

## Memorandum

September 22, 2003

TO:

Honorable Chaka Fattah

Attention: William T. Miles

FROM:

Maxim Shvedov

M.S.

Analyst in Public Sector Economics Government and Finance Division

**SUBJECT:** 

Transactions Fee

As you requested, this memorandum examines your proposal to replace all existing federal taxes with a broad-based fee on the value of transactions. The revenues from this fee should also cover two new programs: federal revenue sharing to support public education, equal to 50% of domestic K-12 expenditures, and rural-urban areas support, equal to approximately 10% of the current federal tax collections. While it is impossible to account for all implications of such a significant change in the tax structure, the following analysis attempts to pinpoint some of the major effects and provide plausible quantitative estimates of the required fee rate.

## **Mechanics of the Proposed Transactions Fee.**

The fee envisioned by the proposal would apply to any transaction that uses any payment instrument, be it a check, cash, credit card, or anything else. The fee would be collected on all retail and wholesale sales, all purchases of intermediate goods, and financial and other intangibles' transactions. Only checks or electronic transfers issued by employers for their employees' salaries would be exempt. Taxpayers become liable for the fee at the moment they are able to exercise control over a piece of a property or a service regardless of the payment method.

The proposal offers several options for computing the fee amount. One possibility is to set it equal to a certain flat percentage share of a transaction's value. Alternatively, the fee may be computed using a progressive rate schedule. Finally, the fee may be set at several tiers for transactions in different value ranges.

For example, under the flat rate fee schedule when a person buys \$100 worth of groceries, the fee due would amount to \$5, using 5.00% rate for illustration, even when a credit card was used to make a purchase. By the same token, a money management firm buying \$1 million worth of bonds would incur a \$50,000 liability. Under a progressive rate schedule the above taxpayers may incur \$3 and \$60,000 liability, assuming hypothetical

applicable rates of 3% and 6% correspondingly. An example of a tiered fee would be \$5 fee for transactions valued at less than \$1,000, \$50 per transaction valued between \$1,000 and \$10,000; and so on.

The fee could be collected by the seller or financial institution servicing the transaction and transferred to the U.S. Treasury just as sales and use taxes are transferred to state treasuries today, or handled in some other manner prescribed by law.

The process may become more cumbersome in the case of a complex transaction. For example, when a person buys a house and finances the purchase through a bank, a number of transactions are generated:

- (i) The bank usually pays the full amount to the house seller at closing.
- (ii) The buyer makes a single payment for the closing costs to the mortgage-issuing bank. This payment may be ultimately split among several parties, such as the bank itself, the title company, and the local government.
- (iii) The buyer makes monthly payments to the bank for the next 30 years, which also often combine payments to several entities, like the mortgage-issuing bank, the insurance company, and the local government.

For the purposes of this discussion, it is assumed that (i) the buyer's bank would pay the fee on the whole value of the house at the time of the deal closing, (ii) on portions of the closing costs, and (iii) on portions of the monthly payments upon such portions' transfer to other entities. The home buyer would be liable for the fee on full value of the closing costs and the monthly payments upon making them.

The assumption of who is legally responsible for the fee payment is economically inconsequential, since in the long run fee incidence depends on market dynamics, rather than on legal liabilities.

# Background and Historical Information on Transactions Fees and Taxes.

The revenue source described above – namely, a levy on the value of a transaction – has some precedents in the United States and abroad. However, unlike the proposal, the existing transactions fees or taxes are imposed on a limited number of strictly defined products or activities. While the transactions fee may appear similar to the sales and use tax – one of the major revenue sources for state and local governments, there is a major distinction: sales tax is charged only on sales to the final consumer of the product, while the transactions fee would apply to intermediate users as well.

