Thoughts on Tax Reform

Thank you Mr. Chairman. It is my pleasure to be here today as your invited guest to discuss the tax reform options you are now considering. I want to stress that I am appearing only as an individual who has worked extensively on these issues, and my remarks today do not represent the views of the Federal Reserve, where I now serve as a Member of the Board of Governors. However, the focus of my remarks is going to involve monetary policy issues and how they interact with some of the issues that you are now considering. In a sense I am going to make your lives more difficult, because I plan to raise a question which is going to complicate your discussion rather than provide any answers.

First, let me say that all of the types of taxes you have under consideration will, relative to our current tax system, promote capital formation, entrepreneurship, and economic growth. I think that you should be applauded for your efforts. My comments today will abstract from those very positive issues. Any cautions I have about particular tax changes should in no way be construed as diminishing the important positive incentive gains which those tax changes will produce. Indeed, I believe it likely that any of the tax regimes you have under consideration will have a positive impact on economic performance.
That said, let me turn your attention to an important short run transitional issue related to the tax system that you choose. Some of the plans which you are now considering contemplate a shift away from income-based taxation to the taxation of sales -- either through a retail sales tax or a Value Added Tax. There are some clear advantages to such a shift, particularly with regard to the incentives to save and invest. However, such a shift might involve a complication for monetary policy of which you should be aware. Understanding this issue is complicated, so please bear with me as I take you through the problems.

Let's begin, as economists like to do, by starting with a very simple world. We've got a one person company who gets $100 per week for selling 100 goods at $1 each. He is currently taxed on his income at a flat rate of 20 percent. So, $20 goes to the government which buys 20 of the goods sold by the company. The other $80 goes home to his wife who buys the other 80 goods at $1 each.

We now consider switching to a tax based at the point of sale. The $80 of personal consumption spending is the base. To get $20 of revenue we impose a 25 percent tax on all consumption purchases. The businessman now has two choices. The first and easiest is to just "eat" the tax whenever the consumer comes in the door. That is, keep the price to the consumer at $1, set aside the $20 for tax payments, still take $80 home to his wife, and just send the government 25 cents every time she comes in to buy a good. So far so good. In this classical world it doesn't matter whether you tax income or sales.

Now, just to continue this story, let's say the man's wife happens to ask one day whatever happened to the income tax payments they used to make. Aren't you still making $100
at the store? Yes. What happened to that $20 you used to pay the government? You're leaving it at the store? We could use that money here at home.

The businessman now brings home $100, and covers the tax by charging $1.25 at the store to consumers. Why is the price higher asks the consumer? To cover that darn sales tax that the government just put in, he replies. With $100, the consumer can only buy 80 goods at $1.25 each and so everything stays the same in the real economy.

Now comes the complication. I must introduce money into the story. More precisely, I must introduce money not just as a medium of exchange, which was implicit in the story above, but as a store of wealth and as a unit of account. Let me complicate this story by adding another character, who I'll call Grandma. The businessman's parents used to own the business.

The businessman bought them out by agreeing to pay $40 a year to them out of the after tax income of the store. Grandpa died, and Grandma now gets the $40 a year.

Back in the real economy, a switch to a sales tax now does not leave things unchanged. If the businessman decides to "eat the tax", both his wife and Grandma now each can buy 40 goods. But, suppose he brings home the whole $100 and decides to raise the tax by raising prices. Grandma now gets her $40 payment, the man's wife keeps the other $60. Grandma now gets to buy 32 goods, the wife 48. So, we have lesson number one. Switching from an income tax to a sales tax changes the value of nominal contracts. Debtors win, Creditors lose. Within types of capital income, there is a transfer from debt to equity -- in this case from Grandma to the wife. (I might leave our theoretical world for a moment to note that Uncle Sam is a net debtor and the private economy in Grandma's position.)
Alternatively, and as a segue into the implications for monetary policy, let us imagine that the purchase of the firm was accomplished by the transfer of "money", which is a stock of wealth. In this case, all holders of "money" lose out if the price is increased rather than eaten by the businessman. So lesson number two of this story is that holders of money, along with holders of nominal contracts such as bonds, are losers from a change in tax regime which is accompanied by an increase in retail prices.

Now, we know that people are smart, and not just players in a story. If we pass a law today that says there will be a 25 percent VAT or Sales Tax effective January 1, holders of money know that they have about four months before prices go up. This is the time to dump your dollars and buy goods. This is known as an increase in the velocity of money. The level of nominal spending, or nominal GDP will rise in the run-up to the imposition of the tax. Indeed, as you get closer to Tax Switch Day, the rate of return on dumping dollars and buying goods increases dramatically. Some of the holders of goods, seeing the increase in demand, will increase their prices in advance of the January 1 deadline. We can't tell how much of the increase in nominal GDP will be the result of higher prices and how much will be the result of higher real output. But we can tell, unambiguously, that nominal GDP will rise.

Now comes January 2. Everyone comes back to work and the economy begins again with the 25 percent sales tax on all goods. For simplicity sake, let's say that there was no change in prices toward the end of the year. So all we have is a one time 25 percent rise in prices. In our new world the flow of incomes is temporarily unchanged, but the stock of wealth, some of which was constituted in terms of money, was reduced. If we assume that consumers are partly spending out of income (like the wife) and partly spending out of wealth (like
Grandma), then consumers on net are poorer in real terms. They no longer choose to buy as many goods.

