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HOUSEHOLD INCOME VOLATILITY AND TAX POLICY: HELPING MORE AND HURTING LESS

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Testimony Before the Joint Economic Committee
February 28, 2007

Good morning, Mr. Chairman, Vice Chair Maloney, Ranking Member Saxton, and Members of the Committee. My name is Lily Batchelder and I am an assistant professor at NYU School of Law. Thank you for the opportunity to testify before you today on potential tax policy responses to household income instability. My testimony makes three main points:

- First, income volatility, especially when it involves income declines, imposes significant hardships on American families. It heightens stress about finances and may increase household living expenses. These hardships are most pronounced for middle- and low-income families, whose incomes tend to be more volatile, and who tend to have less access to low-cost borrowing.

- Second, the income tax system currently simultaneously helps and hurts families trying to cope with these burdens. It helps in that it softens annual income fluctuations on an after-tax basis by timing tax payments so that a larger share of a family’s income is due in taxes in its higher-income years, and smaller share in its lower-income years. It hurts because over time it imposes higher average tax rates on households with relatively volatile incomes than it does on others whose income is the same but more stable.

- Finally, I will discuss two potential reforms to make the tax system help more and hurt less when a family’s income fluctuates. The first is a limited form of income averaging. It would permit taxpayers to elect to carryback unused standard deductions and personal and dependent exemptions for one year, and to average their income over two years when calculating the Earned Income Tax Credit. The second is a much broader proposal, which would involve converting the roughly $500 billion per year that we spend on tax incentives into uniform refundable tax credits. These reforms could be implemented on a revenue-neutral basis. Both would reduce the penalties that the tax system currently imposes on families with volatile incomes, and would provide relief from these penalties in the years when families need it most—when their income has fallen.

1 The views expressed in this testimony are those of the author alone and do not necessarily represent those of NYU School of Law. Portions of this testimony draw upon joint work with Fred Goldberg and Peter Orszag. My co-authors also should not be held responsible for the views expressed in this testimony. I am grateful to David Kamin for excellent research assistance.
I. Background on Household Income Volatility

Household income volatility is pervasive. The evidence to date suggests that on average family income tends to vary by roughly 30% from its mean. While further research is needed, there is also mounting evidence that household income volatility has been increasing over the past several decades as a percentage of household income. The source of this apparent rise in household income volatility is unclear. It likely results in part from increases in labor market flexibility and capital mobility that stem from legal changes and globalization. Both may have increased the variability of individual earnings. It also likely reflects the increasing presence of women in the paid labor force. As a result, couples now face a greater combined risk of job loss or wage declines, and no longer have a back-up potential worker if the primary earner loses his or her job.

Income volatility is a serious social policy concern because it imposes both psychological and economic costs on families, especially when it involves sudden income declines. Economic insecurity can heighten anxiety and family conflict. It creates incentives not to take on risky jobs or invest in goods, like higher education, that may generate an uncertain but greater expected return for the individual and society. In addition, families with relatively volatile incomes likely incur additional expenses as a result of the unplanned changes in their standard of living. For instance, they may move more often or incur high-interest debt in order to keep up with relatively fixed expenses, like mortgage payments and utility bills.

The economic costs associated with income fluctuations are largest for middle- and low-income families, and those that are relatively disadvantaged. Unlike more wealthy families, these families typically have little savings and few assets against which they can borrow. Downward income shocks for these families are also more likely to

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2 See, for example, Lily L. Batchelder, *Taxing the Poor: Income Averaging Reconsidered*, 40 Harvard Journal on Legislation 395, 446 (2003); Jeffrey Liebman, *Should Taxes Be Based on Lifetime Income: Vickrey Taxation Revised Fig.5* (July, 2002).
result in earnings reductions that persist over a long period of time and are passed on to their children.  

Unfortunately, these families are also precisely the ones that face the widest swings in their income. As illustrated in Figure 1, the annual income of a family in the bottom quarter of the income distribution on average varies about 44% from the family’s average income over a six year period. By contrast, the comparable figure for families in the top quarter of the income distribution is about 18%. 

