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Should Monetary Policy “Lean or Clean”?*

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Abstract

It has been contended by many in the central banking community that monetary policy would not be effective in “leaning” against the upswing of a credit cycle (the boom) but that lower interest rates would be effective in “cleaning” up (the bust) afterwards. In this paper, these two propositions (can’t lean, but can clean) are examined and found seriously deficient. In particular, it is contended in this paper that monetary policies designed solely to deal with short term problems of insufficient demand could make medium term problems worse by encouraging a buildup of debt that cannot be sustained over time. The conclusion reached is that monetary policy should be more focused on “preemptive tightening” to moderate credit bubbles than on “preemptive easing” to deal with the after effects. There is a need for a new macrofinancial stability framework that would use both regulatory and monetary instruments to resist credit bubbles and thus promote sustainable economic growth over time.

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By William R White

A. Introduction

Should monetary policy **lean** against the wind of the expansion phase of credit upturns, in order to moderate boom conditions? Clearly, no one would question the desirability of leaning enough to reduce associated inflationary pressures. But should the reaction be stronger than that which near-term inflation control might seem to warrant? In particular, should policy be tighter than otherwise, given evidence of growing “imbalances” in the real economy¹ or increasing systemic exposures in the financial system? Or should an alternative strategy be relied upon to deal with such problems. In particular, should monetary policy be content with trying to **clean** up afterwards, once the boom has turned to bust? Indeed, should central banks go even further and preemptively ease policy in order to short circuit the bust altogether?

As a matter of logic, the answer to the **lean or clean** question must depend on an evaluation of the relative merits of each approach, since alternatives cannot be evaluated in isolation. The dominant view until quite recently seems to have been in favor of cleaning up afterwards. However, the practical difficulties encountered in trying to do so over the last eighteen months seem now to be altering the balance of earlier arguments.

Indeed, the current set of economic circumstances facing the official community is as difficult as any seen in the postwar period. Growth is slowing, and quite sharply in both the advanced and emerging market economies. For a time inflationary pressures were also rising, particularly in the emerging market economies, though they now seem to be receding in the face of an unexpectedly sharp slowing of near-term growth prospects. In the major financial centers, many markets are dysfunctional and some are not operating at all. Many financial institutions have had to be closed down, nationalized or supported in some way by governments. Moreover, it cannot be ruled out that the economic and financial situation will worsen substantially before it eventually improves.

The purpose of this paper is to suggest steps that might be taken to help avoid a repeat of these difficulties in the future. Evidently, this presupposes some understanding of what caused today’s difficulties in the first place.

Liberalized financial systems seem to be inherently “procyclical”.² That is, there are endogenous cycles in which some piece of good news leads to both an increased demand for and supply of credit. This affects positively both asset prices and spending, contributing to still more optimism and providing still more collateral for still more loans. Eventually, all these trends overshoot levels justified by the initial improvement in fundamentals and rational exuberance becomes irrational exuberance. In the end, the bubble bursts and the

¹ Imbalances are defined here as significant and sustained deviations from longer run trends. Such deviations raise the possibility of mean reversion, perhaps with associated macroeconomic costs. Evidently, such an outcome need not be inevitable, given that underlying fundamentals might have changed enough to justify these unusual observations. Nevertheless, mean reversion seems a quite common historical phenomenon.

² For a fuller description see Borio and White (2004)

process of speculation and leverage which powered it goes into reverse. Such processes have been seen repeatedly in history. The great recessions beginning in 1825, 1873 and 1929 all shared these characteristics³, as did the more recent Nordic, Japanese and South East Asia crises⁴. Moreover, in each instance the crisis emerged suddenly and unexpectedly, and without any significant degree of accelerating inflation beforehand.

There is a great deal of evidence to support the view that we are witnessing something quite similar today. The “New Era” and “Great Moderation” proclaimed in the latter part of the 1990’s led to a variety of excesses which suddenly collapsed around the turn of the century. This was met in turn by an unprecedented degree of monetary easing in the large industrial countries, and subsequently by very easy monetary policies in many emerging market countries (accompanied by massive foreign exchange intervention) as they tried to resist upward pressure on their exchange rates. The upshot was that global interest rates, both short and long, were held at unusually low levels for much of this decade. These lower rates contributed (a demand side effect) to a massive increase in monetary and credit aggregates. A further contribution to this credit growth (a supply side effect) was made by sharply declining lending standards. These easier lending terms were said at the time to be justified, both by an overall reduction in the risks to be managed, and by improved risk management capacities. In both the advanced and emerging market countries, many borrowers obtained access to credit who would never have been able to do so in the past (subprime mortgages, for example) or did so on unusually easy terms (cov-lite corporate loans, for example). Speculation and leverage are also thought to have expanded significantly, not least through the use of new structured products with high levels of leverage imbedded in them.

