

Market Monetarism

The Second Monetarist Counter-revolution

- DRAFT -

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Abstract:

Market Monetarism is the first economic school to be born out of the blogosphere. Market Monetarism shares many of the views of traditional monetarism but unlike traditional monetarism Market Monetarism is sceptical about the usefulness of monetary aggregates as policy instruments and as an indicator for the monetary policy stance. Instead, Market Monetarists recommend using market pricing to evaluate the stance of monetary policy and as a policy instrument. Contrary to traditional monetarists – who recommend a rule for money supply growth – Market Monetarists recommend targeting the Nominal GDP (NGDP) level. The view of the leading Market Monetarists is that the Great Recession was not caused by a banking crisis but rather by excessively tight monetary policy. This is the so-called Monetary Disorder view of the Great Recession.

JEL Classification:

B22, E31, E50, E61.

Key words:

Market Monetarism, blogs, Monetarism, Monetary Policy, The Great Recession, NGDP targeting, Methodology, monetary policy rules, Federal Reserve, Monetary Disorder View, Free Banking, Monetary Disequilibrium Theory.

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The birth of Market Monetarism – from blogosphere to an economic school

Since the outbreak of the so-called Great Recession in 2008, a new economic school has been born. This new school, which I refer to as *Market Monetarism*, was born out of the policy response to the crisis as well as in response to the analytical failure among mainstream economists, economic commentators and policy makers to grasp the causes of the crisis. Hence, in contrast to mainstream economic thinking, which sees the causes of the Great Recession as a banking crisis, Market Monetarists think that the root of the crisis is in what Robert Hetzel has termed the “monetary disorder” view (Hetzel 2009).

An interesting factor in the birth of Market Monetarism is that it was not primarily the result of scholarly articles in economic journals but rather a result of internet blogs. In this regard, the blogs of Scott Sumner, Nick Rowe, David Beckworth, Joshua Hendrickson and William Woolsey, in particular, have been instrumental in forming the views of Market Monetarism². Other blogs have also played a role but normally these five economists are seen to be at the centre of Market Monetarist thinking. A sixth economist – Robert Hetzel – should also be mentioned as instrumental in Market Monetarist thinking. Robert Hetzel, however, does not have a blog and has not associated himself to the same extent with the Market Monetarists but he has had great influence on the thinking of some of the main Market Monetarists^{3,4}.

Market Monetarists are also known as “Quasi Monetarists” – a term (indirectly) coined by Paul Krugman (2010), who is certainly not a Market Monetarist himself. Below I argue that Market Monetarism is more fitting for the school than Quasi Monetarism.

² Scott Sumner www.themoneyillusion.com, Nick Rowe www.worthwhile.typepad.com, David Beckworth www.macromarketmusings.blogspot.com, William Woolsey www.monetaryfreedom-billwoolsey.blogspot.com, <http://everydayecon.wordpress.com/>

³ Notably Scott Sumner in a blog entry stated: “I’ll die a happy man if my gravestone reads: Scott Sumner: Devoted his life to blogging on Hetzelian ideas” (Sumner 2011A).

⁴ Other bloggers could also be mentioned as being part of the bigger Market Monetarist family – most notable David Glasner (uneasymoney.com) and Marcus Nunes (thefaintofheart.wordpress.com).

Market Monetarism is a young school, so there are naturally many areas where different Market Monetarists appear to have different views from other Market Monetarists. I certainly do not claim that all Market Monetarists would agree with everything that I call Market Monetarism.

Recessions are always and everywhere a monetary phenomenon⁵

At the core of Market Monetarist thinking, as in traditional monetarism, is the maxim that “money matters”. Hence, Market Monetarists share the view that inflation is always and everywhere a monetary phenomenon. However, it should also be noted that Market Monetarists have focused on nominal GDP growth rather than inflation. Indeed it was the large decline in (US) NGDP growth during the Great Recession that pushed Market Monetarists to become involved in the blogosphere.

Market Monetarists generally describe recessions within a Monetary Disequilibrium Theory framework in line with what has been outlined by orthodox monetarists such as Leland Yeager (1956) and Clark Warburton (1966)⁶. David Laidler has also been important in shaping the views of Market Monetarists (particularly Nick Rowe) on the causes of recessions and the general monetary transmission mechanism.

The starting point in monetary analysis is that money is a unique good. Here is how Nick Rowe (Rowe 2011A) describes that unique good.

“If there are n goods, including one called “money”, we do not have one big market where all n goods are traded with n excess demands whose values must sum to zero. We might call that good “money”, but it wouldn't be money. It might be the medium of account, with a price set at one; but it is not the medium of exchange. All goods are means of payment in a world where all goods can be traded against all goods in one big centralised market. You can pay for anything with anything. In a monetary exchange economy, with n goods including money, there are $n-1$

⁵ Inspired by a draft version of this paper, Nick Rowe wrote a blog entry with this headline Rowe (2011B). I am grateful to Nick for this inspirational advice and comments on this paper.

⁶ While Market Monetarists acknowledge their intellectual debt to Leland Yeager, they tend to make fewer references to Clark Warburton. Nonetheless, Clark Warburton is clearly a forerunner for Market Monetarism and his work on Monetary Disequilibrium Theory is very similar to Market Monetarist thinking.

markets. In each of those markets, there are two goods traded. Money is traded against one of the non-money goods.”

From this also comes the Market Monetarist theory of recessions. Rowe continues:

“Each market has two excess demands. The value of the excess demand (supply) for the non-money good must equal the excess supply (demand) for money in that market. That’s true for each individual (assuming no fat fingers) and must be true when we sum across individuals in a particular market. Summing across all n-1 markets, the sum of the values of the n-1 excess supplies of the non-money goods must equal the sum of the n-1 excess demands for money.”

Said in another way, recession is always and everywhere a monetary phenomenon in the same way as inflation is. Rowe again:

“Monetary Disequilibrium Theory says that a general glut of newly produced goods can only be matched by an excess demand for money.”

This also means that as long as the monetary authorities ensure that any increase in money demand is matched one to one by an increase in the money supply, nominal GDP will remain stable⁷. This view is at the core of Market Monetarist’s recommendations on the conduct of monetary policy. More on this below.

Obviously, if all prices and wages were fully flexible, then any imbalance between money supply and money demand would be corrected by immediate changes prices and wages. However, Market Monetarists acknowledge, as New Keynesians do, that prices and wages are sticky.

It should also be noted that Market Monetarists are critical of the “equilibrium always” views of money held by both New Keynesians and New Classical economists⁸.

Markets matter

⁷ Market Monetarists obviously does not say that economic activity cannot drop as a result of a bad harvest or an earthquake, but such “events” does not create a *general* glut of goods and labour. I am grateful to Nick Rowe for stressing this point.

⁸ New Keynesians especially stress that the bond market clears, while New Classical economists stress that all markets clear.

In a world of monetary disequilibrium, one cannot observe directly whether monetary conditions are tight or loose. However, one can observe the *consequences* of tight or loose monetary policy. If money is tight then nominal GDP tends to fall – or growth is slower. Similarly, excess demand for money will also be visible in other markets such as the stock market, the foreign exchange market, commodity markets and the bond markets. Hence, for Market Monetarists, the dictum is Money *and* Markets Matter.

Furthermore, contrary to traditional Monetarists, Market Monetarists are critical of the use of monetary aggregates as indicators of monetary policy tightness because velocity is unstable – contrary to what traditional Monetarists used to think. As Scott Sumner (Sumner 2011B) states:

“Monetary aggregates are neither good indicators of the stance of monetary policy, nor good policy targets. Rather than assume current changes in (the money supply) affect future (aggregate demand) with long and variable lags, I assume current changes in the expected future path of (the money supply) affect current (aggregate demand), with almost no lag at all.”

Hence, contrary to Milton Friedman’s dictum that monetary policy works with “*long and variable lags*”, Scott Sumner argues that monetary policy works with “*long and variable leads*” (Sumner 2010A). Hence, the expectation channel is key to understanding the impact of monetary policy.

