soap dispenser doesn't or cannot offer an option of modifying the soap dispenser. The soap dispenser costs approximately \$2,300 to replace. We estimate the total potential cost to our business to be between \$30,600 - \$32,600. This represents a significant portion of our annual sales and would create an extreme financial hardship and jeopardize our ability to employ our 5 workers and to provide the service to our low-income community.

Please do not change the current design of the quarter. It is our number one coin in our store and in our industry. We are a business that provides a public health service to under-served communities. Making any adjustment to the quarter would provide a financial hardship and risk our ability to remain profitable.

Thank you so much for your attention.

Kind Regards,  
Yvette Morton Williams  
Wash & Spin Coin Laundry  
Atlanta, GA

**From:** Shawn Redd <shawntredd@gmail.com>  
**Sent:** Tuesday, April 15, 2014 3:27 PM  
**To:** Coin.StakeholdersResponse  
**Subject:** Don't Change the Quarter

Hello,

I would like to voice my concern regarding possible changes to the Quarter. I operate a coin laundry in Dilkon, Arizona on the Navajo Nation, Indian Reservation. Due to our remote location our business is a break even operation that barely keeps in operation. It is important to the local community that it serves allowing them to do locally what would otherwise entail a few hours commute time further straining their limited resources.

Retrofitting of our equipment to accept new coin versions would likely prove to be cost prohibitive.

I understand that all entities are looking to save money in their operations. But I feel the current quarter is already earning its way in the world and should not be altered. Quarters are the most functional of the coins in that they are used by vendors all across the country. They hold up well and endure a long service life. Current composition is more than profitable.

Please leave the quarter as is.

Regards,  
Shawn Redd  
Redd's Laundry  
HC 63 Box L  
Dilkon, AZ 86047

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**From:** Coastal Coin Laundry <coastal.coin@bellsouth.net>  
**Sent:** Tuesday, June 17, 2014 8:17 PM  
**To:** Coin.StakeholdersResponse  
**Subject:** Proposed change to the US Quarter

As a small business owner of a laundry which is dependent upon the quarter as the denomination to do business, any change in the composition or size of the quarter is a very costly expense for us. It effectively constitutes TAXATION. Let me draw you a picture of the impact this will have on our operation and that of every other business which relies on the US quarter.

1. The coin slots in every one of our 35 machines will no longer work
2. The vending machine will no longer work
3. The video games will no longer work
4. The coin change machine will no longer work
5. The arcade games will no longer work
6. The soap dispensing machine will no longer work

Any change will effectively either put us out of business or cost us 1000s of **Dollars** for retrofitting these machines.

I read the article indicating that the quarter is the most profitable denomination in the mint and that it is actually manufactured for under the 25 cent face value. So why is the mint/government/bureaucracy going to mess with a something that is already profitable and is not broken?

Please rethink this proposed redesign of the quarter with consideration for the impact it will have on our economy: toll booths, vending machines, car washes, marquis, arcades, all the coin counting machines (i.e. banks and vendors) ...just to name a few. Whoever is proposing this change has misplaced priorities.

Respectfully,

Ken Meyer