These developments contributed to record high global growth rates, until quite recently. Inflation, moreover, was quiescent for an unexpectedly long period under the influence of a variety of positive supply shocks, not least the process of globalization⁵. However, at the same time, these financial developments were also contributing to the gradual buildup of at least four major “imbalances” affecting both the financial and real sectors of the global economy.⁶ As to the former, most asset prices (not least housing) rose to unprecedented levels. The exposure of financial firms to risks of various sorts, as can now be clearly seen with hindsight, also increased sharply. As to the latter, household saving rates in many countries (especially the English speaking ones) fell to zero or even below, while the ratio of investment to GDP in China rose to almost 50 per cent⁷. Again, such National Income

³ On this see Schumpeter (1934)

⁴ See Kindleberger and Aliber (2006)

⁵ White (2008a) provides a fuller assessment of the relationship between globalization and domestic inflation.

⁶ As noted above, imbalances are defined here as significant and sustained deviations from longer run trends. Logically, individual deviations might be explained in a variety of idiosyncratic ways. However, when a wide variety of imbalances emerge simultaneously, this rather points in the direction of a joint underlying cause. This is pursued further below.

⁷ From a Wicksellian perspective, troubles arise whenever the financial rate (say, the long bond rate) differs from the natural rate (proxied by the prospective growth rate of the economy). Estimates of each for the global economy show that the financial rate fell below the natural rate in 1997, as the global growth rate of potential accelerated, and the gap continued to increase at least until the middle of 2008. See Knight (2008). In the English speaking countries, where the financial system has focused increasingly on lending to the household sector, consumption rose as a result. In China, where consumer credit is much less freely available, it was investment (often subject to political influences) that rose to very high levels. The crucial point, however, is that both imbalances seem to have a common source; namely, a large and longstanding gap between the natural and financial rates of interest.

Account numbers are unprecedented in large countries in the post war world. Finally, a number of countries with highly advanced financial systems and associated low household saving rates ran very large trade deficits. These were largely financed by capital inflows from surplus countries that had accumulated reserves in the process of resisting exchange rate appreciation.

Evidently, the period of high global growth and essentially stable prices has now come to an end. Perhaps the first overt manifestation of the effects of the long period of rapid monetary and credit expansion was the sharp rise in commodity prices. With the influence of the earlier positive supply shocks having run their course, higher commodity prices quickly fed through to headline CPI in many countries. However, lower real wages subsequently weighed on spending and growth, and this deceleration was further aggravated as the imbalances noted above began to unwind. Indeed, the slowdown has been so sharp, and the effects on commodity prices already so appreciable, that the earlier worries about inflation have increasingly been replaced by fears of near term deflation.

The tipping point in this transition was arguably the “Minsky moment” in financial markets⁸ which occurred in August of 2007. The announcement that BNP had suspended redemptions from three of their investment funds sparked a massive withdrawal of liquidity from the market for asset based securities, not least by money market mutual funds fearful of “breaking the buck”. Since then, the process of financial deterioration has continued relentlessly with a wide spectrum of asset prices falling sharply and many financial institutions having merged, gone bankrupt, or now on the verge of bankruptcy.

Due in part to tighter credit conditions and the wealth destruction arising from lower asset prices, real growth in the advanced industrial economies has also slowed sharply. However, probably more important has been the beginning of a process of mean reversion in spending patterns, in countries exhibiting such imbalances, and the spread of this effect to other countries through trade linkages in particular. The emerging market economies initially seemed somewhat immune to this slowdown, but it is now clear that they too have been caught up in this global transition⁹.

This interactive process of deterioration between the real and financial sectors, as the various imbalances simultaneously unwind, has yet to fully run its course. Nor have we yet seen the full impact on global currency markets, or on protectionist sentiment, of the current large trade imbalances. Recognizing the potential economic costs of all these developments raises the important question of how such processes might be avoided, or at least the costs moderated, in the future? Given that the underlying problem is one of excessive credit creation, there should be a strong presumption that monetary policy will

⁸ A “Minsky moment” refers to the analysis of financial crises initially put forward by Hyman Minsky. See Minsky (1992) for a summary. He refers to various stages in the credit upswing, characterized by an ever declining quality of loans, with the end result being a “Ponzi” like financial structure. Interestingly, Irving Fisher (1933) painted a similar picture of this process. The “Minsky moment” is that point in time when the market suddenly recognizes the scale of the accumulated potential losses and further lending ceases. According to this story, markets may look illiquid but the underlying problem is one of fears about solvency. The word “arguably” is used in the text, because the panic in August 2007 had been preceded by well over a year of declining US house prices and rising default and delinquency rates. The markets, however, initially chose to ignore these developments.

