"Federal Reserve Board Policy and the Price of Oil"

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Thank you, Chairman Jordan, Ranking Member Kucinich, and other members of the Subcommittee, for the opportunity to testify before you on the effect of the Federal Reserve's quantitative easing policy on the price of gasoline. I will make three main points in my testimony:

- The main channel through which the quantitative easing policy could affect the price of gas is by lowering the value of the dollar. The decline in the dollar has been modest since this policy began, and most of it just reversed the run up since bursting of the bubble. The decline in the value of the dollar can at most just explain a small share of the increase in the price of gas.
- 2) The dollar is over-valued at present. A decline in the value of the dollar is necessary to bring down our trade deficit. Such a decline is beneficial in the short-run because it means more net exports and therefore more jobs. It is also beneficial in the long-run since it will mean less borrowing from abroad.
- 3) The main factors behind the increase in the price of oil have nothing to do with Fed policy. Rapidly growing developing countries like China are causing the growth in demand to exceed the growth in supply. Instability in the Middle East has also created uncertainty in the market, thereby pushing prices upward. Finally, there is undoubtedly considerable speculation in this market that has likely exaggerated the upward movement in prices.

Quantitative Easing and the Value of the Dollar

The Federal Reserve first adopted an explicit policy of quantitative easing in November of 2008, when it committed itself to buying \$600 billion in mortgage backed securities. It subsequently expanded this target to over \$1 trillion in purchases in March of 2009.

The reason the Fed adopted this path was that the economy was shedding jobs at the rate of several hundred thousand a month. The federal funds rate had already fallen to one percent, and the Fed was just

about to lower it all the way to zero the next month. Given the weakness of the economy, it would have liked to push real interest rates down further, but it cannot make the nominal interest rate negative.¹

This background is important to realize the policy of quantitative easing has been in place for two and a half years. It did not begin with the Fed's announcement of its second round of quantitative easing in November of 2010. It began two years earlier in the last months of the Bush administration.

There are several channels through which quantitative easing could boost the economy. The first is that it would reduce long-term interest rates. This would make it easier for people to buy homes, having some positive impact on sales and prices. More importantly, lower mortgage rates would allow many homeowners to refinance at lower rates, reducing mortgage payments and thereby freeing up money for other consumption. Lower interest rates may also lead to some increase in investment, as it becomes cheaper for firms to borrow. And, lower interest rates could make dollar-denominated assets less attractive to investors, thereby pushing down the value of the dollar. A lower-valued dollar makes U.S.-made goods more competitive in world markets, increasing U.S. exports and reducing imports.

The actual impact of quantitative easing in these areas is hotly debated among economists in large part because it is not easy to determine what would have happened if the Fed had not gone this route. However, it is easy to show that its impact on the value of the dollar has been relatively limited, and therefore its impact on the price of gas paid by people in the United States must be limited. **Figure 1** shows the downward path of the dollar over the last decade.

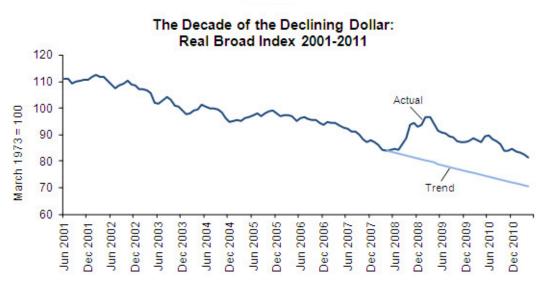


FIGURE 1

Source: Federal Reserve Board.

¹ The real interest rate is equal to the nominal interest rate minus the inflation rate. In principle the Fed can lower the real interest by raising the inflation rate, but this could not be easily accomplished in a situation in which many prices were falling and the rate of inflation was declining.

As can be seen, the dollar has fallen from the levels reached in late 2008 and 2009, but it is just now returning to its pre-recession levels. The levels reached in that period were driven by a flight to safety. In the middle of the financial crisis, Treasury bonds were viewed as one of the few safe assets, leading investors from around the world to eagerly buy them up at extraordinarily high prices. This had the effect of raising the value of the dollar against the currencies of our trading partners.

