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EXAMINING ISSUES RELATED TO TACTILELY DISTINGUISHABLE CURRENCY

HEARING

BEFORE THE

SUBCOMMITTEE ON
DOMESTIC AND INTERNATIONAL
MONETARY POLICY, TRADE, AND TECHNOLOGY

OF THE

COMMITTEE ON FINANCIAL SERVICES
U.S. HOUSE OF REPRESENTATIVES

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CONTENTS

	Page
Hearing held on:	
July 30, 2008	1
Appendix:	
July 30, 2008	31

WITNESSES

WEDNESDAY, JULY 30, 2008

Brunson, Melanie, Executive Director, American Council of the Blind	10
Felix, Larry R., Director, Bureau of Engraving and Printing, U.S. Department of the Treasury	3
Geerdes, Richard M., President and Chief Executive Officer, National Automatic Merchandising Association (NAMA)	19
Habib, Cyrus, Disability Advocate	13
Knoll, Jeffrey G., Executive Vice President and Corporate Counsel, Cummins-Allison Corporation	21
Maurer, Marc, President, National Federation of the Blind	12

APPENDIX

Prepared statements:	
Brunson, Melanie	32
Felix, Larry R.	34
Geerdes, Richard M.	42
Habib, Cyrus	49
Knoll, Jeffrey G.	52
Maurer, Marc	61

ADDITIONAL MATERIAL SUBMITTED FOR THE RECORD

Gutierrez, Hon. Luis V.:	
Written statement of Steven M. Rothstein, President, Perkins School for the Blind	68
Paul, Hon. Ron:	
Written statement of the Coalition for the Presidential $1 Coin	72

EXAMINING ISSUES RELATED TO TACTILELY DISTINGUISHABLE CURRENCY

Wednesday, July 30, 2008

U.S. HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON DOMESTIC AND
INTERNATIONAL MONETARY POLICY,
TRADE, AND TECHNOLOGY
COMMITTEE ON FINANCIAL SERVICES,
Washington, D.C.

The subcommittee met, pursuant to notice, at 10:04 a.m., in room 2128, Rayburn House Office Building, Hon. Luis V. Gutierrez [chairman of the subcommittee] presiding.

Members present: Representatives Gutierrez; Paul and Manzullo.

Also present: Representative McCarthy of New York.

Chairman GUTIERREZ. This hearing of the Subcommittee on Domestic and International Monetary Policy, Trade, and Technology will come to order. And thanks to all of the witnesses for agreeing to appear before the subcommittee this morning.

Today's hearing will focus on the issues stemming from the U.S. District Court for the District of Columbia's ruling in *American Council of the Blind* v. *Paulsen,* which held that the United States discriminates against the blind and visually impaired because its paper money consists of bills that are all the same size, regardless of denomination. This ruling was upheld by the U.S. Court of Appeals by the D.C. Circuit, and now the Treasury Department is under an order to make U.S. currency tactilely distinguishable to blind and visually-impaired people.

We have before us today representatives of the named parties in the lawsuit, as well as the National Federation of the Blind, which filed a brief in support of the Treasury Department and various other interested parties.

Let me stress that this is not a legislative hearing, and neither the subcommittee nor the full Financial Services Committee have legislation pending before it.

We are under substantial time constraints to get through three panels of witnesses before a mark-up starts in this very hearing room at 2 p.m., so we are limiting opening statements for the members to 5 minutes per side. But, without objection, all members' opening statements will be made a part of the record.

Likewise, we will be limiting our witnesses' oral testimony to 3 minutes each, with their full written statements being made a part of the record. In order to expedite this process, I will submit my opening statement for the record, and recognize Ranking Member Ron Paul for 5 minutes. Dr. Paul, you are recognized.

Dr. PAUL. Thank you, Mr. Chairman. Mr. Chairman, we would not be here, discussing this topic today, if we had a truly free monetary system. It is well known that I am a proponent of sound, commodity-backed currency. Anyone who has ever felt the heft of a gold or silver coin, noticed the variation in size and design among different denominations of precious metal coins, or examined the different types of reeding, incusions, and other edged designs, recognizes that coins are far superior to paper bills in terms of their ability to be distinguishable solely by touch.

Due to what many people deem the impracticality of carrying around coins, bills have, over the course of time, replaced coins in everyday commerce. However, a system of competing currencies would ensure that blind or near-blind citizens have access to currency.

If we had a truly free market in currency, private currency producers could produce coins or bills that are tactilely distinguishable, with bills incorporating different sizes, shapes, raised geometric patterns, and other things. It is not inconceivable to imagine that a privately issued currency incorporating such features and making itself available to all Americans might obtain a dominant position as a preferred currency.

What prevents such a scenario from occurring is the U.S. Government's attempt to maintain a monopoly over the dollar. Through a multi-faceted legal barrier consisting of legal tender laws, anti-counterfeiting statutes worded to prevent the private issue of notes and coins, and punitive taxes on precious metals that would form the backing of a commodity-based currency, the Government has ensured that alternative currencies, such as the Liberty Dollar, have to face an often insurmountable legal hurdle.

While nothing prevents many point of sale transactions today from being carried out in euros or pounds, legal tender laws ensure that Gresham's Law—that bad money drives out good—remains in effect.

The recent court ruling against the Treasury Department has been advertised as having a potential cost in the hundreds of millions of dollars. It would be far more economical to eliminate the legal tender restrictions on private currencies and enable the market to find a solution to the problem of currency for the blind.

Competitive private currencies would have the added benefit of keeping the U.S. Government honest by forcing the Government to stop the limitless increase of money, which is inflation, thereby removing the Government's ability to run up large trade deficits, half-trillion dollar budget deficits, and an enormous national debt. Allowing currency competition would aid in lifting burdens not only from the blind, but also from all American taxpayers. I yield back.

Chairman GUTIERREZ. Thank you very much, Dr. Paul. I ask unanimous consent that Congresswoman McCarthy, who is a member of the full committee, be allowed to participate in this subcommittee hearing. She has a very keen interest in this issue. And without objection, I yield to her 3 minutes for any opening statement.

Mrs. MCCARTHY. Thank you, Mr. Chairman. Thank you for having this hearing. It is really going to be a learning experience, I think, for us, as Members of Congress.

When the Supreme Court came down with having a reasonable accommodation for blind people so they can distinguish between money, I found the subject interesting. But already meeting with all parties—and it became more and more complicated, so I think this is going to be a very long journey, trying to figure out how we're going to do this, what's going to be the most feasible to make those accommodations.

So, with that, Mr. Chairman, I am really looking forward to hearing the testimony so we can begin this process. I'm looking forward to working with all of the participants, and hopefully we can come up with a solution in the near future. With that, I yield back the balance of my time.

Chairman GUTIERREZ. The gentlelady yields back.

Testifying on our first panel, we have Mr. Larry Felix, Director of the Bureau of Engraving and Printing. As Director, Mr. Felix is responsible for the overall operations of the Bureau, and the production of U.S. currency and other government securities and documents.

A career Treasury employee, Mr. Felix has spent the last 17 years at the Bureau, most recently as Deputy Director. He previously served as the Bureau's Associate Director for Technology, and Chief of External Relations. He also chaired the Interagency Currency Design Task Force, a group responsible for recommending technical enhancements to U.S. currency design.

Director Felix holds degrees from New York City College of Technology, and City College of the City, University of New York. He did doctoral work in political economy at Columbia University. This is Director Felix's first time testifying before the subcommittee since I took over as chairman, so I wanted to extend to him a very, very warm welcome. You are recognized, Director Felix.

STATEMENT OF LARRY R. FELIX, DIRECTOR, BUREAU OF ENGRAVING AND PRINTING, U.S. DEPARTMENT OF THE TREASURY

Mr. FELIX. Thank you, Mr. Chairman. Chairman Gutierrez, Ranking Member Paul, and members of the subcommittee, thank you for holding this hearing, and inviting me to testify. I appreciate the opportunity to discuss the operations of the Bureau of Engraving and Printing and to expand on our efforts to study, test, and implement measures to help those who are blind and visually impaired more readily identify paper currency denominations.

The BEP is the security printer for the United States. While our primary product is Federal Reserve notes, we also produce security documents on behalf of Federal agencies. This year, the Bureau will produce about 7 billion Federal Reserve notes, as well as millions of secured passports and other printed security documents.

Financed through an industrial revolving fund, the Bureau does not receive an annual appropriation from Congress. Instead, customers reimburse the Bureau for the products we produce. The Bureau works very closely with the Federal Reserve System and the Board of Governors of the Federal Reserve, to ensure that the U.S. paper currency program meets rigorous quality, cost, and design specifications and can function effectively in the marketplace.

The currency program of the United States is a shared responsibility that demands high levels of cooperation and coordination between several Federal agencies. The Department of the Treasury, the Bureau of Engraving and Printing, the Board of Governors of the Federal Reserve System, the banks in the Federal Reserve system, and the United States Secret Service perform key and unique functions that contribute to the production and issuance of counterfeit-deterrent bank notes that are routinely accepted and widely used in commerce.

The U.S. Government initiates a redesign of currency notes in order to stay ahead of evolving technologies that enable counterfeiting. Since counterfeiting techniques remained traditional for the better part of the previous century, the appearance of U.S. currency remained unchanged from 1929 until the mid-1990's.

Because the size of U.S. currency has remained constant since 1929, entire industries and product lines have been developed and built around the size of our bank notes, including much of the Bureau's manufacturing equipment, as well as sophisticated, high-end cash handling machinery in the private sector, and automated vaults and storage used not only by the public sector, but also by commercial banks.

Additionally, currency-accepting machinery employed by the private sector, portable currency-reading devices that assist the blind and visually impaired, cash register drawers, and even the basic size and composition of our wallets conform to the dimensions of our bank notes.

In anticipation of the emergence of personal digital technology, the Government established a strategy to redesign currency every 7 to 10 years, in order to maintain our edge over counterfeiting. This new policy led to the introduction of the new currency design in 1996, and the colorful NextGen design in 2003. The Government has used these redesign changes as an opportunity to test, study, and implement features that can better assist the blind and visually impaired to more readily identify paper currency.

For example, in 1983, the Bureau commissioned a study to research design features that would assist the blind and visually impaired. In accordance with that 1983 report's recommendation, the Bureau procured equipment and undertook several initiatives to incorporate machine-readable features into our bank notes.

Later, in 1995, the National Research Council completed a study that assessed and recommended features for the blind and visually impaired to help facilitate them to denominate U.S. currency. That study recommended four modifications to bank notes: different size bank notes; large, high-contrast numerals; differing predominant colors for each denomination; and features that can lead to the development of effective low-cost devices for examining bank notes to facilitate the blind.

Since the 1995 study, the Bureau has incorporated 3 out of those 4 recommendations. The Bureau is committed to finding solutions that will assist the blind and visually impaired to more effectively denominate currency. Even before the recent decision by the U.S. Court of Appeals, the Bureau awarded a contract to conduct a comprehensive study of the issue.

The BEP and its contractors have already met with the American Council for the Blind and the National Federation of the Blind, as well as the National Council on Disability, an independent Federal agency tasked with making recommendations to the Congress and the President on changes regarding disability policy. All of these entities have provided invaluable input.

The study is intended to further advance the Government's understanding of the issues and to review all of the possible options to help the blind and visually impaired. The study, which is a three-part study, will examine the use of paper currency by the blind and the visually-impaired population in the United States and examine possible alternatives to improve their experience.

The study will solicit input from a number of interested parties. It will employ surveys and focus groups to fully study and evaluate the issues.

The study is intended to: One, identify the characteristics of blind and visually-impaired Americans and to project trends and needs for U.S. bank note identification purposes; two, examine technical and practical feasibility of technological solutions and currency design changes that can assist those who are blind or visually impaired—this will include a review of the effectiveness of potential features, as well as an ability to either manufacture these features or produce them, and will also look at operational, timing, and security considerations related to whatever proposals that are deemed feasible; and finally, the study will provide an economic analysis of the changes that have been identified. The economic analysis will examine societal costs to the public and private sectors and consider the effectiveness of these solutions, relative to their costs.

The Department of the Treasury, and the Bureau of Engraving and Printing are sensitive to the national needs of all Americans, including the blind and visually impaired. Changes to U.S. currency can have broad consequences to all users of currency, and potential solutions to assist the blind and visually impaired must be thoroughly evaluated prior to reaching a final decision.

The Department and the Bureau, in coordination with the Federal partners, the blind and visually-impaired community, and the private sector—and the major private sector users of currency—will continue to search for creative and practical solutions in this area.

Mr. Chairman, this concludes my prepared remarks, and I am happy to take your questions.

[The prepared statement of Mr. Felix can be found on page 34 of the appendix.]

Chairman GUTIERREZ. Thank you very much. Well, as I said, the focus of the hearing today stems from the U.S. District Court for the District of Columbia's ruling in *American Council of the Blind* v. *Paulsen,* which held that the United States discriminates against the blind and visually impaired because its paper money is all the same size, regardless of denomination.

So, we are going to have to work together to resolve this problem, and respond accordingly to the lawsuit that was filed.

You spoke—and it's really good, I'm really happy we have you as a career professional, because you have been there many years in many different positions. So I think you're going to be in a very

keen position to help us figure this out. In your testimony, you mentioned the redesign programs that the Bureau has implemented over the years to maintain an edge on counterfeiters. Wouldn't it be fairly easy for the Bureau to implement the D.C. court order in the next redesign?

And wouldn't a larger bill or a bill that is sensitive to touch make our currency even harder to counterfeit? That is to say now the counterfeiters have to figure out two things, all your technology and figure—I mean, this is only preliminarily.

But if you can't see, you have much better—you use your fingers a lot more during the day to read Braille and a number of other things. And they have—the blind and visually impaired have a much better sense of touch than we do. Wouldn't it be easy to do that? What do you think?

Mr. FELIX. Mr. Chairman, clearly, we have evaluated the use and incorporation of tactile features into bank notes. Typically, because of the substrate, tactical features do not work. They do not last the life of a bank note. And in the instance of our neighbors in the north, in Canada, they have deployed tactile features, as well as Switzerland and various other countries.

Tactile features tend to last a very small fraction of the life of a bank note. And so, if you're going to deploy a feature to assist the blind and visually impaired, it doesn't really help them if that feature erodes over a period of time. So, tactility has proven to be ineffective in the long run. The bank notes tend to circulate consistently over time, and in the U.S. case, our bank notes circulate outside our borders.

Chairman GUTIERREZ. All right. How is the Treasury going to respond to the actions of discrimination against the visually impaired and the blind?

Mr. FELIX. There are a lot of potential options available. Certainly, one option is we have put features in the bank notes that are machine-readable. And in the case of Canada, they provide a portable detector for people, and you can certainly use the portable detector to authenticate and denominate a bank note.

Even if we were to change the sizes of bank notes to have a different size and a denomination, we can't currently do that because of equipment limitations. But even if we could, blind people will—visually-impaired people will still require the use of a template, and that's because the range that all of the denominations can change is so small that certainly, in the case of, say, the euro, you can tell a 5 euro from a 500 euro. But the average blind person can't distinguish 10 from 20, or 20 from 50, or 50 from 100, because the gradations in the size of these notes are very, very minor.

And so, what the European Central Bank has done is provided a portable template for people to use. One of the things we are looking at is how do you provide people with an effective method for denominating currency. Clearly, having a portable device seems to be the most effective method for denominating currency.

Chairman GUTIERREZ. Well, we will be working—I'm not going to ask you any more questions, so that we can have Dr. Paul and others ask. We will be working very closely, and as quickly and as expeditiously as possible, obviously with all of the interested parties,

so that we can resolve this issue as quickly as possible. We shouldn't let it linger any more than necessary.

I am really looking forward to working with you, Director Felix, on this issue. I am very happy, again, that we have a career—somebody who has made it his career to get this done.

Dr. Paul, please, you are recognized.

Dr. PAUL. Thank you, Mr. Chairman. Mr. Felix, you mentioned that the Bureau of Engraving and Printing has other documents that you have to do, as well. Can you give me a rough number of how many different documents you are involved in? Is it 10, 20, 100, or 500? What?

Mr. FELIX. It is more like 10 or 20.

Dr. PAUL. Ten or twenty. And you mentioned passports. That must be one of your big ones. Do you still print treasury bills and bonds?

Mr. FELIX. Not the Bureau of Engraving and Printing.

Dr. PAUL. They don't do that? But, you know, you have these other documents, and none of those fulfill this requirement with Braille.

Mr. FELIX. That's correct. Most of the documents we produce do not require Braille.

Dr. PAUL. And would the logical conclusion be that if it is discrimination to not adjust our currency, it would be discrimination not to adjust these other documents?

Mr. FELIX. Most of the documents we produce tend to be documents that interface with machines; they have machine-readable characteristics. That is, in fact, our core competence, to be able to marry technology on the printed document. So, the vast majority of our work is based on the machine to document interface.

Dr. PAUL. But if the Government is charged with discrimination because they don't fulfill this requirement, it seems like it would be logical that the private companies would be held responsible too. Although I might not agree with that, and I would like the market to solve those problems and have competition, it seems like in this day and age, the people who print other documents would be required to do the same thing, like a stock certificate or a regular bond.

Or, for instance, if—I think not too many people use cash any more. More and more people are using credit cards. And let's say that we end up—and the blind use credit cards or cash even less, and use credit cards, it seems like this may well lead into saying, "Well, how does a blind person"—and I don't know, maybe it's already taken care of, but how would a blind person read his receipt? Maybe the Government will come along and then say, "Well, make sure the receipt is in Braille, too."

So, it could go on and on. Do you see that as a natural consequence, or is that worrying too much?

Mr. FELIX. Well, Mr. Chairman, you know, I think I would prefer to address the issue as it relates to U.S. currency. And as it relates to U.S. currency, the Government has been proactive in putting features that are accessible. We could do more. We haven't yet, we haven't gone to the notion of changing the sizes of bank notes, but we have gone and incorporated many accessibility features into the bank notes.

And, in fact, we have relied and helped and encouraged the private sector to develop readers using the features we have deployed, so that it can be made available to the blind and visually impaired who need those devices.

Dr. PAUL. Thank you. I have no more questions. I yield back.

Chairman GUTIERREZ. Thank you, Dr. Paul. I will recognize the gentlelady from New York for 5 minutes.

Mrs. MCCARTHY. Thank you, Mr. Chairman. One of the things that I wanted to—going back to your question, Mr. Chairman, on the "tactable" dollars, half the population of the blind or visually impaired suffer from diabetes. And with diabetes, a lot of them do not have the feel of touch in their fingers. So, that kind of starts off right there with a difficulty.

But that comes down to what is a reasonable accommodation from the Supreme Court, because, to be very honest with you, when I was asked to look into this, the more we looked into it, the more we found how difficult this is going to actually be.

