

**Why Central Banks' Policies Have Differed and Might Yet Differ Again**  
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## Why Central Banks' Policies Have Differed and Might Yet Differ Again

By William R White

### Unpleasant Facts and the Differing Responses of Central Banks<sup>1</sup>

The catalytic moment for the current economic and financial crisis is commonly said to have been 9 August 2007. On that date, Banque National de Paris ceased to allow withdrawals from three of its off balance sheet vehicles, on the grounds that it could no longer reliably estimate the value of their assets. Since that time, most of the world's central banks have been confronted to varying degrees with three unpleasant facts. Broadly put, we have been witnessing the sharp reversal of all the remarkably positive economic and financial trends seen in some countries over previous years, and even over decades in others<sup>2</sup>. This in itself severely complicated the task of making monetary policy since these different facts often seemed to call for conflicting responses from monetary policy. It is not surprising then that the policies followed by different central banks also differed. Further, and perhaps even more importantly, these continuing developments are increasingly calling into question the underlying reasons for the crisis, and whether monetary policy might have contributed to it in some material way. Should different central banks give different answers to this deeper analytical question, the conduct of monetary policy going forward might also be affected.

The first unpleasant fact, seen most evidently around the time of the onset of the crisis was that inflation had risen to higher levels almost everywhere, but particularly so in a number of important emerging market economies (EME's). Higher prices for food and energy were a major contributing factor, but there were also fears in many countries that wages might also respond contributing to a more profound inflationary cycle. The second unpleasant fact, seen most evidently from the middle of 2008 to the middle of 2009 was that output in the real economy fell sharply and subsequently recovered only fitfully. This was particularly the case in a number of the advanced market economies (AME's), including a number of countries thought to have quite strong domestic "fundamentals". And the third unpleasant fact, affecting particularly the AME's with well developed capital markets, was that many of these markets became highly dysfunctional almost from the moment the crisis began. In addition, asset prices in most economies declined sharply, implying large losses at financial institutions and serious questioning of the adequacy of banks' capital levels. Indeed, a number of firms had to be merged and others (like Lehman Brothers) went bankrupt which only served to make the markets more dysfunctional.<sup>3</sup> With capital becoming ever more

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<sup>1</sup> The focus of this paper is on the monetary policy decisions of the central banks in the largest of the advanced industrial economies.

<sup>22</sup> The previous two decades in the United States had been characterized as "The Great Moderation". Both the level and volatility of inflation were low. As for output growth, while its level was high, its volatility was also low. Further, there were recurrent financial shocks but the financial system showed itself remarkably resilient. While other crisis ridden countries in the emerging market economies (EMEs) exhibited a much worse overall performance over a similarly long period, this decade has until recently been characterized by outstanding economic performance in most EME's.

<sup>3</sup> Whether it was the Lehman bankruptcy itself, or the way in which it was handled, is still being discussed. The fact that, under UK law, the collateral lodged by many hedge funds at Lehman Brothers was tied up seemed to call into question a fundamental assumption that had previously underpinned market functioning; namely, that collateral is owned by the pledging agent.

expensive, credit conditions tightened significantly in many countries as banks sought to deleverage. This led to concerns of a cumulative process that might feed back on to asset prices and global growth in turn.

Against this background, the response to date of different central banks has at times varied widely. At one end of the spectrum we have the central banks of Australia, Sweden and the European Central Bank who continued to tighten for almost a year after the start of the crisis. In contrast, the Federal Reserve began to lower the policy rate almost immediately, and even more aggressively than in the period from 2001 to 2003. The upshot of this was that the 125 basis point rate differential in favour of the United States (vis a vis the Euro area) in the summer of 2007 had turned into a negative differential of 175 basis points by August of 2008. The policy easing of the Bank of England also lagged significantly that of the Federal Reserve. Only after the failure of Lehman Brothers was a dramatic easing of monetary policy central to the agenda of almost every central bank around the world.

Moreover, from the current perspective of early 2009, it appears that central banks might also have differing views about how to respond to the “green shoots” that might be indicating a recovering global economy. Policy rates have ready moved up in Sweden, Norway, Australia and Israel. Again in sharp contrast, the Federal Reserve has stated that policy rates are likely to stay near zero in the United States until at least the end of 2010. While the European Central Bank has been less clear about its intentions, a number of statements from senior officials indicate serious reservations about maintaining the policy rate at “unnatural” levels for long periods. The Bank of Japan has made similar protestations for many years, but has not in fact tightened policy appreciably to date.

This diversity of responses needs explanation. Evidently, the different degrees of exposure to individual unpleasant facts in different countries must be a significant part of this explanation. However, it will be argued in this paper that a number of other key differences also need consideration. In spite of the growing focus of almost all central banks in recent years on keeping CPI inflation under control, central banks still differ in many other ways that can affect monetary policy decisions.

