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## Money, Bank Capital and Zero Interest Rates

With Central Bank Rates Approaching Zero, Can Economic Policy Be Effective?

By Arthur Donner and Doug Peters

### Introduction

In the midst of the present worldwide recession there is a debate as to what policies governments should follow and which blend of policies would be the most effective in bringing economies out of recession. Do governments need to implement fiscal stimulus or monetary ease or both? A majority of economists favour both, but in a recent article the C. D. Howe Institute's Bill Robson argued that an easy monetary policy was sufficient. He said "...the economy's most pressing need is for central bank cash, not big deficits." And he went on further, "The frenzy of red ink south of the border and around the world is driven by panic not logic." And "Widespread government spending in January is not the answer."<sup>1</sup> The key question is whether or not monetary policy with a zero or close-to-zero interest rate can on its own accomplish a national or a world-wide economic recovery? There are difficult monetary, economic and financial problems inherent in these questions and this paper will examine these issues.

### Effective Fiscal Policy Or Are Zero Interest Rates Enough?

A much different view was recently expressed by the President of the Federal Reserve Bank of St. Louis who stated "...fiscal policy conceived of as a more direct intervention in the operation of private sector firms has emerged as a leading tool to combat ongoing financial

market turmoil. This is so, not just in the United States, but globally. The passage of the Emergency Economic Stabilization Act (EESA), with authorization for the Treasury to spend up to \$700 billion to help return financial markets to more normal operation has put focus going forward squarely on fiscal responses. This created in a matter of weeks a very different policy environment from the one that had existed in the United States for the past 25 years."<sup>2</sup> He also felt that with an almost zero central bank interest rate that monetary policy could no longer be "defined as nominal interest rate targeting."<sup>3</sup> Whether the Federal Open Market Committee, he states "decides to stay on hold at this point or eases further and then stays on hold at some lower level, even zero, may not be the critical question. The fact is, monetary policy defined as movements in short-term nominal interest rates is coming to an end, at least for now."<sup>4</sup> This emphasizes the change in U.S. policy to a broad range of other policy weapons, such as the "quantitative easing" policies to be discussed later in this paper.

One clear voice in favour of monetary policy and a zero interest rate is Stephen Grenville, who stated, "The idea that a zero interest policy has no impact is absurd. A zero rate isn't like putting the motor into neutral: it's more like having the accelerator flat to the floor... This is "cheap money" and, considered in isolation, should provide a strong incentive to borrow and to spend."<sup>5</sup> But even if one acknowledges that a central bank zero interest rate will have positive affects, the question

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remains as to whether, in present circumstances, it will be effective and effective enough to bring the world economies out of recession. There remains, therefore, the question as to the need for both a zero interest rate policy as well as the role for an accommodating or strongly expansionary and invasive fiscal policy.

### ***Background to the World Recession***

In the year 2008 the world began to feel the crippling effects of the financial crisis that began in the United States in the summer of 2007. In the face of this crisis there were unusually aggressive actions by governments and central banks to support financial markets, financial institutions and their economies. But despite these efforts the outlook for the global economic growth is the worst since the 1930s.

The economy of the United States is at the center of this global financial disaster. The American housing market meltdown, the credit crunch, the collapse of the “shadow banking sector,” as reflected in derivatives trading, hedge funds and equity markets, have already triggered a year long American recession and a loss of 2.6 million payroll jobs in 2008.

Central banks around the world, including the U.S. Federal Reserve, the Bank of Canada, the European Central Bank (ECB) and the Bank of England have sharply reduced interest rates to support their economies, as most are clearly in recession.

In the United States, its central bank the Federal Reserve cut its target for overnight interest rates to a range of 0% to 0.25% on December 15<sup>th</sup>. Japan’s central bank interest rate is also effectively zero. The European Central Bank rate is at 2% and the Bank of England has a 1.5% policy rate. The Bank of Canada lowered its overnight policy rate to 1% on January 20<sup>th</sup>. At 1%, Canada’s central bank rate is only slightly higher than the effective zero rates in the U.S. and Japan. But even with these low or zero central bank interest rates virtually everywhere, private interest rates are still quite high and credit availability is still too tight.

There is clear evidence that very low interest rates are not working to expand economic activity. In the current recessionary environment, banks are obviously worried about lending to each other, and of course, are worried about lending to consumers and firms. Bankers also worry that recessions are a bad time to

be pushing loans. Interest rates that count, such as, inter-bank lending rates, mortgage lending rates, bank commercial lending rates, are all unusually high especially considering that inflation is also very close to zero. Even though prime bank lending rates are low, the conditions for loans at those rates have increased. Thus, loan rates look low but banks are lending at much higher rates above their nominal prime rates.

