

***By electronic delivery***

August 18, 2010

Meaningful Access  
Bureau of Engraving and Printing  
Office of External Relations  
14th and C Streets, S.W.  
Room 530-1M  
Washington, D.C. 20228

**Re:** Docket ID: TREAS-DO-2010-0003; Notice of Proposed Agency Action and Request for Public Comments; Meaningful Access to United States Currency for Blind and Visually Impaired Persons

Ladies and Gentlemen:

The American Bankers Association (ABA)<sup>1</sup> welcomes the opportunity to respond to the Department of the Treasury's Bureau of Engraving and Printing's (BEP) notice of proposed agency action and request for comments (the Notice).<sup>2</sup> The Notice solicits public comment on proposed design modifications to U.S. Federal Reserve Notes (U.S. currency) that the BEP intends to recommend to the Secretary of the Treasury in order to ensure meaningful access to the U.S. currency by the blind and visually impaired.

**Summary of Comment**

ABA supports reasonable modification of U.S. currency to accommodate the blind and visually impaired. Although electronic payment technology is developing alternative means of everyday exchange, ABA and its members recognize that the ability to distinguish currency denominations conveniently and confidently in order to engage in routine transactions remains important to independent living and to employment opportunities for all Americans. Therefore, ABA supports in principle BEP's efforts to identify and incorporate appropriate new design features – a raised tactile feature and large, high-contrast numbers – into the next currency redesign approved by the Secretary of the Treasury.

However, the design and placement of the raised tactile feature and high-contrast numbers will require extensive technical and empirical research and appropriate consideration of a variety of

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<sup>1</sup> The American Bankers Association represents banks of all sizes and charters and is the voice for the nation's \$13 trillion banking industry and its two million employees. ABA's extensive resources enhance the success of the nation's banks and strengthen America's economy and communities.

<sup>2</sup> 75 Fed. Reg. 28331 (May 20, 2010).

interests including printing efficiency, counterfeit deterrence, bank note aesthetics, and costs to the public, businesses, and organizations that manufacture, process, or handle U.S. currency. ABA believes that the study commissioned by BEP, *Study to Address Options for Enabling the Blind and Visually Impaired Community to Denominate U.S. Currency* (the ARINC Study),<sup>3</sup> was an important first step in this process, but it is an incomplete record of the technical issues, impacts, and costs to be incurred. Our members, as well as manufacturers and vendors of cash processing and dispensing equipment<sup>4</sup> and ATMs, report that without detailed information about specific currency design proposals, anticipating the full range of potential impacts is speculative at best, and the ARINC Study reflects this.

Determining the ideal design and placement of the raised tactile feature will require considerable additional research and testing. ABA recommends that BEP assemble an advisory group of experts representing all U.S. stakeholders – all entities and organizations, including financial institutions, that manufacture, process, or handle currency – to provide on-going input to BEP to ensure that the accommodative features are designed, located, and introduced in such a way as to minimize costs and disruption to the payment system and the broader economy and are consistent with the needs of the public overall. It is imperative that the tactile feature and high-contrast numbers be designed and positioned on an area of each note that will not impede the function or escalate the cost of currency processing in the United States.

## **Background**

BEP is taking this action to comply with the order and judgment of the United States District Court for the District of Columbia in *American Council of the Blind v. Paulson*<sup>5</sup> which held that the Department of the Treasury (the Treasury) violated section 504 of the Rehabilitation Act by failing to provide meaningful access to the U.S. currency for blind and visually impaired persons. On October 10, 2008, the court issued injunctive relief directing the Treasury to:

Take such steps as may be required to provide meaningful access to United States currency for blind and other visually impaired persons, which steps shall be completed, in connection with each denomination of currency, not later than the date when a redesign of that denomination is next approved by the Secretary of the Treasury after the entry of this order and judgment.<sup>6</sup>

In addition, beginning on March 16, 2009, and continuing in six-month intervals, the Treasury is required to file with the court status reports describing steps taken to implement the order and judgment.

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<sup>3</sup> *Id.*

<sup>4</sup> We use the term “currency processing or dispensing equipment” in this comment letter to encompass the broad range of high speed, desk top, and teller line currency processors, authenticators, counters, dispensers, and recyclers.