The extent to which a central bank’s mandate extends beyond near term inflation fighting matters. So too does its economic history, and how it comes to assess and give relative importance to different risks. Different assessments of the efficiency of monetary policy, in resisting both inflation and economic downturns, is also relevant. And finally, there is the issue of whether a central bank chooses to focus only on the desirable near term implications of policy (via Keynesian effects on aggregate demand) or to put some weight as well on undesirable medium term effects (largely arising on the supply side of the economy, or in the financial sector). This last consideration, reflecting stock and balance sheet effects, is fundamental. It raises important issues about macroeconomic theory and the usefulness of the economic models used by central bankers and academics respectively. Should mainstream theories be complemented, or even replaced, by some of the insights of the Austrian school and Hyman Minsky?<sup>4</sup>

Before turning to the differences in central bank behaviour, the first part of this paper stresses the similarities. Indeed, it suggests that the commonly accepted framework for the conduct of monetary policy in recent decades might have helped cause the current crisis. In effect, it presupposes an answer to the question of theory raised just above. If this supposition is correct, it evidently leads on to the question of how that analytical framework ought be changed to avoid such problems arising in the future.

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<sup>4</sup> For a fuller analysis of the practical usefulness of New Classical, New Keynesian and Keynesian models of the economy, see White (2009b)

In this regard, an important practical issue is the length of the policy horizon on which policymakers should focus in their pursuit of price stability. Beginning in the 1970's, an increasing number of central banks extended their policy horizon to allow them to capture the costly inflationary implications of the real growth which they were trying to stimulate with expansionary monetary policies<sup>5</sup>. The similar question today, on which central banks still seem to differ widely in their views, is whether the policy horizon should be extended still further to capture other undesirable side effects (below called "imbalances") of expansionary monetary policies. In the limit, as credit boom turns to bust, such imbalances could lead to deflation rather than inflation. Historical experience over the centuries indicates that debt-deflation is likely to be an even more costly threat to price stability<sup>6</sup> than moderate inflation.

It is an important corollary that this longer term framework would actually encourage the acceptance of measured deflation over shorter time periods. Not all deflations are "ugly"<sup>7</sup>, although those arising from credit driven "booms" and "busts" commonly are. To avoid such longer term outcomes, assuming that forecast inflation was under control, tighter monetary policy might then from time to time cause inflation targets to be undershot. The likelihood of this happening would depend in part on the rate of growth of productivity which, unless resisted by monetary stimulus, tends to drive prices down. The neglect of positive supply side shocks, in the essentially Keynesian framework used by most central banks to guide monetary policy, is a serious and perhaps even fatal shortcoming<sup>8</sup>.

### **Common causes for broadly common problems**

It is not hard to tell a story in which easy financial conditions over many years lie at the heart of current global difficulties. With inflation kept down by positive supply shocks, particularly due to the reintegration of many EME's back into the global economy, nominal interest rates in most of the world's major regions were kept very low for many years. For those central banks focussed on the achievement of price stability (a large and growing majority), there seemed no reason to raise policy rates, even though growth rates of global GDP were at record highs earlier in this decade. And, by the same token, there seemed no reason not to lower rates when growth slowed or financial disturbances threatened such an outcome in the future. This story essentially begins with the easing of monetary policies in the major industrial countries, particularly Japan, Germany and the United States in response to their respective "busts" in the early 1990's and at the beginning of this decade. However, as this easing eventually put upward pressure on the currency of the major EME's, these countries responded with massive exchange rate intervention and easier monetary policies as well. The former helped lower global bond rates, as foreign exchange reserves were invested in the major financial centres, and the latter encouraged more spending domestically.

This phenomenon can be put in a more Wicksellian perspective by noting that the aggregate global real 10 year bond rate (using TIPs rates where available) fell below the IMF's estimate of potential global growth in 1997. The former continued to fall subsequently, and the latter continued to rise. The gap between the "natural" rate of interest and the "financial rate" is thus of very long standing and had reached almost 4 percent by the middle of 2008. Since then, real policy rates have remained near zero in many regions and have often fallen

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<sup>5</sup> For many years, monetary policy was focussed almost solely on fostering near term real growth and employment. The longer term effects on inflation (implied by a negatively sloped long term Philips curve) were judged to be acceptable. This view was challenged and then repudiated by the Friedman-Phelps hypothesis of the natural rate of unemployment.

<sup>6</sup> For a very useful overview of this history, see Reinhart C and Rogoff K (2008).

<sup>7</sup> See Borio C and Filardo A (2005) as well as Atkeson A and Kehoe (2004).

<sup>8</sup> For a review of an extensive pre War literature on such issues, see Selgin (1997) and for a more recent discussion see Beckworth D (2008).

significantly below zero in others. In China, given its very high rate of potential growth, the Wicksellian policy rate gap could currently be as high as 6 to 8 percentage points.

Closely related, growth rates of money and credit aggregates were unusually high in all major regions (except Japan) for many years, with such figures exceeding 20 percent in many EME's in the years preceding the onset of the crisis. Moreover, even these measures underestimate significantly the degree of monetary and financial stimulus at work in the global economy. This was due to the simultaneous process of innovation in the financial sector (in particular the processes of securitisation, globalisation and consolidation) which had the effect of encouraging speculation, leverage and the reduction of credit standards. One manifestation of this latter process was that credit was made available to many who were previously denied it. This would of course include "covlite" corporate loans in many countries, below prime mortgage borrowers in the United States (and to lesser degree in some other countries), but also the recently urbanized poor in many EME's.