Figure 1: Average Variance of Household Income from its Mean over Six Years

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9 See also Peter G. Gosselin, *The Poor Have More Things Today – Including Wild Income Swings*, L.A. Times, Dec. 12, 2004, at A1; Jeffrey Liebman, *Should Taxes Be Based on Lifetime Income: Vickrey Taxation Revised* fig.5 (July, 2002); Christopher D. Carroll and Andrew A. Samwick, *The Nature of Precautionary Wealth*, 40 Journal of Monetary Economics 41, 47 (1997). While the Congressional Budget Office has found an association between greater individual earnings volatility and lower education levels, it has not found this relationship with respect to household income. Peter R. Orszag, Director, Congressional Budget Office, Economic Volatility: Statement before the Committee on Ways & Means, January 31, 2007, at 7. This may result from the fact that, unlike the other studies cited here, the CBO estimates are based on data from the Survey of Income and Program Participation and look at volatility over a two-year period, not multiple years.

10 Unless otherwise noted, all estimates are taken from Lily L. Batchelder, *Taxing the Poor: Income Averaging Reconsidered*, 40 Harvard Journal on Legislation 395 (2003). The estimates of income volatility are based on Panel Survey of Income Dynamics (PSID) data from 1987 to 1992. They exclude income from transfers, capital gains and inheritances. The measure of income volatility is the coefficient of variation over that period, which roughly speaking is the percentage by which a household’s income varies from its mean. The estimates of the tax effects that follow are based on PSID data from 1968 to 1992 for households with at least 10 years of income data during which their filing status was unchanged. In both sets of estimates, income groups are based on average income over the period.
These broad movements in many households’ income are not simply due to families making their way steadily up the economic ladder over time, or transitioning from school to work, or from work to retirement. Figure 1 is based on households in which the head was 44 to 55 years old, the point in life when earnings are typically the most stable. Moreover, the Congressional Budget Office recently estimated that between 2001 and 2002, 24% of households with a head aged 25 to 55 experienced a 25% increase in income, but 14% experienced a 25% decline.

Sometimes these downward income shocks are planned or the family can insure against them. For instance, a young family can save so that one parent can take a couple of years off to care for a newborn, and workers can often purchase disability insurance through their employer. Frequently, however, large declines in household income are unexpected and private insurance for the relevant risk—such as unemployment or a wage reduction after a layoff—is unavailable. In these situations, the case is strongest for the government stepping in to cushion the decline.

II. Income Tax Effects of Household Income Fluctuations

Currently the income tax system simultaneously helps and hurts families facing income fluctuations. It helps because the progressive nature of our income tax results in families paying relatively more tax in good years and relative less in bad ones. It hurts because the fact that we levy taxes on annual income results in a family whose income is relatively volatile paying more tax over time than a family whose income is more stable.

To illustrate these countervailing effects, suppose two families both earn an average of $80,000 each year. Family A earns $100,000 in the first year and $60,000 in the second. Family B earns the same amount in both years. Both are composed of a married couple with two children. Table 1 shows that the rising marginal rates of the income tax provide a form of insurance for the family with fluctuating income. Family A owes a smaller share of its income in taxes in the tough year in exchange for paying a larger share in the more comfortable one. The decline in its income is therefore smaller on an after-tax basis (about $32,500) than it is on a pre-tax basis ($40,000).

Table 1: Example of Income Smoothing and Fluctuation Penalties (2006 Law)

<table>
<thead>
<tr>
<th></th>
<th>Income</th>
<th>Tax Due</th>
<th>Average Tax Rate Per Year</th>
<th>Average Tax Rate Over 2 Years</th>
<th>After-Tax Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family A</td>
<td>Year 1</td>
<td>100,000</td>
<td>10,240</td>
<td>10%</td>
<td>89,760</td>
</tr>
<tr>
<td>Family A</td>
<td>Year 2</td>
<td>60,000</td>
<td>2,720</td>
<td>5%</td>
<td>57,280</td>
</tr>
<tr>
<td>Family B</td>
<td>Year 1</td>
<td>80,000</td>
<td>5,720</td>
<td>7%</td>
<td>74,280</td>
</tr>
<tr>
<td>Family B</td>
<td>Year 2</td>
<td>80,000</td>
<td>5,720</td>
<td>7%</td>
<td>74,280</td>
</tr>
</tbody>
</table>