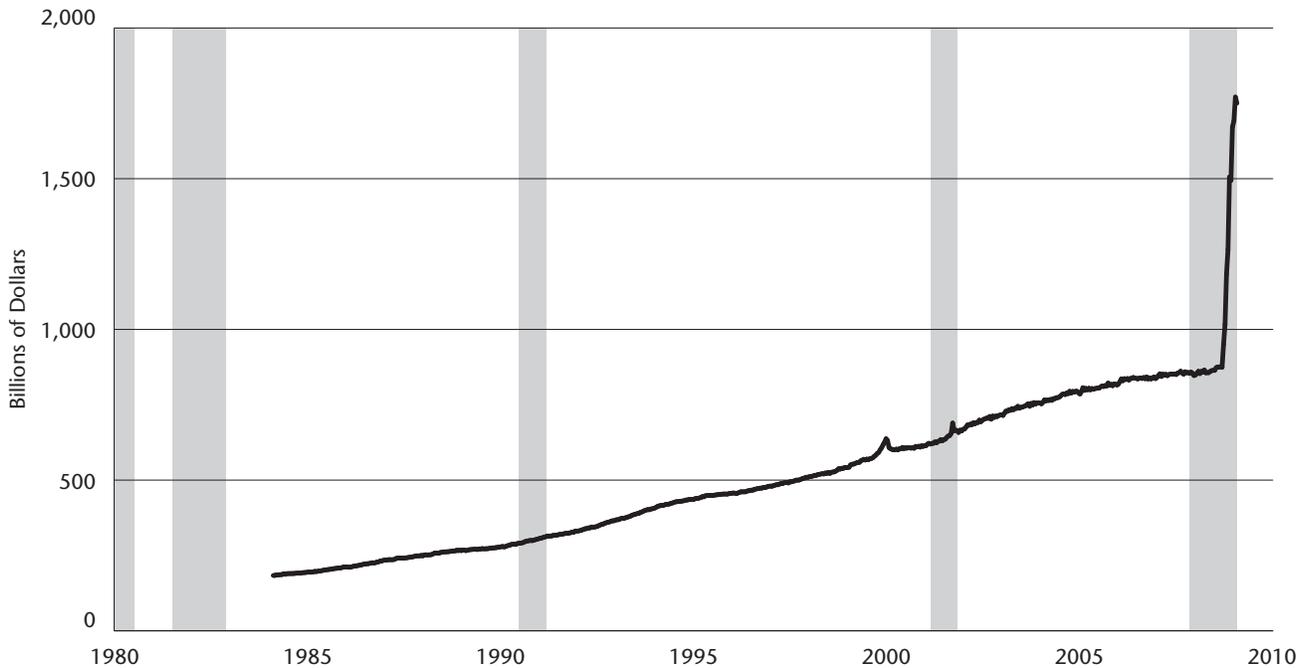
Can monetary policy still work when central bank interest rates are zero or so close to zero that they simply cannot fall any further? Can zero interest rates do the job when virtually everything on the real economy side is so sour? Does an easy monetary policy become much less effective or even ineffective at such low interest rates?

### ***The U.S. Policy of Quantitative Easing***

The U.S. Federal Reserve introduced a program of so-called “quantitative easing” on a fairly large scale in late 2007 and through 2008 and, as a result, appears to believe that ordinary monetary policy has not been effective. The “quantitative easing” included such programs as the Term Auction Facility (TAF), through this facility the Federal Reserve auctions funds to depository institutions. Another is the Primary Dealer Credit Facility (PDCF) which allows security dealers effective access to the Federal Reserve discount window (that is, allowing security dealers to borrow from the Fed just as banks do). Another action was to set up the Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility (ABCP MMMF Liquidity Facility), which was intended to add liquidity to the commercial paper market and help with the liquidity needs of the money-market mutual funds. As Daniel Thornton states, “All other things being equal, such loans increase the monetary base. Until September 2008 the Fed offset the effect of these lending programs on the total supply of credit through open market operations.”<sup>6</sup> From the inception of these programs until August 2008 there was little or no increase in the monetary base and, thus, “no effect on the total supply of credit in financial markets until September 2008.”<sup>7</sup>

While central banks usually lower interest rates and reduce the cost of capital in order to promote bank lending, quantitative easing goes much further and specifically allocates credit to certain institutions in the financial system. But it takes away credit from other institutions when the Federal Reserve offsets

**Chart 1: Monetary Base<sup>9</sup>**



**Source:** 2009 Federal Reserve Bank of St. Louis. Shaded areas indicate U.S. recessions as determined by the NBER.

such loans with open market operations. It was not until September that the Federal Reserve ended these offsetting operations<sup>8</sup> and flooded the banking system with funds in order to encourage lending.