Low policy rates might themselves have encouraged this process of financial innovation. For example, tranching products like CDO's and CLO's were designed to make the senior tranches effectively look risk free<sup>9</sup>. As is now clear, the process did not reduce expected losses, but rather reduced the probability of loss while increasing the size of the loss should the event materialise. Similarly, low policy rates seem to have encouraged the expansion of markets in which the receipts come up front, but the prospective losses materialize only sporadically (if at all) and only in the future. Such behaviour would include the massive expansion in the writing of out-of-the-money options, credit default swaps and related instruments, and the pervasive use of carry trade strategies funded with low yielding currencies. Perhaps the most dangerous version of this latter trade was the growing recourse to mortgages, denominated in lower yielding foreign currencies, by household borrowers in some countries in Central and Eastern Europe.

One did not have to be a "monetarist", prior to the crisis, to worry that monetary and financial expansion of that long duration and large magnitude might eventually result in inflation. The record global growth rates in the years preceding the crisis did in fact eventually succeed in raising global demand to a level that matched the rapidly expanding near term supply potential of the global economy. Accordingly, inflationary pressures also began to rise. Commodity price increases were the cutting edge for these pressures, reflecting high income elasticity of demand, particularly in EME's, and a relatively low price elasticity of supply, particularly for metals and energy products. However, wages and prices also began to rise more broadly, particularly in EME's. While measured inflation in such countries showed the sharpest acceleration, inflationary pressures began to be seen in the AMEs as well. Higher import prices from EMEs were an early manifestation, but there were also other transmission channels<sup>10</sup> which aggravated domestic pressures on production capacities. Evidently, once the crisis began, these pressures retreated sharply with commodity prices once again leading the way. However, as will be discussed below, the full inflationary implications of the preceding period of rapid monetary and credit expansion might not yet have been fully seen in some countries. In particular, the United States and the United Kingdom have large current account deficits which could eventually lead to further exchange rate depreciation. Moreover, the pass through effects of depreciation on domestic inflation might well be greater than what has been observed in recent years<sup>11</sup>.

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<sup>9</sup> Rajan R (2005)

<sup>10</sup> . See White WR (2008).

<sup>11</sup> See Galati G and Mellick W R (2005) who document that exchange rate pass through declined in most countries in the years leading up to the crisis. If, however, this was largely because positive supply shocks were masking the effects of depreciation, this need not continue.

Nor did one have to be an “Austrian” to have worries that the prolonged and significant gap between the financial and natural rates of interest might also have other unwelcome effects. For many years preceding the crisis, the BIS had raised concerns about four sets of interrelated “imbalances” which they saw emerging in the global economy; where imbalances were broadly defined as sustained and significant deviations from historical norms. Two of these concerns had to do with the financial side of the economy; asset prices and the exposure of the financial system to losses of various sorts. The other two imbalances had to do with the real side of the economy; unusual domestic spending patterns and associated global trade imbalances. A constantly reiterated fear was that these financial and real imbalances would interact to dramatic effect in the downward phase of the credit cycle, as indeed they had interacted in the upward phase. These interactions lie at the heart of our current difficulties.

The first “imbalance” identified prior to the crisis was that asset prices seemed very high, both by historical standards and also by the application of traditional evaluation metrics. These included house prices almost everywhere, long bond yields, the level of the stock market in many countries, the price of high risk and sovereign bonds (ie they carried unusually low risk spreads) as well as the prices of antiques, fine art, wine and even stamps. Similarly, the price of buying insurance against risks of all sorts, prior to the onset of the crisis, was at record lows. It seemed hard at the time to explain these joint movements except in terms of the underlying and wide spread availability of cheap credit.<sup>12</sup>

Evidently, the problem associated with these elevated asset prices was that normalcy might be restored through a reversal of earlier price trends. Indeed, this is precisely what happened in the aftermath of the crisis<sup>13</sup>. House prices fell sharply in a number of countries and risk spreads everywhere rose significantly, as did implied volatility and the cost of risk protection. Unable to borrow further against the collateral provided by rising house prices, and subjected to increasingly tight credit conditions, household spending in many countries slowed sharply in consequence. Housing starts and employment in construction also fell sharply in many countries, contributing to a sharp rise in recorded unemployment

The second “imbalance” said to arise from the long period of easy credit conditions was the increased risk exposure of the global banking system and the financial system more generally. So much has been written on this, that the account can be brief. What is clear is that lending standards in many countries declined over many years in a wide range of markets; think not only subprime, but also near-prime, home equity, commercial property, credit card debt, structured products, cov-lite and well beyond. What is still not clear is how big the ultimate losses will be, or who will bear them, Ultimately, and unfortunately, this must also be unknowable in advance since the final outcomes will be dependent on the unwinding of all of the imbalances identified above. In turn, the economic damage caused will depend on the extent to which credit conditions tighten. In the end, everything becomes endogenous.

On this issue of declining credit standards, it is also worth noting that at least one school of thought concluded the crisis would be catalyzed by a subsequent and sudden increase in concerns about bank solvency. Hyman Minsky<sup>14</sup> posited three stages of credit expansion finally ending in “Ponzi finance” when loans would be made to service the interest on

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<sup>12</sup> For example, expectations of continuing rapid growth in the economy, especially with inflationary pressures rising, would have seemed more likely to push bond prices down even as they pushed equity prices up

<sup>13</sup> An important caveat here has to do with house prices in the United States. They began to fall well before the summer of 2007, and also most immediately sparked an increase in delinquencies. This was very unusual in that increases in delinquencies in the past were more likely to be associated with rising unemployment. The phenomenon is consistent with many houses having been purchased for speculative purposes.