Now that the panic in financial markets is largely over, we are seeing the dollar return to a more normal level. In fact, the dollar is still far above the level it would have been at if the rate of decline over the years 2002 to 2008 had continued. The real value of the dollar at the end of April 2011 was still 15.6 percent higher than the level it would have been at if the decline that begin in March of 2002 had not been disrupted by the world financial crisis. In other words, the value of oil measured in dollars would be 15.6 percent higher than it is today if the dollar had continued to decline at the same rate as it did in the period from the beginning of 2002 to the spring of 2008.

It is not possible to assess the impact of the quantitative easing policy on the price of oil without a clear counterfactual for the value of the dollar. The fact that the dollar is just now hitting its pre-recession level suggests that the Fed's quantitative easing policy probably did not have too much impact in driving down the value of the dollar, except insofar as it helped stabilize worldwide financial markets, thereby making investors more comfortable holding assets other than Treasury bonds.

The Benefits of a Lower Dollar

The recent trend in the dollar suggests that the Fed's quantitative easing policy did not have much impact in pushing the dollar lower. However, a lower dollar would be desirable for many reasons, and is an important part of the necessary rebalancing whereby the U.S. economy can have healthy growth with low budget deficits.

As noted earlier, a lower valued dollar will increase demand in the economy by making U.S. exports cheaper for people living in other countries and making imports more expensive for people in the United States. This will increase the economy's net exports, which means more jobs and more growth. Given that Congress seems unwilling to support more stimulus, lowering the dollar to improve the trade balance is probably the economy's best hope for more rapid growth at the moment.

A lower dollar does have the negative effect that many have noted. Not only oil, but all imported goods will cost more to consumers. This translates into an increase in the cost of living. However, this increase in the cost of living is likely to be limited. Furthermore, there is no real way around it in the long-run.

To take an extreme case, suppose that the dollar fell by 20 percent against other currencies. Typically importers absorb some of the change in price in the form of lower profit margins. Based on research on pass-through ratios, it is likely that roughly 50 percent of this drop, or a 10 percent increase in import prices, would be passed along to U.S. consumers. With imports comprising 16 percent of GDP, this would translate into an increase in the cost of living of roughly 1.6 percentage points (16 percent multiplied by 10 percent).

This is hardly trivial, but neither is it devastating. In an economy where productivity growth averages close to 2.5 percent annually, it would have roughly the same effect in lowering living standards as 8 months of productivity growth would in raising living standards. If this rise in import prices was associated with a sharp move toward balanced trade, and the millions of jobs that this would imply, most people would likely view this rise in import prices as being of little consequence.

It is also important to understand that a lower valued dollar is essential to reducing the trade deficit and raising national savings. This first point should be evident. The main factor determining our consumption of imported as opposed to domestically-produced goods is their relative price. An over-valued dollar makes imports cheaper. It makes our exports more expensive for people in other countries.

Even our best efforts at removing foreign trade barriers or promoting domestic industry will not have anywhere near the effect in reducing imports and increasing exports as even modest declines in the value of the dollar. Policymakers are just fooling themselves if they imagine otherwise.

Furthermore, a reduction in the trade deficit is a necessary part of increasing national saving. By definition, total national saving is equal to the trade surplus. When we have a trade deficit, that means that the country on the whole is on net a borrower.² This just logically follows from the notion that if we are buying more from abroad than we are selling, then we must borrow to cover the difference. This means that either the public sector must be borrowing, meaning that we have government budget deficits, or the private sector must be borrowing, which would correspond to a situation where we had very low household savings.

In the last decade we have seen both scenarios. We currently have very large government budget deficits. In this case, the government is doing the borrowing that corresponds to our trade deficit. However, before the collapse of the housing bubble, when budget deficits were relatively low, it was the private sector that was doing most of the borrowing. This was due to the consumption boom that resulted from the \$8 trillion in housing bubble-generated wealth. Consumers spent based on this illusory bubble wealth, sending the household saving rate to zero. There was a similar situation at the end of the 1990s, when the wealth created by the stock bubble led to another consumption boom that caused the saving rate to fall to what was at the time a record low.

There is no way to escape the simple accounting identity that national savings is equal to the trade deficit. This means that if we want the budget deficit to be brought down, and we don't want to see private savings collapse, as they did during the years of the stock market bubble and the housing bubble, then we must want to see the trade deficit fall. This in turn means that we must want to see the dollar decline since there is no other plausible mechanism for bringing about large reductions in the trade deficits.