⁹ On the high likelihood of this happening, see White (2007b).

have a significant role to play in leaning against these excesses. In the same way that repairing a broken financial system may be a necessary but not sufficient condition for restoring health to the real economy after a “bust”, relying solely on regulatory mechanisms to moderate a “boom” might also prove insufficient.

B. The “lean versus clean” debate

Against this background, an attempt is made in this paper to evaluate what has been a dominant analytical paradigm guiding the conduct of monetary policy in recent years; namely, that it is impossible to **lean** against credit bubbles using tighter monetary policy, but that it is possible to **clean** up afterwards using easier monetary policy.¹⁰ Should it be possible to throw doubt on either or both of these propositions, then support is provided for the arguments presented in Section D of this paper. It is suggested there that “preemptive tightening” should replace “preemptive easing”.

While not alone, the Federal Reserve seems most evidently to have conducted its monetary policy in strict conformance with the dominant analytical paradigm. Over the last two decades, representatives of the Federal Reserve System repeatedly stressed that monetary policy had been tightened only in response to the prospective inflationary implications of asset price increases, not in response to accumulating credit related imbalances (as such) or increasing exposures within the financial system. Conversely, when financial disturbances threatened growth prospects, monetary policy was repeatedly eased significantly. This occurred in 1987 (the stock market crash), in 1990-91 (the property crash, and the S and L crisis), in 1998 (LTCM), in 2001-4 (the end of the NASDAQ bubble), and most recently in 2007 in response to the current financial difficulties. In addition, in the context of the Asian crisis of 1997, monetary policy was not tightened even though all of the traditional indicators said it should have been. This pattern of “preemptive easing” was referred to by (then) Chairman Greenspan as a risk management paradigm. In sum, combining a refusal to lean with an eagerness to clean implies that the Fed’s policy has been highly asymmetrical over the credit cycle.

Whether this approach is appropriate is already being implicitly questioned by some other central banks. The Bank of Japan, for example, has announced that its policy settings will be determined by two “perspectives”. While the first perspective is very similar to the “gapology” methodology¹¹ favored by the Fed, the second perspective seems to be a promise to resist in the future the formation of the credit and associated debt excesses that plagued Japan in the 1980’s. Given how long Japan was stuck in the “bust” period, with all its accumulated economic costs, that promise is not surprising. Similarly, the European Central Bank has a second “pillar” in addition to a conventional first one. While historically rooted in the belief that there is a low frequency association between money growth and inflation, some people associated with the European System of Central Banks now seem more willing to suggest that the second pillar could also foretell other kinds of problems¹². While this

¹⁰ See, for example, Bernanke (2002), Mishkin (2007) and Kohn (2008). For a more recent description (and also a qualified recantation), see Yellen (2009)

¹¹ The gap referred to here is not the Wicksellian gap referred to in fn.7. Rather, it is the gap between estimates of actual output and potential output, or the equivalent in terms of labour market variables. It is this gap that is commonly thought to drive changes in the rate of inflation.

¹² See Weber (2008). Also Issing (2005) for one reference among many.

evolution is by no means complete, it seems clear that the grounds for a serious analytical debate have at least been laid.¹³

Nor is this a new issue. Indeed, it was at the heart of the famous debate between Hayek and Keynes in the early 1930's.¹⁴ Keynes won this debate, in part because Hayek offered no hope that policy might be used to ameliorate the situation during the Great Depression. In the process, Hayek's message was lost that the magnitude of the problem in the downswing was due to the buildup of imbalances (specifically "malinvestments") in the upswing of the credit cycle. This is one aspect of the debate that needs to be reopened. At the same time, the scope for policies to resist the downturn also need to be reexamined in light of another Austrian insight. It is not self evident that policies are desirable when they are effective only at the expense of creating even bigger problems in the future¹⁵. Whenever there is an intertemporal tradeoff, at least some attention needs to be paid to the discounted net benefit offered by alternative policies.