<sup>14</sup> Minsky (1992)

previous loans. At what is now being referred to as a “Minsky moment”, a moment of joint “recognition and revulsion”, creditors would suddenly cease lending as they feared they would not be repaid. Such a crisis might look like it was prompted by a shortage of liquidity but, for Minsky, concerns about bank insolvency constituted the fundamental problem.

In addition to these two financial imbalances, real side imbalances were also expected to play an important role in explaining the magnitude of the post-crisis downturn. The influence of these factors has still not yet been fully appreciated.<sup>15</sup> The third of the “imbalances” referred to above was that of unusual and potentially unsustainable spending patterns in domestic economies. This insight is conceptually similar to what the Austrian school refers to as “malinvestments” facilitated by a credit system based on fractional reserve banking. While very low interest rates constituted the basic driver of credit extensions everywhere, the particular effects in different countries seemed very much related to their respective stage of financial development. In this regard, the United States was at one end of the spectrum (largely driven by market based lending criteria) and China was at the other (largely driven by politically influenced lending criteria). These financial considerations also played an important role in explaining global trade imbalances, which are further discussed below.

In the United States and a number of other countries (many English-speaking), the “malinvestment” associated with very low interest rates was a secular and ultimately unsustainable reduction in household saving rates to zero or even less than zero. As asset prices rose, so did the collateral available for borrowing, and the perception of increased wealth also seems to have discouraged saving<sup>16</sup>. In turn, as the demand for credit by households rose, banking systems refocused and made lending to households an integral part of their new business strategies. This change in orientation was further supported by the fact that lending to corporations was increasingly being done through markets. Associated with this lack of household saving was a steady increase in household debt to record levels as a proportion of income.

The problem implicit in the observed decline in household saving rates was that they might rebound with material and lasting effects on growth. Indeed, this process began shortly after the crisis hit, and was further encouraged both by the interaction of lower asset prices (particularly for houses) and the tightening of credit conditions noted above. In the United States, the initial sharp reduction in policy rates was met by an equally sharp rise in mortgage risk premia, such that mortgage rates rose for a time rather than falling. Moreover, in the United States and to a lesser degree elsewhere, a further exposure had been generated by new instruments (like “teaser” rates on subprime loans) which were designed to be serviceable over time only if house prices kept rising<sup>17</sup>. Once prices actually began to

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<sup>15</sup> Many commentators seem to feel that once the financial system has been restored to health, it will be “business as usual”. For a contrary position see White (2010).

<sup>16</sup> On the relative importance of collateral vs wealth effects, see Muellbauer J (2007) and White W R (2007) Both contend that the increase in “wealth” resulting from higher house prices is not in fact an increase in wealth, if wealth is correctly defined as the capacity to enjoy a higher standard of living in the future. The fundamental reason is that higher house prices imply an identical (once discounted) increase in the cost of housing services in the future. Living standards remain the same. However, because the price effect is up front, and the related costs distributed over the future, householders could well have the “perception” of being wealthier. This is similar to the bias towards short term results, and the tendency to ignore longer term risks, that often characterizes financial markets. Perhaps more importantly, higher house prices do increase collateral that can be used to borrow and to finance consumption. In the middle years of this decade, this was favourably viewed by some central bankers as a contribution to “intertemporal smoothing” which moderated the earlier downturn. The fact that, by definition, this meant there had to be less consumption in the future, was hardly ever mentioned.

<sup>17</sup> Giving such mortgages, to people incapable of servicing them from income sources, still generated fees for the mortgage originators up front. In most cases it was clear to the originator from the start that the borrower would not be able to service the loan after the “reset”. In such cases, it was intended that the mortgage would

fall, a significant proportion of householders found, not only that such refinancing was impossible, but also that that size of their mortgage was greater than the value of the house<sup>18</sup>. This could well lead to another round of foreclosures since the capacity for negotiated workouts in such circumstances currently seems very limited.<sup>19</sup>

In China the “malinvestment” arising from the especially wide gap between the natural and financial rates of interest was of a more traditional sort. The ratio of investment to GDP, prior to the global crisis, had risen to over 45 percent of GDP. Such a level of investment was not approached even at the height of the Japanese bubble of the 1980’s. Much of this investment has been conducted by enterprises which were still state owned or heavily influenced by the state. Local and regional political authorities had also exerted an important influence, with similar investments in fashionable industries threatening overcapacity. In both cases, the availability of low cost finance from state owned banks played an important facilitating role. Against this background, it is not difficult to imagine that many of these investments will in the end prove unprofitable or (for state sponsored infrastructure) unproductive. Further, Chinese investment was particularly focussed on heavy industry, ultimately directed to support production for export markets. Given that such investments tended to be extremely polluting and a particularly heavy user of commodities, their social rationality was being questioned within China even before the crisis broke.

As with the other imbalances, the primary concern raised pre crisis was that this unusually high level of investment might be cut back significantly. If this occurred before domestic consumption, which has been falling as a percentage of GDP, could rise to offset it, then domestic growth overall would suffer. However, even then there were counterarguments to indicate that this need not be an imminent worry. In particular, China seemed to have both the political and financial capacity to keep up investment demand as long as is required, even if it meant that the underlying problems would grow steadily worse. A second and related source of concern was the extent to which investments had been made in support of export orientated industries. The ultimate inter temporal imbalance, feared by the Austrians, would emerge if the build up of export capacity in Asia (and also Central and Eastern Europe) came on line just as a significant number of countries in the industrial world began to raise household saving rates in response to their past over-consumption. Thus, a slowdown in growth elsewhere in the world would have a material effect on China, and perhaps an even greater effect on those who export parts to China for assembly in that country.