I know that you are looking at a new design, or a $100 bill which has the tactable feel on it for security reasons. Now, is it because the $100 bill is not circulated as much as the smaller bills, that you feel this is going to work? Or is this just an experiment?

Mr. FELIX. Well, the $100 bill offers us an opportunity to both address tactility, from a security perspective, as well, you know, as potentially to see if tactility assists people with denominating the currency.

Just what we have done in a series of design redesigns was to use these designs to attempt to deploy features that can facilitate some people with some level of vision impairment to be able to distinguish. And if you look at a $5 note, we increased the size of the high contrast numeral on the back. It was another attempt, sort of as we go on, to progressively increase the functionality of the bank notes.

So, clearly, increased tactility on the $100 bill certainly does promote an opportunity for people with vision impairments to distinguish the notes, but it also adds to some of the security elements.

Mrs. MCCARTHY. Could I just follow up, and if you could, explain with a little bit more detail on what you have also been working on.

I know Engraving and Printing has been encouraging the development of technology and currency reading devices, including technology that could be downloaded off the Internet and programmed into cell phones, which also may assist blind individuals and the visually impaired not only to read the currency, but also cash registers and price stickers and things like that. How far is that going and where are we on that?

Mr. FELIX. That is correct. The Bureau has been trying to stimulate private sector development to—because we have already incorporated features more than 10 years ago into the bank notes, we have been trying to stimulate the private sector to use these features to develop devices that will enable people to denominate.

We have even funded an awful lot of research. But inevitably, these companies come back to us and say, "There isn't a market." The market, in order to develop a portable feature, doesn't make their product cost effective. And so that's one of the challenges we

have, because we recognize there is a need for this product, and we have put the features in. We will continue to maintain these machine-readable features, it's just that the private sector, so far, has not indicated an interest to follow up on those features.

But we have done several studies, and will continue to do additional studies, to see if there is some way we can stimulate the development of a low-cost feature.

Mrs. MCCARTHY. Well, just out of curiosity, though, with the private industry not really getting involved in this as you have been trying to work with them, was that even before the Supreme Court judgement, or now will they start looking at it, because now this is almost like a mandate?

Mr. FELIX. We started this effort back in the late 1990's, in an attempt to stimulate private industry to pick up on the features that we have incorporated for them. They have.

Interestingly, they use these features that we have put specifically for the blind and visually impaired, they use it for security reasons. But they don't use it for developing a feature for the blind.

All of these developments have occurred maybe as recently as last year, and it's an ongoing effort to encourage them to try to develop a market. But they really don't see that it's a sustainable market for them.

Mrs. MCCARTHY. As we go forward—and, obviously, when you look at the—our European colleagues that do mostly coins from a $1 coin and a $2 coin, are we looking into that?

I know there was a concern, because it's so bulky, not in our pockets, but when you're talking about dealing with retailers and things like that.

Mr. FELIX. It is the position of the Treasury Department that it should give the American public the choice between a $1 coin and a $1 bill, and—rather than having the Government dictate that, "You shall not have a dollar bill."

We think that is a fair position, in line with the spirit of allowing choice and freedom to the American public. So, we fully support the fact that people have a choice between the two. But, nevertheless, by having that choice, we recognize that we have to work on finding a much more universal solution for the paper currency, because we clearly recognize that is a hurdle for some people.

Mrs. MCCARTHY. Thank you. I yield back the balance of my time, and I know we will be working closely with you. Thank you.

Chairman GUTIERREZ. Thank you very much. Thank you, Mr. Felix. Let me just say that we are going to be in recess. We have a Republican Convention, a Democratic Convention, things to do in August. It's also very hot here, so we will be away.

We will get back here on the 7th or the 8th, so we will be in touch with your office. The gentlelady from New York and I are going to be calling other interested parties, so that we can—I mean outside of these hearings—we can kind of listen to you, and have a conversation among ourselves with interested parties.

So, during the recess, get ready. We will be back, and we will be calling you and arranging a time to meet with you and other interested parties so that we can have a more informal discussion about this issue. Thank you so much, Director Felix.

We now have the next panel: Melanie Brunson; Marc Maurer; and Cyrus Habib. While everybody is getting seated, I ask unanimous consent that the written testimony of Perkins School for the Blind be admitted into the official record. Hearing no objection, it is so ordered.

Thank you so much. I will now introduce our second panel. First, we have Melanie Brunson, executive director for the American Council of the Blind. She has been with the ACB since 1998. Previously, she served in the capacity of director of advocacy at ACB. Prior to that, she was in private practice of law for 12 years. Ms. Brunson holds a B.A. and a J.D., both from Whittier College.

Second, Marc Maurer is joining us. He is president of the National Federation of the Blind. Mr. Maurer has been president of the NFB since 1986. And from 1997 to 2000, he also served as president of the North American Caribbean region of the World Blind Union. Mr. Maurer graduated cum laude from the University of Notre Dame, and received his J.D. from Indiana University School of Law. In 1981, Mr. Maurer was elected president of the National Association of Blind Lawyers, and served in that office until 1985. And from 1984 until 1986, he served as president of the National Federation of the Blind of Maryland.

Mr. Maurer has received numerous honors and awards, including the Presidential Medal for Leadership in 1990, the Baltimore Business Journal's 1999 Innovation Award for Excellence and Workplace Technology, the 2002 VME Robert Dole Award, and the Daily Record's 2002 Innovator of the Year Award.

And finally, we have Cyrus Habib. Mr. Habib is a third-year law student at Yale Law School, where he is editor of Yale Law and Policy Review. Mr. Habib, along with the Yale Law School dean and several other students, submitted an amicus brief in the *ACB* v. *Paulsen* case, arguing that the U.S. currency is inaccessible to the blind. In the past, Mr. Habib has been awarded a Soros Fellowship, a Rhodes scholarship, a Truman scholarship, and in 2001, won the United States Congressional Service Award.

We thank you all for coming here. Your complete testimony has been submitted for the record, and we will begin with Ms. Brunson, please.

STATEMENT OF MELANIE BRUNSON, EXECUTIVE DIRECTOR, AMERICAN COUNCIL OF THE BLIND

Ms. BRUNSON. Good morning. First of all, I want to thank the committee for holding this hearing, and for the opportunity to speak with you this morning.

As was indicated, I represent the American Council of the Blind, an organization which was founded in 1961, and currently has members in all 50 States, most of whom are blind or visually impaired.

ACB's mission is to increase the independence, equality of opportunity, and quality of life for all blind Americans. We believe that one way to increase the independence, enhance the opportunity, and improve the quality of life for blind Americans is to ensure that they can identify the denominations of their own bank notes, without having to rely on someone who is sighted to assist them.

Since the exchange of bank notes is a key component of so many transactions engaged in by our society today, we believe that it is imperative that the Government recognize that people who have visual impairments should be able to conduct their part of such exchanges independently. And we have been pleased to hear about some of the efforts that are currently ongoing to address this issue, as you have heard about this morning.

The rate of unemployment among people who are blind or visually impaired is unacceptably high. We believe that job opportunities that are currently, at best, limited, and sometimes even unavailable to people who are blind, would be opened up to us if we could identify paper money as efficiently as others do.

This is particularly significant for young people, and other first-time job seekers who are looking for entry-level positions in places such as stores and restaurants, so that they can gain the work experience they need to advance in their chosen careers. Such jobs are currently frequently customer service-related, and involve a good deal of handling money.

Certainly, there are blind people who now work in cash-intensive business situations, but they are forced to rely on either the honesty of their colleagues and customers, or currency reading technology that is inefficient and often unreliable. Money identifiers are slow, frequently inaccurate, and, in noisy situations, are unusable.

It is common knowledge that blind people who are required to complete transactions involving cash quickly, such as cashiers in vending facilities, often abandon their money identifiers and rely on the honesty of other people to identify the cash involved, so that they can quickly meet the needs of their customers.

The problem with this scenario is that, oftentimes, verification by another sighted person isn't any faster than verification using a money identifier. Secondly, the process requires that a blind person often make an issue of, or call attention to his or her visual impairment in order to get someone else to assist, or take the risk of being defrauded.

The fact is that, while most people that you encounter on a day-to-day basis are honest about the denomination of money, I can personally testify to instances from my own experience, and could provide additional anecdotal evidence in a significant amount from other people, that would show that blind people do get defrauded because of their inability to ascertain the value of U.S. bank notes.

It is our position that if blind people are to be truly accepted as equal partners in the work places, cultural activities, and economic life of this society, the Government must design and issue bank notes that we can identify independently.

As I alluded to a minute ago, we believe that currency readers are a very poor substitute for bank notes that are readily distinguishable without vision. In addition to being slow, each time a bank note is redesigned, the users of currency identifiers currently have to return the units to the factory to be updated, and there is a charge for such updates.

Over 180 countries around the world have found ways to incorporate tactile features into their bank notes that enable blind and visually impaired people to distinguish notes of one denomination

from another. They have also taken steps to enhance the visual distinctions between denominations.

Chairman GUTIERREZ. Ms. Brunson, you have 10 seconds to conclude your testimony.

Ms. BRUNSON. Thank you. We simply want the Government of this country to do the same. We are not as concerned about the speed, as we are about the appropriateness and the usability of the features involved.

And we thank you for the supportive comments that you have made, and we hope that this committee will support our efforts to obtain accessible currency. Thank you very much.

[The prepared statement of Ms. Brunson can be found on page 32 of the appendix.]

Chairman GUTIERREZ. Thank you for your testimony.

Mr. Maurer?

STATEMENT OF MARC MAURER, PRESIDENT, NATIONAL FEDERATION OF THE BLIND

Mr. MAURER. Good morning, Mr. Chairman. My name is Marc Maurer and I am the president of the National Federation of the Blind. It is the oldest and largest organization of blind people in the United States. It has an affiliate in each of the States, the District of Columbia, and Puerto Rico, and it has chapters in most large cities and many of the small ones. I come to present the considered opinion of the National Federation of the Blind regarding currency identifiable by blind people.

Would it be desirable to have a method for blind people to identify currency independently? Of course it would.

Are blind people able to use the currency today, without modification? Certainly, we are.

The argument has been made that currency which cannot be identified independently by blind people discriminates against the blind. However, blind people use items that are not tactilely identifiable by the hundreds every day.

The argument about the currency has implications far beyond the money. In the work that I do, I handle currency, documents, and affidavits. Very few of these items are identifiable by touch. But to say that I cannot use them is to make an argument that isn't true. We know that the blind can manage currency as it now exists.

It would be more convenient to have a method of identifying it without help. However, many of the methods used throughout the world don't work. In Canada, the bills that I have received have had Braille symbols on them, but these were useless to me. There are other methods of doing it. Some of them work, but none of them are as easy as some of the methods that we might recommend.

Technology has been developed that can readily identify currency. The KNFB reader has a currency identifier in it that a number of blind people have used with outstanding success. A standalone currency reader, portable enough to carry in a pocket, could probably be produced for as little as $100.

One final point should be made. To say that we can't manage money is to argue that we, as blind people, are helpless. This is not

the case. To say that we might be victims of fraud is to argue that we can't imagine methods of protecting ourselves. Such an assertion also urges the unscrupulous to try to prey on our vulnerabilities, be they real or imagined.

To describe us as helpless, vulnerable, or incompetent is to paint a picture of blind people so negative that others in society are persuaded to mistrust any ability we have. Can you trust a blind lawyer, if he can't even figure out how to manage his money? How can you be sure that your lawyer will be able to handle your transactions if he can't handle his own? These are the unfortunate associations that come from the false and misleading argument that the blind cannot manage currency.

The National Federation of the Blind has adopted resolutions about currency in 1994, 2002, and 2008. I attach these for your information. If there is to be a change in the currency, we who represent the largest number of blind people in the Nation wish to be involved in drafting and crafting the change.

I do have a currency reader here. And, if we could take just a moment, I would like to have it demonstrated.

Mrs. MCCARTHY. [presiding] Permission granted.

Mr. MAURER. This is—it just mentioned that it was a $20 bill. It had to check it twice, in order to be sure. I'm sorry that we didn't have it on the microphone.

But we have had no false positives with this machine. It is currently expensive. We believe that it can be made for $100 to go on any cell phone, and we think it will be an effective method of identifying currency.

We ask that we participate in whatever the crafting of the change might be, as we estimate that there will be a change in the currency.

This concludes the summation of the statement of the National Federation of the Blind. Thank you very much.

[The prepared statement of Mr. Maurer can be found on page 61 of the appendix.]

Chairman GUTIERREZ. I would ask those who are present to please refrain from applauding or interrupting in any way the proceedings. Thank you very much.

I am sorry I had to leave momentarily, but we had a Rove contempt citation and I had to show up for that.

Finally, we have Mr. Cyrus Habib. I recognize you for 5 minutes. I will also give you 30 seconds when the light turns red.

STATEMENT OF CYRUS HABIB, DISABILITY ADVOCATE

Mr. HABIB. Thank you, Mr. Chairman, Ranking Member Paul, and members of the committee. I would, first of all, like to thank you for holding this hearing, for taking up this important issue. I would also like to take this opportunity to thank the American Council for the Blind for their leadership on this issue, and Congressman Frank's office and staff for their leadership and for helping us to be here today.

It is an honor for me to sit among leaders of the blind community, and individuals from industry. In deference to time constraints, and in the wake of some of the testimony that has already been heard, I want to just focus, Mr. Chairman, on three points.

I, and another fellow law student at Yale, began work under Dean Harold Koh on an amicus brief for the D.C. circuit about a year-and-a-half ago, specifically because we felt that the issue of blind employment had not adequately been made by the parties in that case, that the issue of inconvenience to a blind consumer, and the opportunity for a blind consumer to be defrauded had been mentioned, but that in balancing government interests and undue burden with the impact on the blind community, the blind employment issue, which Ms. Brunson has spoken to you about, had not adequately been raised.

There are three things that I think are important. And in writing that amicus brief, we represented the Perkins School for the Blind, which is the largest educational institution for the blind.

The first point is the importance of entry-level jobs. When working with students from the Perkins School, we heard many of them—teenage, late teenage, early twenties—saying that first job, which I think all the members of the subcommittee will acknowledge is integral to obtaining references, to having key work experience at an early stage, to building mentorship relationships, that those jobs were the very jobs from which they had been foreclosed.

Mr. Maurer mentioned that any such changes, proposed changes, would imply that blind people are currently not able to hold those sorts of jobs. What the students at the Perkins School were telling us is that those prejudices, Mr. Chairman, are already present, and in fact, are barring them. And the experts and staff at the Perkins School concurred with that assessment, that those biases, that blind people are unable to handle, denominate, verify, and exchange cash currency are already there, and that itself is detrimental to them.

The second point I want to make is about financial literacy. This is what I have deemed the "lemonade stand effect," which is that from a young age, Mr. Chairman, all of us Americans begin the process of becoming financially literate, you know, the archetypal example being the lemonade stand.

Blind people, by dint of not being trusted and able, independently—not withstanding a 5-year-old being able to use Mr. Maurer's machine—are, from a very early stage, cut out of the process of being the front man in financial exchanges. And this leads to an attenuated effect, which is financial illiteracy, which we argue is at the heart of the epidemic of blind unemployment in this country, as well.

The final point I want to make is about, once again, this idea of perception. Blind people are fully capable of being employed in many of the same capacities as any other person. All we seek is an opportunity to enter into the economy of this great Nation. And by remaining in State and Federal, Social Security disability pay, and so on, we are not living up to our full potential. And that is marring and tainting our image.

When I lived overseas in England, I was pleasantly surprised to be served at a cash register for the first time in my life by a blind individual. That altered my perception of what sorts of jobs could be available to blind people, and motivated and catalyzed me to take on this issue when I returned to the United States, and found out about the great work of the American Council.

I want to just close, Mr. Chairman, by addressing—in calling on the subcommittee to take urgent action on this issue, I want to address the issue of private versus public. And, again, as a matter of law, this lawsuit was brought under section 504 of the Rehabilitations Act. That is a statute that requires the Government to make reasonable accommodations in avoiding discrimination.

With all due respect to those who are proponents of a private sector fix, we argue that the Court of Appeals and the D.C. District Court have both—in agreement that section 504 controls this matter of law, and—as a matter of law, controls this case. And so, we really would hope that, in taking action, the subcommittee would look affirmatively to how other countries have dealt with this in the public sector, and abide by the holdings of those courts.

Once again, I want to thank the subcommittee for your time, and also clarify in closing that I come before you as an individual, not as a representative of the Perkins School for the Blind or the law school. I stand ready for any questions. Thank you.

[The prepared statement of Mr. Habib can be found on page 49 of the appendix.]

Chairman GUTIERREZ. Thank you so much. Well, Mr. Maurer, how do you respond to Ms. Brunson's and Mr. Habib's testimony, that having tactilely distinguishable currency is vital for young people and others, first-time job seekers who are looking for entry-level positions in stores and restaurants, and looking to become financially independent and not on Social Security and other kinds of Government aid, but that this would help them secure jobs and a livelihood? How do you respond to that, Mr. Maurer?

Mr. MAURER. The reality is that blind people are doing cash management at cash registers today. And the argument about cash is one that is a real argument, but it is only one tiny argument among so many. Entry-level jobs today are a problem, but they are very much a problem, because of lack of computer technology-based access that is at least as important.

And if Mr. Habib hasn't ever run a lemonade stand, then his experience isn't as broad as mine. I have, and I was blind when I did it. And I delivered newspapers and collected currency.

Managing currency for blind people is a thing that blind people do now. If a person doesn't want to employ you and uses that argument, then they will have another one, which is to say, "Can you read the price tag on the product that is coming to your cash register?" "Can you tell whether it is a package that contains one product or another?" Do you have to identify everything by touch?" And if you do, then it's only one tiny element of all of the things that have to be managed. There may be a way to do it, but it's a bigger problem than they are talking about.

Chairman GUTIERREZ. Ms. Brunson, would you care to respond? I am not trying to—I mean, there is a significant difference here, and I thought we would take these 5 minutes just to develop it somewhat.

Ms. BRUNSON. Well, certainly there are any number of items that one deals with in managing either a professional position or any number of transactions involving doing business, either personal or professional. And to say that because you don't have a way to ad-

dress all of them, or you might not want to address all of them, you shouldn't address any of them, I think isn't appropriate.

And so, I think that because of the degree to which currency affects so many aspects of our lives, that doesn't mean that we shouldn't address it, just because we might not have the opportunity to address all of the issues that might come up at once.

Chairman GUTIERREZ. Mr. Maurer, the lawsuit has been filed. The court has found that it is discriminatory. How should we resolve that?