<sup>5</sup> See *American Council of the Blind v. Paulson*, 463 F.Supp.2d 51 (D.D.C. 2006), *affirmed and remanded*, 525 F.3d 1256 (D.C.Cir. 2008).

<sup>6</sup> The order and judgment expressly excludes the \$1 and the \$100 note from the mandatory redesign.

In January of 2008, BEP commissioned ARINC Engineering Services, LLC (ARINC), to analyze the needs of the blind and the visually impaired; to study methods that might improve their access to the currency; to perform a cost-benefit analysis of six possible accommodations selected by BEP; and to provide a decision model which BEP can use to evaluate each of the accommodations in order to make specific recommendations to the Secretary of the Treasury. Based upon the ARINC Study and its own expertise in manufacturing U.S. currency, BEP proposes recommending:

- The development and deployment of a “raised tactile feature that builds upon current tactile feature technologies” and that is “unique to each Federal Reserve note denomination;”
- The addition of large, high-contrast numerals and different and distinct color schemes; and
- The implementation of a program to loan and distribute currency readers to the blind and visually impaired.<sup>7</sup>

**The banking industry, and other industry stakeholders, must all be involved and engaged in the design and testing of the raised tactile feature.**

ABA supports BEP’s recommendation for introduction of a raised tactile feature, but urges BEP to engage the banking industry, and other industry stakeholders, in all stages of research and testing of the design and placement of this feature. As demonstrated by Canada’s successful introduction in 2001 of a raised tactile figure on its *Canadian Journey* currency series,<sup>8</sup> a tactile feature can be added that does not interfere with the efficient authentication, processing and dispensing of currency using existing equipment and ATMs. Indeed, ABA member banks with offices in Canada report that they were able to authenticate, sort, and dispense *Canadian Journey* series notes efficiently with existing currency processing or dispensing equipment and existing ATMs. The introduction of the *Canadian Journey* currency series did not require hardware modification of existing equipment, and the tactile feature did not adversely affect currency processing efficiencies.

The introduction of a raised tactile feature that varies significantly from the Canadian model in design, height, or location, however, could require significant hardware modifications, or even replacement of, all currency processing and dispensing equipment, including ATMs, to address problems presented by notes interlocking and to address strapping and stacking processes. Unfortunately, further identification of the issues presented or determination of the extent and cost of required hardware modifications is impossible without more specific information on the design, height, and location of the raised tactile feature.

Any hardware modification, however, would require significant capital expenditures by the banking industry. There are an estimated 78,500 bank branches in the United States; each has

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<sup>7</sup> 75 Fed. Reg, *supra* at 28332.

<sup>8</sup> The *Canadian Journey* series has a raised tactile feature with a height of less than 140 microns that is located in the top, right corner of each note

cash sorting, authenticating and recycling equipment behind the teller line that would have to be modified or even replaced, depending on the age of the equipment and the nature of the hardware modification required.<sup>9</sup> Similarly, there are an estimated 400,000 ATMs in service that could require modification or even replacement of cash dispensing modules, again depending on the age of the ATM and the nature of the hardware modification required. Finally, larger banks operate hundreds of regional currency processing offices that house high-speed currency processing equipment that would also have to be modified or replaced. Ongoing involvement of representatives of the banking industry, cash processing equipment, and ATM manufacturers in the design and testing of proposed raised tactile features will be essential to ensure that the introduction of the tactile feature does not mandate modification of currency processing and dispensing hardware.

BEP must also engage the banking industry in discussions about the implementation strategy and schedule. The timing of the introduction of each redesigned note must be carefully planned to reduce burden on the industry. As noted in the ARINC Study, the introduction of a raised tactile feature will require software modifications to currency processing and dispensing equipment and ATMs to permit the equipment to authenticate and process the new note design.<sup>10</sup> Adequate time must be allowed to permit banks to install and test the software changes on all currency processing equipment and ATMs.