Market Monetarists basically have a forward-looking view of monetary theory and monetary policy and they tend to think that markets can be described as efficient and that economic agents have rational expectations. Therefore, financial market pricing also contains useful information about the current and expected stance of monetary policy⁹.

Market Monetarists therefore conclude that asset prices provide the best – indirect – indicator of the monetary policy stance. Market Monetarists would like to be able to observe the

⁹ It is especially Scott Sumner who stresses this. In fact other Market Monetarists for example William Woolsey seem to be more sceptical about rational expectations. Overall, however, Market Monetarists in general see economic agents as rational and forward looking, but probably in a less “superman”-like fashion than for example New Classical economists.

monetary policy stance from the pricing of a futures contract for nominal GDP¹⁰. However, such contracts do not exist in the real world and Market Monetarists therefore suggest using a more eclectic method where a more broad range of financial variables is observed.

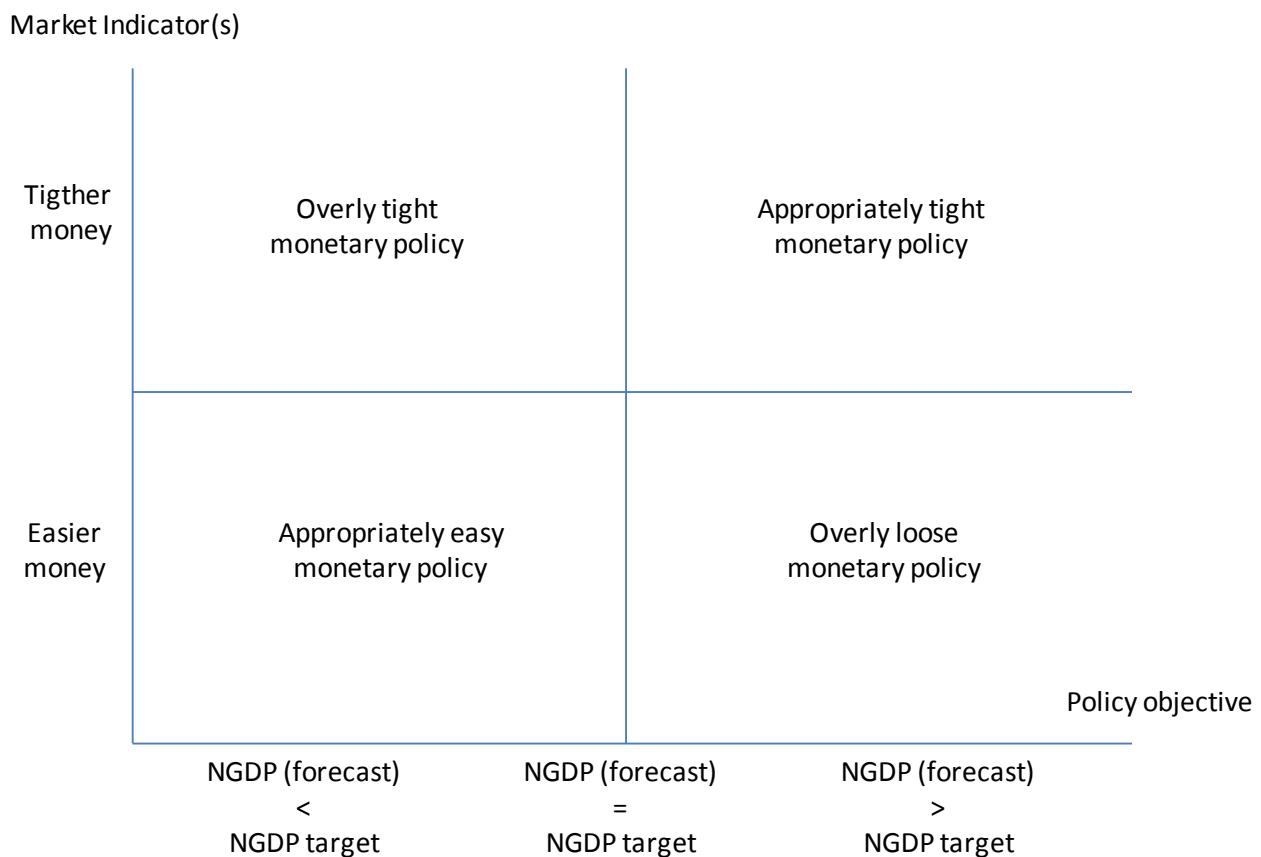
Generally, if monetary policy is “loose” one should see stock prices rise, the currency should weaken and long-term bond yields should rise (as nominal GDP expectations increase). For a large country such as the US, a loosening of monetary policy should also be expected to increase commodity prices. The opposite is the case if monetary policy is tight: lower stock prices, strong currency, lower long-term yields and lower commodity prices^{11,12}.

Market Monetarists only favour “looser” (tighter) monetary policy if NGDP expectations are below (above) the central bank’s policy objective. Hence, Market Monetarists would always conduct monetary analysis by contrasting the signals from market indicators with how far away the objective is from the “bull’s eye” (the policy objective). This is illustrated in the chart below.

¹⁰ Some countries – for example Argentina – have issued bonds linked to *real* GDP.

¹¹ There are some clear similarities between the Market Monetarist approach to monetary policy analysis and the approach recommend by Manuel H. Johnson and Robert Keleher (1996). However, the Market Monetarists in general have not acknowledged the work of Johnson and Keleher.

¹² It should be noted that the picture can be blurred somewhat by changes in the risk premium on certain assets. An increase in the “country risk” could for example increase bond yields with out this reflecting an increase in inflation expectations. This is typical something, which would be seeing in Emerging Markets asset markets.



A forceful demonstration of the value of this method of “Market Based Monetary Policy”, which has been highlighted by Market Monetarists, was the announcement of a second round of quantitative easing of monetary policy (QE2) in the second half of 2010. The Federal Reserve’s first round of quantitative easing ended in the first quarter of 2010 but renewed weakness in the US economy soon made it clear that a second round of QE was warrant. Federal Reserve Chairman Ben Bernanke announced QE2 at a speech in Jackson Hole on 27 August 2010¹³.

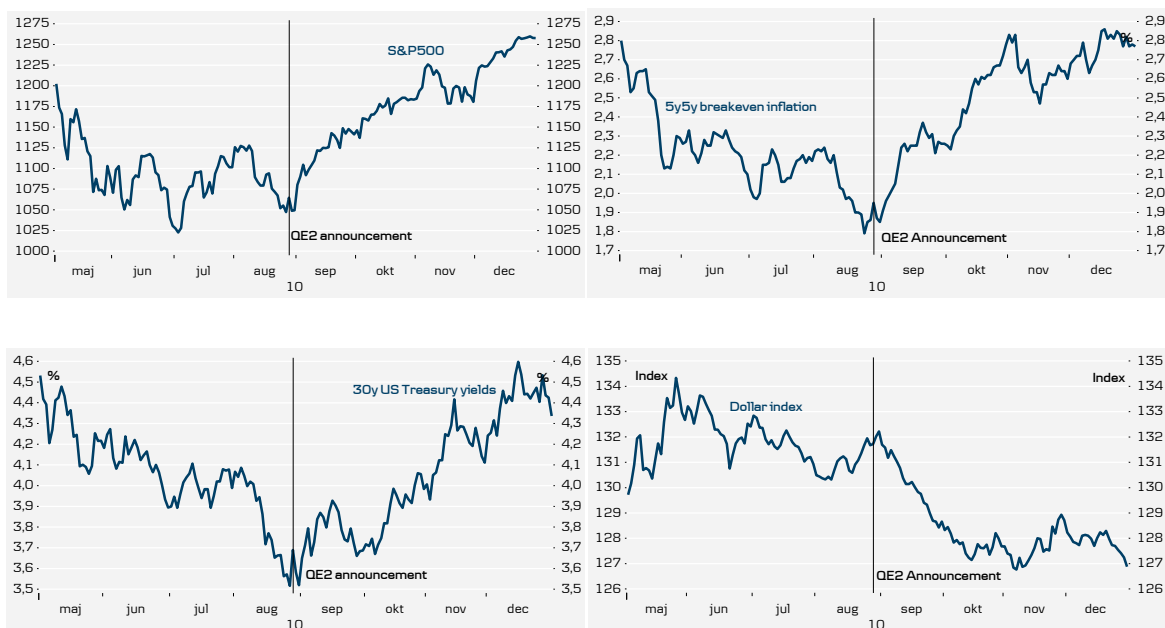
Here is how James Bullard President of the St Louis Fed sees it (Bullard 2011).