Relevant examples in this section include both fees and taxes. While the proposal designates the new revenue-generating mechanism as a "fee," there is no bright line test to distinguish between "fees" and "taxes" as far as their economics is concerned. Traditionally, governmental fees tended to be narrower in scope, and often directly linked to a certain government service. A typical example would be driver's license fees, charged specifically for the service of issuing a driver's license. Revenues may also be generated in other ways, such as profits from state-run liquor stores, but their economic effects are the same as taxes.

At the federal level one of the historical examples of a transactions tax was a stock transfer tax (STT) effective from 1914 to 1966. In 1966 the rates were 0.1% at security

issuance and 0.04% on transfer. At the present time the federal government still levies a small tax on share issuance and transfers at the rates of 0.028% and 0.0033%, respectively, for the primary purpose of financing the activities of the Securities and Exchange Commission (SEC). In 2000 this tax raised revenues of \$2.2 billion. However, after recent enactment of P.L. 107-123, revenues are expected to drop.<sup>2</sup>

In the late 1980s and early 1990s, several ideas to introduce additional securities transactions tax in the U.S. were floated, though none was implemented.<sup>3</sup> Some of the proposals were targeted to narrow segments of financial markets, such as trades in derivatives, while others were broader and covered most financial transactions. For many years introduction of various types of consumption taxes, value-added tax (VAT), or national sales tax has resurfaced as an alternative to the current tax system.<sup>4</sup>

Other federal transaction value taxes include some of the excise taxes, such as the 3% tax on telephone services and the 3% luxury passenger vehicle tax. There are a number of excise taxes levied per-transaction or per-unit, irrespective of an item's value. Unlike the proposed fee, the existing excise taxes apply only once for each product, avoiding a pyramiding effect.

In addition to federal taxes, many state and local governments impose levies on such transactions as sales of real property and vehicles or provision of telecommunication services. The rates and exact definitions of taxable events differ by jurisdiction.

Worldwide, many governments impose some kinds of transaction taxes or fees, for example, on securities transfers. Specifics vary by country. In many cases revenues raised are insignificant, but in some instances they were noticeable. For example, STT generated 4.2% of the government general account revenue in Japan in 1988. However, by 1993 this

<sup>&</sup>lt;sup>1</sup> Robert Pollin and James Heintz, Evaluation of a Proposal to Reinstate the New York Stock Transfer Tax, research report (Political Economy Research Institute, University of Massachusetts, Amherst, April 2003), p.5.

<sup>&</sup>lt;sup>2</sup> For further information see CRS Report 20953, *Reducing Securities Transaction Fees: Effects on Collections of H.R. 1088 and S. 143*, by Mark Jickling.

<sup>&</sup>lt;sup>3</sup> For further information see CRS Report 90-415, Taxation of Securities Transactions to Discourage Short-Term Investment: a Selected Bibliography, by Louis Alan Talley; CRS Report 90-350, The Securities Transactions Tax: an Overview of the Issues, by Donald W. Kiefer; and CRS Report 93-474 E, A Tax on Large-Dollar Wire Funds Transfers?, by William Jackson. These reports are archived, but available on request.

<sup>&</sup>lt;sup>4</sup> For further information, see CRS Issue Brief 95060, Flat Tax Proposals and Fundamental Tax Reform: An Overview, by James M. Bickley.

<sup>&</sup>lt;sup>5</sup> CCH Editorial Staff Publication, 2003 U.S. Master Tax Guide (Chicago: CCH Incorporated, 2002), pp. 46-48.

<sup>&</sup>lt;sup>6</sup> See Appendix in CRS Report 90-350 and Table 1 in Bob Pollin, *Applying a Securities Transactions Tax to the US: Design Issues, Market Impact, Revenue Estimates*, Discussion Paper Prepared for Jan. 16, 2003, New Rules for Global Finance Tobin Tax Conference, visited on Aug. 21, 2003, [http://www.new-rules.org/Docs/tobintax/Pollin2.pdf].