The final “imbalance” identified prior to the crisis was that of global trade imbalances. In the United States and a number of other countries, unusually high levels of consumption (with generally high import content) drove up imports as a percentage of GDP to record levels. The counterpart surplus countries were generally to be found in Germany, Japan, South East Asia and regional producers of commodities. One contributing factor to the surpluses was a high level of national savings in some countries; in particular, China. Another was the fact

by refinanced against the presumed higher value of the house, and with a second set of fees being charged at the time. . As for the longer term risks of this strategy, there were none since the mortgage was then sold to a bank (generally to be securitized subsequently) and the originator generally had no personal exposure.

<sup>18</sup> As of end 2008, about one in eight houses in the US (with mortgages) had mortgages greater than the value of the house.

<sup>19</sup> Many sub-prime and AltA loans were granted to people who did not reveal that they had borrowed the down payment from another lender. These “silent second” mortgage holders are now a significant obstacle to restructuring efforts. Even though house price declines may effectively have wiped out the value of the second mortgage, the owner of that mortgage can still try to get value by interfering in the workout process between the debtor and the first mortgagor. See Ellis (2008). In addition, many mortgages have been wrapped into structured products which explicitly (and legally) forbid changing the original mortgage terms. Finally, it appears that there are many incentive structures now in place that lead to involved parties making more money out of a foreclosure than a negotiated settlement.

that the exchange rates (against the dollar) of many of the surplus countries were effectively pegged to the dollar (the yen tracked the dollar for different reasons) thus moderating the influence of the “elasticity” channel for reducing current account rate imbalances. Further, massive exchange rate intervention by surplus countries resulted in a buildup of foreign exchange reserves that were largely reinvested in longer term securities in deficit countries (especially the US). This had the effect of lowering long term interest rates, which moderated the “absorption” channel for reducing current account imbalances as well. The effect of these accumulating current account deficits was that the external debt of the United States had risen to unprecedented levels prior to the onset of the crisis.

It should be noted that the trade imbalance story had a worrying supply side component as well as a demand side. As noted above, financial systems at different stages of development in different countries (particularly the United States and China) resulted in different kinds of “malinvestments”. In the United States, there was unusually strong investment in consumer durables (especially cars and home furnishings) and investment in housing. Investments of this sort produce services over time which are not malleable. That is, unlike a machine tool, their output cannot be redirected for sale to foreigners or for import substitution. In China and some other countries, the stock of physical capital is more malleable, but it would still require significant time and effort (to say nothing of appropriate shifts in domestic demand), to redirect sunk capital from external to domestic markets.

The first worry raised by these global trade imbalances was that they might eventually spark a dollar crisis, with a massive depreciation in the effective value of the dollar. This might lead to financial disruptions of various sorts, as foreign holders of dollar denominated assets took big losses in domestic currencies. Further, these wealth losses might also impair aggregate demand in creditor countries, preventing domestic demand from rising to offset the depressing effects of lower levels of exports. A combination of “J” curve effects and a non malleable capital stock might further slow down any improvement in the trade imbalances, potentially leading to even more extreme exchange rate movements. A second worry was that these trade imbalances might lead to protectionist trade policies, particularly if global demand were to slow for any of the reasons noted above.

In the event, these particular risks did not materialize in the aftermath of the crisis. Contrary to most anticipations, the onset of the financial crisis did not result in strong downward pressure on the US dollar. On the contrary, with rising risk aversion and with long positions in US dollar assets having been financed with short term money, a dollar shortage emerged which (for a time) led the dollar to strengthen<sup>20</sup>. When the anticipated downward trend re emerged, it was met by even more vigorous monetary easing in many creditor countries (especially China) and still heavier exchange rate intervention.<sup>21</sup> As for protectionist pressures, they clearly began to rise, but their incidence was by no means as great as some feared.

To summarize: the emergence of rising inflation and financial turbulence, followed by a sharp slowdown in global economic activity, was caused by a long period of excessive credit expansion driven by easy monetary conditions and financial innovation. A tipping point marked the ending of the “boom” phase, along with its potentially inherently inflationary implications, and also marked the beginning of the “bust” phase. This latter phase is being driven by the simultaneous and interacting reversal of a number (if not yet all) of the imbalances which had accumulated in the boom phase. If unresisted by policy, this process

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<sup>20</sup> McGuire P and G von Peter(2009)

<sup>21</sup> Perhaps most important, whereas China had previously allowed the renminbi to drift upwards against the dollar, the dollar peg was reestablished during the crisis..

might well have culminated in outright deflation, made more dangerous by the magnitude of the nominal debts accumulated during the boom years.<sup>22</sup>

Virtually all central banks have, in the end, decided to resist these deflationary forces. In effect, they have all proved themselves “Keynesians” in that they saw the first prerequisite in the situation was to stimulate aggregate demand. In the use of this analytical framework, they are similar to their respective Ministries of Finance who have generally engaged in discretionary fiscal stimulus as well<sup>23</sup>. Yet, as documented above, there were as well significant differences in the timing and force of the central bank resistance to the crisis. Moreover, looking forward, virtually all central banks are talking about the need for “exit strategies”, a non-Keynesian phrase which implicitly seems to recognize that there is something “unnatural” about the current stance of policy. This need to “exit” being generally agreed, some central banks seem clearly to worry more about this than others. The rest of this paper explores those differences further.