“The policy change was largely priced into the markets ahead of the November FOMC meeting, as financial markets are forward looking. The financial market effects of QE2 were entirely

¹³ Bernanke in fact only hinted at QE2, but the markets rightly understood his comments to mean that QE2 would be announced in November 2008 – as it was.

conventional. In particular, real interest rates declined, expected inflation increased, the dollar depreciated and equity prices rose. The purchases of longer term Treasury securities essentially lowered the risk-free real interest rate, which then caused some investors to switch to riskier assets—most notably US equity markets, but also emerging market equities and commodities as an investment class—in search of higher rates of return...”

Hence, Bullard, in line with Market Monetarist thinking, acknowledges the forward-looking nature of markets and hence the impact of monetary policy announcements. The charts below illustrate this.



Bullard continues:

“While the effects on financial markets occurred during the run-up to the November decision, effects on the real economy (e.g. consumption and employment) are expected to occur six to 18 months after the monetary policy action, as is the case with conventional monetary policy.”

In fact, the impact on US macroeconomic data was much faster and hence is supportive of Scott Sumner's view that monetary policy works with *"long and variable leads"* and affects aggregate demand with *"almost no lag at all"*¹⁴.

So, given the relative success of QE2, it should be no surprise that James Bullard concludes:

"As the experience with quantitative easing has shown, monetary policy can be effective even when nominal interest rates are at the zero bound. QE2 was successful as a classic easing of monetary policy in that the imprint on the financial markets looked just like a standard, aggressive monetary policy easing...Although a rule-like approach would have been preferable from my point of view, rather than independent, isolated decisions with large amounts of purchases, the impact of quantitative easing on macroeconomic and financial conditions showed that the Fed has plenty of ammunition to carry out stabilisation policy even when the policy rate cannot be lowered further."

James Bullard here surely sounds like a Market Monetarist¹⁵.

Against Neo-Wicksellian analysis

Mainstream economists and particularly New Keynesian economists place interest rates at the core of monetary policy. Furthermore, central banks mostly formulate monetary policy within an interest rates framework. Market Monetarists – as traditional monetarists – are highly critical of this approach to monetary policy and monetary analysis, which Nick Rowe has termed Neo-Wicksellian analysis (Rowe 2009)¹⁶.

¹⁴ It should, however, also be acknowledged that the QE2 has failed to permanently change the outlook for NGDP in the US economy. Market Monetarists think this is due to how QE2 was implemented – particularly the lack of a clear policy objective. Furthermore, Market Monetarists are highly critical about the Federal Reserve's attempt to implement credit policies rather than implementing a policy to increase NGDP expectations through an expansion of the money supply.

¹⁵ Bullard's view has, however, had mixed "reviews" from the Market Monetarists and it is also clear that, despite the strong monetarist tradition at St Louis Fed, Bullard is surely not consistently Market Monetarist or even traditionally monetarist in his economic thinking.

¹⁶ While Sumner and Rowe in particular have very traditional monetarist reservations about Neo-Wicksellian economics, the other key Market Monetarist bloggers Woolsey, Beckworth and Hendrickson are more open to using Wicksell's term the "natural interest rate" as the interest rate that will prevail in monetary equilibrium. This probably also reflects that

Market Monetarists particularly object to the use of interest rates as a measure of monetary policy “tightness”. Scott Sumner (Sumner 2009), for example, often quotes Milton Friedman (Friedman 1997).

“Low interest rates are generally a sign that money has been tight, as in Japan; high interest rates, that money has been easy...After the US experience during the Great Depression and after inflation and rising interest rates in the 1970s and disinflation and falling interest rates in the 1980s, I thought the fallacy of identifying tight money with high interest rates and easy money with low interest rates was dead. Apparently, old fallacies never die.”

This view of course is in stark contrast to the prevailing New Keynesian orthodoxy where low interest rates are seen as loose monetary policy and have a significant impact on how monetary policy is analysed. Hence, as a consequence, when evaluating whether a given monetary policy decision is expansionary, contractionary or neutral, Market Monetarists would evaluate whether the long-term bond yield rose or fell on the announcement of the policy. Market Monetarists would see rising (falling) bond yields as a sign that the policy was expansionary as rising long-term bond yields reflect rising (falling) inflation expectations. Contrary to this is the conventional Keynesian position that rising bond yields increase funding costs for companies and households and, therefore, reduce domestic demand.

In general, Market Monetarists are highly critical about the New Keynesian/Neo-Wicksellian focus on interest rates as the only monetary policy instrument. Hence, Sumner (2010B) states that it is wrong *“that monetary policy is changes in short-term rates. Changing short-term rates are just one of many effects of monetary policy”*. One such policy could be quantitative easing where the central banks bought government bonds or other assets. Alternatively the central banks could intervene in the currency markets, etc.

Woolsey, Beckworth and Hendrickson are more open to the teachings of the Austrian School than Sumner and Rowe who come from a more traditional monetarist tradition. This slight difference of opinion or rather of emphasis is also visible in their differences in view of the US economic situation prior to the crisis. Here Beckworth in particular has stressed the signs of a monetary-created bubble in the US economy – an emphasis shared with modern Austrian school economists.

Nick Rowe (2009) claims that the reason modern macroeconomic theory and the conduct of monetary policy has become so interest rate focused is because modern day economists (mistakenly) have taken “money” out of monetary policy. To quote Rowe:

“As interest rates approach zero, and central banks look at “unorthodox” monetary policies, the Neo-Wicksellian perspective on monetary policy has switched to a blank screen...That's the main reason why economists find it hard to think about unorthodox monetary policies. The dominant Neo-Wicksellian paradigm which fills our heads can say nothing about them. We are forced to return to older, half-forgotten ways of thinking. There is perhaps a “Dark Age” in thinking about monetary policy...The dominant paradigm for monetary policy over the last decade has been the Neo-Wicksellian perspective: monetary policy is the central bank setting a short-term nominal rate of interest...You can always add money to the (Neo-Wicksellian) model, if you like, by adding a money demand function. But it doesn't do anything. The quantity of money would be demand-determined, by whatever amount people want to hold at the rates of interest, prices and incomes determined by the rest of the model. Money is a fifth wheel: an epiphenomenon. You could delete it from the model without anything else changing...The standard model of monetary policy, in other words, says absolutely nothing about money. 'M' does not appear in the model. As David Laidler wrote, it's like “Hamlet without the ghost”. “Quantitative easing” cannot be understood using a model where M, the quantity of money, does not appear....Our heads can't handle quantitative easing, because the quantity in question is no longer in our heads.”

Rowe continues:

“The only way of thinking about unorthodox monetary policies, in the dominant Neo-Wicksellian paradigm, is in terms of the central bank creating expected inflation. This would reduce real interest rates (with nominal rates stuck at zero) and would increase consumption and investment demand. But this is useless advice, because there is no actual mechanism whereby the central bank can create expected inflation. It can only push on the useless lever of interest rates, which is already stuck at zero.”

Rowe then calls for a counter-revolution in monetary economics.