Mr. MAURER. The lawsuit is over, Mr. Chairman. The Treasury does not intend to appeal the lawsuit. I think the lawsuit is an error. That's a personal opinion, and that—

Chairman GUTIERREZ. I guess my question is, we know that it is over and it has been found to be discrimination. How do we resolve that, Mr. Maurer?

Mr. MAURER. That, I appreciate, is the decision of this subcommittee, working with the Treasury. I don't—the recommendation that I would have would be a technological solution. I think it is the most effective. I think it is the most cost effective, as well as the most technologically effective. That is, I think it is the best way for blind people to identify currency. That is why I brought the currency reader today. I think it is the best way to go.

Now, the Treasury may not agree, you may not agree. And that, of course, is an argument that I will make to you.

Chairman GUTIERREZ. Okay. Well, we will continue. Mr. Habib, do you have any closing comments?

Mr. HABIB. I just wanted to make one quick response to Mr. Maurer's point in answering your first question, which is that I think it misses the mark in the sense that price tags, Mr. Chairman, are a matter of a private store. If I go into a grocery store, whether that employer has made the workplace accessible to me or not is a matter of reasonable accommodations governed by the Americans with Disabilities Act. That is a different statute than what we're talking about here.

We are talking about the Government. We are talking about section 504 of the Rehabilitations Act. Not withstanding Dr. Paul's points, U.S. currency is, in the status quo, a public accommodation, is governed by public—by the section 504 of the Rehabilitations Act, and as such, is held to a completely different standard than the type of workplace, you know, environment in a private business, such as what Mr. Maurer was referring to.

Chairman GUTIERREZ. Thank you so much. Dr. Paul, please, you are recognized for 5 minutes.

Dr. PAUL. Thank you, Mr. Chairman. First, I would like to ask unanimous consent to insert into the record a written statement on this topic by the Coalition for the Presidential $1 Coin.

Chairman GUTIERREZ. Without objection, it is so ordered.

Dr. PAUL. Thank you. Actually, I don't have a question, but I do want to make a brief comment. And maybe Mr. Maurer would comment on it. I was fascinated with his testimony, because sometimes I don't find a lot of optimism in finding all the solutions with more regulations and more rules and more Government.

And, fortunately, today I think we live in an age where technology is so beneficial. Even in medicine today, whether it's dealing

with the blind and the deaf, I am sort of an optimist, long term, that great things will come out of technology. And of course, today we are not talking about that.

But you take the problems of the bad stuff that's on the Internet and on television. You know, there are two ways to do that. You either resort to Government that monitors and gets in the area of violating the First Amendment, or you can go to technology, and all of a sudden you know how to block things on the Internet, and block things on TV. And I think, in some ways, we are talking about technology coming to the answer. Because too often, when we look to the Government, even though it seems like it might solve one problem, it might introduce another.

And certainly this issue of self-reliance, which is very challenging, of course, under these circumstances, but I think there is a bit of satisfaction that all of us get out of self-reliance, so—I keep wondering that—the demonstration you did is awfully fascinating. And if you can do that with a bill, wouldn't it be wonderful if they could do that with us at the airport? You know?

And actually, there is technology available in the hands of private people at the airport. We might not have to have 500,000 people on suspicious terrorist lists and being pestered to death to make us safe. And there are technologies available.

So all I want to say is I applaud your approach, and I think hopefully this can be worked out to everybody's satisfaction, legally, and to benefit everybody. I would like to just compliment Mr. Maurer on his testimony.

Mr. MAURER. I want to thank you, Mr. Chairman, and Mr. Paul. I have never met a currency that worked tactilely. If there is one, I would like to know about it. And I have traveled many places.

We would like to be involved in the solution to this process. We do believe it would be more convenient; we just don't want to spend hundreds of millions of dollars on it.

Chairman GUTIERREZ. Thank you so much, Dr. Paul. The gentlelady from New York is now recognized for 5 minutes.

Mrs. MCCARTHY. Thank you, Mr. Chairman. Number one, I think everybody is going to be involved as we go through this process. They have to be.

Again, we were handed down a mandate from the Supreme Court that we have to do something. Now I will tell you what happens around here, especially on committees. When we have so many different factions working together for the bill, against the bill, this needs to be changed, that needs to be changed, there is an expression around here: "If no one is happy with it, we have actually done our job right." And that means we tried to accommodate everybody. But everybody should be involved in the process, and they will be.

With that being said, you know, sitting here—and my background is as a nurse—so sitting here thinking, my first reaction is, "Well, let's do coins." But then I started thinking of those who have other challenges, someone who basically might have had a stroke and will not be able to use their fingers to be able to pick up a coin, and yet they're able to work with a $1 bill or a $5 bill. So, I mean, there are going to be a lot more complications in other areas, as we go through this process.

But Mr. Habib, when you were over in London, and you said that it was the first time you met a blind person or a visually-impaired person at the cash register, was it because of their currency, or was there other technology that was helping that person work there?

Mr. HABIB. No. They were using the British pound, which uses, you know, a combination of the methods that we have been talking about. There is a 1 pound and 2 pound coin, which I think takes us well above $4 now in exchange rate. So coins are a fairly viable solution at the low end for them.

But the bills are also sized differently, both—and the changes are noticeable, to address that—the previous point made by Mr. Felix, that those are—the 20, the 5, and the 10 pound notes are distinguishable from one another.

Mrs. MCCARTHY. Thank you. Mr. Maurer, as we go forward, in many ways, like Mr. Paul, I do believe that technology is going to be out there. And it is going to be interesting as we go forward. Are we going to have a solution where, again, we're going to have to almost, as they say, split the baby? Some will be technology, maybe there will be some that will be dealing with the actual hard currency.

We are too early in the stage to actually know all of that, even though we have had many meetings with different groups. On the next panel it's going to be interesting to hear them on the accommodations and what they're looking at, basically, on how—and the ideas they have on how we can address this issue that we're going to be looking at.

So, again, this is very, very early. I have to ask you, Mr. Chairman, do we have a timetable on this?

Chairman GUTIERREZ. We don't have a timetable. We will be getting together in the beginning of September to put one together. The first thing is getting—

Mrs. MCCARTHY. So there was no mandate from the Supreme Court on when we had to have this done?

Chairman GUTIERREZ. No.

Mrs. MCCARTHY. That's good.

[Laughter]

Mrs. MCCARTHY. Well, you know Congress works slow, anyhow. But if we are going to be making major changes, which I guess that's what we're going to be doing, this needs to be really thought out, and have all areas working together so that when we make this decision, it's going to be accommodations for everybody, and hopefully satisfactory.

With that, I yield back the balance of my time.

Chairman GUTIERREZ. Thank you so much. We don't have a specific timetable, so we will be working on the issue. But we will be working responsibly to get it done in the quickest way possible. I think that's our goal, to get it done quickly. There is a court mandate. We should respond to it in the most timely fashion possible. That is certainly going to be my goal.

I would just like to say to Mr. Maurer, Mr. Habib, and Ms. Brunson, look, you all represent a community of people in the United States. You do a wonderful job. You have a difference of opinion, and you come from a point. But we will be talking to all of you to figure this out in rendering a solution that responds to

the court, and more importantly, that responds to the court that does fairness and justice, and makes America a better place for all of us to live in.

I thank you all for participating in this panel.

Ms. BRUNSON. Thank you.

Mr. MAURER. Thank you, Mr. Chairman.

Mr. HABIB. Thank you very much.

Chairman GUTIERREZ. We have on the next panel Mr. Richard Geerdes and Mr. Jeffrey Knoll; if they would come up to the—Mr. Richard M. Geerdes, testifying on our third panel, is president and CEO of the National Automatic Merchandising Association, NAMA. Mr. Geerdes assumed the leadership of NAMA on January 1, 1999. A native of Chicago, Mr. Geerdes holds an MBA in finance and a bachelor's degree in management information sciences from Western Illinois University.

Mr. Geerdes has worked at NAMA since 1988 in various capacities. He joined the staff of NAMA following his experience as a vending operator in a series of senior management positions with Interstate United and Canteen Corporation.

And we have Jeffrey Knoll. He is executive vice president, corporate counsel for Cummins-Allison Corporation of Mt. Prospect, Illinois. Mr. Knoll serves as executive vice president corporate counsel for Cummins-Allison. Mr. Knoll holds a J.D. with honors from Chicago Kent College of Law, as well as undergraduate and graduate degrees in aerospace engineering and engineering mechanics from the University of Illinois at Urbana-Champaign.

In his current position, Mr. Knoll receives all corporate legal affairs for the company, including prosecution and litigation of intellectual property rights. You are both welcome, and we will start with Mr. Geerdes for 5 minutes.

STATEMENT OF RICHARD M. GEERDES, PRESIDENT AND CHIEF EXECUTIVE OFFICER, NATIONAL AUTOMATIC MERCHANDISING ASSOCIATION (NAMA)

Mr. GEERDES. Thank you, Mr. Chairman. Good morning, Ranking Member Paul, Mrs. McCarthy. Thank you for the invitation to testify today.

NAMA is the National Automatic Merchandising Association, since 1936 our country's national trade association, headquartered in Chicago, representing people in the vending, coffee service, and contract food service industry in this country.

NAMA estimates that approximately 20 million Americans purchase a food or beverage item from a vending machine every work day. And I want to emphasize that people who are blind or visually impaired are not only important customers to the vending industry, but they are also important participants through the set-aside programs in many States, where they operate vending.

I speak for NAMA's nearly 1 million members in over 2,400 companies nationwide in an industry well north of $40 billion a year. NAMA members are small and mid-sized businesses who own and operate approximately 7 million currency and coin-operated vending machines across our country. And we also represent everyone else who supplies products, equipment, and the distribution chain in the industry.

My testimony today will center on the impact to the industry if tactile or other changes are made to U.S. currency, and the various ways of meeting the currency use needs of the blind or visually impaired—as I said, important customers of NAMA. And, finally, also serving the needs of the American taxpayer, by keeping down vending machine operating costs to consumers.

Vending in the United States is an equipment-driven, small business-owned, highly competitive, very capital-intensive business. The latest data from NAMA shows the average pre-tax margin of a small NAMA operator or service to be less than 2 percent. So keeping costs under control, so that consumer prices can be held in check, is critical.

Coinage and currency are the engines that drive vending. To provide improved accessibility and use of currency for the blind and visually impaired, there are various options to be considered, and an opportunity to use technology, as we have heard.

At the request of this committee in May, NAMA resurveyed our members and manufacturers to get the most up-to-date information for Congress to consider. The most far-reaching and expensive change to currency for the vending industry would be to change its size, particularly the width of the bills.

From a vending machine operating standpoint, it's important to keep in mind that the ability of bill validating equipment to correctly validate legitimate U.S. currency is very dependent, in part, on the physical size of the bill being validated.

Technical research shows that bills that are significantly longer than current U.S. bills would not fit into the validator storage boxes, and would cause jamming in the bill transport mechanism. Longer bills would probably require additional software updates to the reading mechanisms. Bills that are significantly shorter could also create jamming in the bill boxes and also require software changes. Bills that are narrower would require, at a minimum, software upgrades. And also, sensing techniques used to validate bills require an accurate left positioning of the bill in the reader, so that positioning sensors can properly validate. And whether or not this could be incorporated into bills of various sizes is still open to question.

But a change in the width of currency would require a replacement of the currency validating mechanisms on virtually every vending machine in the country. At a cost of $500 per mechanism, multiplied by 7 million machines, this means a minimum expense of $3.5 billion to the vending industry, plus the labor to install, which we estimate at close to another $100 per machine.

To make similar changes to the 300,000 free-standing bill changers would likely add another $150 million to that total.

We are still working to develop cost data for changes to the length of currency, but the research simply wasn't available yet.

Simply put, these costs are certain to drive many of the small owner-operators, including those operating under the blind enterprise programs to bankruptcy in short order, and certainly will result in much higher costs to the consumers, given the margins in the industry.

But we also looked at a number of other features that I would like to relate to you. First, the impact of incorporating a single

large font denomination number on the bill. The effect of a larger single denomination number would depend on size and placement. As long as the larger denomination number was not in a position that interfered with areas that the current validators used for sensing, the changes to existing validators may not be needed at all.

Otherwise, we estimate retooling costs to be anywhere from $50 to $120 a machine. So again, a cost to the industry somewhere between $350 million and $840 million.

However, while incorporating a single denomination numeral would have the least financial impact, this modification would not permit people who are totally blind to determine the bank note denomination, so we recognize it's not a solution.

We also examined the idea of incorporating Braille, and we have heard many of the pluses and minuses from the other witnesses. The effect, my manufacturers tell me, is again, dependant greatly on where the Braille or tactile features are placed. And because they would likely increase the thickness of the bill, there would be a reduced capacity in the equipment to hold machines—the paper bills and machines that reach bill capacity cannot accept additional currency, therefore, a sales loss. So there is a financial impact there, but it is more difficult to recognize.

But again, retooling costs could range anywhere from $100 to $500 a machine, depending on what changes were made.

[The prepared statement of Mr. Geerdes can be found on page 42 of the appendix.]

Chairman GUTIERREZ. Thank you, Mr. Geerdes.

Mr. Knoll, you are recognized for 5 minutes.

STATEMENT OF JEFFREY G. KNOLL, EXECUTIVE VICE PRESIDENT AND CORPORATE COUNSEL, CUMMINS-ALLISON CORPORATION

Mr. KNOLL. Thank you, Mr. Chairman, and members of the subcommittee. My name is Jeff Knoll, and I am executive vice president and corporate counsel of the Cummins-Allison Corporation. I am honored to participate and offer testimony at this hearing today.

Mr. Chairman, we commend you and your colleagues for bringing us together in order to discuss what is truly an important issue.

Cummins-Allison is a privately-held U.S. company which has been in existence since 1887. Cummins-Allison is an industry leader in the design and manufacture of high-tech coin and paper currency processing equipment. Cummins-Allison's corporate headquarters are located outside Chicago, Illinois. We have technical facilities in California and Pennsylvania. There are sales and service offices located throughout the United States. And we have a number of wholly-owned foreign subsidiaries.

Cummins-Allison is the only American-owned manufacturer of currency processing equipment. All Cummins products are manufactured in the United States by U.S. workers.

Cummins-Allison equipment is used by banks. It's used by armored carriers. It's used by governments, retailers, the gaming industry, and many others. The equipment is used to do things like count, sort, denominate, and authenticate large volumes of currency. When I say large volumes, these machines run at rates of

up to 1,000 notes per minute, and they are used by people in applications ranging from a bank teller who may be taking a few notes across the counter, to a large back room for an armored carrier, or a Federal Reserve branch, where it is actually running at 1,000 notes per minute for several hours or several days, continuously.

Cummins-Allison fully appreciates and supports the important need to facilitate the use of U.S. currency by the visually impaired. However, in considering any change to the design of U.S. currency, Cummins strongly encourages the Government to move cautiously, particularly with respect to changes made to the size of U.S. currency notes.

More than 60 percent of the world's reserve currency is held in U.S. dollars, which provides America with many economic benefits. The U.S. dollar is easily recognized and well-respected by hundreds of millions of people around the world, which provides the U.S. Government with greater legitimacy, and allows America to assert its economic leadership. Any change to the American coin or paper currency may significantly impact the ability and willingness of other nations to utilize our currency, and could have adverse impacts on our economy.

Importantly, American currency has been the same size for more than 50 years—probably approaching 70 or 80 years. As a result, the currency processing industry has developed cost-effective machinery which is used throughout the world to process the American dollar.

Cummins-Allison has researched the development of equipment for processing foreign currencies as well. And our experience has demonstrated that it is far less expensive to process American currency of the same size than foreign currencies of varying sizes. As a result, the uniform size of American currency makes it a preferred currency in many other countries.

If the United States introduced currency of varying sizes, the process for converting the existing infrastructure of currency handling and processing equipment would be extremely onerous and expensive. Today's state-of-the-art processing machinery utilizes highly engineered components for feeding, transporting, scanning, and stacking currency notes. The majority of these components could not be modified to process new or different sizes of currency, and would need to be completely replaced.

If you consider the replacement costs for the existing currency processing equipment, and combine that with the modification or replacement costs associated with other industries like ATM, vending, and currency printing, it quickly becomes apparent that changing the size of the currency would be an extremely, extremely challenging proposition.

Although Cummins-Allison has not worked intensely in the area of alternatives, we are aware of alternative technologies. And, as Mr. Maurer described previously, we think one of the more promising areas of alternative technology is in the area of electronic, hand-held currency denominators. As this technology continues to advance, like many segments of our society, the cost will come down, and the technology will improve. In fact, it's likely that next generation devices will even be able to identify counterfeit currencies.

So, when taken into consideration with all the costs associated with the potential currency redesign, it may be far more economical and efficient to provide the visually impaired with personal denomination devices than to consider a broad scale redesign or change of the size of the U.S. currency.

In summation, Mr. Chairman, Cummins-Allison wholeheartedly appreciates the importance of finding a way for blind and visually-impaired individuals to more easily and accurately identify different denominations of currency. However, Cummins strongly encourages Congress to strive to identify the most efficient long-term solution.

Mr. Chairman, thank you again for the opportunity to participate in this hearing, and I am happy to answer any questions that you or other members of the subcommittee may have.

[The prepared statement of Mr. Knoll can be found on page 52 of the appendix.]

Chairman GUTIERREZ. Mr. Geerdes, let me ask you. You said $3.5 billion—$3.6 billion—you said there was another $150 million in there. That is to change the vending machines, alone?

Mr. GEERDES. No, sir. That is to change the paper accepting mechanisms on the machines. The critical part is the width of the bill. If—

Chairman GUTIERREZ. But changing them on vending machines, or all machines? ATMs?

Mr. GEERDES. No, I'm just speaking for the food and refreshment vending industry. So the cost is much broader to industry, as a whole.

Chairman GUTIERREZ. But there are other machines.

Mr. GEERDES. Oh, yes, certainly.

Chairman GUTIERREZ. ATM machines and other—

Mr. GEERDES. ATM, coin—parking, car wash, coin-operated laundry, sure.

Chairman GUTIERREZ. All of the other things that, when I go to the car wash, it takes it and—okay.

So, there are many other machines, you're just talking about—

Mr. GEERDES. Just the food and refreshment—

Chairman GUTIERREZ. Food and refreshment industry, okay. I wanted to make sure we had that clear.

In your testimony you suggest, Mr. Geerdes, that hand-held readers, scanners, could be provided to blind persons in the United States as an alternative to currency redesign.

Are you suggesting that the Federal Government subsidize these readers? And if so, has NAMA done any research, and are you aware of any research on how much this would cost the Government per unit, and overall?

Mr. GEERDES. Mr. Chairman, I have spoken with Mr. Felix. He indicated that the cost per reader was in the $100 to $125 range, I believe he said.