14 The table assumes that each family claims the standard deduction, personal and dependent exemptions, and child tax credit, but no other tax benefits.
At the same time, though, Family A owes about $1,500 more in taxes over the two years than Family B. Its average tax rate over the two year period is 8%, while Family B’s is 7%. This “fluctuation penalty” arises because we tax annual income, not average income. As a result, in its good year Family A is pushed into higher tax brackets that would never apply if, like Family B, it earned the same amount of income more evenly.

The penalties that the tax system imposes on families with fluctuating incomes can be substantial. They are also more pronounced for middle- and low-income households. Figure 3 provides rough estimates of the average increase in households’ tax rates under 2001 (post-EGTRRA) law as a result of paying tax on their annual income instead of on their average income over the 10 to 25 years for which I had data on individual households. It shows that fluctuation penalties are much larger for families in the bottom quarter of the income distribution. This pattern is a product of two factors: lower-income families experience wider income swings as a proportion of their income and marginal tax rates rise more rapidly at the lower end of the income distribution, especially because of the earned income tax credit (EITC).

Figure 3: Percentage Point Increase in Average Tax Rate Due to Not Averaging Income over 10 to 25 Years

At all income levels, fluctuation penalties are also much larger for the roughly 10% of families that experience the widest income fluctuations. As illustrated in Figure 4, depending on their income level, the average tax rate on these households is between about two and twelve percentage points higher as a result of not being able to average their income over the period. Moreover, in the individual years when these households experience the largest income shocks, the increase in their average tax rate is much

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15 See also Jeffrey Liebman, Should Taxes Be Based on Lifetime Income: Vickrey Taxation Revised fig.7 (July, 2002).
greater. These estimates are also based on data on the earnings patterns of individual households from 1968 to 1992. To the extent that household income volatility has increased, the percentage of families facing these large fluctuation penalties has likely grown.

Figure 4: Percentage Point Increase in Average Tax Rate Due to Not Averaging Income over 10 to 25 Years—By Size of Fluctuation Penalty

If anything, the hardships created by income volatility suggest that we should impose smaller, not larger tax burdens on households with wide income fluctuations. Instead we are currently doing just the opposite. Direct spending programs like unemployment insurance, welfare, and food stamps may ameliorate these tax penalties imposed on income fluctuations to some degree, but it is unlikely that they offset them completely. All three programs are time limited. Food stamps and welfare are restricted to very low-income households and only between 20% and 60% of households eligible for these benefits actually claim them.16 Meanwhile, unemployment insurance covers an increasingly small share of workers, and only provides benefits to workers who are unemployed, not to those who experience earnings declines as a result of underemployment or reemployment at a lower wage.

Thus, absent large new transfer programs, the onus is on the tax system to soften downward income shocks more and impose more equal burdens on households with volatile incomes. Essentially the tax system needs to simultaneously become more part of the solution, and less part of the problem.

III. Reforms Worth Consideration

Any tax reform to address household income volatility should further these twin objectives of concentrating tax payments in higher-income years and reducing tax penalties on income fluctuations. Fluctuation penalties can be seen as premium payments for the income insurance that the income tax effectively provides by smoothing after-tax income. Meeting these twin objectives will result in greater income insurance benefits and smaller premium payments at the same time.

The result will be a fairer and more efficient tax system. Reducing fluctuation penalties will mean that taxpayers with the same income over time owe more equal amounts of tax. It will also reduce the disincentives for risk-taking that these penalties create. Heightening the income smoothing effects of the tax system can further enhance efficiency by addressing the failure of private markets to offer income insurance. If a tax reform can further these objectives while minimizing administrative and compliance costs and strengthening the fairness and efficiency of the tax system in other ways, all the better.