Software upgrades will require coordination of equipment manufacturer and ATM software developers and service teams with bank employees responsible for currency processing and ATM operations. Community banks will encounter the greatest challenges. Installing and testing software upgrades will require the diversion of limited bank employees from other responsibilities. In addition, community banks may be forced to wait for the attention of critical third-parties as the purchasing power of large banks will likely command the first attention of equipment and ATM manufacturers, forcing these institutions to wait to install and test equipment. Community banks are also unlikely to benefit from the volume purchase and service discounts offered to larger institutions. Finally, all banks must be afforded adequate time to train employees and inform customers about the new currency design features. To mitigate these negative consequences, ABA urges BEP to work closely with the banking industry and other stakeholders to ensure that there is adequate time to make the necessary software changes and to train staff.

In addition, the banking industry should be consulted about decisions on the replacement schedule for currency series currently in circulation. To reduce burden on the industry, ABA believes that the replacement of existing currency with the newly designed currency should be on a normal attrition basis, not on an accelerated replacement schedule. To require financial

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<sup>9</sup>Manufacturers of currency processing equipment and ATMs note that some older equipment may not be able to be retrofitted with “standard” hardware and software upgrades, necessitating the replacement of the entire machine.

<sup>10</sup> The Notice states BEP’s intention to introduce the new features in conjunction with the next currency redesign for counterfeit deterrence purposes; therefore, modifications to currency authentication algorithms necessary to accommodate the raised tactile feature or the addition of large, high-contrast numbers should impose more limited additional costs on the banking industry if conducted at that time.

institutions to manually or mechanically sort the old currency from the new would significantly impact currency processing efficiencies and would increase cash inventory carrying costs.

### **The limitations of the ARINC Study.**

ABA appreciates BEP efforts to analyze and evaluate each of the six proposed currency modifications. The ARINC study was an important first step toward identifying the needs of the blind and visually impaired, their acceptance of each proposed accommodation, and the potential costs and burdens to be imposed on the public and private entities and organizations that handle, process, and distribute currency. However, the banking industry believes that it is important to acknowledge the limitations of the ARINC study. First, although the number of banks contacted is never clearly stated in the report, the ARINC team’s outreach to the industry appears to have been quite limited; the report states only that they “met with several large commercial banks to establish a generic unit-operations profile for estimating purposes.”<sup>11</sup> Moreover, the ability of those banks contacted to identify all of the potential impacts of each of the proposed currency accommodations – or to assess the cost of each impact with any degree of certainty – was limited by a lack of detailed information about the precise nature of each proposal and the time permitted for responses.<sup>12</sup> Indeed, careful review of the economic analysis in section 7 reveals inconsistent identification of impacts and assessment of their costs across the six accommodations.

As a result, the banking industry is concerned that the record upon which the Secretary of the Treasury will rely when determining the appropriate design modification for the U.S. currency underestimates many of the technical and operational burdens imposed by alternative accommodations. These limitations are of particular concern with respect to the proposed addition of a “mechanical tactile feature”— the addition of notches along the edges of a banknote or perforations in it – an accommodation for which the ARINC study reports a strong preference by the blind and visually impaired.<sup>13</sup> The banking industry, however, believes that the study underestimates the burdens and costs that would be imposed by the addition of either form of mechanical tactile feature.

### **The addition of a mechanical tactile feature would impose significantly greater burdens than the addition of a raised tactile feature.**

ABA challenges the study’s identification of *identical* recurring and non-recurring costs to the banking industry arising from the proposed addition of a mechanical tactile feature and a raised tactile feature.<sup>14</sup> Our members anticipate far greater burdens will be imposed by the addition of notches or perforations than those imposed by the addition of a raised tactile feature. The study’s economic analysis could not have adequately factored in anticipated currency jams resulting from the addition of a mechanical tactile feature or the decreased life span of notched or

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<sup>11</sup> ARINC Study, *supra*, at 95.

<sup>12</sup> *Id.* (“The ARINC team included relevant costs *that could be gathered* during the study time period.”)(emphasis added).

<sup>13</sup> ARINC Study, *supra*, at 4 -5.

<sup>14</sup> Compare Tables 8-3 and 8-4, Economic Analysis of Mechanical Tactile Features and Economic Analysis of Raised Tactile Features, respectively. ARINC Study, *supra*, at 114 and 117.

perforated notes. Both issues, however, will present significant operational challenges and costs to the banking industry.