Our point was simply if Congress considered eliminating the dollar bill and used the savings to produce dollar coins, you could reallocate the savings to buy readers. We simply offer that as one more alternative for Congress to consider.

Chairman GUTIERREZ. To change the dollar bill to dollar coins?

Mr. GEERDES. To eliminate the dollar bill altogether, and simply go with a dollar coin, which is easily distinguishable by the blind. It would save the Government at least $600 million a year.

Chairman GUTIERREZ. That would complicate our problem in trying to figure out a solution. We have a lot of fans of the dollar bill.

Mr. GEERDES. Oh, absolutely. We understand.

Chairman GUTIERREZ. And so then we have to bring the dollar bill/dollar coin people to the table. So I think we will eliminate that one altogether. We just want to get to a solution. Starting with me, I'm a big fan of dollar bills, so you already have a bias here, and a prejudice here. Well, that's another conversation that we will have.

So, about $100 to $125?

Mr. GEERDES. Yes.

Chairman GUTIERREZ. Okay.

Mr. GEERDES. I believe that's what he said, yes.

Chairman GUTIERREZ. Okay. And then, I want to ask you, Mr. Knoll, a hypothetical in the conversion process. If we had a redesign, obviously we couldn't—no conversion would be immediate, because we would have two versions. We would have millions, if not billions, of notes out there, all over the world that are already printed.

So we would probably have two at the same time. If we could figure out a way to get—but we will never figure out—people keep coins in their houses and all kinds of stuff for years, we already know that. So we would have two at the same time. Has Cummins-Allison looked at what it would take, logistically, for businesses to operate two sets of currency processing equipment, one for the old currency and one for the redesign?

Mr. KNOLL. Well, first that takes into—I guess it assumes that, depending on the sizes, changes that are implemented, that it would be even feasible and possible to continue to process using existing processing technology.

The real trick is that as the notes become more and more sophisticated with technical features located in specific parts of that note, it becomes that much more critical to properly register the note with the different scanners in the machine. When the notes are all the same size, you can really control to strict tolerances how those bills move through there, and are reliably read with all those notes, all those features being read at the specific locations.

When the sizes change by denomination now, you have to account for both the smallest and the largest. So you have a question. Can you have notes that are basically floating now in that transport path? And can you as efficiently utilize those same technical features that you could reliably use when the notes were controlled now in this more or less floating environment?

So, the real change in the infrastructure not only is how long would it take and how much would it cost, but is it even technically feasible to do?

Chairman GUTIERREZ. Is it technically feasible to do? Okay.

So, I am not going to ask any further questions here this morning of the panelists, except to say I am going to ask Congresswoman McCarthy to chair the remaining part of the hearing. I am going to go over to the Judiciary Committee. We are having more

problems with Karl Rove, getting him to testify. So I am going to go over there, and make sure that happens. I thank you all for your testimony.

Mr. GEERDES. Thank you, Mr. Chairman.

Mr. KNOLL. Thank you.

Chairman GUTIERREZ. I look forward to working with you and convening the meetings, starting in September.

Mr. KNOLL. Yes, sir.

Mr. GEERDES. Thank you.

Chairman GUTIERREZ. I recognize Dr. Paul for 5 minutes.

Dr. PAUL. Thank you, Mr. Chairman. And the chairman has essentially stolen my question, but I am going to follow up on it. This timing, I think, is pretty important. And Mr. Knoll commented on it, so I will ask Mr. Geerdes to comment on this. Because you did throw out a number about the number of machines that would need to be changed, and the dollar amount.

In a calculation, really, we have to deal with this problem, the transition. And I think, you know, from the retail point of view, do you see it as even achievable? I mean, what kind of cost would be involved? And would it be—would you think that there would have to be two machines? Or would there have to be a day of recall, or how do you think that transition would work? And what kind of extra cost would it be to bring these two systems together?

Mr. GEERDES. Congressman, I believe that, yes, it's a terrific point. We don't see a solution to this right now, because the space on a typical machine front is fairly limited, and so it is well-defined as to where the validating equipment is contained.

If the validators themselves could be made to accept a variety of different sizes, then simply they would have to be replaced. But to my knowledge, you're correct. We would have two circulating. And I am not sure exactly how the industry would accommodate that, other than to say we would lose sales, because the customers cannot use what's in their pocket.

Dr. PAUL. That is the only question I have, and I yield back the balance of my time.

Mrs. MCCARTHY. [presiding] Well, I'm wondering, have you—and I guess I should have asked this question to Treasury, especially with—I guess it could work with any of the currency, on just cutting the tip of—whether it's the $1, the $5, or you know, the $1 could be on the left-hand side, the $5 could be on the right-hand side, and a $10 and $20 could be on each corner. How would that work out?

Mr. GEERDES. Well, my machine manufacturers and the validating people tell me that that could be accommodated, depending on the degree of cut and other technical considerations. But it certainly could be a more workable solution, and one that would not place such a cost burden on industry, because the size of the bill did not change.

That, or we have also heard discussions of perhaps placing notches in some fashion along the leading or trailing edge of the bill, a number of ways to mark it without changing the size. We think that is a more viable solution.

Mrs. MCCARTHY. Now, would that also work, though—some of the—you know, like, when you go to some of the stores to change

a $5 bill, to get change or whatever, obviously, if you don't put it in exactly right, it won't accept it. Would that be a problem with a lot of the ATM machines and things like that?

Mr. KNOLL. We don't make ATMs, per se, but the machines operate with similar technology. Certainly, there is some allowance for a slight variation, because even with our, you know, intended uniform sized currency, over time bills become damaged. They become—they shrink, different things happen, that we are inherently forced to accommodate some slight size change.

But when we get into the kinds of changes that I think would be a perceptible difference between one denomination and the other, typically those kinds of variances cause at least Cummins-Allison equipment quite a bit of trouble, in terms of denominating and authenticating the notes.

Mrs. MCCARTHY. By cutting the corners?

Mr. KNOLL. I'm sorry, I thought we were referring to slight changes in the size.

Mrs. MCCARTHY. No, no, no. I was talking about taking the currency that we have now, and if it came out to the future where a corner—like, say, the $1 bill, same exact size, but say the left-hand corner would be slightly cut, $5 to the right-hand side, $10 on to the bottom, to rotate around with that?

Mr. KNOLL. I think we would need to look at that more closely. But I don't know if that would be a workable solution. I mean, if the overall length and overall width stayed such that it would fit within the existing guides, if there were slight changes, be it perforations or removed corners, that is something that could conceivably be workable.

Mrs. MCCARTHY. We have heard a lot of testimony, especially about the coins, where Europe does use, for the pound or you know, our $1, $2, they're all uniform. But with coins, we have tried the dollar bill—I'm sorry, the dollar coin. We have been actually trying to push that for a long time, coming out with different designs and everything, to get the American people to start using, you know, a dollar as a coin instead of paper.

And I guess that's another question for Treasury down the road, why they want to have that switchover to a coin, versus the dollar, as far as currency. I guess because it would last longer. Obviously, the dollar bill is something that would—but I have heard that some stores—or even storage of that, because it would be a lot more bulky than it would be for paper.

Do either one of you have an opinion? I know it wouldn't probably affect you, Mr. Knoll, but is there an opinion on that, as far as storage using the coins versus the dollar?

Mr. GEERDES. Madam Chairwoman, we haven't discussed storage per se, other than yes, it would generate more bulk in the pocket. That is certainly one argument.

You referred to Europe. My industry in Europe does not accept the paper notes, because there is so much variety and size of the euro notes that they have not developed a technology affordable to use. So it's strictly coin-driven, and now beginning to use electronic payments, credit and debit cards.

Certainly there is an extra expense in handling coins, there is no question about that. The Treasury should be as interested, because

they would save—a coin lasts 30 years, the dollar bill lasts 18 months, so—

Mrs. MCCARTHY. Thank you. I'm sorry. Mr. Manzullo?

Mr. MANZULLO. Thank you, Madam Chairwoman. This is a fascinating discussion on the need, obviously, to try to come up with some solutions that would work.

Mr. Knoll, you mentioned that the cost to convert would be astronomical.

Mr. KNOLL. I think the costs, first off, are developing the technology which, again, is a big question mark. We spend months just trying to catch up with—compared to what we're talking about here, you know—relatively smaller changes in some of the currency patterns in the different denominations over time. Those changes alone take months and months to—for us to come up to speed with, technically.

For us to talk about a more significant change, such as a change in the dimension of the currency, would be enormous. And that's just the development cost. Then we talk about how we put that into hardware, and how we convince a world full of people who are processing American dollars with very expensive equipment right now that, "Oops, you need to replace all that." I am not sure how you would put a dollar figure on that, but it would be a high one.

Mr. MANZULLO. In addition to that would be the cost to the government to come up with some type of—I guess the Canadians put bumps, don't they, or Braille? I'm not quite sure—

Mr. KNOLL. Yes, I think there are a number of—

Mr. MANZULLO. —what is—indentations?

Mr. KNOLL. That's correct, tactile approaches to implementing a distinction by denomination. That's correct.

Mr. MANZULLO. But your machines are—could they be designed, or is it something that would be impossible, to pick up the indentations?

Mr. KNOLL. No. I think it's technically feasible to mechanically or optically sense either, you know, dimples or raised areas, or alternatively, perforations or cut-outs or notches. That could be done optically, or—

Mr. MANZULLO. It's the size of the note that would present the problem?

Mr. KNOLL. That is the biggest problem. We are moving—it's really how quickly we can move paper. And if we're moving 1,000 pieces of paper, which, in some cases, can get very ragged, at 1,000 notes per minute, you need to have precise control over that, which means you need to know where the edges are. And if the edges change, by denomination, that presents a very big problem.

Mr. MANZULLO. The mechanical scanner, I have not seen one of those. That technology is already here, or it is around the corner? Does somebody have one?

Mr. KNOLL. I have an example here with me, if I could demonstrate it just briefly, to show what we're talking about.

Mrs. MCCARTHY. Without objection.

Mr. KNOLL. Thank you. What I have here is what is known as a scan head, and this is what resides in basically every model of equipment we sell, whether it be a desk top machine or a large floor standing sorter.

And what happens is that there is a plate that is pressed down against here. But bills get fed through here 1,000 notes per minute. And there are a variety of sensors located on this scan head, which are reading different technological features that are embedded in the notes. But as you can see, the sensors are at discreet locations on this scan head.

Mr. MANZULLO. My question was the portable scanner that the person would carry in order to—

Mr. KNOLL. One was demonstrated earlier.

Mr. MANZULLO. I didn't have a chance to come here. Was it—

Mr. KNOLL. I'm sorry. It's certainly, in Cummins's perspective, a feasible approach. Again, I think that the technology is only going to get better.

Mr. MANZULLO. How much does that weigh?

Mr. KNOLL. Again, I will defer to the experts. I do not have a—

Mr. MANZULLO. Four ounces?

Mr. KNOLL. Approximately four ounces.

Mr. MANZULLO. Four ounces? Okay. So if the scanner were developed even further and, with technology the cost would probably go down, the least disruptive way and the most economical way, as far as the bill-making industry, which is the Treasury, and the people involving the scanners, which is you, Mr. Knoll, and the people with the machines, which is you, Mr. Geerdes, would be to have the visually impaired equipped with these individual hand scanners. That would go a long way to solving the problem?

Mr. KNOLL. That seems to have some merit. It certainly would avoid the wholesale redesign of the processing equipment problem.

Mr. MANZULLO. Okay. And if you had to take a guess at the amount of time to develop a new technology on your part to be able to read different sized bills and dimples, for lack of a better word, do you have any idea what your lead time would be?

Mr. KNOLL. I think you would be conservatively talking about years.

Mr. MANZULLO. Okay, okay. Thank you.

Mr. KNOLL. Thank you.

Mrs. MCCARTHY. With a little bit of indulgence, Mr. Knoll, you were talking earlier, and I would like to see if you could elaborate on the cache that the U.S. currency carries in foreign markets and how changing might affect the value of the U.S. dollar.

In other words, I know a lot of people over in Europe who actually have been putting the American dollar away, or saving it, for a long time. Obviously, the currency right now is down. But how would it affect the market if we did change the currency, as far as changing what the bill looks like and everything else like that? How will it affect, and how would we even handle all that money that would come flooding onto the market? Would that change the market?

Mr. KNOLL. I don't know how we would handle that. And it conceivably could. I think my point was really directed to the fact that there is certainly a recognition level, and for many, a comfort or a confidence level associated with the appearance of U.S. currency as it has existed for many, many years.

And just the fact that we have—we're talking about some sort of a disruption or a change, I think could reflect—I don't know if it's

a lack of confidence, but it would be a change. And I think there would be certainly a shift in the view by many as to what the status of that currency is, worldwide.

Mrs. MCCARTHY. I know that more than 60 percent of the world's reserve currency is held in U.S. dollars, which provides Americans with economic benefits, due to the large quantity of American currency held by foreign nations. The United States is able to purchase commodities at a lower price and borrow money at lower rates than would otherwise be possible. So I think that is also a concern.

If there are no more questions, I want to thank the witnesses and the members for their participation in this hearing. The Chair notes that some members may have additional questions for the witnesses, which they may wish to submit in writing. Therefore, without objection, the hearing record will remain open for 30 days for members to submit written questions to the witnesses, and to place their responses in the record.

Again, I look forward to working with all of the parties. This is where we are all going to be sitting at the table, and trying to find the best solution, certainly, for all of us. And with that, the subcommittee is now adjourned. Thank you.

[Whereupon, at 11:41 a.m., the hearing was adjourned.]

A P P E N D I X

July 30, 2008

TESTIMONY
OF THE AMERICAN COUNCIL OF THE BLIND
BEFORE THE
SUBCOMMITTEE ON DOMESTIC AND INTERNATIONAL MONETARY POLICY, TRADE AND TECHNOLOGY
JULY 30, 2008

First, I want to thank you, on behalf of the membership of the American Council of the Blind (ACB), for the opportunity to speak with you this morning, and for the interest the members of this subcommittee have taken in the issues surrounding the need for tactilely identifiable paper currency.

The American Council of the Blind was founded in 1961 and currently has members in all 50 states. The majority of our members have visual impairments. ACB's mission is to increase the independence, equality of opportunity, and quality of life for all blind and visually impaired Americans. We believe that one way to increase independence, enhance opportunity, and improve the quality of life for blind Americans is to ensure that they can identify the denominations of their own bank notes without the assistance of someone who is sighted. Since the exchange of bank notes is a key component of so many transactions engaged in by our society today, we believe that the recognition that people who have visual impairments should be able to conduct their part of such exchanges independently is imperative.

The rate of unemployment among people who are visually impaired is unacceptably high. Job opportunities which are now at best limited, and sometimes even unavailable to people who are blind, would be opened to us if we could identify paper money as efficiently as sighted people do. This is particularly significant for young people and other first-time job seekers who are looking for entry level positions in stores and restaurants so that they can gain the work experience necessary to advance in their chosen careers. Such jobs generally center on customer service transactions, most of which involve money. Certainly, there are blind people who currently work in cash-intensive business situations, but they are forced to rely on the honesty of colleagues and customers, or to rely on currency reading technology that is inefficient and often unreliable. At its best, such technology requires the user to keep others waiting while money is being scanned and identified, thereby decreasing the level of the user's performance. Money identifiers are slow, frequently inaccurate, and useless in noisy environments. It is common knowledge that blind people who are required to complete cash transactions quickly, such as cashiers in vending facilities, frequently rely on other people and not their technology to identify the cash involved, because they cannot get the information from technology quickly enough to keep the customers moving efficiently through the line. This has two unfortunate results. First of all, this also takes time. Seeking verification from another person isn't necessarily any faster than using a note scanner. Secondly, this process requires that a blind person either make an issue of his or her visual impairment, or risk being defrauded. The fact is that while most people are honest, I can personally testify to instances from my own experience, and could provide a significant amount of anecdotal evidence from others that would show that this is not a

proposition the blind community can rely on. Blind people do get defrauded because of their inability to ascertain the value of U.S. bank notes.

If we are to be truly accepted as equal partners in the workplaces, cultural activities and economic life of this society, it is imperative that the United States government design and issue bank notes that we can identify independently. As stated earlier, we believe that currency readers are a very poor substitute for bank notes that are readily distinguishable without vision. Each time the bank notes are redesigned, users are required to return currency readers back to the factory to be updated for a fee.

Over 180 countries around the world have found ways to incorporate tactile features into their bank notes which enable blind and visually impaired people to distinguish notes of one denomination from another. They have also taken steps to enhance visual distinctions between denominations. The specific tactile features used vary from country to country and it is not our intention to express a preference for any particular type of tactile feature. However, we do wish to make it clear to this committee that we believe it is both imminently possible and absolutely essential that this country, which has led the rest of the world through a myriad of technological, scientific and economic innovations for so long, now join the rest of the world in making it possible for blind and visually impaired people to engage in financial transactions with dignity and independence.

We recognize that what we are seeking may take time to implement and we are very willing to allow a reasonable amount of time for the design and implementation processes. We are not as concerned about the speed of implementation as we are about the certainty of action to address this issue. Our goal is a meaningful effort on the part of the Treasury Department to ascertain the most appropriate manner in which to provide currency that is independently identifiable by people who are visually impaired, and to incorporate such identification features into U.S. currency within a reasonable time. The measures will appropriately address the accessibility of currency if the Department of the Treasury can demonstrate that they are effectively usable by the largest number of blind and visually impaired persons as possible.

In conclusion, I want to thank the Subcommittee on Domestic and International Monetary Policy, Trade, and Technology for taking an interest in this issue. It is our sincere hope that the members of this subcommittee, and indeed the members of the House Committee on Financial Services,will support the efforts of the American Council of the Blind to obtain accessible currency in the United States.

TESTIMONY OF LARRY R. FELIX, DIRECTOR
BUREAU OF ENGRAVING AND PRINTING
UNITED STATES DEPARTMENT OF THE TREASURY

BEFORE THE HOUSE FINANCIAL SERVICES SUBCOMMITTEE ON DOMESTIC AND INTERNATIONAL MONETARY POLICY, TRADE AND TECHNOLOGY

To be submitted for the record

July 30, 2008

Chairman Gutierrez, ranking member Paul and members of the subcommittee: Thank you for holding this hearing and inviting me to testify. I appreciate the opportunity to discuss the operations of the Bureau of Engraving and Printing (BEP) and expand upon our efforts to study, test and implement measures to help those who are blind and visually impaired more readily identify paper currency denominations.

MISSION AND OVERVIEW OF THE BUREAU OF ENGRAVING AND PRINTING

The BEP is the security printer for the United States. While our primary product is Federal Reserve banknotes, we also produce other security documents on behalf of Federal agencies. The Bureau produces billions of Federal Reserve notes and other products such as passport documents each year.