The possibility that policies which are effective in the short run might have longer term costs is also suggested by some of the insights from dynamic control theory, applied to economics in the 1950's by the engineer A W Philips¹⁶. Think of the economy as a system subject to shocks, and one in which the policy instrument has significant lagged effects on the real economy (say through encouraging procyclicality). In such a world, a problem of "instrument instability" can easily arise. In this situation, a successful effort to ensure that the actual level of output closely matches that desired by the policymaker comes at the cost of the stabilizing instrument having to move ever more sharply in successive cycles. Evidently, such policies cannot be sustained forever¹⁷. The solution to this instrument instability problem was often found by engineers to be a lightening of the control procedure, to allow deviations from equilibrium to be somewhat longer lasting. By analogy, this implies that policies of "preemptive easing" might in the end prove disruptive. Put otherwise, small recessions (temporary deviations from equilibrium) might sometimes serve to ward off bigger deviations later. Moreover, in the case of monetary policies, the dangers might be even greater than the analogy suggests. This is because the monetary control instrument (policy rates) must eventually be constrained by the zero lower bound, and that asymmetric policies over successive cycles would make this a more and more likely outcome.

¹³ For a discussion of some other significant differences between major central banks in how they conduct monetary policy, and why, see White (2008b).

¹⁴ Hicks (1967) noted how this debate "captured the imagination" of economists at the time, but had been almost forgotten by the late 1960's. For a fuller account see Cochran and Glahe (1999)

¹⁵ Contrast Keynes' famous comment: "In the long run we are all dead", with von Mises: "No very deep knowledge of economics is usually needed to grasp the immediate effects of a measure; but the task of economics is to foretell the remoter effects, and so to allow us to avoid such acts as attempt to remedy a present ill by sowing the seeds of a much greater ill for the future" One is also reminded of Milton Friedman who, on being told that money growth only led to inflation in the long run, was said to have responded "I have seen the long run, and it is now".

¹⁶ Philips (1957)

¹⁷ In making a similar point, Cooper (2008, p137) makes delightful reference to early work on "governors" for steam-driven saws. If "over governed", such that the steam pressure was quickly altered to keep the saw moving exactly at a predefined pace, after the wood was put on the blade, the machine would literally shake itself to pieces.

Arguments supporting (and opposing) the view that monetary policy cannot be used effectively to lean against the expansionary phase of the credit cycle

It is important to note that the arguments **supporting** this view have focused almost exclusively on the difficulties of using monetary policy to lean against asset price increases, rather than the underlying credit cycle itself¹⁸. Rising asset prices are, of course, only one imbalance of many that can be generated by easy credit conditions. However, this narrow focus does have the advantage of allowing a number of plausible arguments to be made against the straw man of “targeting” asset prices.

The first argument is that there is a number of asset prices that might be targeted. Advocates of a policy of leaning against the wind are then invited to choose which asset price should be the focus of the authorities’ attentions, and to explain why. Since there is no obvious right answer to such a question, the whole approach of leaning against the wind is made to seem questionable. A second criticism is that, absent any clear criteria for determining the level of the asset price consistent with “fundamental value”, it is impossible to estimate deviations from such a price in order to lean against it. A third criticism is that, given expectations of further increases in any rising asset price, the interest rate increases required to “prick the bubble” would be so great as to cause material damage to other parts of the economy.¹⁹

A more general argument against leaning against the credit cycle is that it might result in an undershoot of the desired level of inflation, whether that level is expressed as an explicit target or not. Two sorts of concerns can be noted in this regard. The first is that the economy might inadvertently be pushed into deflation, with all of the problems said to be associated with such a development. The second is that, by undershooting the desired inflation levels, the credibility of the central bankers’ fundamental commitment to price stability as a longer term goal might be brought into question. If he/she can countenance undershoots, why not overshoots as well?²⁰

Those **opposing** the dominant view (thus favoring the use of monetary policy to lean against the expansionary phase of the cycle) begin with a simple point. To favor leaning against the credit cycle²¹ is not at all the same thing as advocating “targeting” asset prices. Rather, they wish to take action to restrain the whole nexus of imbalances arising from excessively easy credit conditions. The focus should be on the underlying cause rather than one symptom of accumulating problems. Thus, confronted with a combination of rapid increases in monetary and credit aggregates, increases in a wide range of asset prices, and deviations in spending

¹⁸ Weber (op. cit, p5) is implicitly critical in this regard. He states “The debate about monetary policy and financial markets is too often slanted to the question of how to deal with asset price bubbles. In my opinion, this view of monetary policy and asset prices is too narrow”. He then goes on to suggest that the focus should be “redirected from financial bubbles to the issue of “procyclicality”, which is consistent with what is being suggested in this paper. See also Borio (2003) and White (2005).