² The accounting identity is $X-M = G_s + P_s$, where X is exports, M is imports, G_s is the government budget surplus and P_s is the excess of private savings (household and corporate) over private investment. If X-M is negative, meaning that we have a trade deficit, then by definition we must either be running a budget deficit or have private sector savings that are less than investment, or both.

The Causes of the Rise in the Price of Oil

The decline in the value of the dollar over the last two years was a relatively small factor in the rise of the price of oil for people in the United States. Even if we made a comparison to the value of the dollar at the peak of the crisis, the decline would only explain an increase in the price of oil of less than 20 percent. However, as noted above, this comparison would be hugely misleading since it refers to a temporary dollar peak that was driven by the crisis-driven flight to safety. Compared to pre-crisis levels, the recent fall in the dollar can essentially explain none of the increase in the price of oil.

There are three alternative factors that can explain the rise in the price of oil over the last two years:

- 1) the growth of the world economy, especially fast-growing developing countries;
- 2) instability in the Middle East; and
- 3) speculation in the oil market.

The first explanation should be straightforward; the developing world has been growing very rapidly over the last year and a half, and the demand for oil grows more or less in step with their economy. China, which is now the second largest user of oil after the United States, grew at 10.3 percent rate last year and is projected by the IMF to grow at a 9.6 percent rate this year. India grew by 10.4 percent in 2010 and is projected to grow by 8.2 percent in 2011. For Brazil, the numbers are 7.5 percent in 2010 and 4.5 percent in 2011. Many smaller developing countries have also experienced rapid growth over this period.

This means that the world demand for oil is growing rapidly, while world supply is stagnating. Many of the major oil producers are seeing their production dwindle, as most of their reserves have already been tapped, and the new sources of supply are not proving sufficient to add much to the output. The fundamentals of supply and demand suggest that oil prices are likely to continue to rise in the years ahead as demand growth will outstrip supply growth.

The second factor pushing up the price of oil is the uncertainty about supply resulting from the unrest in the Middle East. The biggest spike in the price of oil occurred in the two weeks during which protests turned into civil war in Libya, one of the world's leading oil producers. In the two weeks from February 18th to March 4th, the price of oil rose by more than 20 percent. There were actual disruptions to oil supplies during this period, but more importantly there is a real concern that continuing unrest could take much or all of Libya's daily production of 1.6 million barrels (about 2 percent of world production) off-line. With violence being used to suppress protests in Algeria and in Bahrain, which sits on Saudi Arabia's border (and is dependent on Saudi military assistance) there is an understandable fear of further disruptions to production in the future. This fear is likely to push up the price of oil as actors in the market will buy extra oil now in order to protect against the possibility it will be considerably more expensive at some point in the future.

This raises the last cause of the run-up in the price of oil: speculation. Inevitably, when there are sharp movements in price in either direction, there will be speculators entering the market who hope to profit from these trends. Speculation also certainly was an important factor in the run-up of the price of oil to \$150 a barrel in the summer of 2008. While the original increase in that year was driven by the fact that the growth of supply was outstripping the growth of demand, this increase was likely magnified by

speculators who anticipated further increases. The role of speculation can explain the speed with which prices fell later in the year as speculators were forced to unwind their positions.

Speculators are likely playing the same role today, amplifying price movements in both directions. The positive side of this story is that a price increase that is attributable solely to a speculative run-up will not be sustainable over the long-term. But the bad news is that for the period that prices are pushed higher by speculation, people will find it much harder to fill their gas tanks and heat their homes.

Conclusion: The Fed's Quantitative Easing Is Not the Cause of the High Oil Prices

As I have shown above, there really is not a plausible story that can tie the Fed's quantitative easing policy to the rise in the price of oil for people in the United States. While it may have had some impact in lowering the value of the dollar, this effect was likely very limited. The real value of the dollar is just now falling back to its pre-recession level. It is still more than 15 percent higher than it would have been if it had continued to decline at the same rate as over the years from 2002 to 2008. The real culprits behind the rise in the price of oil are rapid economic growth in the developing world, the uncertain political situation in the Middle East, and speculation in the oil market.