<sup>&</sup>lt;sup>7</sup> Peter M. Garber, "Issues of Enforcement and Evasion in a Tax on Foreign Exchange Transactions," in *The Tobin Tax: Coping with Financial Volatility*, Mahbub ul Haq, Inge Kaul, and Isabelle (continued...)

share fell back to 0.96% as most of the speculative trading moved to the trading floors in much-less-taxed locations. In many countries STT's were either reduced or completely eliminated over the last decade.

Widely used around the globe, VAT is not the same as the proposed transaction tax, since VAT is imposed only on a part of a transaction value, roughly the difference between an item's selling price and its cost, thus avoiding multiple layers of taxation.

Ongoing discussion in economic literature on transactions taxes is focused in such areas as currency exchange or STT. The rationale for their imposition differs. For example, James Tobin put forward an idea of taxing currency transactions, which came to be known as "Tobin tax," in order to stabilize exchange rates, not to raise revenues. However, other proponents of the tax would like to tap its revenue potential.

### Impact of a Transactions Fee on Economic Behavior.

Generally speaking, any levy changes behavior of economic agents since it alters costs and benefits associated with decisions they make. Because of that, fees or taxes imposed in a competitive market typically lead to economic inefficiency. However the taxation mechanism does affect how economic agents respond to it, and levy burden per se is just one part of the equation. Different levy structures can raise exactly the same revenues, and yet create very different sets of incentives.

Under the proposal, the transaction fee revenues would replace all other federal receipts and generate additional revenues to fund new programs. Therefore, unless other programs or expenditures were eliminated, the aggregate tax burden on the U.S. economy as a whole would increase. At the same time separate taxpayers' burdens may end up higher or lower. Let's consider how various groups of taxpayers might be affected by the change.

By eliminating existing federal taxes, the proposal would eliminate all efficiency losses and distortions associated with them, most importantly those arising from higher marginal tax rates. For example, firms would be willing to undertake projects that were not profitable in the past and workers would be more willing to supply labor than before. On the other hand, the transactions fee would introduce its own distortions into the economic system. Its burden would still fall on both labor and investment income, albeit burden shares may shift.

A transactions fee applies to the full transaction value, without any credit for the previously paid fees. At every stage of the production chain the fee becomes a cost ultimately incorporated in the output prices. Therefore, even though the nominal fee rate can be set at a low level, the effective rate may end up being a multiple of that. Different sectors of the economy would be affected in different ways. For example, offering legal services may require a minimal supply chain, with a correspondingly low total transactions fee bill. In contrast, an aircraft manufacturer would have to include in the final price transactions fees paid by all of its suppliers, from mining companies to electronics vendors. Thus effective fee rate would differ across goods, and generally such variation is likely to create more distortions than a fee imposed at a uniform effective rate.

<sup>&</sup>lt;sup>7</sup> (...continued)

Grunberg, eds. (New York, Oxford: Oxford University Press, 1996), p. 130.

<sup>&</sup>lt;sup>8</sup> James Tobin, "Prologue," in Mahbub ul Haq, Inge Kaul, and Isabelle Grunberg, pp. ix-xviii.

A transactions fee creates incentives to minimize the number of transactions necessary to produce a product and bring it to the final consumer. One of the fundamental results of economics suggests that specialization and trade are some of the key driving forces of economic development, because through specialization people learn to use resources efficiently. Taxing transactions discourages economic agents from gaining specialized skills. In the absence of transactions fees each firm can choose its business model taking into account actual costs associated with every option. After imposition of a transactions fee, this choice would become artificially skewed towards internalizing production, even though there is no value to the society as a whole in this mode of operation.

Transactions fee liability is present regardless of whether a company makes or loses money. Many sectors of the economy are cyclical in nature. The necessity to pay the fee may become a significant burden for companies, especially in cyclical industries and start-ups. Knowing that they have to face the fee bill even if the venture is unprofitable may discourage companies from taking entrepreneurial risks. In addition, companies would have to keep larger cash reserves to service their fee liability in a bad year, which implies a lower return on capital and economic inefficiency.