“So we need to revert to an older, earlier way of thinking. Monetary policy is about changing the stock of money. The objective of monetary policy, in a recession, is to create an excess supply of

money. People accept money in exchange for whatever they sell to the central bank, because money by definition is a medium of exchange. But they don't want to hold all that money. Or rather, the objective of the central bank is to buy so much stuff that people don't want to hold the money they temporarily accept in exchange. An excess supply of money is a hot potato, passing from hand to hand. It does not disappear when it is spent. It spills over into other markets, creating an excess demand for goods and assets in those other markets, increasing quantities and prices in those other markets. And it goes on increasing quantities and prices until quantities and prices increase enough that people do want to hold the extra stock of money.”

Interest rates are NOT the price of money

A very common fallacy among both economists and laymen is to see interest rates as the price of money. However, Market Monetarists object strongly to this perception. As Scott Sumner spells out in capitals: “INTEREST RATES ARE NOT THE PRICE OF MONEY, THEY ARE THE PRICE OF CREDIT” (Sumner 2011C). On the other hand, the price of money or rather the value of money is defined by what money can buy: goods. Hence, the price of money is the inverse of the price of all other goods – approximated by the inverse of for example consumer prices.

This is completely in line with the view of traditional monetarists such as Brunner and Meltzer (1997) or Yeager and Greenfield (1986) who strongly stress the difference between money and credit. William Woolsey (2009B), with direct reference to Leland Yeager, spells out the key difference between money and credit.

First, he defines money.

“Money is the medium of exchange. The quantity of money is the amount of money that exists at a point in time. The demand for money is the amount of money that people want to hold at a point in time. To hold money is to not spend it.”

Then he defines credit.

“The supply of credit is the amount of funds people want to lend during a period of time. The demand for credit is the amount of funds that people want to borrow during a period of time.”

Further, Woolsey notes the following.

“An increase in the supply of credit isn't the same thing as an increase in the quantity of money. While it is possible that new money is lent into existence, raising the quantity of money over a period of time while augmenting the supply of credit, it is also possible for the supply of credit to rise without an increase in the quantity of money. Purchases of new corporate bonds by households or firms, for example, add to the supply of credit without adding to the quantity of money.”

Finally, while Woolsey acknowledges that *“there are relationships between the supply and demand for money and the supply and demand for credit...But money and credit are not the same thing”* and *“One of the first rules of monetary economics is to never confuse money and credit.”*

While the Market Monetarists have been calling for quantitative easing to help pull the US out of the Great Recession, they are also critical of the actual *implementation* of QE under the leadership of Federal Reserve chairman Bernanke. This is because they believe QE in the form implemented by the Federal Reserve focuses excessively on the functioning of the credit markets rather than on expanding the money supply. Even worse, the Federal Reserve lacks an explicit nominal target.

The liquidity trap fallacy

In line with the reasoning on interest rates above is the Market Monetarist's rejection of the so-called liquidity trap. Almost every day the financial media quote economists claiming that the central banks are running out of ammunition because interest rates are close to zero. This is the so-called liquidity trap¹⁷. Market Monetarists object strongly to the perception that monetary policy is ineffective at rates close to zero. If one single issue has dominated Market Monetarist blogs over the last couple of years, it has been that monetary policy is highly efficient in terms of influencing the nominal economic variables such as nominal GDP or the price level. Market Monetarists do not believe that there is a liquidity trap. This is consistent with traditional monetarist teaching (see for example Friedman 1997).

¹⁷ This is not entirely correct. In the original version of the liquidity trap, an increase in the money supply fails to decrease the interest rate because the demand for money is perfectly elastic (Keynes 1936). In the original version, interest rates do not necessarily have to be zero to be unable to fall. In the “modern” formulation, it is often assumed money demand is perfectly elastic exactly because interest rates have hit a “zero bound”.

At the core of the Market Monetarist's criticism of the liquidity trap is that the conventional New Keynesian models assume that there is only one type of asset in the economy and that is bonds, which pay interest. As Sumner says:

"The flaw in the Keynesian model is that it assumes sticky wages and prices, whereas only T-bond prices are flexible. But there are lots of other asset prices that are also flexible and that don't have a zero lower bound. These include commodities like gold and silver, stocks and foreign exchange."

Hence even if interest rates are at zero there is nothing that stops the central bank from, for example, buying gold, stocks or intervening in foreign currency, all of which could be used to boost money supply growth (relative to money demand) and thereby boost nominal income and inflation. This is effectively what is today known as quantitative easing (QE).

William Woolsey (2010A) argues along the same lines as Sumner.

"Of course, there isn't a single interest rate and there are very few nominal interest rates that are near zero. If a central bank is restricted to purchasing only those securities with near-zero interest rates, then much of the new Keynesian argument follows. However, the Federal Reserve is buying all sorts of assets and all of them have nominal interest rates well above zero. And while it might be necessary to purchase much larger quantities of those assets if the problem is something other than low money expenditures...In other words, if the Fed committed to purchase whatever quantity of securities with currently positive nominal yields to return money expenditures back to trend, then only limited purchases would actually be needed. There would be no need for higher expected inflation and lower real interest rates."

Concluding, the Market Monetarists do not think that the central bank is limited by interest rates near zero as the central bank can always conduct quantitative easing by, for example, buying bonds. However, it should be noted that Market Monetarists do not expect to see the impact of QE in a fall in bond yields. Rather, Market Monetarists would actually expect bond yields to *rise* if the policy worked, as effective QE would push up inflation expectations and

hence long-term bond yields¹⁸. This is exactly what happened both after the US Federal Reserve announced the first round QE in late 2008 and after the second round of QE (QE2) in the second half of 2010.

QE primarily works not through interest rate effects but through *“injecting more cash into the economy than the public wishes to hold. The only way to get rid of these excess (real) cash balances is to spend them on goods, services and assets, thus driving aggregate demand higher.”* (Sumner 2009B).

Hence, Sumner’s take on QE is well in line with the kind of disequilibrium monetary theory that Nick Rowe was quoted on above. In addition to this method of getting out of a liquidity trap, we also cite the “price of money” approach to monetary policy. *“According to this view it is always possible to produce inflation by lowering the price of money either in terms of a commodity like gold or in terms of foreign exchange...the price-of-money approach is so effective that Lars Svensson¹⁹ has called it a “foolproof” escape from a liquidity trap.”*

It should be noted that Market Monetarists have a very different view of the transmission mechanism of monetary policy than New Keynesian (and traditional Keynesians). While Keynesians see monetary policy working interest rates, which have an impact on investments and private consumption, Market Monetarists – as traditional monetarists – stress cash balance effects. Said in another way, money influences consumption and investment directly rather than indirectly via interest rates as in the Keynesian model²⁰.

The expanded equation-of-exchange: $BmV=PY$

¹⁸ Market Monetarist certainly do not deny that open market operations can reduce *real* interest rates even when nominal interest rates are zero through higher inflation expectations. However, Market Monetarists contrary to New Keynesians does not see this as the main channel by which monetary policy works.

¹⁹ Lars E. O. Svensson is certainly not a Market Monetarist but he is nonetheless a hero among the Market Monetarists, both for his work on monetary theory and as a policymaker on the board of the Swedish central bank (Riksbanken).

²⁰ For more on the monetarist transmission mechanism see Yeager (1956) and Rabin (2004). Brunner and Meltzer (1993) is a standard reference on the monetarist transmission mechanism as well.

The fact that Market Monetarists are sceptical about using monetary aggregates (on their own) as an indicator for monetary policy stance does not mean that they have abandoned the equation of exchange. The equation of exchange ($MV=PY$) has always been at the centre of monetarist analysis. Josh Hendrickson (2010) and David Beckworth (2009) in particular have done work on what they have termed *the expanded equation of exchange*.

In the words of Beckworth, who starts out with the traditional equation of exchange $MV=PY$, where M is money supply, V is velocity, and PY is nominal GDP:

“So what does this identity tells us about the crisis? To answer this question we first need to expand the identity a bit. To do so, note that the money supply is the product of the monetary base, B , times the money multiplier, m or

$$M = Bm$$

Now substitute this into the equation of exchange to get the following:

$$BmV = PY.$$

Now we have an identity that says the sources of nominal spending are the monetary base, the money multiplier and velocity. With this identity in hand, we can assess the contribution of these three sources to the dramatic decline in nominal spending in the past year.”