¹⁹ For a recent airing of such arguments see Greenspan (2009)

²⁰ A number of practical difficulties would also have to be faced, should a central bank wish to lean against the wind of the credit cycle. These issues are addressed in the last section of this paper, supposing that the case for leaning, in principle, has been accepted.

²¹ A policy of leaning against the wind of procyclicality has been recommended in successive Annual Reports of the BIS and in many publications by BIS Staff. In particular, see the various papers on the BIS website by Borio, Borio and White, and White.

patterns from traditional norms, the suggestion is that policy would tend to be tighter than otherwise.

From this broader perspective, there is no need to choose which asset price to target. It is a combination of developments that should evoke concern. Nor is there a need to calculate with accuracy the fundamental value of individual assets. Rather, it suffices to be able to say that some developments seem significantly out of line with what the fundamentals might seem to suggest. Finally, there is no need to “prick” the bubble and to do harm to the economy in the process. Rather, the intention is simply to tighten policy in a way to restrain the credit cycle on the upside, with a view to mitigating the magnitude of the subsequent downturn. Note as well, that general inflation would normally also be tending upwards in such circumstances, so that what is at issue here is not likely to be the direction of policy, but rather only the degree of policy tightening.

As for the more general concerns about undershooting the inflation target, this could lead to outright deflation, but it need not. In any event, it needs to be stressed that the experience of deflation is not always and everywhere a dangerous development.²² The experience of the United States in the 1930’s was certainly horrible, but almost as surely unique²³. There have been many other historical episodes of deflation, often associated with bursts of productivity increases, in which falling prices were in fact associated with continuing real growth and increases in living standards. As noted above, there can be little doubt that serious problems can arise from the interaction of falling prices and wages and high levels of nominal debt. But the essential point of leaning against the upswing of the credit cycle is to mitigate the buildup of such debt in order to moderate the severity of the subsequent downturn. The price undershoot, per se, would not seem to be a problem if the economy is still growing strongly under the influence of the credit cycle itself. As for an undershoot undermining the credibility of the price stability objective, this would seem far less likely than the effects of an overshoot and should be easily explainable to the general public.

There are also other arguments supporting the views of those wishing to lean against the upswing of the credit cycle. It is very possible that credible statements of official concern and determination to act would change private behavior in a more stabilizing direction. In particular, it might help moderate some of the excesses seen in banking and credit markets, with their subsequent effects on asset prices and spending propensities. This is not an outlandish suggestion²⁴. Indeed, it is now widely believed that a similar change occurred in the way inflationary expectations were formed after central banks became more serious about controlling inflation. Finally, tightening policy more in the upswing would seem likely to mitigate the size of the downswing,²⁵ and would also provide more room for policy easing

²² See Borio and Filardo (2005).

²³ Atkeson and Kehoe (2004) note in their concluding remarks, based on a broad historical study of 17 countries over 100 years, that “The data suggest that deflation is not closely related to depression”. Elsewhere they state “Our main finding is that the only episode in which there is evidence of a link between deflation and depression is the Great Depression (1929-1934)”.

²⁴ Greenspan (2009) states “I know of no instance where incremental monetary policy has defused a bubble”. This may or may not be true, but the historical record might well have been different had there been a different countercyclical policy regime in place before the expansionary phase of the credit bubble began.

²⁵ One reason for believing in such a relationship is that financial institutions might become less exposed to bad loans during the upturn. This, together with other policies designed to make them more resilient to downturns, would lessen the likelihood of a significant tightening of credit conditions during the downturn.

in response. In particular, with interest rates higher at the peak of the cycle, there would be less chance of running into the serious constraint of the zero lower bound for interest rates.

Arguments supporting (and opposing) the view that it is effective to use monetary policy to clean up in the contractionary phase of the credit cycle.

The first argument used by those **supporting** this view (that monetary easing will effectively stimulate aggregate demand) is that it seems generally supported by the macroeconomic models now commonly used by central banks. These include large scale structural models, not much changed since the 1970's, but increasingly the use of Dynamic Stochastic General Equilibrium Models (DSGE)²⁶ as well. The second argument is that policy easing has consistently worked to stimulate demand in the past. As noted above, the Fed's typical response to financial turmoil since 1987 has been to ease monetary policy and, in every instance to date, the economy subsequently resumed growth. Indeed, over the last few decades, recessions have been very mild and the variance of output growth has been very low²⁷. Third, as for previous experiences of costly deflations, the United States in the 1930's and Japan in the 1990's, it is argued that these were primarily the byproduct of policy error. In particular, the authorities failed to ease monetary policy aggressively enough²⁸.