Targeted Averaging

One promising approach for ameliorating the hardships associated with income volatility is to implement a limited form of income averaging, which I refer to as “targeted averaging.” This approach would have two components.

First, if a family has less income in a given year than the standard deduction and personal and dependent exemptions to which they are entitled, the family could elect to carry these excess personal deductions back to the prior year. What this means in practice is that they could recalculate their tax liability for the previous year as if they used these excess personal deductions in that prior year. The family would then receive as a refund the difference between the amount of taxes they actually paid in the previous year, and the smaller amount due after the recalculation.

Second, under targeted averaging, families could elect to average their income over two years for purposes of calculating the EITC. The EITC effectively provides an earnings subsidy of up to about $4,500 for a low-income households with two or more children and with income under $38,000. In doing so, it offsets work disincentives for such families that are created by transfer programs and the payroll tax. In practice, it has successfully induced more work, especially among single mothers. However, families with income in the range of the EITC frequently face the largest fluctuation penalties. In

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17 The maximum credit is about $2,700 for households with one child and about $400 for households with no children.
part this occurs because the EITC creates rapidly rising marginal tax rates.\textsuperscript{19} It also occurs because, on average, the incomes of lower-income families are the most volatile.

Targeted averaging would eliminate a significant portion of the penalties that the tax system imposes on households with unstable incomes. Figure 5 shows the average tax rate increase for households over 10 to 25 years as a result of families not being able to claim the benefits of the targeted averaging proposed here. When compared to Figure 4, it shows that targeted averaging would eliminate roughly a quarter of fluctuation penalties and, like more comprehensive averaging, would provide the greatest benefits to low- and middle-income households.

**Figure 5: Percentage Point Increase in Average Tax Rate Due to Inability to Claim Targeted Averaging—By Size of Fluctuation Penalty**

In addition, targeted averaging would enhance the income smoothing benefits of the tax system. Taxpayers would only benefit from carrying back personal deductions in years when their income had declined to the point that they could not use personal deductions. They wouldn’t benefit in years when their income had risen.\textsuperscript{20} Similarly, two-year EITC averaging would provide benefits more frequently to households that had experienced a downward income shock than to those whose economic circumstances had improved. All households with income up to $76,000 could potentially benefit from EITC averaging. A small share of households—those earning less than the phase-out amount of about $16,000 in the first year—would receive benefits if their income rose as a result of working more or at a higher wage. But all others would only benefit from the reform if and when their household income had fallen.

\textsuperscript{19} For families with two or more children, when it is phasing in, the implicit marginal tax rate is up to \textemdash40\%, and as it phases out at higher incomes, it imposes an implicit marginal tax rate of up to 21\%.

\textsuperscript{20} Conversely, allowing taxpayers to carry forward personal deductions would provide benefits only in years when their income had increased.
More comprehensive averaging of all income or over a longer time frame could reduce fluctuation penalties and heighten income smoothing still further.\textsuperscript{21} However, it could significantly increase administrative and compliance costs as taxpayers and the government would need to recalculate innumerable items on multiple prior returns. Moreover, the theoretical and practical benefits of averaging decline as the averaging period is extended. Most income volatility appears to be short-lived, with a large share disappearing after one year.\textsuperscript{22}

Targeted averaging is a modest step that simply narrows the tax differential between families with stable and unstable incomes. In a relatively administrable way, it would simultaneously put families with volatile incomes on more equal footing relative to those with smoother incomes, and provide a cushion in the years when they need it most.

**Converting Household Tax Incentives into Uniform Refundable Tax Credits**

A second complementary but more far-reaching approach to address household income volatility would be to transform individual tax incentives into uniform refundable tax credits. Targeted averaging focuses on the income side of the tax ledger, but the tax treatment of household expenses and investments is almost equally important.