### **Why Might Different Central Banks Choose to Behave Differently?**

When the crisis hit in August of 2007, it was clear that global inflation was on the rise. While food and energy were important components, these prices movements must be treated as endogenous at the global level. Thus “headline” inflation should have been a concern for the monetary authorities. Moreover, the history of the industrial countries in the 1970s indicated clearly that inflationary expectations could easily rise leading to second round effects and a future wage-price spiral. With the IMF at the time also predicting real growth in the global economy of over 4 percent, there were clearly big risks to the global inflation outlook. As well, the imbalances identified above were steadily growing. For both reasons, since higher inflation must eventually be resisted and larger imbalances are more dangerous than small ones, tighter monetary policies might generally have been expected. In fact, as noted above, the actual policies followed diverged significantly.

Many reasons can be suggested to explain past differences, and they also seem likely to affect policies going forward. Four sets of considerations would seem to account for different central banks having done what they have done. First, different central banks have different objectives, in part arising from their unique histories. Second, different central banks found themselves confronted with different objective circumstances. Third, they had different views about the effectiveness of monetary instruments in different circumstances. Fourth, different central banks put different degrees of emphasis on the urgency of dealing with today’s problems as opposed to the possibility of inadvertently making tomorrow’s problems worse. This last difference marks a significant analytical rupture, recalling in important respects the Keynes-Hayek debate of the early 1930’s<sup>24</sup>. It may be that a reopening of this debate will prove one of the few positive aspects of recent developments.

First, central banks have different objectives. On the one hand, there is little doubt that central banks globally have converged on a framework that gives significantly more emphasis to inflation control while remaining cognizant of the costs of real output deviating from potential. The remarkable spread of explicit “inflation targeting regimes” is one

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<sup>22</sup> The classic reference here is Fisher I (1936).

<sup>23</sup> This has not been the case everywhere. For example, the economies of Hungary and Ireland were particularly hard hit by the crisis. Nevertheless, both governments used discretionary fiscal tightening to offset in part the massive effect on government deficits of automatic stabilisers and the drying up of tax revenues previously thought to be structural rather than cyclical. In the former case, the fear was of a massive run on the florint, and in the latter case an unsustainable increase in the risk premia on government debt. In effect, discretionary tightening was judged to be less contractionary than the alternative likely to be imposed by increased market discipline.

<sup>24</sup> Cochrane J P and F R Glahe (1999).

indication of this trend, though the differences in both approach and results between implicit and explicit inflation targeters seems to be less than many believe<sup>25</sup>. On the other hand, the central banks of all the largest currency areas do not in fact consider themselves to be explicit inflation targeters, and this gives considerable scope for different policy choices.

The Federal Reserve has a dual mandate concerning the maintenance of both growth and price stability, and seems to have an historical bias towards the former. This is not surprising. After all, the “Great Depression” was the defining economic event for the US in the twentieth century. In contrast, the ECB must put price stability first, but can then exploit whatever leeway this provides to pursue other objectives. This is also not surprising and consistent with their history, since the defining economic event for them in the twentieth century was the hyperinflation in middle Europe in the 1920’s. In sum, the Fed could have a relative bias in favour of supporting growth, while the ECB has a similar bias to fighting inflation. Finally, another argument supporting the need for the European Central Bank to be relatively cautious was that it was a relatively new institution. Therefore, its credibility was more open to question, particularly since it had failed to hit its inflation targets at times in the recent past<sup>26</sup>.

Second, central banks always find themselves reacting to somewhat different near term prospects, and these differences can be widened if they put different emphasis on different “indicators” for the conduct of monetary policy. This was clearly the case in mid 2007, as evidenced by the different reaction of the Federal Reserve and the European Central Bank to ongoing events. One reason why the Fed eased so vigorously relative to others was that the downside risks for growth seemed much greater in the United States. There, the household spending (balance sheet) imbalances seemed very large compared to the problems faced by European households and US house prices had already begun to fall significantly. As well, and closely related, the US financial system seemed more exposed, and evidence was accumulating that US credit conditions were tightening sharply. Such considerations would help explain the relatively greater degree of easing in the United States.

As further support, it could also be argued that the Fed’s focus on core inflation, in contrast to the ECB’s emphasis on headline inflation, gave very different impressions of the seriousness of the inflationary problem. Further, it might have been thought that inflationary expectations were more stable in the United States, and that the relative absence of unionisation and wage indexation would also work in the same direction<sup>27</sup>. Rising inflation in the United States was then thought to be both less likely and more tolerable in the United States than in Europe.

The third reason why central banks might differ in their policy responses would be different assessments of the effectiveness of monetary policy. Again, a comparison of the Fed’s views with those of others might provide some insights. The Fed clearly felt, not only that their objective was to resist a potentially serious downturn, but also that the monetary instruments they had at their disposal would be effective in doing so. Chairmen Greenspan and Bernanke stated repeatedly that, while it was not effective to use monetary policy to lean against asset

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<sup>25</sup> See White (2008) .