A fourth argument, of increasing practical relevance as policy rates edge ever lower, is that monetary policy can still be effective even at (or very near) the zero lower bound for the policy rate. The argument rests upon the efficacy of three propositions²⁹. First, it is suggested that long rates can be lowered by generating expectations that the policy rate will be kept very low for an extended period. Second, it is held that term and credit risk premia can be reduced through changes in the relative supply of securities, reflecting shifts in the composition of the central bank's balance sheet. Third, it is suggested that "quantitative easing", in which the central bank's balance sheet is allowed to expand beyond the size required to keep the policy rate at zero, can have expansionary effects through various channels.

Those **opposed** to this view, rely in part on refuting the arguments above. The first argument rests on the reliability of models of the macroeconomy. Evidently, models must not be confused with reality and, in fact, large structural models have had a very poor record in predicting the turning points of even standard cycles in the post war period. To this must be added the reality of massive change in the real economy, the financial sector and the policy regime in recent years. The assumption of parametric stability under such conditions is highly implausible, unless the parameters are so loosely estimated in the first place as to raise serious doubts about the model's reliability. Further, even the large structural models have very rudimentary financial sectors, and their predictions might therefore be particularly suspect at times of financial crisis. As for more modern DSGE models, even their supporters

²⁶ For an overview see Tovar (2008)

²⁷ The low variance of output growth in the United States, together with inflation remaining both low and stable, led to the accolade "The Great Moderation" referred to above.

²⁸ See Ahearne et al (2002)

²⁹ See Reinhart (2003,) Bernanke (2004) and Bernanke (2009) .

admit that they are “work in progress”, and they possess even more rudimentary financial sectors than those seen in more structural models.³⁰

As for the second argument, just because something has worked in the past need not logically imply that it is certain to work in the future.³¹ Indeed, the degree of monetary easing required to kick start the United States economy seems to have been rising through successive downturns as the “headwinds” of debt have become stronger³². The recognition that something seems to have changed in the transmission mechanism of monetary policy likely accounts for the spate of recent conferences on this particular topic.³³ After the crisis emerged in the summer of 2007, it was disquieting that, as the US policy rate fell at a record pace, mortgage rates actually rose for an extended period. A similar phenomenon was seen early in the last cycle of easing. Then, lower short rates initially failed to feed through to standard channels of the transmission mechanism until asset prices started to rise strongly in the middle of 2003.³⁴ In the United States, in spite of unprecedented monetary and fiscal stimulus, the recovery after 2002 was the weakest in post war history.

One way to explain this phenomenon might be in terms of the cumulative effects of previous policy actions. As noted above, the Fed has used “preemptive easing” on successive occasions since the stock market crash of 1987, and many other central banks more or less followed its leadership. In each case, it could be argued that the resulting demand stimulus came in the form of an unsustainable bubble, which was then subsequently replaced by yet another bubble. The series begins with the easing of monetary policy in the late 1980’s which helped spur the subsequent property bubble in many countries. The subsequent period of very low rates in the early 1990’s, led to the decline in the value of the US dollar (and the Asian currencies effectively linked to it) and contributed to the Asian bubble. The subsequent decision not to raise rates, in spite of tighter domestic conditions, contributed to the excesses of the LTCM period, and the subsequent easing of rates then induced the stock market speculation of the late 1990’s. When this collapsed and rates were sharply reduced in response, the seeds of the housing market boom and bust were sown. Moreover, with many countries again resisting currency appreciation as the US dollar fell through most of this decade, the imbalances referred to above became truly global.

Today, these imbalances (or “headwinds”) constitute a serious threat to the continued effectiveness of monetary stimulus. One particular source of concern is the state of household balance sheets in many countries. As a result of previous low household saving

³⁰ For a critique of some of the theoretical and empirical underpinnings of such models, see Rudd and Whelan (2003)

³¹ On this theme, against a far wider historical and philosophical backdrop, see Talib (2007)

³² Consider the path of the policy rate in the US in the early 1990’s, the first years of this decade, and most recently. Both the size of the policy rate reduction and its speed have increased through successive cycles. This is consistent with the instrument instability argument made above.

³³ The joint conference of the CEPR and ESI that took place in September of last year, at the BIS in Basel, was but one of many. Its topic was “The evolving financial system and the transmission mechanism of monetary policy”.