Currently the individual income tax provides about $500 billion per year in tax incentives intended to encourage people to spend or invest their money in ways that are considered socially-valuable, such as on homeownership, retirement savings, charitable contributions, health insurance and education.\textsuperscript{23} I’d like to pause and emphasize, as you are well aware, that $500 billion is a big number. It is close to 4% of GDP.\textsuperscript{24} It is about

\begin{footnotesize}
\begin{itemize}
\item \textsuperscript{21} Another way to heighten income smoothing through the tax system would be to allow taxpayers to defer taxes owed with interest so that theoretically they could concentrate all of their tax payments in their more prosperous years. Given the current high levels of household debt and rising personal bankruptcy rates, this approach could create more problems than it solves. See Daniel Shaviro, *Beyond the Pro-Consumption Tax Consensus* 14 (January, 2007).
\item \textsuperscript{22} See, for example, Jeffrey Liebman, *Should Taxes Be Based on Lifetime Income: Vickrey Taxation Revised* fig.7 (July, 2002).
\item \textsuperscript{23} Staff of the Joint Committee on Taxation, 109th Congress, *Estimates of Federal Tax Expenditures for Fiscal Years 2006-2010* (Comm. Print 2006). The estimated cost in 2006 was $510 billion for tax expenditures for homeownership, charitable contributions, health insurance, education, retirement savings, life insurance, annuities, state and local bonds, and work incentives (the EITC and child tax credit). This figure may be substantially higher or lower due to interaction effects. In addition, some may disagree with the characterization of these tax benefits as designed to promote certain behavior, rather than, for example, being designed to measure ability to pay more accurately.
\end{itemize}
\end{footnotesize}
half of the revenue raised by the individual income tax, and equals our total outlays for the Department of Defense last year.

Figure 6: Form of Tax Incentives

As illustrated in Figure 6, about 80% of these tax incentives are currently structured as deductions, exclusions, exemptions, and non-refundable tax credits. Whenever a tax incentive is structured in these ways it is “upside-down.” Deductions, exclusions, or exemptions (all of which I will refer to as deductions for simplicity) are worth more to higher-income households because the value of these types of incentives is the amount deducted times the taxpayer’s marginal tax rate. Indeed, itemized deductions are typically worth nothing for middle- and lower-income taxpayers because about two-thirds of taxpayers do not itemize. Similarly, non-refundable credits are worth nothing to the roughly 40% of households with no income tax liability.

The “upside-down” incidence of these types of tax incentives can be seen in Figure 7, which summarizes estimates of the average value of the home mortgage interest deduction and tax incentives for retirement savings among claimants. Since higher-income households are more likely to claim these benefits, the actual distribution among the entire population is even more skewed that Figure 7 suggests.

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Fred Goldberg, Peter Orszag and I have argued that, purely on efficiency grounds, these tax incentives should generally be restructured into uniform refundable tax credits on a revenue-neutral basis, if they are to continue.\textsuperscript{30} For example, instead of providing a deduction for up to $10,000 spent on some good, we could match a percentage of spending on that good, up to $10,000. In the context of retirement savings, Bill Gale, Jonathan Gruber and Peter Orszag have estimated that the revenue-neutral match would be 28\%.\textsuperscript{31} At current levels, allowing refundability would be roughly akin to allowing averaging of expenses eligible for tax incentives because the vast majority of households with zero tax liability or negative tax liability in one year have positive tax liability over time.\textsuperscript{32}

In a nutshell, the efficiency argument for uniform refundable credits is that since tax incentives are intended to encourage certain expenditures and investments generating social benefits, the default policy should be that all taxpayers are eligible for the same


subsidy. We should only deviate from a uniform subsidy if there is evidence that certain groups of taxpayers are more responsive to the incentive, or that their expenditures and investments generate more social benefits. In my view, this conversion would not only improve economic efficiency, it would also be more equitable.

Most importantly for today’s topic, though, this transformation would have very positive effects on household income volatility. The estimates of fluctuation penalties that I have discussed are all based on the assumption that taxpayers don’t claim tax incentives. But tax incentives structured as deductions and non-refundable credits create fluctuation penalties as well, and often quite sizable ones.\(^{33}\) For instance, suppose that two families would both like to claim $30,000 in home mortgage interest deductions each year, and both earn the same income over time and are composed of a married couple with two children. Family A earns $150,000 in the first year and $90,000 in the second. Family B earns $120,000 in both years. Table 2 shows that these tax incentives will be worth almost $2,000 less for Family A whose income is unstable.