Similar issues may arise on the individual side. However, they may be offset by earned income credits or similar programs retained under the plan.

Note that many of the problems discussed above are present irrespective of each taxpayer's absolute fee bill value: under the plan their fees may become lower than taxes they currently face, yet this lower absolute burden does not reduce the above distortions.

Imposition of the fee may put at a disadvantage those sectors of the domestic economy that compete internationally. Some of the sectors are very large and extremely mobile, such as financial markets. For example, average daily foreign exchange gross turnover in the U.S. was \$287 billion in April of 2001. The Securities and Exchange Commission reported total market value of equity and options sales on the U.S. exchanges of over \$13 trillion in 2001. Tiny fluctuations in securities' prices generate huge cross-border capital flows. In essence, the largest financial centers in New York, Tokyo, and London ensure global around-the-clock operation, and geographic location of buyers and sellers is of little importance.

As a result of a transactions fee, trading activity may flee the U.S. in favor of other sites. For example, Umlauf<sup>11</sup> cites the historical example of Sweden, which increased STT to 2% in 1986. By the end of the decade, half of the volume in Swedish shares traded in London. Furthermore, restoring a lost position may be extremely difficult once alternative trading sites emerge.

<sup>&</sup>lt;sup>9</sup> Bank for International Settlements, Statistical Annex in *Triennial Central Bank Survey 2001*, March 2002, visited on Aug. 20, 2003, at [http://www.bis.org/publ/rpfx02a.pdf].

<sup>&</sup>lt;sup>10</sup> U.S. Securities and Exchange Commission, Appendix in 2002 Annual Report, visited on Aug. 10, 2003, at [http://www.sec.gov/pdf/annrep02/ar02appendix.pdf].

<sup>&</sup>lt;sup>11</sup> Steven R. Umlauf, Transaction Taxes and the Behavior of the Swedish Stock Market, *Journal of Financial Economics*, vol. 33, issue 2, April 1993, pp. 227-240 as cited in R. Glenn Hubbard, "Securities Transactions Taxes: Tax Design, Revenue, and Policy Considerations," *Tax Notes*, Nov. 22, 1993, pp. 985-1000, also available at [http://www.taxanalysts.com].

The change in tax structure under the proposal may create an opportunity to address a major concern with the existing law: its complexity, reflected in high compliance, administration, and other costs. The Internal Revenue Service (IRS) net cost of operations in 2002 was over \$10 billion, but this is just a part of the total economy-wide cost. While estimates vary, most show that compliance costs are much larger than the IRS budget. The Office of Management and Budget estimates that taxpayers spend 6.7 billion hours annually to comply with the Internal Revenue Code. Assuming labor at \$30 an hour, it implies a cost in excess of \$200 billion. Scott Moody of the Tax Foundation estimated the 2001 compliance burden at \$140 billion in his testimony to the House Ways and Means Committee. The Office of Tax Policy Research at the University of Michigan Business School, directed by Joel Slemrod, provides an estimate of over 3 billion hours and as much as \$100 billion annually.

A transactions fee would discourage short-term speculative trading in financial markets. Many advocates of the Tobin tax on foreign exchange transactions assert that in some instances "hypersensitivity" of financial markets may be socially undesirable. In fact, the tax was first proposed as a way to prevent excessive exchange rate volatility that by many accounts exacerbated currency crises and disrupted normal flow of economic life. To the extent these assertions are true, a transactions fee could improve overall welfare. At the same time many researchers believe that frictionless financial markets are essential to an efficient allocation of resources.

A transactions fee may capture revenues from an underground economic activity that currently evades taxation. Since illicit income remains undeclared, the federal government does not collect any taxes on it. However, proceeds from illegal operations eventually are used to buy legitimate goods and services that would become subject to the fee under the plan. On the other hand, the transactions fee may induce broader use of undocumented cash payments to reduce the liability.