³⁴ It is evident from casual inspection that almost all asset prices, most commodity prices, and implicit volatilities derived from option prices, had an inflection point around the middle of 2003. It is perhaps more than correlation that global nominal policy rates hit their low point at that time, with rates of zero, one percent and two percent in Japan, the United States and the Euro zone respectively.

rates, debt levels are very high. Against a backdrop of falling asset prices and tightening credit conditions, this will impede consumption going forward. Moreover, the real burden of this debt would rise even further, should prices and wages begin to fall. Evidently, monetary policy in the major countries now has very little room to lower nominal policy rates further. This implies that, even with inflationary expectations stable at some low level, real interest rates (ex ante) would be positive. Moreover, it is not unlikely that declining prices might even be extrapolated into the future. This would imply an even higher real rate of interest and would make the debt/deflation dynamic all the more resistant to the influence of monetary policy³⁵.

As for the third argument, that the depressions in the US and Japan were primarily the product of too timid monetary easing, it cannot be denied that still more aggressive easing might have made a material difference. However, this is a supposition rather than a statement of fact. What is a fact is that, in both cases, interest rates were eased very sharply at the beginning of each crisis, and in the latter case, significantly more than a Taylor rule would have implied.³⁶ A competing (or perhaps complementary) hypothesis would be that the difficulties seen in previous downturns were related to the excesses of the earlier upturns. In Japan, for example, it is a fact that investment levels collapsed after the crisis broke and that the corporate ratio of debt to value added fell continuously for over a decade³⁷. Above, four major sets of global economic and financial imbalances were identified, of which only one has to do with the increased risk exposure (and inadequate capital) of financial institutions. Should the global economy now slow abruptly, in spite of the unprecedented degree of monetary easing seen almost everywhere, this would provide particularly clear evidence that underlying deflationary forces have their roots as much in the preceding “boom” period as in subsequent policy errors.

The fourth set of arguments, that monetary policy can still be effective even when policy rates are near zero, can be questioned (although not refuted) on various grounds. First, a credible commitment to keep policy rates low for an extended period to fight deflation assumes there are no other arguments for potentially having to raise policy rates. One such argument in the United States would be fear of a currency crisis arising from the long standing increase in US external indebtedness. The argument that changes in the composition of a central bank’s balance sheet can effectively alter risk premia would seem to assume a high degree of non-substitutability between assets. This view has not been at all fashionable in academic circles in recent years, though it might now be being reassessed in light of the current degree of market dysfunction. Recall as well the failure of “Operation Twist” and various studies into the effectiveness (or rather the ineffectiveness) of foreign exchange rate intervention in large, liquid markets. Indeed, the fact that the Federal Reserve has recently felt it necessary to embark upon a policy of quantitative easing is itself testimony to the shortcomings of the policy initiatives taken to date. Whether this last

³⁵ On this dynamic, the classic reference is Fisher (1936)

³⁶ See BIS (2001) Chapter 4

³⁷ A still unsettled issue is whether Japan’s poor performance throughout the 1990’s was due to corporation’s not wishing to invest, because of earlier overinvestment, or because a weakened banking system was not prepared to lend them the money. Recent statements by Japanese officials seem more sympathetic to the former view than the latter.

recourse will work in stimulating real output growth remains to be seen, but the previous experience with quantitative easing in Japan cannot be considered wholly encouraging.³⁸

This said, quantitative easing raises the possibility of two further channels through which monetary policy might regain its effectiveness. The first is a direct effect on inflationary expectations. The second is a direct effect on asset prices. Either could lead to a recovery of spending, as described below. However, the risks associated with each are also substantial. In effect, the cure might well prove as dangerous as the disease.

Scepticism about the efficacy of conventional monetary policy, when policy rates are already at zero, rests largely on a combination of two beliefs. First, a positive output gap is required to cause inflationary expectations to move in a positive direction. And, second, when policy rates are already zero, it is believed that monetary policy cannot produce such an outcome³⁹. However, it is possible that quantitative easing could short circuit this dynamic by having a direct effect on inflationary expectations. A number of academics have made such arguments.⁴⁰ Indeed, this view is also implicit in the credit given to central banks for having produced “The Great Moderation” over the two decades prior to 2007. Similarly, we have decades of observations from many Latin American countries indicating the extent and speed with which inflationary expectations (and inflation) responded directly to perceived changes in the monetary regime

These observations lead to the conclusion that quantitative easing could in theory moderate or even reverse a debt/deflation dynamic. However, the associated risk would be that the process could easily get out of hand. Expectations driven by forward looking beliefs in the integrity of the monetary framework would seem more open to rapid revision than expectations based on recent historical experience⁴¹. The fact that the Federal Reserve recently took steps to make its longer term inflation objectives more concrete, presumably indicates both an awareness of the potential problem and a willingness to confront it directly. An underlying problem, however, is the credibility of such commitments, given the usefulness of higher rates of inflation in eroding debt burdens that are difficult to reduce in any other way. This problem can only be aggravated by the growing perception that central banks in many countries are increasingly acting like agents of their respective Ministries of Finance.