Table 2: Example of $30,000 Home Mortgage Interest Deduction Penalizing and Exacerbating Income Fluctuation (2006 Law)\(^{34}\)

<table>
<thead>
<tr>
<th>Family A</th>
<th>Income Per Year</th>
<th>Value of Deduction Per Year</th>
<th>Over 2 Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 1</td>
<td>150,000</td>
<td>9,084</td>
<td>14,104</td>
</tr>
<tr>
<td>Year 2</td>
<td>90,000</td>
<td>5,020</td>
<td></td>
</tr>
<tr>
<td>Family B</td>
<td>Year 1</td>
<td>120,000</td>
<td>8,000</td>
</tr>
<tr>
<td>Year 2</td>
<td>120,000</td>
<td>8,000</td>
<td></td>
</tr>
</tbody>
</table>

What’s worse, structuring tax incentives as deductions also results in taxpayers reaping the largest tax benefits in their most prosperous years, not the years in which they are most financially stressed. These types of tax incentives sharpen rather than smooth income fluctuations.\(^{35}\) The value of Family A’s deduction falls by about $3,000 in the year when its income plummets. Thus, in the context of tax incentives, our tax system doesn’t help and hurt families with volatile incomes. It only hurts.

Transforming tax incentives into uniform refundable credits would reverse both of these adverse effects on families with unstable incomes. The value of tax incentives would then not vary depending on degree of income volatility that a family experiences. In addition, relative to current law, the benefits of tax incentives would be much more concentrated in a household’s relatively lean years. Structuring tax incentives as uniform refundable credits might increase administrative and compliance costs slightly as more taxpayers claim them. However, this seems to be a desirable result if it means that more households spend and invest their money in the ways that tax incentives seek to

\(^{33}\) This conclusion only holds if the marginal income tax rate schedule is concave, meaning that marginal tax rates rise more quickly at the low end of the income distribution and more slowly at the high end. While there are some exceptions, this assumption generally holds.

\(^{34}\) The table assumes that each family claims the personal and dependent exemptions and the child tax credit, and has other itemized deductions equal to the standard deduction.

\(^{35}\) For an example, see Appendix 2 in Lily L. Batchelder, Fred T. Goldberg, Jr., and Peter R. Orszag, Efficiency and Tax Incentives: The Case for Refundable Tax Credits, 59 Stanford Law Review 23 (2006).
encourage. Uniform tax incentives might also spur more families to respond positively to the incentive because the value of the incentive would be clearer.

This second proposal is clearly an extremely ambitious one. But it is worth serious consideration. The current structure for the lion’s share of our tax incentives is fundamentally flawed. Deductions, exclusions, exemptions and non-refundable credits all penalize families with fluctuating incomes at their most vulnerable points. They are inefficient and unfair. It is rare that tax reform can improve the tax code in so many ways, and with so few substantive drawbacks.

IV. Conclusion

The tax system can play an important role in addressing the serious hardships that sudden income declines create for American families. However, to date, the tax system has been both a help and a hindrance for families experiencing wide income swings. It has taxed families more if they experience income fluctuations, but it has imposed these taxes disproportionately in the years in which they are better able to pay.

Fortunately, two concrete reforms—targeted income averaging and transforming tax incentives into uniform refundable tax credits—do not exhibit this trade-off. Both would increase the tendency of the tax system to smooth income fluctuations. At the same time, they would reduce the extra taxes that families with unstable incomes currently pay. Together, they could be implemented on a revenue-neutral basis. Moreover, they would improve the equity and efficiency of the tax system in other ways.

As income fluctuations appear to be rising over time, the economic lives of American families, and especially those that are middle- or low-income, are increasingly unstable and insecure. The time is ripe to make the tax system more of a cushion and less of a disproportionate burden on these families that are already vulnerable.