Under a progressive rate, payers would be inclined to substitute large payments for a series of smaller ones. This avoidance behavior may be relatively easy to accomplish. Even in the case of a multimillion dollar merger it is possible to structure the transaction, for example, as a short-term loan. In effect, it means that only the bottom bracket would be

<sup>&</sup>lt;sup>12</sup> U. S. General Accounting Office, *Financial Audit. IRS's Fiscal Years 2002 and 2001 Financial Statements*, GAO Report to the Secretary of the Treasury, GAO-03-243 (Washington: November 2002), p.74.

<sup>&</sup>lt;sup>13</sup> U.S. Office of Management and Budget, Office of Information and Regulatory Affairs, *Managing Information Collection and Dissemination (Fiscal Year 2003)*, visited on Aug. 20, 2003 at [http://www.whitehouse.gov/omb/inforeg/2003\_info\_coll\_dism.pdf].

<sup>&</sup>lt;sup>14</sup> Methodology follows Chris Edwards, Simplifying Federal Taxes: the Advantages of Consumption-Based Taxation, *Policy Analysis*, No. 416, Oct. 17, 2001, visited on Aug. 21, 2003, at [http://www.cato.org/pubs/pas/pa416.pdf].

 $<sup>^{15}</sup>$  Tax Foundation, "Cost of Complying with Federal Income Tax Will Reach \$140 Billion in 2001," July 17, 2001 release, visited on Aug. 21, 2003, at [http://www.taxfoundation.org/pr-compliancetestimony.html].

<sup>&</sup>lt;sup>16</sup> The Office of Tax Policy Research, "Hot Topics in Taxation, Compliance Costs," visited on Aug. 25, 2003 at [http://www.otpr.org] or [http://www.otpr.org/compliance\_costs.html].

effective, and the fee structure would revert to a flat one. For a tiered progressive fee this fee-minimization strategy may also work in certain situations.

A tiered fee structure may be difficult to set up because it would either be prohibitively high for some transactions, or fail to meet revenue targets. For example, let's assume hypothetically that a flat rate fee of 5% would meet the revenue target. The fee of \$50 for transactions in the range between \$1,000 and \$10,000 would be equivalent to 5% fee for transactions at the low end of the range, however it would be equivalent to just 0.5% for transactions at the high end. Such a tax structure would fail to meet the revenue target. Increasing the fee to a higher value of, say, \$300 per transaction, may suffice to meet the revenue target, but taxpayers would have to pay a 30% fee on a \$1,000 purchase.

Finally, the plan may have significant transition and implementation issues; however, it is impossible to analyze them without knowing the plan's specifics.

#### **Revenue Goal Estimates.**

According to the proposal, the total revenues raised by the transactions fee should replace receipts from all existing federal taxes and generate additional revenues for newly introduced or expanded programs. The revenue target is estimated for 2001, since this is the most recent year available for many series.

The Congressional Budget Office (CBO) reported federal revenues of \$1,991.2 billion in 2001.<sup>17</sup> This figure does not include amounts paid out as earned income tax credit (EITC). Since the plan keeps the EITC program in place, collections from the new fee should be able to cover it. IRS reported that the total EITC payments of \$62.2 billion in tax year 2001, which puts the total collections requirement at \$2,053.4 billion. Since there would be no income tax filing under the plan, the EITC program would have to undergo a major revision. The above computation assumes that (i) aggregate earned income credit payout remains the same as under the current law, and (ii) variation in EITC between taxable and fiscal years is insignificant. If the EITC program is expanded, required revenues would have to go up correspondingly.

According to your request, the revenues should cover additional federal revenue sharing programs supporting K-12 education and urban-rural areas. Public education support should cover half of the expenditures in the states that would choose to repeal local taxes earmarked towards educational funding. It is difficult to estimate which school districts would be likely to participate in the program without knowing its details. The U.S. Census Bureau estimated total school expenditures for public elementary and secondary schools in 2001 at \$392.2 billion. Hypothetically the new program would have to cover at most half of these expenditures, or \$196.1 billion.