In China, for all practical purposes, it is the objectives of the State Council that govern the conduct of monetary policy. Moreover, these objectives could change quite quickly depending upon the assessment of whether, at any moment, slowing growth or rising inflation posed the greater threat to social stability. The mandate of the Bank of Japan is not in fact clear, and they operate as well under immense pressure from the government via the Ministry of Finance. Such pressures might be expected to be especially potent in a society traditionally driven by consensus.

<sup>27</sup> Union membership in the US has fallen to around 7 percent of the workforce, and most of this is in seriously troubled industries (automobiles, airlines, construction etc.). In Europe, union members make up around 25 of the workforce.

price bubbles, monetary instruments would be effective in cleaning up afterwards. Evidence from simulations with economic models were commonly cited<sup>28</sup>, as was the successful and repeated use of such policies in the past. Recall that interest rates were lowered sharply in response to financial and economic shocks in 1987, 1990, 1998, and 2001 and were kept on hold in 1997 during the Asian crisis. In every case, recovery (or continued expansion) followed. Finally, spokesmen for the Board stated repeatedly that it was the failure of monetary policy to ease aggressively in the US Great Depression (in the 1930's) and at the beginning of the Japanese Great Stagnation (in the 1990's) that was fundamentally responsible for these outturns. In short, the Fed did what it did because it thought it was necessary, and because they thought that it would work.

There is not a great deal of evidence for or against the proposition that other central banks shared the Fed's strong views on this. Only the Bank of Japan made it clear, on the basis of its own experiences, that cleaning up after a boom-bust cycle was by no means easy. What is also clear is that there were plausible counterarguments to each of the arguments presented by the Fed<sup>29</sup>. Moreover, these arguments gained force with each day that the economic downturn gained momentum in spite of the (eventual) vigorous monetary policy easing on the part of almost everyone. The fact that traditional means of monetary easing had in the end to be supplemented with "quantitative" and "credit easing" respectively<sup>30</sup> testifies further to the ineffectiveness of traditional monetary easing. Of course, the Zero Lower Bound problem might be introduced logically as a separate constraint necessitating such unusual monetary measures. However, it had been pointed out much earlier<sup>31</sup> that a central bank would inevitably be driven to such a point if (like the Fed) it followed a monetary policy that was asymmetrically easy in the downward phase of successive economic cycles.

The fourth set of explanations for divergent policy reactions is that different central banks might give different weights to solving the problems of "today" as opposed to worrying about the problems of "tomorrow". Again, there seems to be something of a trans-oceanic divide<sup>32</sup>. The approach of the Federal Reserve is to focus almost wholly on setting policy to have the desired effect on growth and inflation over a relatively short policy horizon, say two or three years. In this one period context, the domestic output "gap" plays a dominant role in assessing the prospects for inflation. Very little concern is given to the possibility that such policies might, even though they work effectively within that time frame, create "imbalances" which would make policy making more difficult in subsequent periods.

Reference was made above to the various occasions in which monetary easing in the United States (and elsewhere) did seem to lead to subsequent recovery or continued economic expansion. But the same experiences can also be viewed through a different lens. Arguably, the easy monetary conditions which followed the sharp easing of monetary policy in 1987 contributed to the property price boom in the late 1980's and the crisis which subsequently affected the Saving and Loans Associations. The easing of policy through the early 1990's led to a further decline in the US dollar, and the Asian currencies which chose to peg to it. The excessive lending and investment which followed, culminated in the 1987 Asian crisis.

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<sup>28</sup> See, for example, Mishkin (2007)

<sup>29</sup> White (2009a)

<sup>30</sup> See Borio and Disyatat (2009)

<sup>31</sup> White (2005)

<sup>32</sup> From the perspective of the history of economic thought, the divide is between the "Keynesians", whose views are essentially summarized in the one period IS/LM model, and the Austrians who tell a much more dynamic and forward looking story. See Laidler D (1998) and White (2009b)

Putting US policy rates on hold, in spite of all traditional indicators pointing to overheating,<sup>33</sup> then encouraged the position taking which led to the LTCM crisis in 1998. Subsequent interest rate decreases then contributed to the momentum of the NASDAQ “boom-bust”. Finally, the monetary easing from 2001 to 2003 contributed significantly to the buildup of the imbalances referred to earlier in this paper.

It is also noteworthy that the easing phases of US monetary policy over this twenty year period became ever more aggressive. Not only were the peak-to-trough movements larger, but the speed of the movements increased. The easing in 2007-8 was more dramatic than 2001-3, which was itself more dramatic than in earlier cycles. One plausible reason for this was the increasing need to offset the growing “headwinds” of debt and associated problems in the financial system. Chairman Greenspan recognized the problem of headwinds as far as far back as the recession of the early 1990’s, and they grew steadily stronger over the years. In effect, each phase of easing not only set the scene for the next **financial** bubble, but it ensured that the following bust in the **real** economy would be still more resistant to monetary easing. If this logic can be followed to its limit, monetary easing would in the end have no stimulative effects on the real side of the economy at all. Indeed, this may be the point at which the US economy has already arrived.