Beckworth then goes on to decompose the left-hand side of the expanded equation of exchange in the US during 2008. This decomposition leads him to the following conclusion.

“This figure indicates that declines in the money multiplier and velocity have both been pulling down nominal GDP. The decline in the money multiplier reflects: (1) the problems in the banking system that have led to a decline in financial intermediation as well as (2) the interest the Fed is paying on excess bank reserves. The decline in the velocity is presumably the result of an increase in real money demand created by the uncertainty surrounding the recession. This figure also shows that the Federal Reserve has been significantly increasing the monetary base, which should, all else equal, put upward pressure on nominal spending. However, all else is not equal as the movements in the money multiplier and the monetary base appear to mostly offset each other. Therefore, it seems that on balance it has been the fall in velocity (i.e. the increase in real money demand) that has driven the collapse in nominal spending.”

Beckworth continues:

"[the] sharp decline in velocity appears to be the main contributor to the collapse in nominal spending in late 2008 and early 2009 as changes in the monetary base and the money multiplier largely offset each other. It is striking that the largest run-ups in the monetary base occurred in the same quarters (2008:Q3, 2008:Q4) as the largest drops in the money multiplier. If the Fed's payment on excess reserves were the main reason for the decline in the money multiplier and if the Fed used this new tool in order to allow for massive credit easing (i.e. buying up troubled assets and bringing down spreads) without inflation emerging, then the Fed's timing was impeccable. Unfortunately, though, it appears the Fed was so focused on preventing its credit easing programme from destabilising the money supply that it overlooked, or least underestimated, developments with real money demand (i.e. velocity). As a consequence, nominal spending crashed."

Hence, with the Beckworth-Hendrickson expanded equation of exchange one can demonstrate the role played by the Federal Reserve in the collapse in nominal GDP in 2008 and 2009 and in line with the Market Monetarist reasoning the Federal Reserve is far from innocent in the development of the crisis. More on this below.

The Fed caused the Great Recession

"In my view, the reason for the Great Recession is simple – the Federal Reserve allowed an excess demand for money to develop, so GDP fell 14% below its growth path from the Great Moderation."

This is how William Woolsey (2011) and the other Market Monetarist bloggers see it. The Federal Reserve is mostly to blame for the fall in nominal GDP.

The Market Monetarist theory on the Great Recession is essentially Friedmanite in the sense that it is very similar to Milton Friedman's theory of the causes of the Great Depression (Friedman and Schwartz 1963) as well as similar to Friedman's view on Japan's deflationary problems (Friedman 1997).

This is what Robert Hetzel in his 2010 paper "*Monetary Policy in the 2008-2009 Recession*" called the Monetary Disorder view of the Great Recession. Hetzel's paper can be described as

the Market Monetarist's ABC on the crisis. Furthermore, Scott Sumner also lays out the Market Monetarist theory of the crisis in *"Misdiagnosing the crisis: the real problem was not real, it was nominal"* (Sumner 2009A).

The key argument in the Monetary Disorder view is that, contrary to the general perception, US monetary policy was not loose in 2008 and 2009 but rather monetary policy was tightened dramatically as the excess demand for money rose significantly.

According to Scott Sumner (2009A):

"Let's start with my argument that money was very tight in late 2008. Most economists have assumed that the Fed adopted a policy of extreme ease in late 2008. Perhaps so, but I have yet to see a persuasive argument for this assumption. Some would point to the fact that the Fed cut its target rate to very low levels in 2008. Is that reasoning any different from when (in 1938) Joan Robinson argued that easy money couldn't have caused the German hyperinflation, as interest rates in Germany were not low?"

Sumner continues:

"Surely in the 21st century we aren't still using nominal interest rates as an indicator of the stance of monetary policy? Friedman and Schwartz (1963) demonstrated that interest rates are a very poor indicator on monetary policy. In the early 1930s, the Fed cut its discount rate just as sharply as in 2007-08 and yet today almost no one believes money was easy during the Great Contraction."

Sumner then goes on to quote Mishkin (2007).

"It is dangerous always to associate the easing or the tightening of monetary policy with a fall or a rise in short-term nominal interest rates."

This is obviously at the core of Market Monetarism as argued above. Interest rates tell us very little if anything about the stance of monetary policy and it is therefore wrong to conclude that US monetary policy could in anyway be said to be loose in 2008-09. Rather, the Market Monetarist argues that monetary policy became very tight and has remained too tight ever since.

Most controversial in the Market Monetarist theory of the Great Recession is the role played by the collapse of Lehman Brothers. Most economists, policymakers and commentators automatically assume that the reason for the sharp fall in economic activity in 2008-09 was the direct result of the collapse of Lehman Brothers. However, Sumner (2009A) argues that *“Contrary to what many economists assumed, tight money was already sharply depressing the economy by August 2008. After the failure of Lehman, most economists simply assumed that causation ran from financial crisis to falling demand. This reversed the primary direction of causation – as in the Great Depression, economic weakness worsened bank balance sheets and intensified the financial crisis in late 2008.”*

Hence, while the collapse of Lehman Brothers was a serious shock to the economic system, the real cause of the Great Recession was that monetary policy became extremely tight as the Federal Reserve allowed excess demand for money to spike.

As argued by Sumner:

“...the simultaneous declines in stocks, commodities, and industrial production during late 2008 were eerily similar to late 1929 and 1937. All three crashes occurred as monetary policy errors led investors to dramatically scale back their forecasts for nominal growth going several years forward. Each market crash was followed by one of the most severe contractions of the past 100 years. It is difficult to overstate the importance of maintaining policy credibility with explicit target trajectories for prices or nominal GDP.”

Hence, markets were saying very clearly that monetary conditions had tightened significantly but policymakers failed to react to these clear signals because they were focused on the development of headline inflation and the fact that interest rates were “low” (Hetzl 2009).

Sumner argues that asset prices other than interest rates contain important information about the stance of monetary policy. Looking at the period from July to November 2008, he notes the following.

- The stock market crashed.
- Commodity prices crashed.
- Yields on indexed bonds soared.

- The conventional/indexed bond yield spread went negative.
- The dollar soared against the euro.

Based on his Sumner concludes *“money was exceedingly tight in late 2008”*.

Market Monetarists argue that the signs of the recession were clear well before the collapse of Lehman Brothers and despite this central banks around the world were very reluctant in moving to ease monetary policy. Indeed, the ECB *increased* its key policy rate to 4.25% in July 2008 – only months before the collapse of Lehman Brothers. However, following the collapse of Lehman Brothers in October 2008, central banks around the world started to cut interest rates. However, as interest rates approached zero, central bankers concluded that monetary policy was now “accommodative”. Of course Market Monetarists would say that financial markets were telling a very different story: monetary policy had become extremely tight and consequently economic activity plummeted.

The reason monetary policy was allowed to become “exceedingly tight” is according to the Market Monetarists that the Federal Reserve credibility broke down. During what has come to be known as the Great Moderation from the mid-1980s until the Great Recession broke out, US monetary policy had been conducted as though the Federal Reserve had de facto a 5% target for long-term nominal GDP growth. That framework ensured that expectations for nominal economic variables such as inflation and NGDP were well anchored, which ensured unprecedented economic and financial stability during the Great Moderation. However, this monetary policy framework, which Hetzel named LAW (Lean Against the Wind), effectively broke down sometime during 2008 (Hetzel 2009 and 2010) as market participants started to realise that the Federal Reserve would no longer ensure NGDP growth around 5%. An illustration of this is the very significant fall in market expectations on long-term inflation (5y5y Breakeven Inflation measured from so-called TIPS).