With fewer purchases taking place, our businessman may decide to start cutting prices to push demand back up. Indeed, in some models of economic behavior this price cutting would continue until the retail price fell back down to $1 per unit. At this point, the real wealth of the consumers in the economy would be back to its old level.

Another way of telling the story is to go back to the concept of velocity of money. Nominal GDP on January 2 is higher. In our old economy, for example, consumers are now buying 80 units at $1.25 and the government 20 units at $1. The government does not tax itself in this example. So, nominal GDP is now 120. If the same stock of money exists, there is increased demand for each dollar. The economy's players will need more money just to finance transactions. So, interest rates will have to rise in order to attract people who hold money as a store of wealth to let it be used to carry on transactions. As interest rates rise, the economy slows, pressure rises for price reductions to move inventory, and eventually retail prices fall to their old level.

Therefore, a third economic lesson we can take away from this story, one which comports with most economic thinking on this subject, is that IN THE LONG RUN, nominal GDP will not increase if the money supply is not also increased. In effect, if the supply of money is not increased, normal economic forces will, over time, produce exactly the same result as the businessman in our story produced when first confronted with a switch from income taxes to sales taxes. Thus, in the long run, if the money supply is not increased, money holds its purchasing power in the face of the kind of switch of tax regime from income-based to sales-
based described here. This means that ultimately, unless the money supply is increased, holders of dollars and other nominal obligations such as bonds will not be made worse off.

In this discussion I have emphasized two very important caveats: (1) in the long run and (2) if the money supply is not increased. But, the long run might involve a protracted period of instability. In the simple story told above, I noted that there would likely be a boom, during which people tried to dump their soon to be devalued dollars, followed by a bust during which demand was insufficient to maintain the existing level of nominal GDP, inducing a recession and gradually a deflation. Again, I do not know how long or how pronounced this process would be. In an ideal world of perfect foresight, there might be very little economic disruption.

I think that in the real world, the potential disruption is likely to be significant. Let me begin this line of reasoning by thinking about a price with which we are all concerned: our salary or wage rate. We all know what our salary is when we take a job and often bargain about it. But, the wage rate we are talking about is almost always the nominal pre-tax wage, not our take home pay. We just don't think in those terms. Thus, think about what would have to happen on our hypothetical Tax Switch day. Assuming we all had the same rate, as in our story above, workers and management would have to have seen what our businessman saw. For a given level of product prices and profits, workers would have to agree to a cut in their nominal pre-tax wage down to its post-tax level. Furthermore, they would have to assume that all of the other workers at all of the other companies would do exactly the same, so that no prices would rise. I find that implausible to say the least. When one considers that we are all in different tax situations, the thought that labor contracts could instantaneously be changed to keep real after-tax compensation constant seems impossible.
If pre-tax wages don’t fall, then the costs of production necessarily rise with the tax switch. This means that the transition must either be financed out of sharp reductions in profits or by passing along the cost of the sales tax in the price of the good. As a practical matter I have often presented this situation to corporate CEOs who support a VAT or sales tax approach and asked whether their workers would take a cut in real pay. Their response invariably is that it would occur over time. In other words, they would let inflation and or uncompensated productivity gains erode the value of the nominal pre-tax wage.

I think they are probably right. Assuming they are, consider what would happen if the money supply was unchanged with the tax regime. Given the analysis above, we would probably witness a protracted transition to the tax regime as we waited for productivity increases to cover the added cost structure. The consequent decline in profits during the interim could depress investment and contribute to the nominal price (and wage) reducing recession that the classical or monetarist stories above predict. To some extent this could be mitigated by a phase in of the new tax regime to allow enough time for productivity gains and any existing inflation to permit real adjustments in wages without sharp nominal changes.

This leads me to my other caveat: if the money supply is unchanged. Frankly, given the real world, I think that it would be highly likely that the political decision-making process would not adopt such a scenario. Instead, the more likely scenario would involve a monetary increase to cover the disruptions entailed in the change in tax regime from an income-based to a sales-based approach. Monetization to finance the Tax Switch therefore will lead to a permanently higher price level. This would entail the adverse effects on holders of nominal assets that I discussed above, and a transfer of real wealth to debtors, including the federal government.
I do not wish to take a position as to whether such a monetary policy is advisable but that its political likelihood is high. I would worry somewhat that our elected representatives might try to micromanage the transition process and create needless regulation. Indeed, leaving the monetary authorities with as much flexibility as possible during any transition is probably wise. Whether or not a particular monetary policy response is legislated, a switch to a sales-based tax regime should also require our elected representatives to decide such issues as the treatment of COLAs which are linked to the CPI. Do we want to offer windfall insurance to those who happen to have contracted for automatic COLAs, thus exempting them from bearing any of the increase in tax? Or, do we want to change our price measures to reflect a net-of-tax basis?

I want to stress that these problems are probably attendant only to a switch in tax regime from one based on income to one based on sales. Clearly, relative price changes will also occur after the adoption of a flat tax based on income. But such changes are of a magnitude that they can be managed within the micro-economic decision making sphere.

In closing, I want to reiterate that the problems I have discussed are of a transitional nature. The long run benefits attendant to a switch in tax regime are clear. But, I do believe that careful thought is needed regarding the appropriate monetary response to a switch from an income-based to a sales-based system.