Financed through an industrial revolving fund; the BEP does not receive annual appropriations from the Congress. Instead, our customers reimburse the Bureau for the products we produce. By far, our largest client is the Federal Reserve System. This year

alone, the BEP will manufacture over 7 billion Federal Reserve notes. The Bureau works very closely with our primary customer, the Federal Reserve System, to ensure that the U.S. paper currency program meets rigorous quality, cost and design specifications.

The Bureau operates from two locations – the Washington, D.C. headquarters facility located at 14th and C Streets, S.W. and the Western Currency Facility in Forth Worth, Texas. The BEP's workforce numbers just over 2,000 and all employees are career civil servants.

THE U.S. CURRENCY PROGRAM – A SHARED RESPONSIBILITY

The currency program of the United States is a shared responsibility that demands high levels of cooperation and coordination between several Federal agencies. The Department of the Treasury, the Bureau of Engraving and Printing, the Federal Reserve System and the United States Secret Service perform key and unique functions that contribute to the production and issuance of counterfeit-deterrent banknotes that are routinely accepted and used in commerce.

The Congress has authorized the Secretary of the Treasury to establish the design of U.S. currency and manage its manufacture, although most technical and day-to-day currency-related duties are delegated to the Bureau of Engraving and Printing. The Federal Reserve System is responsible for managing the flow of Federal Reserve notes through the commercial banking system and the United States Secret Service is the law

enforcement agency charged with monitoring and investigating counterfeiting activities. The Department of the Treasury and the BEP work in close partnership with the Federal Reserve System and the United States Secret Service to ensure that the design and production of U.S. currency meets the needs of our customers and helps to earn the public acceptance and use of Federal Reserve notes.

The U.S. banknote program is enormously important to our Nation. The Dollar is widely recognized as the predominant global currency and routine and widespread use and acceptance of Federal Reserve notes helps to maintain confidence in our Country's economic and monetary systems. According to the Federal government's report, *U.S. Currency and Coin Outstanding and in Circulation*, U.S. notes with a total estimated value of $779 billion are circulating worldwide, roughly two-thirds of this money is held outside the borders of the United States. The management of this portfolio of circulating currency generates significant interest earnings for the government. As the issuer of U.S. currency, the Federal Reserve, as required by law, holds collateral in the form of Treasury Securities for the value of U.S. currency in circulation. The Federal Reserve deposits the net earnings from its portfolio of Treasury securities into the General Fund of the Treasury. In 2007, the Federal Reserve System returned $34.4 billion to the U.S. Treasury.

U.S. CURRENCY REDESIGN PROGRAMS – 1929 to 2008

The U.S. government initiates a redesign of currency notes in order to stay ahead of evolving technologies that enable counterfeiting. Since counterfeiting techniques remained "traditional" for the better part of the previous century (counterfeit plate-making, use of high quality inks and use of standard printing press technology) the appearance and dimensions of U.S. currency remained unchanged from 1929 until the mid-1990s. During this period Federal Reserve notes resembled the design and size of the current $1 and $2 note.

Because the size of U.S. currency has remained constant since 1929, entire industries and product lines have been developed and built to facilitate the production, handling and use of our banknotes. These products include many of the Bureau's printing presses, inspection devices and note finishing and packaging equipment; sophisticated, high-end cash handling machinery, inspection devices and automated vaults utilized by the Federal Reserve System and commercial banks; currency accepting machinery employed by the private sector; Automated Teller Machines; portable currency reading devices; cash register drawers; and even the basic size and composition of our wallets.

Due to the emergence of sophisticated and personal reprographic and digital technologies, in the late 1980s the government established a strategy to redesign U.S. currency every 7 to 10 years in order to maintain an edge over counterfeiters. This new policy led to the introduction of the New Currency Design series in 1996. The New

Currency Design or "large portrait" design was followed in 2002 by the introduction of the NexGen series, the current currency note design that utilizes distinct background colors. Since 2003, the Federal Reserve has issued the $5, $10, $20 and $50 notes, with a new $100 note to follow next. The government has no intention of redesigning the $1 and $2 note, as they are rarely targets of counterfeiters.

REDESIGN OF U.S. CURRENCY – MEASURES TO ASSIST THE BLIND

The government has used the recent design changes of U.S. currency as an opportunity to study, test and implement features to better assist those who are blind and visually impaired to more readily identify paper currency denominations. For example, in 1983 the Bureau commissioned a study to research design features that would assist the blind and visually impaired community to distinguish U.S. currency denominations. In accordance with the 1983 report's recommendations, the Bureau procured equipment and undertook several initiatives to incorporate machine-readable features in U.S. currency.

Later, in 1995, the National Research Council (NRC), through its National Materials Advisory Board, completed a study that assessed and recommended features for people who are blind and visually impaired to recognize and denominate U.S. currency. This study recommended four modifications to banknotes – including different size banknotes, large high-contrast numerals, differing predominant colors for each denomination, and overt features that could lead to the development of effective, low-cost devices for examining banknotes.

Since the 1995 study, the Bureau has begun to incorporate each of the NRC recommendations, except for different size banknotes, into U.S. currency. Beginning with the Series 1996 New Currency Design notes (with the exception of the $100 note) an enlarged, high-contrast numeral was incorporated into the design on the reverse of the $5, $10, $20 and $50 notes to aid in distinguishing denominations.

After procuring new offset printing equipment, in 2003 the Bureau began adding color to newly designed banknotes (NexGen series). Most recently, the Series 2006 $5 note, which was issued on March 13, 2008, has a much larger, easy-to-read number "5" in the lower right corner on the back of the bill, which is printed in high-contrast purple ink. This enlarged numeral feature will be included on the back, lower right corner of future designs of $100 notes as well. Some blind-advocacy experts have estimated that this large, high-contrast numeral will enable 50 percent of all legally blind Americans to denominate the new $5 note.

Starting with the Series 1999 banknotes, a machine-readable feature was incorporated into the currency to facilitate the development and use of hand-held scanning devices to identify currency denominations. This feature now enables the use of small, portable readers that assist those who are blind and visually impaired to identify currency. These assistive devices are currently available and cost around $270. With the support and encouragement of the House Committee on Financial Services, the Bureau inspired private sector development of a lower-cost, portable currency reading device. We are optimistic that such a device will be available for sale in the near future.

NEXT STEPS TO ASSIST THOSE WHO ARE BLIND AND VISUALLY IMPAIRED

The BEP is committed to finding solutions that will assist individuals who are blind and visually impaired more effectively denominate currency. Even before the recent decision by the United States Court of Appeals, the Bureau awarded a contract to conduct a comprehensive study of the issue. Through the study and on its own, the BEP is including the American Council of the Blind (ACB), the National Federation of the Blind (NFB) and the National Council on Disability (NCD) in the effort to find solutions. The BEP and its contractor have already met with the ACB and NFB to represent consumer interests and have also met with the NCD – the independent federal agency tasked with making recommendations to Congress and the President on changes to disability policy. All of these entities have provided valuable input.

The study is intended to further advance the government's understanding of the issues and review all possible options to help people who are blind and visually impaired. The comprehensive, three-phase study will examine the use of paper currency by the blind and visually impaired populations of the United States and the possible alternatives to improve their experience. The study will solicit input from a number of interested parties, employ surveys and use focus groups to fully study and evaluate the issue. The Bureau intends to use the data, research and analysis from the study to evaluate potential measures to improve the ability of those who are blind and visually impaired to identify currency denominations.

This three phase study is intended to: 1) identify the characteristics of the blind and visually impaired Americans and their projected trends and needs for U.S. banknote identification; 2) examine the technical and practical feasibility of technological solutions and currency design changes that could assist people who are blind and visually impaired. This will include a review of the effectiveness of the feature, the ability to manufacture the feature, and other operational, timing and security considerations relating to any proposal deemed feasible; and, 3) provide an economic analysis of the design changes identified. The economic analysis will examine the societal cost to the public and private sectors and consider the effectiveness of these solutions relative to their cost.

The Department of the Treasury and the BEP are sensitive to the national currency needs of all Americans, including those who are blind and visually impaired. Changes to U.S. currency can have broad consequences on all currency users and potential solutions to assist the blind and visually impaired must be thoroughly evaluated prior to reaching any final decisions. The Department and the Bureau, in coordination with our Federal partners and the blind and visually impaired community, will continue to search for creative and practical solutions in this area.

Mr. Chairman, this concludes my prepared remarks and I am happy to answer your questions.

Serving the Vending, Coffee Service and Foodservice Management Industries

Supplemental Testimony Statement of Richard M. Geerdes, NCE
President and Chief Executive Officer
National Automatic Merchandising Association ("NAMA")

House Financial Services Committee, Subcommittee on Domestic Monetary Policy,
Hearing, July 30, 2008

Investigative and Fact-Finding Hearing Regarding Effects of Change in U.S. Currency Design as Mandated by the U.S. Court of Appeals (D.C. Circuit) Decision (May 20, 2008) in "American Council of the Blind v. Henry M. Paulson, Jr., Secretary of the Treasury"

Specifically, Testimony Regarding Effects of Change in U.S. Currency Design on the U.S. Vending Industry, and Related NAMA Recommendations

Chairman Gutierrez and other distinguished members of the Subcommittee, this written Supplemental Testimony Statement by me on behalf of NAMA amplifies in greater technical and cost detail the oral testimony I have provided today in this investigative and fact-finding hearing regarding the effects of change in U.S. currency design as mandated by the U.S. Court of Appeals for the D.C. Circuit decision dated May 20, 2008 in "American Council of the Blind v. Henry M. Paulson, Jr., Secretary of the Treasury", and the best way of meeting the currency-use needs of blind individuals.

Thank you for the opportunity to provide this supplemental information to the Committee, and for incorporating this in the record of the hearing.

I am Richard Geerdes, President and Chief Executive Officer of the National Automatic Merchandising Association ("NAMA"), since 1936 our country's national trade association, headquartered in Chicago, representing the vending/coffee service and contract food service management industry of the United States. With more than 2,400 member companies in this over $45 billion annual sales industry, NAMA's membership is composed of small and mid-sized businesses which are the owner/operators of approx. seven million vending machines across the country in public and private locations, and also the small, mid-sized and large businesses which are the suppliers of bottled and canned and cup beverages, packaged foods and other packaged products sold to the public in vending machines, as well as the manufacturers of vending machines and the equipment used in their operation. NAMA members include companies which manufacture, install and service currency validators, counting and sorting equipment, as well as coin-accepting and handling equipment used to operate vending machines. Approximately 2,000 service company members of NAMA provide food and beverage service on-site to offices, manufacturing plants, schools, hospitals and similar locations throughout the country. NAMA estimates that approximately 20 million Americans purchase a food or beverage item from a vending machine each work day.

My oral testimony at today's hearing, and this written Supplemental Testimony Statement, centers on the impact upon the U.S. vending industry if U.S. currency is redesigned to be tactilely distinguishable, and, if changes are made to U.S. currency to incorporate tactilely distinguishable features, which features would create the least impact on our country's vending industry, and what changes NAMA would prefer.

Very importantly, NAMA offers this information with the intention of helping find various ways of meeting the currency-use needs of blind individuals, who are important customers of NAMA's members, and also best serving the needs of all American taxpayers, who comprise NAMA's total customer base, by keeping down vending machine operating costs to the consumer as much as possible.

Changes in U.S. currency, either as a result of action by the Congress, or initiated by the Treasury Department, or in connection with the May 20, 2008 decision and mandate by the U.S. Court of Appeals for the D.C. Circuit in the case: "American Council of the Blind v. Henry M. Paulson, Jr., Secretary of the Treasury", would have a very substantial impact on the vending industry in our country.

As noted in my oral testimony during the hearing, NAMA prepared and submitted an amicus brief to both the U.S. District Court and the U.S. Court of Appeals in the federal case which I just noted. Drawing on those briefs, my testimony today emphasizes, updates and supplements that information about NAMA's perspective on currency change issues. To provide improved accessibility and use of currency for blind individuals, there are various options to be considered and an opportunity to use innovative technology such as hand-held pocket-size inexpensive currency reader/scanners (such as those provided free of charge to blind persons by the Bank of Canada under a program with the Canadian National Institute for the Blind).

As my testimony highlighted, at the request of this Committee, NAMA once again surveyed our service members and equipment manufacturers to get the most up-to-date information for Congress to consider. The most far-reaching and expensive change to currency for the vending industry would be to change its size, particularly the width of bills.

As an overview, from a vending machine operating standpoint, it is important to keep in mind that the ability of bill validators to correctly validate legitimate U.S. bills is very dependent upon the physical size of the bill being validated. Technical research has shown that bills that are significantly longer than current U.S. bills would not fit into current bill validator storage boxes and would cause jamming in the bill transport mechanism. Longer bills would probably also require software updates. Bills that are significantly shorter could also create jamming in bill boxes and also require software changes. Bills that are significantly narrower than existing bills would require at a minimum software upgrades. Also, sensing techniques used to validate bills require an accurate left positioning so that positioning sensors can properly validate a bill. Whether or not this could be incorporated into existing validators is questionable.

A. Currency Use in Vending Machines and Historical Redesign Costs:

First, for perspective in considering possible changes as to currency denominations over one dollar (especially in light of the terms of the U.S. Court of Appeals decision of May 20, which draws a distinction between $1 bills and all denominations over $1)) and then as to changes in currency denominations generally, the extent to which different currency denominations are actually used in vending machines in our country should be noted, and then also the currency redesign costs which have been imposed on the U.S. vending industry over the past decade.

As for one dollar bills, $1 bills are usable in every one of the seven million vending machine bill acceptors currently in service. Any size reduction of the $1 bill will require an adjustment to every one of these seven million vending machine bill acceptors. It is NAMA's understanding that if the size of U.S. Banknotes is altered to allow the blind and visually impaired to distinguish denominations, the size of the $1 bill would have to be reduced. As of this time, Congress has prohibited the Treasury from redesigning the $1 bill.

As for currency denominations over one dollar, over the past nine years, the federal government has issued one newly designed $5 note, two newly designed $10 notes, and two newly designed $20 notes. Although most vending machines do not accept $10 and $20 bills, virtually all of the estimated 300,000 bill changers that support vending operations accept these two denominations. Adjustments to this equipment were required in the case of each of these four newly designed currencies. Also, adjustments were required to both bill changers and currency acceptors when the newly designed $5 bill was introduced.

As recently as 2005, NAMA believed that the $5 note would not undergo a second redesign. The $5 note is seldom counterfeited. NAMA urged the Bureau of Engraving and Printing not to redesign the $5 note because the cost to the industry would be considerable. In the past five years, with prices rising, more and more vending machines have begun to accept $5 notes. NAMA now estimates that 1.4 million food and beverage vending machines accept $5 bills.

In 2006, NAMA learned from the Bureau of Engraving and Printing that the $5 note was to be redesigned. New $5 notes were to be issued beginning the spring of 2008.

NAMA estimates that the five redesigns of the $5, $10 and $20 notes over the past nine years have imposed costs on the vending industry of at least $75 million (300,000 bill changers, each adjusted 5 times at $50 per adjustment). NAMA estimates the 2008 redesign of the $5 bill will cost the industry at least $85 million (300,000 bill changers and 1.4 million bill acceptors, each adjusted one time at $50 per adjustment).

B. NAMA's Industry Survey, Which Provided the Data in NAMA's Two Amicus Briefs:

With regard to potential changes in currency in order to make currency more usable for blind individuals, NAMA surveyed its members that manufacture currency validators and bill acceptors, currency counting and sorting machines, and currency dispensing equipment. The survey addressed the effects and economic impact on the vending industry of three possible currency design changes: (1) incorporating a single denomination numeral; (2) incorporating Braille in U. S. currency; and (3) introducing variations in length, height ("width") and color of notes. I will discuss the results of the NAMA survey in a moment.

A fourth possible change, not addressed by the NAMA survey but undergoing continuing investigation, would be trimming the corners of currency bills (as apparently envisioned by H.R. 1931, sponsored in 2006 by Congressman Pete Stark of California), as ~~I will~~ noted further below.

A fifth possible approach to making currency more usable for blind individuals, not involving any currency design change, would be the use of small hand-held pocket-size currency bill reader/scanners which read the bill and indicate its denomination by tone, vibration or voice. This approach is used in Canada, in addition to the use of currency with tiny bumps in the upper right hand corner to denominate the value of the currency, as well as the use of currency with larger numbers and contrasting colors to help those with poor vision. Canada's central bank (the Bank of Canada) reportedly considered and rejected the option of producing bills of different sizes as too costly. Use of the small hand-held pocket-size bill reader/scanner option would involve no cost to the vending industry.

In Canada, such hand-held pocket-size bill reader/scanner devices are provided free of charge by the Bank of Canada under a program with the Canadian National Institute for the Blind (CNIB), as described in an article in "The Canadian Press" (Ottawa) on May 21, 2008 simply as costing "more than $250,000 a year". Technically innovative products such as the small hand-held pocket-size bill reader/scanners used in Canada thus constitute another viable approach for enabling blind individuals to operate vending machines. The small hand-held pocket-size bill reader-scanner approach thus also merits consideration, with the significant benefit of imposing no cost on the United States vending industry.

The survey undertaken by NAMA shows that the costs to the United States vending industry to incorporate some or all of the first three suggestions noted above would be staggering.

As explained earlier, it is estimated that there are about seven million food and beverage vending machines in the United States and that virtually every machine is equipped with a currency acceptor.

According to the NAMA survey, the estimated costs associated with each of the above first three proposals are as follows:

1. Incorporating a single denomination numeral: Retooling costs range between $50 to $120 per machine. Resulting total costs to the vending industry would be between $350,000,000 and $840,000,000.

2. Placement of Braille symbols on currency: Retooling costs could range from $100 to $500 per machine. Resulting total costs to the vending industry would be between $700 million and $3.5 billion.

3. Changing the size of U.S. currency, particularly the width of bills: This would have the greatest economic effect on the vending industry. A change in the width of currency would require

replacement of the acceptors at cost of $500 per machine, or an estimated maximum cost of $3.5 billion. One survey respondent put the cost at $6000 for a total replacement of the machine.

4. Trimming the corners, or notching the edges, of currency bills (as apparently envisioned by H.R. 1931, the "Catherine Skivers Currency for All Act" sponsored by Congressman Pete Stark of California in 2006): This would be a fourth possibility. Trimming by use of quarter-circle corner cuts to indicate various denominations might have only a minimal cost to the U.S. Treasury as well as for adjusting bill validators in vending machines. As for this suggestion, further research is required regarding measuring possible retooling needs and associated financial costs for the vending industry. If the same desired effect of trimming the edges would be achieved by putting small notches or similar changes to the sides of the bill there is a good chance that neither transport nor sensing would be affected and therefore no retooling costs would be incurred. As for possible use of corner cuts, current bill validator products are not impacted as long as the radius of the circle in the cut is kept to .75 or less. A 45 degree straight cut also could be used, that could be up to one inch from the corner along the edge to the start of the cut. A straight cut might be preferred as it would offer "less of a corner" than a quarter circle for bills to possibly become snagged in people's wallets and cash registers.