So why did the Federal Reserve’s credibility break down in 2008? Market Monetarists highlight that the Federal Reserve, unlike many other central banks, does not have an explicit target for the conduct of monetary policy. As Sumner (2009A) argues: *“Expectations of future monetary policy and aggregate demand impact current demand. An explicit price level or nominal GDP trajectory going several years forward would have helped stabilise expectations in*

late 2008. Because the Fed failed to set an explicit target path (level targeting), expectations became very bearish in late 2008." Furthermore, it should be noted that the dominant New Keynesian dogma probably led to a feeling among central bankers in both the US and other places that, with interest rates at close to zero, nothing more could be done. Market Monetarists argue that the Federal Reserve had plenty of "ammunition" to counteract the rise in money demand and hence seriously reduce the size of the recession.

Sumner (2011D) also provides a more philosophical answer.

"Throughout history, only a tiny number of economists have intuitively grasped the incredible power of monetary stimulus (even at zero rates) and also understood the need for monetary stimulus when NGDP is inadequate. Irving Fisher was one and Milton Friedman was another. Lots of people are aware of the power of monetary policy. Lots of people understand the need for stimulus. But damn few can see both. And that's why we are where we are."

In addition to the collapse of the Fed's credibility, Market Monetarists have also stressed that the decision in October 2008 by the Federal Reserve to introduce (positive) interest rates on reserves held at the Federal Reserve by banks worsened the monetary contraction, as it led to a further decrease in the money multiplier. David Beckworth, in particular, saw the dangers of the Fed's policy early on and compared it to the policy mistakes made by the Federal Reserve in the second part of the Great Depression in 1936-37. Beckworth (2008).

"Now in 2008 the Fed did not suddenly increase reserve requirements but it did just start paying interest on excess reserves. The Fed, then, just as it did in 1936-37 has increased the incentive for banks to hold more excess reserves. As a result, there has been a similar decline in the money multiplier and the broader money supply (as measured by MZM)...If the Fed's goal is to stabilise the economy, then this policy move appears as counterproductive as was the reserve requirement increase in 1936-37."

Subsequent events have clearly proven Beckworth right and it is very likely that had the Federal Reserve not introduced interest on excess reserves then the monetary shocks would have been significantly smaller.

Finally, Beckworth and Hendrickson (2011) in a ground-breaking econometric study of what they call the four Great Spending Crashes in the USA over the last decade have provided strong empirical support for the Monetary Disorder view of the Great Depression based on their expanded equation of exchange. Beckworth and Hendrickson particularly stress the importance of the collapse in the money multiplier triggered by among other things the Federal Reserve's decision to introduce interest on banks' excess reserves held at the Fed.

In praise of Lars E. O. Svensson and Swedish Monetary Policy after 2008

The Market Monetarists are in general critical of the performance of most central banks in the world during the Great Recession but the monetary policy of the Swedish central bank Riksbanken has had some praise from Market Monetarists.

It should be stressed that the Riksbanken does not target the NGDP level as suggested by Market Monetarists (see below) but is a traditional inflation-targeting central bank. However, Market Monetarists have, nonetheless, praised the Riksbanken's policy response to the Great Recession, as it ensured that Swedish NGDP returned to its pre-crisis path relatively swiftly – unlike NGDP in the US or euroland.

Market Monetarists highlight three aspects of the Swedish policy response in particular.

1. The Swedish money base was boosted to 25% of GDP. In comparison, the Federal Reserve increased the US money base to 15% of GDP.
2. While the Federal Reserve paid interest on bank's reserves deposited at the Federal Reserve, as an emergency measure the Riksbanken actually implemented *negative* interest rates on reserves.
3. Finally, unlike the Federal Reserve, the Riksbanken has a clearly stated monetary policy objective and that is inflation targeting. Even though Market Monetarists see the inflation target as inferior to an NGDP level target, they prefer it to the Fed's "non-target" policy.

Obviously, there are caveats. The Swedish economy is significantly smaller and more open than the US economy and much of the monetary easing in Sweden has been a result of an initial very sharp depreciation in the Swedish koruna. Nonetheless, the Swedish example illustrates that monetary policy is far from ineffective at interest rates near zero.

Another element in the “Swedish story” is that Lars E. O. Svensson, who has been Swedish central bank deputy governor since 2007, is somewhat of a hero particularly for Scott Sumner²¹. Sumner is especially fond of highlighting two of Svensson’s contributions to economic theory. First, Svensson has argued that central banks should “target the forecast” – in other words the central bank’s monetary policy target (for inflation) should be equal to the policy forecast. If they aren’t equal, policy should adjust to equate the forecast and policy objective. While the Market Monetarists prefer “market forecasts”, they acknowledge that a second best solution could be forward-looking monetary policy based on “in-house” central bank forecasts of policy objectives.

Second, Scott Sumner has also highlighted Svensson’s (2000) seminar paper “*The zero bound in an open economy: a foolproof way of escaping from a liquidity trap*”, as it shows that exchange rate policies can be used to “escape” the liquidity trap. This is fully in line with Market Monetarist reasoning.

In regard to the “foolproof” escape from the liquidity trap, Sweden’s economic history provides an example, which has been highlighted by Market Monetarists, that exchange rate policies can be used to escape a liquidity trap. Hence, in 1931 the Swedish uniquely introduced a gold-exchange rates based price level target regime, which was instrumental in pulling Sweden out of the Great Depression much faster than most other industrialised countries²².

²¹ It should be stressed that Lars E. O. Svensson himself can in no way be considered to be a Market Monetarist – rather in most aspects of his research he is a traditional New Keynesian.

²² For more on the Swedish experience of price level targeting in the 1930s see Berg and Jonung 1999. The Swedish policy during the Great Depression was a variation of Irving Fisher’s so-called Compensated Dollar Plan (See Fisher 1911). Fisher is another hero for the Market Monetarists and his Compensated Dollar Plan has clearly inspired the Market Monetarist’s thinking on monetary policy instruments and targets. Scott Sumner’s blog is named after Fisher’s book *The money illusion*.

From money supply targeting to NGDP targeting

While traditional monetarists (Friedman 1960) have favoured different forms of money supply growth rules to stabilise the price level or inflation, Market Monetarists in general favour some form of NGDP level targeting²³.

Scott Sumner lays out the case for NGDP targeting in, among other places, *“The Case for NGDP targeting – lessons from the Great Recession”* (Sumner 2011D). Here he argues forcefully for the advantages of NGDP from a basically utilitarian²⁴ perspective.

In his 2011 paper, Scott Sumner presents numerous arguments for NGDP. A key reason he and other Market Monetarists prefer NGDP level targeting to a rule for money supply growth is that Market Monetarists in general do not think money velocity is stable enough for a measure of the quantity of money to be the base for a monetary policy rule. Crudely speaking, the Market Monetarists want to target the *level* of the right-hand side of the *Equation of Exchange*²⁵, while traditional Monetarists prefer to target the *growth* of the left-hand side of the equation (assuming velocity to be constant).

Most important is the argument that monetary policy can influence only *nominal* variables in the long run – and not *real* variables²⁶. However, traditional inflation targets basically try to “split” NGDP between inflation and real GDP growth (RGDP). As Sumner states: *“Nominal GDP targeting provides a way to address both inflation and output stability, without placing the central bank in the confusing situation of having to aim at two separate targets”*. This also

²³ The American Market Monetarists Scott Sumner, David Beckworth and William Woolsey all favour some variation of NGDP targeting, while the Canadian Market Monetarist Nick Rowe is less explicit in his support for NGDP targeting and tends to support more traditional inflation targeting – especially in cases where inflation targeting regimes have gained a near constitutional status as in Canada or New Zealand.

²⁴ Scott Sumner is basically a *pragmatic revolutionary* in the tradition of Milton Friedman (Christensen 2002). As Friedman, Sumner always argues pragmatically and non-ideologically but the consequences of his arguments are revolutionary.