Our members anticipate that the presence of notches or perforations in a note will present serious problems for automated cash processing and dispensing equipment. Notches or perforations in notes are likely to cause the currency to interlock, adversely affecting automated dispensers (the ability to “pick” a note off of a stack) and the movement of notes along belts within currency processing equipment and ATMs. Both will increase the jamming of currency processing and dispensing equipment, resulting in the interruption of currency processing and out-of-service ATMs as jams must be cleared and maintenance performed. To offset processing inefficiencies and ATM breakdowns, banks will have to increase their vault cash inventories and teller availabilities. They may also consider purchasing additional currency processing and dispensing equipment. However, the purchase of new equipment would require significant capital expenditures estimated at least \$5000 for teller line machines, between \$30,000 to \$100,000 for larger, “table top” currency processors, and \$1,000,000 for high-speed machines installed in centralized currency processing centers. Finally, banks will incur increased maintenance costs for the training and deployment of technicians to clear jams and return ATMs to service.

The banking industry also anticipates that the addition of a mechanical tactile feature will decrease the durability of the U.S. currency as perforations or notches develop into tears (which will further diminish currency processing efficiencies). In addition, the ARINC study notes the propensity for a mechanical tactile feature to wear down, rendering it less useful as an accommodation to the blind. If the Federal Reserve’s Cash Processing Office directs institutions to retire currency with a worn tactile feature, this will further shorten the life of the currency. Regardless of the cause, reducing the usable life of the U.S. currency will increase currency processing, handling, and transportation costs incurred by banks, and it will require banks to increase vault cash inventories.<sup>15</sup> No effort was made in the ARINC study to measure and factor these costs into the economic impact analysis.

ABA appreciates the inherent challenges to assessing these costs. Without prototype currency to process it is difficult to anticipate precisely the incidence of jamming or decreases in note durability, let alone assign a dollar figure to those events. However, it is incorrect to assert that the recurring and non-recurring costs to the banking industry arising from the proposed addition of a mechanical tactile feature and a raised tactile feature are identical. Indeed, the Canadian experience with the introduction of the *Canadian Journey* currency series in 2001 demonstrates that a raised tactile feature can be added to currency without impact on currency processing efficiencies. In contrast, the jamming and durability issues presented by a mechanical tactile

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<sup>15</sup> The ARINC study anticipates a 20% growth in inventory carrying costs arising from each of the proposed design modifications. The banking industry, however, questions whether each modification will require a 20% increase. Instead, the industry believes that only the addition of a mechanical tactile feature has the potential for such a significant increase in cash vault inventories as none of the other design proposals present the potential for jamming and a significant decrease in note durability. However, if the accommodation that is ultimately adopted by the Treasury does result in significant increases in inventory carrying costs, ABA would urge the implementation of a custodial inventory program to help offset these costs.

feature would significantly increase the costs of currency management. We urge BEP to correct the record on which the Secretary of the Treasury will rely, clarifying that the recurring and non-recurring costs to the banking industry as a result of the proposed addition of a mechanical tactile feature are not identical to those presented by a raised tactile feature.

## **Conclusion**

ABA supports reasonable modification of U.S. currency to accommodate the blind and visually impaired, and we appreciate BEP's efforts to analyze and balance the many competing interests. The accommodations selected must be useful and accepted by the blind and visually impaired, but they also must be designed, located, and introduced in such a way as to minimize costs and disruption to the payment system and the economy and must be consistent with the needs and interests of the public overall. The banking industry supports the recommended addition of a raised tactile feature and large, high-contrast numbers, but urges BEP to engage technical experts from the banking industry, as well as experts from other industries that handle, process and distribute currency, in the on-going design and testing of these features.

If you have any questions about these comments, please contact the undersigned at (202) 663-5073 or via e-mail at [voneill@aba.com](mailto:voneill@aba.com).

Sincerely,

A handwritten signature in black ink that reads "Virginia O'Neill". The signature is written in a cursive, flowing style.

Virginia O'Neill  
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