Japanese policymakers used a similar approach of “quantitative easing” earlier this decade to combat deflation and stimulate the Japanese economy. Federal Reserve officials have also confirmed that they stand ready to buy long-term Treasuries to help drive down long-term interest rates.

### ***September 2008 and the Push of High Powered Money***

The Federal Reserve’s program of “quantitative easing,” with no offsetting open market operations, is clearly visible in the Chart 1, as is the key date of September 2008. No, your eyes are not deceiving you. The American central bank, the Federal Reserve, has pumped an unbelievable amount of money into the monetary base in the very short time span since September last year. The “monetary base” is often called “high-powered money”, and the ordinary “money supply” that affects economic activity is a

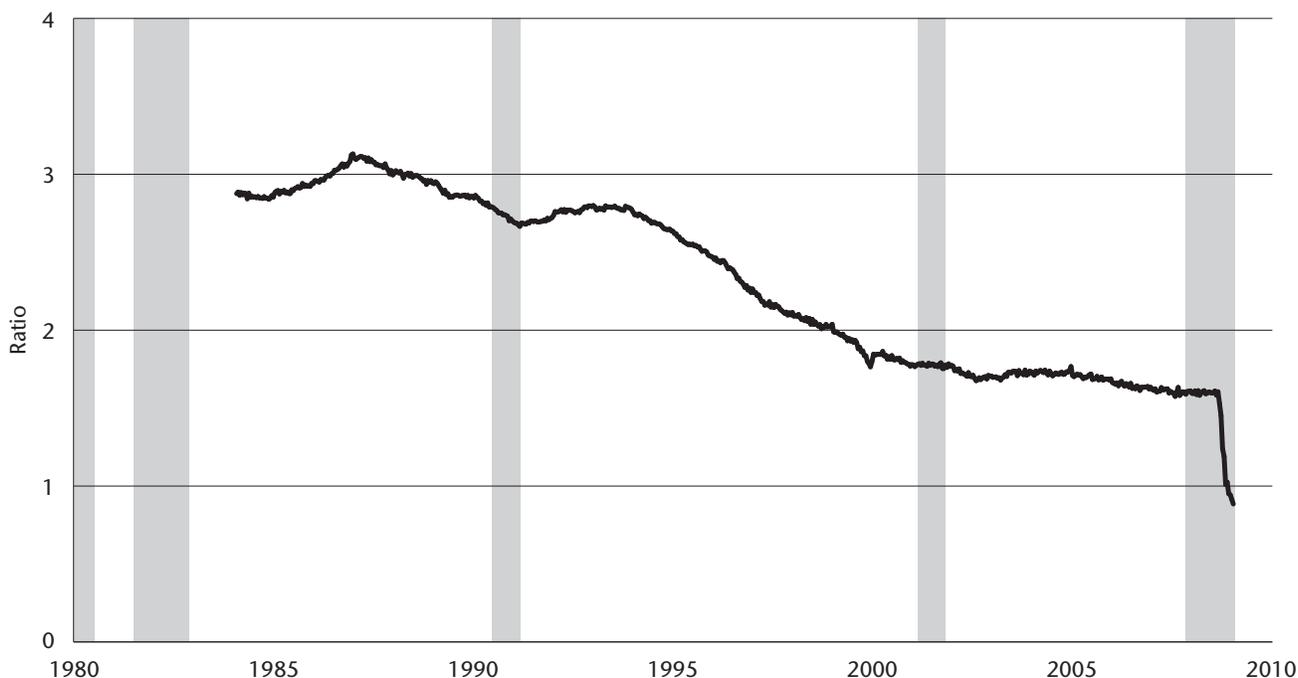
simple multiple of the monetary base. The size of the U.S. monetary base has more than doubled over the past twelve months.

In effect, the Fed has been monetizing the paper assets held by commercial banks. This action should have rapidly increased the U.S. money supply, though conventional definitions of the money supply have little meaning at this time.