²⁵ The Equation of Exchange: $MV=PY$, where M is the money supply, V is the velocity of money and $PY=NGDP$.

²⁶ The Phillips curve is vertical in the long run and so is the AS curve in the traditional AS-AD model. Scott Sumner, in particular, often uses the AS-AD model when he is presenting his arguments in his blog.

means that the central bank will have to react “erratically” to supply shocks such as oil price shocks and productivity shocks²⁷.

It is also key that the Market Monetarists are in favour of targeting the *level path* of NGDP rather than the growth of NGDP. Typically, Market Monetarists prefer a “moving target” in the sense that the central bank targets a path for the level of NGDP with a fixed growth rate of, for example, 5%²⁸.

An advantage of targeting the *level* rather than the yearly growth of NGDP is the rule has “history”, so if the central bank “overshoots” (“undershoots”) its target one year then it will have to make up for this in the following period. This is contrary to money supply growth rules or an inflation target, both of which are “forgiving” rules. Hence, if the inflation target is overshot one year, the central bank will not “pay back” the following year. Level targeting therefore anchors long-term expectations to NGDP better than a growth-based rule. It should also be noted that NGDP targeting will reduce short term fluctuations as the public expects faster going forward whenever growth falls below target in the near term.

The Market Monetarists advocate a “starting point” for NGDP in a year or a period where there were no significant monetary imbalances and therefore no major macroeconomic disturbances. For the US, the Market Monetarists refer to the Great Moderation as such a period, where NGDP grew by a relatively steady rate around 5.0-5.5% and the yearly divergence from the underlying path for NGDP was relatively small. However, this period of NGDP stability ended in 2008 and since then NGDP has fallen well below the “old” path for NGDP. The Market Monetarists argue forcefully that the Federal Reserve just implemented an NGDP level target based on the “old” path for NGDP and significant monetary loosening is, therefore, needed to bring back NGDP to its old path. This might – or might not (if most of the increase in NGDP happens through a RGDP) – imply a significant increase in inflation in the

²⁷ Woolsey (2011B) argues that NGDP level targeting (relative to inflation targeting) should be preferred when dealing with supply shocks precisely because the central bank should not have to care about how to “split” NGDP between prices and RGDP.

²⁸ Scott Sumner’s preferred growth rate for NGDP is 5%, while William Woolsey prefers a 3% growth path for NGDP. In an economy with 3% growth in potential GDP, a 5% target for the NGDP path would imply that long-term inflation would be 2%. Sumner’s preference reflects the *pragmatic* position that during the Great Moderation NGDP grew at around 5% (or rather 5.5%).

short run but Market Monetarists stress that this is not permanently higher inflation just that the Federal Reserve will de facto be paying back the “undershoot” of NGDP²⁹.

Until now, the Market Monetarists have mostly been arguing for an NGDP level target based on “practical” grounds in the sense that it would “work better” than alternative targets or non-targets. That said, there is a deeper more theoretical and one might even argue philosophical foundation for targeting the NGDP level. In this regard, the Free Banking theorists such George Selgin (1988) and David Glasner (1989), in particular, should be noted. Selgin in his masterpiece *“The theory of Free Banking”* shows that in a perfect competition model of Free Banking with private money insurance the money supply will be fully elastic so any increase in money demand will be met by a one-to-one increase in money supply and hence in equilibrium NGDP will be stable. Therefore, from a welfare theoretical perspective, one can say that a central bank, which is an NGDP level targeter is “emulating” the market outcome in a perfect competition Free Banking model.

David Glasner (1989) – inspired by Earl Thompson (1982) – has suggested another Free Banking model where a wage index is targeted instead of the NGDP level. In reality whether a nominal wage index is targeted or a NGDP level is targeted would probably not make much of a practical difference. The proposal to target a wage index goes back to Hawtrey (1932).

What macroeconomic objective to target in monetary policy is one thing. How to implement the policy is another. Here again the Market Monetarists stress the importance of markets in the conduct of monetary policy through what they call NGDP futures.

Here is how Sumner (2009B) describes the suggested scheme.

“I have advocated a policy where the Fed pegs the price of a 12-month forward NGDP futures contract and lets purchases and sales of that contract lead to parallel open market operations. In essence, this would mean letting the market determine the monetary base and the level of interest rates expected to lead to 5% NGDP growth.”

²⁹ This can also be formulated within the framework of the Equation of Exchange ($MV=PY$). The Federal Reserve should simply make up for the fall in V caused by the sharp rise in money demand by increasing the money supply M for a given (path) for PY (NGDP).

This means that if the market in general expects NGDP to be lower than the central bank's target then the price of the future would tend to fall. However, as the central bank is pegging the price of the future it will buy futures to ensure the price increases until the future's price reflects the central bank's NGDP. Similarly, if the market expects NGDP to overshoot the target, the central bank will "automatically" sell NGDP futures. The central bank does however not necessarily have to buy or sell NGDP futures. It might also "just" use the NGDP futures as an indicator of NGDP expectations and then control the money base in a more "normal" fashion via open market operations.

The important thing with the use of NGDP futures in the conduct of monetary policy is that monetary policy becomes endogenous (or at least quasi endogenous) and based on market expectations rather than on the central bank's "in-house" expectations about NGDP. A major advantage of this is that monetary policy will become depoliticised and fully market based. In this set-up the money supply would effectively also become fully elastic and any increase in money demand would automatically be met (fully automatic) by an increase in the money supply.

Sumner notes two other advantages of futures targeting.

"One advantage is that the central bank would no longer have to choose a policy instrument. Their preferred instrument, the fed funds rate, proved entirely inadequate once nominal rates hit zero. Under futures targeting each trader could look at their favourite policy indicator and use whatever structural model of the economy they preferred."

Hence, futures targeting would solve any problem with liquidity traps. Sumner continues with a second advantage.

"I realise that there was another, even more powerful advantage of futures targeting credibility. The same people forecasting the effects of monetary policy would also be those setting monetary policy. Under the current regime, the Fed sets policy and the market forecasts the effects of policy. To consider why this is so important, consider the Fed's current dilemma. They have already pumped a lot of money into the economy but prices have fallen over the past year as base velocity plummeted. Certainly if they pumped trillions more into the money supply at some point expectations would turn around. But when this occurred, velocity might increase as well"

and that same monetary base could suddenly become highly inflationary. This problem does not occur under a futures targeting regime. Rather, the market forecasts the money supply required to hit the Fed's policy goal, under the assumption that they will hit that goal. Today we have no idea how much money is needed, because the current level of velocity reflects the (quite rational) assumption that policy will fail to boost NGDP at the desired rate."

In an earlier paper Sumner (2006) also noted that a system with futures targeting on the central bank's policy objective (NGDP or price level) would be a step in the direction of a full privatisation of the issue of money. However, in his recent writings, this argument has not played a central role – even though he and other Market Monetarists clearly stress that they want to seriously reduce the discretionary powers of the Federal Reserve (and other central banks for that matter).

The Market Monetarists clearly prefer “rules” rather than “discretion” in monetary policy. In fact a key criticism from Market Monetarists of the way QE has been implemented by the Federal Reserve is that it has been far too discretionary, rather than been based on transparent rules.

Market Monetarists are often mistakenly taken to be “inflationists” who are in favour of Keynesian style activist policies. However, this is clearly wrong but undoubtedly in my mind a result of the Market Monetarists' strong advocacy of monetary easing in the US in the present situation where NGDP is far below what they consider an appropriate level (the “old” pre-crisis NGDP trend). That the Market Monetarists are advocating “monetary stimulus” is therefore not advocacy of discretionary policies but basically just a result of their view that monetary policy is too tight to achieve the policy objective. However, Market Monetarists would similarly be “hawkish” if NGDP was running above the NGDP target.

However, that Market Monetarists favour NGDP level targeting means that they would not be worried if inflation increased significantly in the short term if it was part of the “process” towards achieving the NGDP target level.