Overall, it is crucial that every possible step must be taken to minimize retooling costs so as not to financially cripple the United States vending industry from any of the above currency design change suggestions.

Further, from a vending machine operating standpoint, it is important to keep in mind that the ability of bill validators to correctly validate legitimate U.S. bills is very dependent upon the physical size of the bill being validated. Technical research has shown:

1. Bills that are significantly longer than current U.S. bills would not fit into current bill validator storage boxes and would cause jamming in the bill transport mechanism. Longer bills would probably also require software updates.

2. Bills that are significantly shorter could also create jamming in bill boxes and also require software changes.

3. Bills that are significantly narrower than existing U.S. bills would require at a minimum software upgrades. Also, sensing techniques used to validate bills require an accurate left positioning so that positioning sensors can properly validate a bill. Whether or not this could be incorporated into existing validators is questionable.

4. The effect of a much larger single denomination number would depend upon the size and placement of the number. As long as the larger denomination number was not placed in a position that interfered with areas that current bill validators use for sensing valid bills, changes to existing validators may not be needed.

5. The effect of adding Braille to bills is again related to the position on the bill where the Braille is placed. Also, because the addition of Braille would increase the thickness of the bill, reduced capacity in the bill stacker box can be expected.

6. The effect of trimming the corners of bills is dependent upon the amount of trimming required. In order to insure the bills are accepted properly into the bill validator and not inserted at an angle, both leading edges of a bill are sensed during insertion. Proper insertion requires that both leading edges be sensed at the same time, assuring proper bill insertion. Excessively trimmed edges could result in rejected bills.

7. The changes referred to in points ## 1, 2 and 3 above would probably require replacement of the validator to accept the new bills. This cost would range from $250 to $400 depending upon the customer and the market.

8. The changes referred to in points ## 4 and 5 above would probably require no vending machine retooling if the enlarged number or Braille were properly placed.

In connection with evaluating various possible currency design changes and non-currency design approaches to making U.S. currency more usable by blind individuals, all these above variables and options need to be very carefully considered and weighed as to evaluating the extent of possibly necessary related changes for vending machines and measuring associated economic impact costs for the vending industry.

C. NAMA's Concerns Based on NAMA's Industry Survey:

NAMA wants to note that although the first proposed modification to U.S. currency as discussed above, incorporating a single denomination numeral, would have the least financial impact on the vending industry, this modification would not permit people who are totally blind to determine the particular banknote denomination.

The second proposed currency redesign, incorporating Braille into the banknotes, would be the next most expensive redesign for the industry. NAMA observes that a great many blind individuals, particularly those not blind from birth, do not read Braille. Further, it appears that Braille dots incorporated into banknotes would wear down quickly, especially on the lower denominations of currency that are used more frequently, rendering the Braille unreadable by even an experienced Braille reader.

NAMA is particularly concerned with comments indicated that incorporating Braille in currency will decrease bill capacity in vending machines. Machines that reach bill capacity and cannot accept additional currency cannot dispense product. Also, comments about currency with Braille symbols causing more frequent jams in bill validators are a matter of concern. Service firms have reported large revenue losses when a machine jams, usually due to poor quality currency. Service firms have indicated that jams tend to take place during peak sales periods, such as the lunch hour, maximizing revenue losses.

The third proposed currency modification, adopting a different size note for each denomination, is the most frequently advocated alteration to U.S. currency. It appears to be the only alteration to U.S. currency that would reliably meet the needs of all the nation's visually impaired and blind individuals. It would also be the most expensive for the industry to implement.

In addition to the substantial capital cost to accommodate the newly-sized currency, comments from the manufacturers refer to decreased currency acceptance rates, and increased service calls and bill validator jams.

It also needs to be kept in mind that whatever costs the vending industry would bear if currency is redesigned to accommodate the blind and visually impaired, those costs would be added to the costs I earlier described which the industry has borne over the past decade to accommodate newly-designed, harder to counterfeit currency.

NAMA would note that U.S. currency is the most commonly recognized and accepted currency in the world. It may also be the world's most counterfeited currency. Since the mid-1990's, the Secret Service and the Bureau of Engraving and Printing have worked together to redesign U.S. currency to make it harder to counterfeit, thus preserving the integrity of U.S. currency. NAMA and its members have cooperated fully in this undertaking.

D. The U.S. Vending Industry and Dealing with Costs from Currency as well as Coinage Changes:

In my testimony on behalf of NAMA before this Subcommittee earlier this year on March 11, 2008, regarding H.R. 5512 and U.S. coinage modernization and content/composition changes, I stressed that protection for the U.S. vending industry from facing additional substantial expenses to modify vending machines to handle changed coinage designs and content was crucial for a number of critical reasons.

This concern, and those reasons, are equally important as to protecting the vending industry from facing additional substantial expenses to modify vending machines to handle currency design changes, and any currency reform therefore should be pursued from the following perspective, which applies as much to currency reform as to coinage reform::

1. Vending is a low-profit high capital investment business without much room to absorb cost increases without asking customers to pay more. Avoiding currency change-related machinery modification costs for vending machine owner/operators thus will importantly result in keeping costs down for the consumers who use the country's vending machines and, in turn, thus will help make customer taxpayers dollars stretch further in meeting their personal and family needs.

2. Avoiding millions of dollars of additional machinery modification expenses for the country's owner-operators of vending machines, who are conducting business in a mature but key retail delivery channel of convenience to consumers, is crucial since those dollars are vitally needed for the viability and modernization efforts now underway in the industry that will ensure it can continue to meet the needs of consumers in the future as well as maintain and grow the jobs which the industry supplies to taxpayers across the country.

3. NAMA urges that any currency changes, as well as any coinage changes, be only one element of broad fundamental currency and coinage reform, which should include replacing dollar bills with dollar coins, thereby saving the American taxpayers at least $600 million a year.

4. NAMA wants to add that a study of foreign currencies and coinage is also highly educational for an additional reason relevant to the U.S. vending industry as well as to the American taxpayer as above, in considering the $600 million annual savings which would result from replacing dollar bills with dollar coins in the U.S. High value coins, such as dollar coins in the U.S., have also proven helpful to the vending industry in foreign countries with prominent currencies which have been studied in connection with possible currency changes in the U.S. An example is Western Europe. The European Vending Association headquartered in Brussels, Belgium, estimates there are four million food and beverage vending machines in the twelve countries where the Euro circulates. Only five percent of those machines, or about 200,000 machines, accept currency. Specially designed Euro currency, which includes foil and different sized currency to accommodate the needs of the blind, thus has only a modest effect on the vending industry in Europe. In contrast, because virtually all the seven million vending machines in the United States must accept currency, specially designed currency to meet the needs of the blind and visually impaired would have enormous financial impact.

In short, NAMA submits that consideration of currency design changes and related taxpayer cost-saving reforms needs to be viewed in the broadest economic and practicality context, with a view to both protecting the U.S. vending industry from a staggering adverse economic impact, and to helping meet the needs of blind and visually-impaired person, and also to achieving the greatest possible overall taxpayer savings from a combined coinage and currency reform and modernization effort.

E. Conclusion:

In conclusion, NAMA would stress, as NAMA also emphasized in its amicus briefs:

- The most effective redesign of U.S. currency to serve the needs of the blind and visually impaired involves changing the size of U.S. currency. This would be the most costly and disruptive redesign of currency impacting the vending industry. This proposed change, as well as incorporating Braille in the currency, would constitute a staggering financial burden on U.S. consumers and the U.S. vending industry.

- The U.S. vending industry has born very substantial costs over the past nine years to accommodate newly-designed currency. The vending industry faces still more costs with the introduction of the new $5 bill in the spring of 2008. To stay ahead of counterfeiters, the Bureau of Engraving and Printing has forecast more currency redesigns in the coming years.

- The United States stands alone among the major nations of the world in failing to provide its citizens and businesses with coins having a higher value.

- Higher value coins would benefit both the vending industry and blind and visually impaired.

- With the Susan B. Anthony Dollar Coin issued in 1979, the Sacajawea Golden Dollar Coin issued in 2000, and the Presidential Dollar Coin Program beginning in February 2007, there are now nearly two billion dollar coins in the hands of the American public. These coins are accepted in virtually all vending machines in the United States and are easily identified by the blind. By the end of the Presidential Dollar Coin Program in 2016, there will be an additional eight billion dollar coins in the hands of the public.

- Half of all U.S. currency is one dollar bills. Half of the problem the blind and visually impaired face in recognizing currency would be solved by replacing dollar bills with dollar coins. According to a study conducted by the General Accountability Office in 2000, the federal government would save an average of $522 million a year in printing and ink costs by replacing dollar bills with dollar coins.

- These savings would be more than enough to provide each blind and visually impaired person with a light-weight, accurate, hand-held device to read currency. Features are now incorporated in all U.S. currency, except the $1 bill, to facilitate the use of these innovative inexpensive currency scanner/readers.

Respectfully submitted,

Richard M. Geerdes, NCE
President & Chief Executive Officer
National Automatic Merchandising Association

U.S. Currency and Blind Employment

Cyrus Habib
Testimony before Subcommittee on Domestic and International Monetary Policy, Trade, and Technology

INTRODUCTION

Chairman Gutierrez, Ranking Member Paul, and members of the Subcommittee, thank you for the opportunity to participate in this hearing on the accessibility of U.S. currency to blind and low-vision Americans. My name is Cyrus Habib, and I have been fully blind since the age of eight. This Fall I will be starting my third year at Yale Law School, an institution which has played a vital role in my advocacy on this particular issue. Last year, a fellow law student, Jonathan Finer, and I worked under the guidance of the law school's dean, Harold Hongju Koh, and a clinical instructor, David Rosen, to draft an amicus brief on behalf of the Perkins School for the Blind in American Council of the Blind v. Paulsen. I have also written in a number of public forums on this issue, including the Washington Post and the Seattle Post-Intelligencer. In doing so, I have chosen to focus on the extent to which the status quo has had an effect on blind employment, rather than on the harms experienced by a blind customer. I have done so because I feel strongly, as do others in the room, that the staggeringly high rate of unemployment experienced by blind Americans constitutes our community's most serious and intractable problem today. In meeting with students and faculty at the Perkins School, the nation's oldest and most highly-regarded educational institution for the blind, my partner and I received disturbing confirmation of our hypothesis: young blind Americans are finding it difficult to obtain entry-level employment because of their inability to verify and exchange currency independently.

BLIND AMERICANS SUFFER SEVERE ECONOMIC HARDSHIP WHEN COMPARED BOTH WITH NON-DISABLED AMERICANS AND WITH AMERICANS WHO SUFFER FROM OTHER FORMS OF DISABILITY

Myriad studies suggest that blindness imposes a severe economic hardship. A 2002 report by the National Academy of Sciences concluded that:

> "Working-age people with disabilities work less and have less household income than working-age people without disabilities. There are also dramatic differences in the kinds and levels of disabilities within the working age population with disabilities. Those with severe vision impairments are particularly disadvantaged, for they face many barriers in accessing employment."

The study, which focused on data obtained between 1993 and 1996, also compared employment rates among the blind to those of people with other chronic impairments, finding that only those with mental retardation and varying degrees of paralysis had lower employment rates than adult men who were blind in both eyes, less than 50 percent of

whom were employed. According to the most recent U.S. Census Bureau's 2002 Survey of Income and Program Participation (SIPP), of the nearly 3.9 million visually impaired Americans ages 21-64, only 55 percent are employed. Of the 800,000 Americans in that age range with so-called "severe" visual impairments, only 48 percent are employed. By comparison, more than 68 percent of Americans with hearing impairments, both severe and non-severe, are employed, and more than 83 percent of all Americans in that age bracket are employed. With mean annual earnings of $22,106, visually impaired Americans also earn far lower wages than the average American in that age range ($31,840), the average disabled American ($23,034), and the average hearing-impaired American ($27,269).

Data gathered by private research organizations paints an even starker picture. The American Foundation for the Blind estimates that there are 10 million blind or visually impaired Americans, a number arrived at by merging the results of several studies focused on smaller subsets of the population. Of these, around 1.3 million are "legally blind," a status commonly defined as having a visual acuity of 20/200 or less in the better eye, with the best possible correction. AFB has also found that 46 percent of blind and visually impaired adults of working age (18-69) are employed, compared with 74 percent of the sighted public.

Some organizations have concluded that even these more troubling figures understate the severity of unemployment in the visually impaired community due to underreporting, underemployment and other factors. The Cleveland Sight Center, the National Federation of the Blind and the Braille Institute of America have estimated unemployment among the visually impaired at 70 percent or more.

The economic impact of blindness is not only felt by blind and visually impaired individuals, but by American society as a whole. A study published in 2007 and conducted by health economists from Johns Hopkins University and other top research institutions for Prevent Blindness America, a century-old non-governmental organization, estimated the total annual cost of adult vision loss in the American population at $51.4 billion, including $35.4 billion borne by the U.S. economy and $16 billion by the affected individual, caregivers, and others. The study also estimated that these costs would grow rapidly in the coming years, as the nation's 78 million baby-boomers age, and their vision deteriorates. The study's data comport with that obtained in earlier attempts to quantify the economic impact of visual impairments, including studies published in 1981 ($14.1 billion), 1991 ($38.4 billion), and 2003 ($67.6 billion).

THE INABILITY OF BLIND AMERICANS TO USE U.S. CURRENCY INDEPENDENTLY PRECLUDES THEM FROM PARTICIPATING IN ENTRY LEVEL JOBS NECESSARY FOR FINANCIAL INDEPENDENCE.

Because a large proportion of entry-level jobs require the ability to manipulate currency independently, blind Americans are effectively shut out of jobs that lead to further economic opportunities. To meet the standard set out in Section 504 of the Rehabilitation Act of 1973, government entities or government-funded organizations must make

"reasonable accommodation" to allow disabled persons "meaningful access" to programs and benefits. But the blind lack meaningful access to the very class of jobs that provide the gateway into economic life for millions of Americans. A recent study of entry-level employment among teenagers by Ronald D'Amico, entitled, "Does Employment During High School Impair Academic Progress," found that as many as 25 percent of all jobs held by teenagers are in either retail sales or at food service counters, both of which require the ability to manipulate money independently.

"More than one in three high school students are employed, and part-time jobs held during this formative period have been shown to boost confidence and educational outcomes (so long as a threshold number of weekly hours is not surpassed)." A study by Charles Hirschman and Irina Voloshin, entitled "The Structure of Teenage Employment: Social Background and the Jobs Held by High School Seniors," provides two explanations for why a teenager might seek employment: economic need and career development (arguing that "[s]tudents may seek jobs that provide opportunities for achievement, exposure to possible career choices, or to develop ties with persons who could serve as mentors."). "[S]tudents are prominent in the food service industry as waiters, waitresses, and busboys in restaurants, cashiers, courtesy clerks, and stockers in grocery stores, and most of all, as employees in fast food establishments," nearly all of which require the employee to independently handle, verify, and exchange cash currency, effectively cutting off the blind from this critical sector of the employment market.

CONCLUSION

Blind Americans face an uphill battle in our struggle to achieve true equality, and nowhere is this reality more apparent than in the workforce. We blind Americans are eager to participate fully in this country's economy, and policy-makers should consider the elimination of obstacles to that participation a financial investment in our workforce. Every blind teenager who finds it impossible to obtain that all-important entry-level job today may end up applying for disability assistance from the government tomorrow. I will leave it to others here to discuss the logistics of making U.S. currency accessible to the blind, but I will close my remarks by re-iterating that making such changes would go a long way towards ameliorating the tragic problem of blind unemployment in America today.

Thank you for the opportunity to speak before the subcommittee. I welcome your questions.

TESTIMONY OF JEFFREY G. KNOLL
EXECUTIVE VICE PRESIDENT AND CORPORATE COUNSEL, CUMMINS-ALLISON CORPORATION

U.S. HOUSE OF REPRESENTATIVES' FINANCIAL SERVICES SUBCOMMITTEE ON DOMESTIC AND INTERNATIONAL MONETARY POLICY, TRADE AND TECHNOLOGY

JULY 30, 2008, 10:00A.M.
2128 RAYBURN HOUSE OFFICE BUILDING

THANK YOU MR. CHAIRMAN AND MEMBERS OF THE SUBCOMMITTEE.

MY NAME IS JEFF KNOLL AND I AM EXECUTIVE VICE PRESIDENT AND CORPORATE COUNSEL OF THE CUMMINS-ALLISON CORPORATION. I AM HONORED TO PARTICIPATE AND OFFER TESTIMONY AT THIS IMPORTANT HEARING TODAY. CUMMINS-ALLISON BELIEVES THAT ALL AMERICANS SHOULD BE ABLE TO EASILY AND ACCURATELY DETERMINE THE DENOMINATIONS OF THEIR CURRENCY. CERTAINLY, VISION LIMITATIONS SHOULD NOT PREVENT ANY AMERICAN FROM BEING ABLE TO DETERMINE THE VALUE OF THEIR CURRENCY. MR. CHAIRMAN, WE COMMEND YOU AND YOUR COLLEAGUES FOR BRINGING US TOGETHER IN ORDER TO DISCUSS THIS IMPORTANT ISSUE.

CUMMINS-ALLISON IS A PRIVATELY HELD COMPANY WHICH HAS BEEN IN EXISTENCE SINCE 1887. THE COMPANY HAS SURVIVED AND THRIVED ALL

OF THOSE YEARS BY CONTINOUSLY LOOKING FOR NEW PRODUCTS AND OPPORTUNITIES AS BUSINESS CYCLES AND CUSTOMER NEEDS HAVE CHANGED. WHILE IN RECENT YEARS THE COMPANY HAS LARGELY FOCUSED ON BANKING AND AUTOMATED CURRENCY HANDLING PRODUCTS, PAST GENERATIONS OF CUMMINS EMPLOYEES HAVE MANUFACTURED POWER TOOLS, CHECK PERFORATORS, AND OFFICE PRODUCTS. DURING WORLD WAR TWO, CUMMINS-ALLISON RETROFITTED ITS MANUFACTURING OPERATION AND HELPED TO SUPPLY OUR MILITARY.