But will this new monetary policy approach work? It certainly was tried in Japan. The Bank of Japan lowered its policy rate to zero in February 2001 and introduced quantitative easing in the following month. Quantitative easing and the zero interest rate policy both ended in Japan in 2006.

The question of whether or not the huge increase in the monetary base will work to expand the economy needs to be looked at from another point of view. Chart 2 focuses on the U.S. money multiplier. The money multiplier indicates how “high powered money” affects the total U.S. money supply. However, concurrent with the vast increase in the monetary base was a sharp fall in the money multiplier. This

**Chart 2: The M1 Money Multiplier**<sup>10</sup>



**Source:** 2009 Federal Reserve Bank of St. Louis.  
Shaded areas indicate U.S. recessions as determined by the NBER.

means that the increase in the monetary base was not nearly as effective in increasing U.S. money supply as it had been in the past. In other words the U.S. Fed's "quantitative easing" was not as effective as it would have been in the past.

### ***Why Has Quantitative Easing Not Been Effective***

The reason that the money multiplier has fallen so sharply is that the U.S. banking system lacks capital. In order to increase the money supply (i.e. bank deposit liabilities) bank balance sheets must expand. But for regulatory and risk reasons there is not sufficient capital in the banking system to allow balance sheets to expand. If banks are already using their capital to its full extent then balance sheets cannot expand and neither can their deposit liabilities. For the money multiplier to return to its former levels of 1.6 to 1.8 times, U.S. banks would have to raise substantial new capital. At a time when bank capital is much more likely to be reduced by loan losses and the write-off of securities losses, raising new capital poses extremely difficult problems. Those problems are especially difficult in the present capital market conditions. Thus, one problem for an effective and rapid economic recovery is the

need for capital markets to recover so that U.S. banks can increase their capital base.

### ***The Effect of U.S. Fiscal Policy***

The annual projected U.S. federal deficit is set to grow to \$1.5-trillion to \$2-trillion over the next few years. While increasing the size of the budget deficit is certainly appropriate given the seriousness of the U.S. economic downturn, nonetheless this aggressive fiscal policy can have major repercussions on monetary policy depending on how such a deficit is financed. There are three possible ways to finance the U.S. fiscal deficit and probably all three will be needed. Part of the deficit could be financed by overseas investors; part could be financed by domestic savings; and part could be financed by the U.S. banking system, either the commercial banks through monetary expansion or by the Federal Reserve Banks or by both. Each of these has important implications for the U.S. economy and, indeed, for the global economies.

If a portion of the projected U.S. fiscal deficit is financed by overseas investors, whether by governments, central banks or private individuals,

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it affects the U.S. international current account. A high proportion of recent U.S. budget deficits have been financed abroad, which has triggered large U.S. current account capital inflows. The more that is financed abroad, the greater will be the interest payments abroad in the future. To pay that interest the U.S. must export goods and services and to repay the indebtedness the U.S. must export more goods and services than it imports. In other words the U.S. must at some future date run an international current account surplus. That means U.S. savings must exceed U.S. internal investment. The longer the U.S. runs a current account deficit, that is, exports less than it imports, the greater the interest payments to foreigners will be and the more difficult will it be to run a current account surplus.

If a portion of the fiscal deficit is financed by domestic borrowing then Americans will ultimately have to increase their savings. If individual savings increase then spending on consumer goods will decline and it will be a slow economic recovery. The U.S. savings rate has been either very low or negative for some time. Increasing that savings rate means cutting back on consumption. The result will be an economy that expands less rapidly.

A portion of the deficit could be financed by the commercial banks or by the Federal Reserve. This is in essence monetizing the U.S. debt. To the extent the commercial banks finance the deficit, by buying U.S. bonds and notes, their balance sheets will need to expand. Bank deposits must increase and the Fed will have to supply the needed reserves. That means more money in the hands of the public and a risk, down the road of some inflationary consequences. And one of the consequences of higher inflation will almost certainly be higher interest rates.

Each year that the U.S. runs a fiscal deficit increases the dollar size of the U.S. national debt. In a few years that debt could reach a total of \$20-trillion. That size of debt has major implications for both fiscal and monetary policies. As interest rates rise, the cost of interest on the debt increases. This works especially quickly when a large portion of the debt is short-term notes or bonds. At a five per cent interest rate a \$20-trillion debt costs one trillion in interest payments. That amount goes directly into the annual budget and it is not a discretionary spending item. For monetary policy the implication of raising interest rates is to put

the federal fiscal balance into greater deficit. The rising cost of interest on the debt goes directly into the U.S. federal budget and thus increases total expenditures. The huge U.S. debt will make the operation of both monetary and fiscal policy more difficult as they will be much more integrated and interrelated.