<sup>&</sup>lt;sup>17</sup> U.S. Congressional Budget Office, Appendix F in *The Budget and Economic Outlook: Fiscal Years* 2004-2013, Jan. 29, 2003, visited on Aug. 21, 2003, at [http://www.cbo.gov/showdoc.cfm?index=1821&sequence=0#table1].

<sup>&</sup>lt;sup>18</sup> Internal Revenue Service, Table 2 in *Statistics of Income Bulletin*, Spring 2003 (Washington, D.C. 2003), p. 175.

<sup>&</sup>lt;sup>19</sup> U.S. Census Bureau, Statistical Abstract of the United States: 2002, p. 133.

Finally, per your request, urban and rural areas support should amount to approximately 10% of the total revenue collections, or \$199.2 billion in money terms for 2001, using the figure reported by CBO as the base number.

Adding up the above three parts, the resulting revenue target for 2001 is \$2,448.6 billion. The revenue target would be larger if additional measures to protect low-income individuals from the fee were adopted.

#### Transactions Fee Rate Estimates.

In a static world estimating the fee rate would be as simple as dividing the revenue target from the previous section by the total domestic transactions turnover. However, in reality the proposed restructuring would alter economic agents' behavior, with a corresponding change in the total volume of transactions. The response to the levy would not be uniform across economic sectors, and would depend on specifics of the law. Thus, the rate estimates in this section try to capture just the most potent dynamic effects and are highly tentative.

Imposition of the fee may cause a dramatic reduction in transaction volumes in some markets. The most sensitive ones are likely to be the financial markets. A number of estimates of the maximum feasible rate were developed in the past. For example, Garber points out that for a tax on transactions in foreign exchange markets imposed unilaterally, 6/1000 of a basis point (or 0.00006%) is realistic maximum magnitude. Assuming the rate of 0.00006% causes no reduction of trading volume, imposing a fee on foreign currency exchange transactions would yield just \$4.3 billion a year.

Other financial markets are somewhat less prone to cross-border migration and therefore the ceilings are higher. As mentioned above, the U.S. currently imposes the tax on securities transactions at 0.0033% rate. In U.K. a similar tax, known as stamp duty, has a 0.5% rate<sup>21</sup> and in some countries it is even higher than that. It is unclear, though, if these rates are sustainable in the long run, given increasing economic openness worldwide.

Assuming a 0.5% rate on stock and options transactions, the static revenue estimate is \$65.6 billion, but most likely actual revenues would fall far short of this figure. The revenues depend on transaction volume, and it would fall because of the negative relation of turnover to transaction costs, described numerically by elasticity. Elasticity is (a negative of) a ratio of relative change in turnover to relative change in transactions costs. The value of an elasticity of 1.5 means that, say, a 5% increase in transaction costs would result in a 7.5% reduction in transaction volume. Hubbard lists some of the elasticity estimates ranging from 0.26 to 1.7, with 0.26 estimate being obtained in 1976 before industry deregulation. Since the elasticity value typically is not constant across cost ranges, the estimates would work well only for relatively small changes in transaction costs. By contrast, a 0.5% tax can easily exceed the bid-ask spread – the difference between a stock's selling and buying prices, implying a percentage change in transaction costs of more than 100%. Therefore, one might expect a significant turnover reduction and lower revenues.

<sup>&</sup>lt;sup>20</sup> Garber, p. 135.

Stephany Griffith-Jones, "Institutional Arrangements for a Tax on International Currency Transactions," in Mahbub ul Haq, Inge Kaul, and Isabelle Grunberg, p. 147.

<sup>&</sup>lt;sup>22</sup> R. Glenn Hubbard, 1993, Appendix.