CUMMINS-ALLISON'S INTERNATIONAL CORPORATE HEADQUARTERS AND PRODUCT MANUFACTURING ARE LOCATED NEAR CHICAGO, IN MT. PROSPECT, ILLINOIS. IN ADDITION TO OUR HEADQUARTERS LOCATION IN ILLINOIS, CUMMINS HAS A RESEARCH GROUP NEAR SAN DIEGO WHICH HELPS TO DEVELOP SENSORS AND SOFTWARE, AN ENGINEERING GROUP IN BENSALEM, PENNSYLVANIA AND MORE THAN FIFTY SALES AND SERVICE LOCATIONS THROUGHOUT THE UNITED STATES. INTERNATIONALLY, CUMMINS-ALLISON HAS WHOLELY OWNED SUBSIDIARIES IN CANADA, FRANCE, GERMANY, AND THE UNITED KINGDOM. IN ADDITION, WE HAVE SALES AND SERVICE AGENTS LOCATED IN NEARLY 70 OTHER COUNTRIES ALL OVER THE WORLD.

ALL CUMMINS-ALLISON DESIGNED PRODUCTS, WHETHER SOLD IN THE DOMESTIC OR INTERNATIONAL MARKETS, ARE MANUFACTURED IN THE

UNITED STATES BY U.S. WORKERS. CUMMINS-ALLISON IS FULLY COMMITTED TO AMERICAN MANUFACTURING AND AMERICAN LABOR.

CUMMINS-ALLISON IS THE ONLY AMERICAN OWNED MANUFACTURER OF HIGH TECH COIN AND PAPER CURRENCY PROCESSING EQUIPMENT. WE DESIGN, MANUFACTURE, AND SELL HIGH-SPEED COIN AND PAPER CURRENCY PROCESSING EQUIPMENT THAT IS USED BY BANKS, ARMORED CARRIERS, GOVERNMENTS, RETAILERS, THE GAMING INDUSTRY, AND OTHERS TO COUNT, SORT, DENOMINATE, AND AUTHENTICATE LARGE VOLUMES OF CURRENCY. OUR PAPER CURRENCY PROCESSING PRODUCTS RANGE IN SIZE FROM THE SMALLER TABLETOP JETSCAN, WHICH IS USED BY THE MAJORITY OF AMERCAN FINANCIAL INSTITUTIONS INCLUDING YOUR CREDIT UNION HERE AT THE U.S. HOUSE OF REPRESENTATIVES, TO MUCH LARGER PROCESSING EQUIPMENT PRODUCTS SUCH AS THE JETSCAN MULTIPOCKET CURRENCY SORTER. OUR LARGER UNIT WILL DENOMINATE, COUNT, SORT, FACE (TURN THE BILLS THE CORRECT WAY,) AUTHENTICATE (CHECK FOR COUNTERFEITS,) STACK AND BAND PAPER CURRENCY AT A RATE OF 1,000 NOTES PER MINUTE. OUR LARGEST MACHINES ARE USED BY LARGE BANKS, ARMORED CARRIERS, GOVERNMENTS, RETAILERS, THE GAMING INDUSTRY, AND OTHERS.

CUMMINS-ALLISON IS VERY INTERESTED IN ALL ISSUES RELATING TO WORLD-WIDE CURRENCY UTILIZATION AND DESIGN. ANY CHANGE TO

AMERICAN COIN OR PAPER CURRENCY MAY SIGNIFICANTLY IMPACT THE ABILITY AND WILLINGNESS OF A RANGE OF NATIONS TO UTILIZE THAT CURRENCY. ANY CHANGE TO THE AMERICAN DOLLAR COULD ADVERSELY IMPACT OUR ECONOMY BECAUSE WE BENEFIT GREATLY FROM THE DOLLAR'S STATUS AS THE PREIMINATE WORLD RESERVE CURRENCY.

MORE THAN SIXTY PERCENT OF THE WORLD'S RESERVE CURRENCY IS HELD IN U.S. DOLLARS, WHICH PROVIDES AMERICA WITH MANY ECONOMIC BENEFITS. DUE TO THE LARGE QUANTITY OF AMERICAN CURRENCY HELD BY FOREIGN NATIONS, THE UNITED STATES IS ABLE TO PURCHASE COMMODITIES AT LOWER PRICES AND BORROW MONEY AT LOWER RATES THAN WOULD OTHERWISE BE POSSIBLE. IN ADDITION, WHEN COUNTRIES ACCUMULATE AND HOLD THE DOLLAR, AMERICAN ECONOMIC SECURITY, AS WELL AS OUR NATIONAL SECURITY, IS ENHANCED. FINALLY, THE DOLLAR IS EASILY RECOGNIZED AND WELL RESPECTED BY HUNDREDS OF MILLIONS OF PEOPLE AROUND THE WORLD, WHICH PROVIDES OUR GOVERNMENT WITH GREATER LEGITIMACY AND ALLOWS US TO ASSERT OUR ECONOMIC LEADERSHIP. AS WE BEGIN TO REVIEW AND DISCUSS THE POSSIBILITY OF ALTERING CURRENCY DESIGN OR ITS SIZE, IT IS VERY IMPORTANT TO KEEP THESE CRITICAL FACTORS IN MIND.

CUMMINS-ALLISON VERY MUCH APPRECIATES THE NEED TO FIND A SUITABLE SOLUTION SO THAT BLIND INDIVIDUALS CAN EASILY

DIFFERENTIATE THE DENOMINATIONS OF THEIR CURRENCY. HOWEVER, IN CONSIDERING ANY CHANGES TO THE DESIGN OR SIZE OF OUR CURRENCY, WE STRONGLY ENCOURAGE THE GOVERNMENT TO MOVE SLOWLY AND WITH GREAT CARE. AS THE BUREAU OF ENGRAVING AND PRINTING HAS POINTED OUT, EVEN THE SMALLEST ALTERATION TO CURRENCY CONTENT, SIZE, OR DESIGN COULD HAVE ENORMOUS AND EXTREMELY EXPENSIVE CONSEQUENCES FOR THE PUBLIC AND OUR GOVERNMENT, AS WELL AS, THE MANY FOREIGN NATIONS WHERE IT CURRENTLY SERVES SO WELL AS A RESERVE CURRENCY.

AMERICAN CURRENCY HAS BEEN THE SAME SIZE AND DIMENSION FOR MORE THAN FIFTY YEARS. THIS HAS ENABLED THE CURRENCY PROCESSING INDUSTRY TO DEVELOP COST EFFECTIVE MACHINERY WHICH IS USED THROUGHOUT THE WORLD TO PROCESS THE AMERICAN DOLLAR. IT IS LESS EXPENSIVE TO PROCESS AMERICAN CURRENCY THAN FOREIGN CURRENCIES OF VARYING SIZES. TO DENOMINATE THE MULTI-DIMENSIONAL EURO, FOR EXAMPLE, MORE SOPHISTICATED AND EXPENSIVE MACHINERY IS REQUIRED. WHILE SPECIFIC RESEARCH ON THE COST VARIENCES OF PROCESSING DIFFERENT CURRENCIES HAS NOT BEEN CONDUCTED, OUR EXPERIENCE WITHIN THE INTERNATIONAL MARKET SUGGESTS THAT CURRENCY PROCESSING EQUIPMENT AND THE RELATED COSTS OF PROCESSING VARIABLE SIZE CURRENCY IS MORE EXPENSIVE IN THE EURO ZONE THAN IN THE UNITED STATES. IN FACT, THE

UNIFORM SIZE AND DEMENSION OF AMERICAN CURRENCY MAKES IT THE PREFERRED CURRENCY IN MANY COUNTRIES OF THE WORLD BECAUSE IT IS EASIER AND LESS EXPENSIVE TO HANDLE AND PROCESS.

HERE AT HOME, IF THE UNITED STATES INTRODUCED CURRENCY OF VARYING SIZES, THE CONVERSION PROCESS WOULD BE EXTREMELY EXPENSIVE AND CHALLENGING. THE MAJORITY OF THE CURRENCY PROCESSING MACHINERY USED BY BANKS, ARMORED CARRIERS, RETAILERS, THE GAMING INDUSTRY, AND OTHERS COULD NOT BE MODIFIED TO PROCESS A NEW SIZE CURRENCY AND WOULD NEED TO BE COMPLETELY REPLACED. TODAY'S STATE-OF-THE-ART PROCESSING MACHINERY UTILIZES VERY SPECIFIC AND UNIQUE FEEDING MECHANISMS, TRANSPORT COMPONENTS, SENSORS, AND STACKING DEVICES. THESE HIGHLY ENGINEERED COMPONENTS, ALONG WITH THEIR HOUSINGS, ARE DESIGNED TO PROCESS OUR EXISTING CURRENCY ONLY AND COULD NOT BE MODIFIED TO PROCESS NEW, MULTI-DIMENSIONAL CURRENCY. WHILE THERE ARE NO HARD NUMBERS AVAILABLE, WE ESTIMATE THAT THERE ARE SEVERAL HUNDRED THOUSAND UNITS IN AMERICA THAT ARE CURRENTLY IN USE. QUITE SIMPLY, MACHINERY REDESIGN, REENGINEERING, AND LABOR COSTS TO MODIFY EXISTING UNITS WOULD FAR OUTWEIGH THE COSTS OF REPLACING THESE UNITS.

IF A LARGE MAJORITY OF THE CURRENCY PROCESSING MACHINERY IN THE UNITED STATES BECOMES OBSOLETE, NEW MACHINERY WOULD NEED TO BE DESIGNED, ENGINEERED, MANUFACTUERED, PURCHASED AND INSTALLED. MOST LIKELY, THE PUBLIC WOULD BE REQUIRED TO ABSORB THE NATIONAL COSTS ASSOCIATED WITH THIS CONVERSION. IF YOU COMBINE THE COSTS ASSOCIATED WITH CURRENCY PROCESSING MACHINERY REPLACEMENT WITH THE MODIFICATION OR REPLACEMENT COSTS ASSOCIATED WITH THE ATM, VENDING, AND CURRENCY PRINTING INDUSTRIES, IT QUICKLY BECOMES APPARENT THAT CHANGING THE SIZE OF AMERICAN CURRENCY WOULD BE EXTREMELY EXPENSIVE AND IMPRACTICAL FOR AMERICA.

WE BELIEVE THAT THE U.S. SHOULD ACCOMMODATE THE NEEDS OF BLIND AMERICANS, BUT RECOMMEND THAT THE U.S. CONSIDER ACTIONS OTHER THAN CHANGING THE SIZE OF OUR CURRENCY TO ASSIST THEM. FOR EXAMPLE, WE ARE AWARE THAT ELECTRONIC HAND HELD CURRENCY DENOMINATORS ARE CURRENTLY ON THE MARKET AND MAY BE AN OPTION TO CONSIDER. SHOULD THE MARKET CONDITIONS FOR THESE DEVICES IMPROVE, IT IS LIKELY THAT THE NEXT GENERATION UNITS WILL BE SMALLER AND MORE EFFICIENT THAN CURRENT MODELS. FURTHERMORE, IT IS VERY CONCEIVABLE, GIVEN OUR CURRENCY AUTHENTICATION SENSOR WORK AND EXPERTISE, THAT FUTURE HAND-HELD DEVICES COULD IDENTIFY COUNTERFEITS, AS WELL AS DENOMINATE

CURRENCY FOR THE BLIND. THIS, OF COURSE, WOULD PROVIDE BLIND INDIVIDUALS WITH ADDED SECURITY AND ASSURANCE THAT THEIR CURRENCY IS GENUINE AND LEGITIMATE.

WHEN ONE LOOKS AT THE POTENTIAL NATIONWIDE COSTS OF ATM, VENDING, AND CURRENCY PROCESSING EQUIPMENT REPLACEMENT, COUPLED WITH THE TAXPAYER OUTLAYS FOR THE DESIGN, PRINTING, AND CIRCULATION OF A NEW CURRENCY, IT MAY BE FAR LESS EXPENSIVE FOR OUR GOVERNMENT TO PURCHASE AND PROVIDE THOSE WITH LIMITED VISION WITH A HAND HELD CURRENCY DENOMINATOR, THAN IT WOULD BE TO REDESIGN AMERICAN CURRENCY.

IN SUMMATION MR. CHAIRMAN, CUMMINS-ALLISON WHOLEHEARTEDLY APPRECIATES THE NECESSITY OF FINDING A WAY FOR BLIND INDIVIDUALS TO MORE EASILY AND ACCURATELY DIFFERENTIATE BETWEEN CURRENCY DENOMINATIONS. CUMMINS-ALLISON ENCOURAGES CONGRESS, THE TREASURY DEPARTMENT AND OTHERS TO PROCEED WITH EXTREME CAUTION AND DILIGENCE. FIRST AND FOREMOST WE MUST PROTECT THE INTEGRITY AND RESERVE CURRENCY STATUS OF THE DOLLAR. AS YOU KNOW, SINCE 2002, THE VALUE OF THE DOLLAR HAS DECLINED 25 PERCENT. SHOULD THE DOLLAR'S VALUE CONTINUE TO DECLINE, IT WILL BECOME INCREASINGLY IMPORTANT FOR OUR GOVERNMENT TO ACTIVELY PROMOTE ITS USE AND STATUS AS THE WORLD'S PREFERRED CURRENCY.

ANY CHANGES TO THE SIZE OF U.S. CURRENCY COULD BE PROBLEMATIC, CREATING ADDITIONAL DOUBT AND SKEPTICISM AROUND THE GLOBE.

FINALLY, AS AN INTERNATIONAL MARKET LEADER IN THE CURRENCY PROCESSING EQUIPMENT INDUSTRY, WE STRONGLY ENCOURAGE CONGRESS AND THE FEDERAL GOVERNMENT AGENCIES TO AVOID THE EXTREMELY EXPENSIVE AND ULTIMATELY UNWORKABLE OPTION OF CHANGING THE SIZE OF AMERICA'S CURRENCY. THERE ARE UNDOUBTEDLY MUCH BETTER, LESS EXPENSIVE, AND LESS PRECARIOUS ALTERNATIVES THAT WILL ADEQUATELY ADDRESS THIS ISSUE.

MR. CHAIRMAN, THANK YOU AGAIN FOR THE OPPORTUNITY TO PARTICIPATE IN THIS HEARING. I AM HAPPY TO ANSWER ANY QUESTIONS THAT YOU OR THE OTHER MEMBERS OF THE SUBCOMMITTEE HAVE.

July 28, 2008

Marc Maurer, *President*

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STATEMENT OF THE NATIONAL FEDERATION OF THE BLIND
before the
Subcommittee on Domestic and International Monetary Policy, Trade, and Technology
Committee on Financial Services
United States House of Representatives

July 30, 2008

Good morning Mr. Chairman, my name is Marc Maurer, and I serve as President of the National Federation of the Blind. The National Federation of the Blind was formed in 1940, and it is the oldest and the largest nationwide organization of blind people in the United States. The organization has an affiliate in every state, in the District of Columbia, and in Puerto Rico, and a chapter in most large cities and in a number of small ones.

I come to present the considered opinion of the National Federation of the Blind regarding currency identifiable by blind people. Would it be desirable to have a method for blind people to identify currency independently? Of course, it would. Are blind people able to use the currency today without any modification? Certainly, we are.

The argument has been made that currency which cannot be identified independently by the blind discriminates against blind people. However, blind people use items that are not tactilely identifiable by the blind by the hundreds everyday. The argument about the currency has implications far beyond the money. In the work that I do, I handle some currency, many documents, and a number of affidavits. Very few of these items are identifiable without the assistance either of a piece of technology or a sighted person. I cannot, for example, identify my own checks without somebody else's help. Yet, it would be ridiculous to say that I cannot use them. To argue that a thing must be identifiable by touch or a blind person cannot use it is to cut blind people out of most of the commerce and much of the enjoyment of ordinary transactions of life.

We know that the blind can readily manage currency as it now exists. It would be slightly more convenient to have a method of identifying it without help. However, many of the methods used throughout the world do not work. I have received Canadian bills in my travels which, I was told, had Braille identification symbols on them. These symbols were useless to me.

Some people tell me that bills of different sizes could be produced and that the blind could tell one from another because of their size. Apparently, this system of bill identification has been adopted in many countries. Perhaps, this system is effective, although those who wanted to defraud the blind could artificially modify the size of bills to achieve this result. Furthermore, the currency-handling machinery of the nation is made for only one size of bills, and it would cost a lot to change it. Spending hundreds of millions of dollars for a minimal benefit seems unwise.

Technology has been developed that can reliably identify currency. The KNFB Reader Mobile has a currency identifier in it that a number of blind people have used with outstanding results. A stand-alone currency reader portable enough to carry in a pocket could probably be produced for as little as $100.

One final point should be made. To say that we can't manage money is to argue that we as blind people are helpless. This is not the case. To say that we might be victims of fraud is to argue that we can't imagine methods of protecting ourselves. Such an assertion also urges the unscrupulous to try to prey on our vulnerabilities—be they real or imagined. To describe us as helpless, vulnerable, or incompetent is to paint a picture of blind people so negative that others in society are persuaded to mistrust any ability we have. Can you trust a blind lawyer if he can't even figure out how to manage his money? How can you be sure that your lawyer will be able to handle your transactions if he can't handle his own? These are the unfortunate associations that come from the false and misleading argument that the blind can't manage currency.

The National Federation of the Blind has adopted resolutions about currency in 1994, 2002, and 2008. I attach these for your information. If there is to be a change in the currency, we who represent the largest number of blind people in the nation wish to be involved in crafting that change. Thank you Mr. Chairman and members of the Committee.

RESOLUTION 1994-07

WHEREAS, the United States Department of the Treasury is examining alternatives to the present currency for the purposes of making counterfeiting more difficult and for making currency more compatible with modern technology; and

WHEREAS, revisions to the present currency may include variations in color, raised markings, bar coding, or other electronically readable formats; and

WHEREAS, it is a widespread misconception that blind people cannot handle their own money because they cannot see it; and

WHEREAS, it is beyond dispute that blind people can, in fact, handle their own money; however, bills which can be identified by other than conventional print could be more convenient for everyone, may be a necessity to safeguard against counterfeiting, and may be desirable to take the best advantage of evolving technology: Now, therefore,

BE IT RESOLVED by the National Federation of the Blind in Convention assembled this seventh day of July, 1994, in the City of Detroit, Michigan, that this organization express the interest of blind people in the discussion of a modernized form of currency so that any changes which may eventually be made will include methods of identifying money by other than strictly visual means; and

BE IT FURTHER RESOLVED that this Federation, notwithstanding its expressed interest in the ultimate decisions on currency changes, do all in its power correctly to inform the public that blind people can and do successfully handle money in its present form.