On the other hand, assume that the economy is hit by a positive productivity shock to RGDP and that this pushed NGDP above the NGDP target level, then the Market Monetarists would not mind seeing lower inflation or even deflation.

Market Monetarist methodology – market testing rather than econometrics

Given that Market Monetarism as an economic school is very young and only really “live” in the blogosphere, it is difficult to discuss a methodological approach. However, there are some common attitudes to methodology among the Market Monetarists.

In particular, I highlight the following methodological commonalities.

1. Sceptical view of “large scale” macroeconomic models. The Market Monetarists tend to dislike the kind of large-scale macroeconomic – typical New Keynesian – models that, for example, most central banks utilise. Rather, Market Monetarists prefer simpler, smaller models and dictums.
2. “Story-telling” and a general case-by-case method of studying empirical facts rather than using econometric models. This is due to the Market Monetarists’ view of the monetary transmission mechanism as basically forward looking. Despite significant progress in econometric methods, common econometric methods basically cannot handle expectations and therefore any econometric study of “causality” is likely to be flawed, as monetary policy works with “long and variable *leads*”.
3. Market Monetarists’ preferred empirical method is to combine actual knowledge of relevant news about, for example, monetary policy initiatives with analysis of market reactions to such initiatives. As such, Market Monetarists’ methods are highly eclectic.
4. Market data is preferred to macroeconomic data. As markets are assumed to be efficient and forward looking, all available information is already reflected in market pricing, while macroeconomic data is basically historical and as such backward looking.
5. Economic reasoning rather than advanced maths. Market Monetarists base their thinking on rather stringent economic theorising and reasoning but are very critical of the kind of mathematically based models that dominate much of the teaching in economics these days.

Market Monetarism rather than Quasi Monetarism

Throughout this paper I have used the term Market Monetarism. However, none of the five main Market Monetarist bloggers uses this term. Instead, they in general use the term Quasi Monetarist to describe their views. I am critical of this term, as it does not say anything about

the school other than that it is a sort of monetarism. “Quasi” undoubtedly also makes it sound like a half-baked version of an economic school.

An economic school’s name naturally should represent the key views of the school. The Monetarist part is obvious as there is a very significant overlap with traditional monetarism. The difference between Market Monetarism and traditional monetarism, however, is the rejection of money supply targeting and the assumption about the stability of velocity is at the core of Market Monetarists’ reformulation of monetarism.

Instead of monetary aggregates and stability of velocity, Market Monetarists advocate the use of markets as an indicator of monetary disequilibrium. Furthermore, Market Monetarists advocate using market instruments such as NGDP futures – and in the case of William Woolsey Free Banking – as a tool to stabilise the policy objective (nominal GDP).

Hence, while money matters for traditional monetarists money *and* markets matter for Market Monetarists. This to me is enough justification to name the school Market Monetarism.

Isn’t Market Monetarism just the internet version of traditional Monetarism

There is no doubt that the view outlined above as Market Monetarism is very close to traditional Monetarism and Milton Friedman would probably find it hard to disagree with much in Market Monetarism. Hence, one can ask the question why not just call it monetarism plain and simple. There are good arguments for this but Market Monetarism has to be seen as the new and improved version of Monetarism. It is still Monetarism but it is better as it corrects the mistakes of traditional monetarism – such as money supply targeting.

Furthermore, Market Monetarism has to be seen as the Second Monetarist Counter-revolution against Keynesian and Neo-Wicksellian thinking in the economic profession and among policy makers in the same way that Milton Friedman led the Monetarist Counter-revolution against Keynesianism starting in the 1960s.

Finally, it should be noted that a number of traditional Monetarists, such as Allan Meltzer and Anna Schwartz, no longer really advocate monetarist ideas. Both Meltzer and Schwartz have been critical of quantitative easing of US monetary policy and Allan Meltzer has even

indicated that he thinks the US economy is caught in a liquidity trap³⁰. Hence, to save the Monetarist counterrevolution from its founders a Market Monetarist revolution is necessary or in the words of Scott Sumner (Sumner 2011C):

“It pains me to write this because monetarism has greatly informed my worldview. Meltzer is probably one of the three most distinguished post-war monetarists (along with Brunner and Friedman). But it seems to me that this type of monetarism has reached a dead end. It needs to be reformulated to incorporate the insights of the rational expectations and EMH revolutions. It needs to focus on targeting the forecast, using market forecasts, not searching for an aggregate with a stable velocity. And it must be symmetrical, with just as much concern for excessively low NGDP growth as excessive high NGDP growth. It needs to offer answers for high unemployment and advocate them just as passionately as Friedman and Schwartz argued that monetary stimulus could have greatly reduced suffering in the Great Depression. Just as passionately as Friedman and Meltzer argued for monetary stimulus in Japan once rates hit zero. Unemployment is the great tragedy of our time. History will judge the current schools of thought on how seriously they addressed this issue.”

This is a call for a Market Monetarist counterrevolution.

Research agenda

Market Monetarism is growing out of the blogosphere. This makes the school unique as an economic school. However, even though all of the main Market Monetarist bloggers have done scholarly work and written articles for traditional economic journals, there is undoubtedly a need to take the school to a new level and to get overtly Market Monetarist papers published in the traditional journals.

Furthermore, there is a need to broaden the research interest of Market Monetarists. It is very clear that Market Monetarism is extremely US centric. Hence, the Market Monetarists, for example, have very little to say about monetary policy issues in small open economies or

³⁰ See Sumner (2011C) for Scott Sumner’s critic of Allan Meltzer’s apparent defence of the liquidity trap (Meltzer 2011). William Woolsey (2010B) also criticises Meltzer’s (new) views of monetary policy and monetary theory.

about optimal monetary regimes for Emerging Markets. For example, should Brazil adopt a NGDP target? Should Lithuania?

Beckworth's research on the Federal Reserve as a global "Monetary Superpower" (Beckworth and Crowe 2011), which exports monetary disequilibrium might also inspire new research on the international dimensions of Market Monetarism. Also, in terms of international monetary economics, what role did European dollar demand play in the Great Recession? There seem to be some obvious similarities to European gold hoarding during the Great Depression. Sumner describes this in excellent fashion in his unpublished book on the Great Depression (Sumner 2011E).

Given the blog orientation of Market Monetarism, the focus has been very much on the nearly daily ups and downs in US monetary policy. This means that the focus has been highly empirical rather than theoretical. There is no doubt the Market Monetarists have a clear and concise theoretical framework but given that this framework is presented in short blog entries it is difficult to get "the big picture". In this paper, I have tried to draw a bigger picture of Market Monetarism but this is surely not enough and much more research is needed.

Finally, I would like to stress a couple of research areas where Market Monetarists in my view could and should contribute.

First, as already mentioned, there is a need to expand the Market Monetary model from a very US centric model to one covering small open economies, including the need to formulate a theory of exchange rate determination based on combined insights from the two core views Monetary Matters and Markets Matter.

Second, while Market Monetarists have argued forcefully why NGDP level targeting would be good in broad macroeconomic terms, a theoretical analysis of the issues is warranted. Here research done by Free Banking theorists such as George Selgin could be an inspiration³¹. Obviously, William Woolsey is both a Free Banking theorist *and* a Market Monetarist. In general, there seems to be quite a bit of overlap in the methods of Free Banking theorists and

³¹ For a good discussion of the differences and similarities between the economics of Scott Sumner and George Selgin, see Woolsey (2009A) and Selgin (2009). It should also be noted that George Selgin was David Beckworth's Ph.D. advisor.

Market Monetarists and I find it likely that the future will bring a closer theoretical foundation for “merger talks” between the two schools.

Finally, while the Market Monetarist method of “story telling” and case studies clearly has value, there is also a need for more hardcore econometric testing of some Market Monetarist views, such as Scott Sumner’s view that monetary policy works with “long and variable leads”³².

I hope this paper has contributed to a broader understanding of Market Monetarism and helps to take the paradigm to a new level and broaden the influence from the blogosphere to a more academic audience.

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