Levying the fee on transactions going through the Federal Reserve Bank system (Fed) was among the options you have considered. The Fed estimates the daily volume of payments at more than \$3 trillion, which puts the annual total at over \$750 trillion.<sup>23</sup> However, this is the composite of all payments, including Fedwire and Clearing House Interbank Payment System, two payment systems used primarily by the banks and other participating institutions for large-value funds transfer and U.S. government securities transactions. In 2000 such payments totaled \$671.9 trillion.<sup>24</sup> The number is so large in part because many members engage in overnight transactions. Since every transaction would carry a fee and they are performed every business day, the effective fee rate may become prohibitively high, even though the nominal rate is set low. For example, at the nominal rate of 0.01%, the effective annual rate ends up at 5%, rendering many transactions useless.

One of the less elastic parts of the daily turnover is retail noncash payments. "Retail" in this context means payments made by individuals, businesses and government entities, but not large-value funds transfers discussed above. Gerdes reported that in 2000 the value of retail noncash payments was \$46.6 trillion.<sup>25</sup> This figure does not include "on us" checks – checks deposited at the same institution on which they were drawn – estimated at 29% of the total check transactions, or about \$11.4 trillion.

There are two more missing parts. Some portion of payments in the U.S. are processed by private networks and may never pass through the Fed. It is difficult to put a specific number on the value of these transactions, due to the lack of consistent data and potential double-counting.

Another missing piece is cash payments. According to some estimates, retail cash transactions summed to less than \$1 trillion in 1999. In addition, they are predominantly small payments that are most likely to be underreported. For this reason and due to the lack of data on the total cash transactions value, the estimate does not account for them.

In 2000 IRS reported wages and salaries of about \$4.5 trillion.<sup>27</sup> Subtracting this figure from the total of reported retail noncash payments and "on us" checks gives the taxable base of \$53.5 trillion, roughly five and half times the annual gross domestic product. A transactions fee at the flat rate of 4.7% would theoretically raise sufficient revenues to meet the target, based on the debatable assumption that there would be little reduction in transaction volume in response to the tax introduction.

Introduction of a progressive fee rate probably would not yield much of a revenue gain for two reasons. First, the bulk of all transactions are relatively low in value. For example,

The Federal Reserve Board, "Payment Systems," visited on Aug. 22, 2003 at [http://www.federalreserve.gov/paymentsys.htm].

<sup>&</sup>lt;sup>24</sup> Geoffrey R. Gerdes, Jack K. Walton II, "The Use of Checks and Other Noncash Payment Instruments in the United States," *Federal Reserve Bulletin*, Aug. 2002 and The Federal Reserve Board, "Payment Systems," visited on Aug. 21, 2003 at [http://www.federalreserve.gov/pubs/bulletin/2002/0802\_2nd.pdf], p. 370.

<sup>&</sup>lt;sup>25</sup> Ibid., p. 361.

<sup>&</sup>lt;sup>26</sup> Ronald J. Mann, Credit Cards and Debit Cards in the United States and Japan, *Vanderbilt Law Review*, vol. 55, No. 4, May 2002, p. 1072.

<sup>&</sup>lt;sup>27</sup> Internal Revenue Service, p. 171.

almost half of all checks in 2000 were written for \$100 or less, about 87% did not exceed \$1,000, and over 98% were below \$10,000.<sup>28</sup> Second, even in those rare instances when upper brackets could conceivably apply, taxpayers can easily avoid them by splitting up transactions. Therefore there is little revenue gain associated with higher rate brackets, and the necessary fee rate would be likely to stay in 4.5%-5% range.

The same reasons determine a low revenue gain from introduction of a tiered fee structure. Higher fees would apply to a very limited number of transactions, failing to generate significant incremental receipts.

In conclusion, it should be noted that there is no preexisting research analyzing the proposed tax structure reform. As shown above, static estimates fail to account for the change in behavior caused by the imposition of the fee and can be deceiving. Therefore more study is necessary to get a better grasp of the revenue-raising potential of the plan. A separate memorandum will address legal issues related to the proposal.