RESOLUTION 2002-25

WHEREAS, on May 2, 2002, the American Council of the Blind (ACB) and two individual plaintiffs filed a lawsuit against the secretary of the treasury of the United States and the treasurer of the United States alleging that the federal government is in violation of Section 504 of the Rehabilitation Act of 1973 as amended, 29 U.S.C. Section 794, by issuing all U.S. currency in an identical size, color, and texture, which renders various denominations indistinguishable by touch, alleging that the blind are thus largely excluded from enjoying the benefits of monetary transactions and seeking declaratory and injunctive relief by requiring the Department of the Treasury to implement design changes in the currency to make the various denominations distinguishable by touch and color; and

WHEREAS, this lawsuit is based on a false and misleading assumption that the inability to distinguish banknote denominations by touch largely excludes the blind from participating in commerce and other ordinary activities of life; and

WHEREAS, the theory of this suit is disproved by the lives of tens of thousands of blind persons who live normal lives and participate in commerce every day without difficulty; and

WHEREAS, more than having difficulty with money, blind people are apt to suffer great harm from the attendant publicity surrounding this suit, fostering and reinforcing the notion that the blind cannot easily handle currency as it now exists and, for example, needlessly creating an albatross around the neck of any blind person seeking employment in any position involving handling money; and

WHEREAS, to the extent that currency identification is truly a problem for individual blind people, various technological devices capable of identifying banknotes and audibly announcing their denomination are available for sale, and in fact giving every blind person in the country such a device would be simpler and cheaper than re-engineering the nation's cash-handling capacity; and

WHEREAS, in view of its false premise and lack of merit, there is little likelihood that the relief sought by this lawsuit will ever be granted, thus using the blind in a publicity stunt and showing little regard for the genuine needs and concerns of blind people; and

WHEREAS, more than the adverse publicity resulting from the filing of this suit itself, there is a substantial risk of a ruling that could nullify the potential benefits of Section 504 by narrowing its scope and coverage or over-turning the law altogether, as has happened with other recent court decisions in the area of disability: Now, therefore,

Resolution 2002-25
Page two

BE IT RESOLVED by the National Federation of the Blind in Convention assembled this ninth day of July, 2002, in the City of Louisville, Kentucky, that this organization take all appropriate and legally available steps to advise the court that the failure to have U.S. currency issued as sought by the plaintiffs in this suit is not an act of discrimination against the blind and in such a fashion that the accompanying ruling does not harm current and future efforts to achieve genuinely needed and desirable accommodations for the blind; and

BE IT FURTHER RESOLVED that this organization take steps to counter the adverse effects of the harmful publicity arising from this particular lawsuit and renew efforts to educate the public that the blind can participate in commerce on equal terms and fully enjoy the benefits of U.S. currency as it now exists.

RESOLUTION 2008-08
Regarding the Blind and American Paper Currency

WHEREAS, the National Federation of the Blind strongly opposed federal court involvement in issues regarding changing paper currency because the argument presented to the court stated that the blind of America were being unlawfully made victims of discrimination because they lacked "meaningful access" to paper money on the basis that it was impossible for the blind to use paper currency independently, a patently untrue argument we feared judges would believe--fears confirmed by the opinions of the judges who considered the matter; and

WHEREAS, despite the courts' contrary holdings, which are largely the result of factual errors, we remain convinced that blind people have meaningful access to currency, in other words that there is no discrimination against the blind given that we regularly conduct daily business using American paper currency as it now exists; and

WHEREAS, many of the factual suppositions and much of the language included in legal briefs and in opinions issued by both the federal District Court and federal Court of Appeals in Washington, D.C. (language such as the blind are the "most vulnerable individuals in our society") indicate that the judiciary has low expectations of blind people and treats our routine, daily alternative techniques as badges of inferiority which can only serve to make us objects of pity—a perception that could have extreme, grievous, detrimental impact on the ability of blind people to achieve the equality that we so richly deserve; and

WHEREAS, this attack upon the blind was conducted by judges who had sworn to tell the truth and to uphold the laws of the United States; and

WHEREAS, the judicial decisions depict the blind in a false light, asserting that we who are blind have little capacity and less understanding of our own financial resources and of the other accidents of society that surround us; and

WHEREAS, the irony of these judicial determinations is that the blind are told we are incompetent in decisions that base their justification on nondiscrimination principles; and

WHEREAS, as we stated in a 1994 resolution (and as we reaffirm today), "Bills which can be identified by other than conventional print [that is, in nonvisual ways] could be more convenient for everyone, may be a necessity to safeguard against counterfeiting, and may be desirable to take the best advantage of evolving technology": Now, therefore,

Resolution 2008-08
Page two

BE IT RESOLVED by the National Federation of the Blind in Convention assembled this fifth day of July, 2008, in the city of Dallas, Texas, that this organization urge the United States Department of the Treasury to consider means to make currency more identifiable by the blind and thereby more convenient for a greater portion of the population of the country; and

BE IT FURTHER RESOLVED that this organization insist upon being well represented in any process intended to redesign American currency or to promulgate or create means to identify it in nonvisual ways.

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Steven M. Rothstein
President

Written Testimony of

Steven M. Rothstein, President
Perkins School for the Blind
175 North Beacon Street
Watertown, Massachusetts 02472
July 30, 2008

United States House of Representatives, Financial Services Committee

Domestic and International Monetary Policy, Trade and Technology Sub-Committee

Chairman Luis V. Gutierrez and members of the Sub Committee, thank you for the opportunity for Perkins School for the Blind to testify on the key issues surrounding accessible currency. We are very appreciative that your Sub Committee is addressing the important issue of accessible paper currency for people who are visually impaired.

As you know, the battle for equal access to paper money for the blind has been ongoing for years in the United States. We remain the only country – of the 180 countries that issue paper currency – that has not taken this vital step toward providing economic opportunity and independence to people who are visually impaired.

For millions of Americans who are visually impaired, there is no way to tell between a $1, $5, $10, or $20 bill without asking someone who is sighted. Imagine you had to rely on other people, including strangers, to tell you the dominations of the bills in your wallet.

More than 70 percent of people who are visually impaired in the United States are unemployed or underemployed. Denying them meaningful access to paper currency only exacerbates this alarming trend and limits their job opportunities.

As you are aware, in May, the U.S. Court of Appeals ruled the Treasury Department is discriminating against the blind community by refusing to issue paper money with distinguishing tactile features such as bills of different sizes.

Mr. Chairman, do you remember the first job you had as a teenager? From retail shops to food service to newspaper delivery routes, most entry-level positions involve handling cash. So what happens if you can't tell the difference between a $1 and $20 bill?

Let me tell you about one of the many students from Perkins, Cory. He is high school student who is visually impaired. He applied to work behind the counter of a grocery store in his hometown. He was turned down not because he wasn't qualified but because the owner feared he could be taken advantage of when left to deal with cash transactions on his own.

"I don't blame them, they're right. I can't. I've got all this education and I can't do something even that simple," Cory said.

Cory's comments are particularly revealing because 25 percent of all entry-level jobs held by teenagers require the ability to independently handle currency. The lack of appropriate entry level jobs significantly reduces employment opportunities later in life.

As the first school for the blind, Perkins believes that "All we see is possibility". This is a vital message we impart to all of our students that blindness is not a limitation to what they want to accomplish. However, inaccessible paper currency puts anyone who is visually impaired at a disadvantage both as a consumer and as a willing and able contributor to the workforce.

In 2002, the American Council of the Blind filed and eventually won a discrimination lawsuit in federal court against the U.S. Treasury Department for failing to make paper currency readily distinguishable to the visually impaired. The government appealed the decision but

as you know, the U.S. Appeals Court handed ACB a second victory this May. It is our understanding the federal government has not yet decided whether or not to appeal the ruling to U.S. Supreme Court.

We fully agree with the U.S. Court of Appeals ruling in May that the U.S. Treasury Department is denying people who are blind meaningful access to currency, which constitutes unlawful discrimination under the Rehabilitation Act. Perkins School for the Blind has been one of the leading voices in the battle for accessible paper currency. Among other activities, we filed an Amicus Curiae brief supporting the discrimination ruling.

People 55 and older are the fastest-growing visually impaired population and, as the country's elderly population continues to grow, the number of people affected by inaccessible paper currency will only increase.

Change is long overdue. Now is the time to add your powerful voices to the chorus of those demanding equal access to currency.

We hope the Treasury Department accepts the current court decision and works swiftly to implement the recommendations. However, if the U.S. Treasury Department takes this issue to the U.S. Supreme Court, we encourage your Sub Committee to recommend legislation requiring the government to issue paper money that is readily distinguishable by touch to someone who cannot see the numbers on the bills.

By refusing to issue accessible paper money the government disadvantages 3.9 million Americans ages 21-64 who are visually impaired, and the tens of thousands of children who are visually impaired seeking their first summer or after school job. This is a population already facing a serious economic plight.

More than 70 percent of Americans who are blind or visually impaired are unemployed or underemployed. Since many entry-level positions require employees to independently handle cash transactions, inaccessible paper money exacerbates an already existing economic disadvantage by limiting employment opportunities for the blind and visually impaired.

Please put an end to the discrimination by supporting a change to accessible paper currency in Congress if the US Treasury Department does not act on their own. Thank you for your consideration on this critical issue affecting so many of your constituents and citizens across the country. We would be happy to provide additional information.

Coalition for the Presidential $1 Coin

Testimony Submitted for the Record

Committee on Financial Services,
Subcommittee on Domestic and International Monetary Policy, Trade, and Technology

Hearing on Issues Related to Tactilely Distinguishable Currency

July 30, 2008

The Coalition for the Presidential $1 Coin was formed following the passage of the Presidential $1 Coin Act of 2005, and it is composed of a wide variety of companies, associations, and groups that came together to support the implementation of the Presidential $1 coin program. The Coalition includes the National Automatic Merchandising Association (the vending machine industry), the American Public Transportation Association, the National Bankers Association, the National Association of Federal Credit Unions, raw material suppliers, coin collector's groups, taxpayer advocates, presidential historians, and armored car carriers. We came together to support the Federal government's implementation of the Presidential $1 Coin Act: We have worked to educate Federal agencies about their obligations to accept and dispense dollar coins; we have provided a channel of communication for the Mint and the Federal Reserve to reach businesses interested in dollar coins; and we have been an advocate for the significant segments of the business community that would like to see greater circulation of dollar coins in general commerce.

A. Benefits to the Blind of Wide Circulation of $1 Coins.

The Coalition does not take a position on the *American Council of the Blind v. Paulson* litigation or the recent decision of the D.C. Circuit Court of Appeals. The Coalition believes, however, that there is a significant overlap between the issues raised in the lawsuit and the issues that the Coalition has faced with promoting $1 coins. We are submitting this testimony for the record to ensure that Congress is aware of the important role that $1 coins can play, as it considers potential legislative solutions to increase accessibility of our national currency to the blind and visually impaired.

The American Council of the Blind's interest in increasing the accessibility of currency would be greatly enhanced by the greater circulation of $1 coins. The current $1 coins (so called "golden dollars") were specifically designed from the beginning to be accessible to the blind and the visually impaired. Prior to the launch of the Sacagawea $1 coin in 2000, the U.S. Mint consulted with the blind community and designed the new $1 coins to be tactilely different from other coins. The rim of the $1 coin was widened and its edge was smoothed, both of which helped to differentiate the feel of the coin from the quarter dollar. These features were carried over to the design of the Presidential $1 coins.

Although the $1 bill was not specifically at issue in the *American Council of the Blind v. Paulson* litigation, the issues raised in that lawsuit relate to the accessibility of all currency. The $1 bill accounts for approximately half of all bills produced today. If $1 coins were circulated widely in general commerce, it would mean that a very large portion of the nation's cash transactions would immediately be made more accessible to the blind and visually impaired. Moreover, because the $1 coin was originally designed to be accessible, these benefits can be realized immediately, without any additional cost to the federal government, and without any delay for redesign or an implementation of new tactile features. Similarly, owing to the provisions that already are part of the Presidential $1 Coin Act, industry could avoid many of the costs that would be incurred in dealing with tactilely distinguishable $1 bills.

B. Other Benefits from Greater Circulation of $1 Coins.

Greater circulation of $1 coins would have additional benefits, including the following:

- Many businesses, such as coffee shops, general retailers, and convenience and grocery stores, have strong economic incentives to use dollar coins. The transit industry found that it costs approximately $12 to process 1,000 dollar bills, but only $2 to process 1,000 dollar coins.

- The $1 coins are completely recyclable.

- The Bureau of Engraving and Printing reports that $1 bills have a life span of 21 months. Most bills removed from circulation are shredded and sent to landfills. In contrast, $1 coins will last for 30 years or more.

- Because of the durability of $1 coins, the greater use of $1 coins could save the Federal government hundreds of millions of dollars every year. The Government Accountability Office estimated the savings at more than $522 million per year.

To realize these benefits, Congress must ensure that the Mint and the Federal Reserve are fully implementing the requirements of the Presidential $1 Coin Act – specifically the new obligations that require the Secretary of the Treasury and the Federal Reserve to remove barriers to circulation of the $1 coin. In the two years since the start of the Presidential $1 Coin program, the results have been discouraging. If Congress does not ensure that the Act is being

implemented fully, the $1 coins will certainly fail, squandering the savings and other benefits that Congress intended to achieve.

C. Barriers to Widespread Circulation of $1 Coins.

In the Presidential $1 Coin Act, Congress adopted strong provisions with the explicit intent of launching widespread general use of $1 coins in the United States. Congress drew on the experience of the very successful 50 State Quarters program, in which a rotating coin design "radically increases demand for the coin, rapidly pulling it through the economy." (Presidential $1 Coin Act § 101.) Congress created the Presidential coin program in a way that mirrored the Quarters program – with a new design released every three months for several years – to replicate the success of the Quarters program and generate widespread circulation of the $1 coin.

In addition, Congress placed new obligations on the Treasury and the Federal Reserve to engage actively in "identifying, analyzing, and *overcoming* barriers to the robust circulation of $1 coins." (Presidential $1 Coin Act § 104 (31 U.S.C. § 5112(p)(3)(F)) (emphasis added).) Rather than passively serving the coin marketplace, this new mandate from Congress obligates the Federal Reserve and the Treasury to seek out barriers to dollar coin circulation – particularly those that have prevented dollar coins from gaining widespread acceptance – and then work diligently to *eliminate the barriers*.

The Coalition has found that significant barriers to $1 coin circulation remain. For example, existing policies and practices of the Federal Reserve have had the effect of making it difficult, rather than easy, for businesses and ordinary citizens to get and use golden dollar coins (Presidential and Sacagawea coins). Some Federal agencies, which have an obligation to accept and dispense $1 coins in their business operations, have likewise found it difficult to obtain the coins.

D. Reforms Are Needed.

The Coalition has encouraged the Mint and the Federal Reserve to take several steps to enhance the dollar coin program in order to achieve Congress's goal of creating widespread $1 coin circulation. Many of these reforms would also be appropriate for legislation if Congress were to enact legislation as a result of the *American Council of the Blind v. Paulson* litigation. The following summarizes the most necessary changes, and the Coalition would be happy to work with the Committee on any or all of them.

- The Federal Reserve should permit banks and businesses to order supplies of golden dollars unmixed from Susan B. Anthony dollars, which are difficult to distinguish from quarters for both the blind and for sighted persons because of their similarities to quarters. Unmixed supplies of golden dollars could be provided either by releasing enough newly minted golden dollars (Presidential and Sacagawea) to ensure a consistent supply, or by investing in technology capable of sorting Anthony dollars from golden dollars in existing supplies. (The additional revenues for the Treasury generated by increased dollar coin use would more than recoup any necessary investment.)

- The Federal Reserve should make supplies of new, unmixed, Presidential coins available for the full 13 weeks between each coin release, instead of a truncated four-week period. Businesses and consumers need to know they have a reliable and consistent supply of golden dollars, or they will be unwilling to make regular, large scale use of dollar coins. The Federal Reserve should follow the example of the 50 State Quarters program in which each new state quarter design was minted and distributed for the entire period between coins, making each introductory period seamless. The truncated availability period for the Presidential $1 coin has created a new barrier to circulation.

- The process for ordering dollar coins should expedite, not hinder, the availability of coins to the public, businesses, and banks. The Act requires the Treasury and the Federal Reserve to adopt improved methods of distribution. The Federal Reserve should use the effective and efficient ordering processes already in place for the 50 State Quarters program as the model for the dollar coin program. The Federal Reserve should ensure that correspondent banks update their ordering systems as well, so that banks that do not receive cash directly from the Federal Reserve can obtain dollar coins.

- The Federal Reserve should order and distribute sufficient coins to ensure that they are widely available throughout the nation and at all of our nation's major banks. Rather than the current approach, which appears to be primarily designed to meet the needs of collectors, the Federal Reserve must meet the demand of both collectors and commerce, as the Act mandates.

- The Federal Reserve and the Mint should ensure that information on dollar coins is available throughout the United States, with the Mint focusing on the business sector and the Fed on the *entire* banking system, not just the largest banks. The Mint and the Federal Reserve should widely distribute instruction forms, pamphlets, counter top displays, and tent cards to inform and educate the public regarding dollar coins. (The agencies can use as examples the materials generated in support of the 50 State Quarters program, the 2000 golden dollar launch, and the Bureau of Engraving and Printing's currency redesign initiative.)

- Paid advertising was important to the success of the Mint's 50 State Quarters program and the launch of the Sacagawea Golden Dollar in 2000. It is likewise important that the United States Mint undertake a substantial, efficient, and well-designed national paid advertising campaign to support the new Presidential $1 coins. The Mint has recently launched a pilot program promoting the $1 coins in four cities across the country, and it has plans to expand its advertising campaign to make it nationwide. Because increased $1 coin use will generate additional revenues for the Treasury, an efficient paid advertising campaign is a cost effective use of Federal resources. Accordingly, Congress should make clear its strong support for a sustained, nationwide marketing effort.

- Congress should look for opportunities to improve the Presidential $1 Coin Act. For example, although the Act contains a strict accept-and-dispense obligation for Federal agencies and businesses on Federal properties, the legislation is silent on compliance and enforcement of that obligation. The Coalition would therefore recommend that Congress

direct the Office of Management and Budget to undertake an initiative to ensure that agencies are coming into compliance with the statutory requirements of the Act.

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Because the current $1 coins were designed from the beginning to be accessible to the blind, increased circulation of $1 coins is a ready and available means for increasing accessibility of U.S. currency. Golden $1 coins are easily distinguishable for the blind and sighted person alike, unlike the Susan B. Anthony dollars which are often mistaken for quarters. These benefits can be realized immediately and at virtually no cost, without waiting for a redesign or the development of new tactile features. To achieve these benefits, Congress should mandate the measures outlined above to ensure that the Presidential $1 Coin Act is implemented fully and its benefits are realized for all segments of the American public.

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