The European Central Bank seems somewhat more open to such forward looking (multi-period) considerations, though perhaps still not being totally convinced. Europeans have traditionally worried more than North Americans about “moral hazard”, and in recent years some Europeans have raised specific concerns that the “Greenspan Put” was creating serial bubbles in the United States and elsewhere.<sup>34</sup> The ECB also has its second “pillar”, which lets policy be influenced by a presumed long run relationship in which monetary growth leads to inflation. However, it is actually the Bank of Japan that seems most worried about the longer run side effects of policies that seem perfectly sensible in a short term context. Indeed, the second “perspective” guiding the policy of the Bank of Japan is an implicit vow to conduct policy such that the mistakes made in Japan in the 1980’s are never repeated. Note, however, that this is a very different concept to the second “pillar” of the ECB. The Japanese worry is that excessive monetary and credit creation might well lead to deflation (after the bubble bursts) rather than inflation. Such concerns presumably underlie the Bank of Japan’s continuing frustration in not being able to “normalize” the level of policy rates.

Another indication that different central banks might have different policy horizons can be found in their assessment of the implications of “Quantitative Easing”. On the one hand, the Fed’s view has a decidedly one period flavour. There can be no inflationary upsurge as long as the output gap is negative. Thus, close monitoring of the gap and its projected behaviour, which would prompt in turn an appropriate monetary response, would suffice to head off future inflation<sup>35</sup>. On the other hand, it could be suggested that, over time, a more direct link (bypassing the real economy) might be forged between monetary easing, inflationary expectations, and then inflation itself. Should fears of monetisation raise inflationary

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<sup>33</sup> The decision was also justified in terms of “New Era” increases in potential, which would further lower inflationary pressures. However, if “bubbles” were possible problems as well, then failing to raise rates exacerbated these problems.

<sup>34</sup> See Issing (2009).

<sup>35</sup> Of course, this still leaves open the possibility of policy error. Going forward, the levels of both projected demand (due to balance sheet effects) and potential supply (for reasons noted in the text) are open to unusual degrees of forecast error. Moreover, many central banks will be trying to reverse policy measures of unprecedented character and magnitude. Given this reality, it will not be easy to avoid error. In addition, there will be very substantial political pressure, especially from governments with high debt levels, to keep policy rates low. This will not help to stabilize inflationary expectations.

expectations, even with a negative output gap, inflation could rise and potentially quite quickly. As noted above, currency depreciation in countries with large external deficits could play a crucial role in this regard. Such processes have been seen repeatedly in history, particularly in Latin America<sup>36</sup>, and cannot be ruled out of hand

All of the concerns raised above, about the negative longer run effects of monetary easing during a downturn, have to do with implications for the demand side of the economy. However, the effects of extended monetary easing on the supply side of the economy can be no less important. While most central banks tend to underplay the importance of such effects, those taking a longer term view of the implications of monetary policy are evidently more sympathetic to such arguments. It is now increasingly accepted that financial crises (mostly driven by preceding credit excess) can lead to permanently lower levels of “potential output” going forward<sup>37</sup>. Monetary easing might well exacerbate such tendencies. Low interest rates lead to lower saving rates, and capital accumulation in turn. Further, low interest rates can encourage the survival of “zombie companies” and even the “zombie banks” that finance them<sup>38</sup>.

These tendencies are even more pernicious if the “boom” has encouraged an unsustainable degree of production capacity to be built up in certain industries or regions. At the global level, a number of industries (construction, banking services, transportation, shipbuilding, wholesale distribution, steel, concrete etc.) currently look to be in such a situation. Further, as noted above, all of Asia is now geared up to produce goods and services that traditional importers can no longer afford to buy. These situations must be rectified through factors of production being re allocated to more profitable endeavours. If low policy rates actually impede such a reallocation, then they have supply side costs as well as demand side benefits.

### **Should There be More Convergence in Policy Settings?<sup>39</sup>**

In the previous section, four sets of explanations were given for why central banks might decide to do different things with their policy rates. However, to explain differences is not to validate them. On the one hand, if different countries find themselves in different objective circumstances in an assumed one period model (described above as “different worries about today”), or if they have different views about the effectiveness of monetary policy in given circumstances, then it might be appropriate to have different policy settings. On the other hand, the other explanations for different policy settings (different objectives, different degrees of concern about prospective future problems) raise the question of why those differences exist in the first place.

One possibility is that they are justified by different economies having different structures, in which case different policies might again seem warranted. However, another possibility is that some central banks simply discount too much the future costs of their current policy actions. Given this possibility, the question of whether concerns about rising “imbalances” should or should not play a central role in the setting of domestic monetary policies becomes

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<sup>36</sup> Most Latin American economies have been were traditionally relatively closed to external trade. Nevertheless, exchange rate depreciation traditionally sparked much more inflation than in the much more open Asian economies.

<sup>37</sup> See Cerra and Saxena (2008) and Reinhart and Rogoff (2009)

<sup>38</sup> Some commentators, particularly in Japan, would ascribe the length of the Japanese period of stagnation more to supply side rigidities of this sort (following the misallocations caused by the boom of the 1980's) than to policy mistakes on the demand side. See Sato (2006).

<sup>39</sup> This discussion will be strictly limited to questions of principle. Whether “exit strategies” for monetary policy need to be coordinated could be the subject for a separate paper.

a crucial question. So too is the assertion that the aftermath of such imbalances (the bust after the boom) can be easily cleaned up with appropriate macroeconomic policies. If the current global slowdown is subject to a “second dip”, and if expansionary global monetary policy in the end proves ineffective, debate on these issues will surely intensify.

## Bibliography (to follow)