### *The New Economic Paradigm*

We seem to be working with an almost new economic paradigm. Nevertheless, here are some of our concluding expectations.

- Despite all of the goodwill around, the new U.S. Administration has inherited a wrenching economic problem that could haunt President Obama's entire first term of office. The recession, already a year long, is likely to last another three quarters. And after that there could be a period of slow recovery.
- Quantitative easing, together with the substantial fiscal policy stimulants are absolutely necessary in the current circumstances, and in combination with other financial supports will likely work for the major economies, though it will take time.
- Part of the reason why there was such a massive jump in the U.S. monetary base is that the transmission mechanism from high powered money to the regular money supply has been weakened because of the financial crisis. The question still remains as to whether the U.S. money multiplier will return to its previous levels thus making monetary policy more effective.
- There is considerable financial stimulus associated with a zero interest rates, and of course, financial markets should ultimately reflect some positive gains. Already there are some signs that the financial markets are unclogging a bit. At the same time financial institutions will have to feel more comfortable with borrowers' prospects. That may not happen until there is some clear evidence of a recovery in the economy and the demand for their customers' goods and services.
- The overall solution requires much more than monetary stimulus, including major fiscal stimulants, some financial bailouts, as well as some new structural initiatives to unclog the banking and credit markets.
- In the meantime, zero or close to zero central bank interest rates imply considerable currency volatility. The

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U.S. dollar has recently been sliding against the yen and the euro, and the Canadian dollar has been trading very close to 80 cents, but also with considerable volatility.

- The recent sharp slide in the U.S. dollar together with the huge increase in the U.S. monetary base foreshadow the longer-term inflationary risks that the Federal Reserve is taking through jump-starting the U.S. economy using aggressive monetary stimulation.

### **Conclusion**

The expectations of the new Obama team, in terms of economic policy, are exceedingly high. To paraphrase Winston Churchill: "Never was so much expected by so many of so few!" Will the combination of a zero interest rate policy, quantitative monetary easing, and a huge package of fiscal stimulus be enough? Policymakers in the U.S. and elsewhere are relying on all aspects of both monetary and fiscal policy to bring the global economies out of this recession. Will it be a success? Only time will tell; but the global economy needs the latest Obama recovery package to be successful.

The other side of this expansionary coin will be the need to have a scheme to extricate the U.S. out of the future quagmire which zero interest rates, quantitative easing, vast fiscal deficits, and an enormous growth in federal U.S. debt will create. There is also a legitimate question of whether or not inflation will return with a vengeance after so large a growth in the monetary base. One hopes that U.S. policymakers not only have an effective economic stimulus package, but also have a post-economic-recovery package that will look after future fiscal and inflation problems as well.

*(Arthur Donner is a Toronto-based economic consultant. Doug Peters is the former Chief Economist of The Toronto-Dominion Bank.)*

### **Notes**

1. "All Keynesians Now? No." *Globe and Mail*, December 30, 2008
2. Bullard, James D., "Three Funerals and a Wedding", *Federal Reserve Bank of St. Louis, Review*, January/February 2009, p. 11
3. *Ibid*, p 12.
4. *Ibid*, p 8
5. Grenville, Stephen, "Does monetary policy still work?", *Financial Times*, January 13, 2009
6. Thornton, Daniel L., "The Fed, Liquidity, and Credit Allocation," *Federal Reserve Bank of St. Louis, Review*, January/February 2009, pp 13–21.
7. *Ibid*.
8. *Ibid*.
9. *Federal Reserve Bank of St. Louis, Review*, Jan.-Feb. 2009. This is the St. Louis Adjusted Monetary Base, which is the sum of currency in circulation outside Federal Reserve Banks and the U.S. Treasury, deposits of depository financial institutions at Federal Reserve Banks, and an adjustment for the effects of changes in statutory reserve requirements on the quantity of base money held by depositories.
10. *Federal Reserve Bank of St. Louis Review*, Jan.-Feb. 2009. This is the money multiplier for M1, which is the sum of currency held outside the vaults of depository institutions, Federal Reserve Banks, and the U.S. Treasury; travelers checks; and demand and other checkable deposits issued by financial institutions (except demand deposits due to the Treasury and depository institutions), minus cash items in process of collection and Federal Reserve float.