One possible route to inflation rising more than desired might be a process of self-fulfilling expectations, either in financial markets or in the market for labour. Suppose that foreign holders of US debt, almost wholly denominated in dollars, began to fear an inflationary outcome. They would then presumably try to protect themselves by selling their dollar denominated assets, putting downward pressure on the prices of both those assets and the

³⁸ While there can be little doubt that massive increases in the nominal money stock will eventually result in increases in nominal quantities in the real economy, how this might be split between increases in real economic activity and prices (in anything short of the “long run”) is not clear.

³⁹ In the late 1990’s the Bank of Japan was advised by many to adopt an inflation targeting framework to resist deflationary tendencies. The Bank refused to do so. They argued that they had no effective tools to influence aggregate demand, and therefore could not deliver on the promise of price stability.

⁴⁰ For example, see Svensson (2003).

⁴¹ Schumpeter (1934, p4) refers to an even more sinister possibility. He notes that in 1896 in the US there was a significant possibility that bimetallism might replace the gold standard. The implication of this inflationary threat was not higher inflation, as might have been expected. “On the contrary, although underlying conditions were by no means unfavourable for an upswing, business went to pieces”.

dollar itself⁴². In short, the risk premia on dollar denominated assets would rise. This could conceivably raise aggregate demand (if the effect on domestic demand of higher domestic rates was less than the net effect of the currency depreciation) and would also directly raise US inflation through higher import costs. Perhaps worse, the combination of falling asset prices and a weaker dollar might well culminate in stagflation. Similarly, domestic wages might also react more sharply than desired if wage earners began to fear an inflationary policy directed to reducing the real burden of debt at their expense.

The second channel through which quantitative easing might work would be a direct effect on asset prices, with higher wealth then leading to higher spending. As to a direct and significant effect on asset prices, this would have to be judged unlikely, unless inflationary expectations were also moving upwards with all the risks just described. Against the background of recent asset price declines from “unsustainable” levels, there can be no likelihood of previous peaks being repeated. Indeed, were this to happen it would constitute a repeat of the previous bubble with presumably even greater costs at some later date. At best, there might be a hope that asset prices have already overshot on the downside and that quantitative easing might provide a mechanism to reverse that overshoot. As for the effect of higher asset prices on spending, this is also unclear. There now seems to be growing agreement that, aside from asset price movements based on expectations of higher future productivity, higher asset prices do not in fact constitute an increase in wealth⁴³. They do, however, provide more collateral to support more borrowing which might in turn lead to more spending. The difficulty with this mechanism, however, is that banks do not want to lend at the current juncture and potential borrowers do not wish to borrow.

Finally, another risk must be confronted. Should any or all of the extraordinary measures being taken currently to stimulate aggregate demand prove effective, then these measures will have to be reversed in a timely way. This leaves open the possibility of policy mistakes. While presumably no policymaker would be expected to desire anything other than a modest increase in inflation, history teaches us that control over this process is by no means perfect. For example, there are a number of reasons today why policymakers might have an exaggerated view of the level of potential going forward (and therefore the size of the output gap)⁴⁴. First, after a bubble period, misallocated resources must be shifted to more productive uses. More concretely, the automobile, financial services and construction industries in many advanced market economies all seem too large, as does the potential of Asia to export consumer goods. During this process of adjustment, the level of global potential will shift down and the structural rate of unemployment will shift up⁴⁵. Second, hysteric effects, as unemployed workers lose contact with the labor market, could aggravate such

⁴² A related problem is the state of health of the US financial system. Kaminsky and Reinhart (1999) document the ease with which banking crises can turn into exchange rate crises with significant macroeconomic costs.

⁴³ In particular, consider the case of rising house prices. An increase in wealth allows an increase in living standards. Evidently, living standards do not rise with house prices since the rising asset value is offset by the higher implicit rent required to live in the house. For a more formal analysis of this matter, see White (2007) and Muelbauer(2007)

⁴⁴ Many central banks estimate potential using statistical “filters” based on past output levels. Evidently, if those previous output levels were not sustainable, such estimates of potential will be biased upwards.

⁴⁵ This point was made more broadly and much earlier by Schumpeter (1934) among others. He states (p16) “The chief difficulty lies in the fact that depressions are not simply evils, which we might try to suppress but-perhaps undesirable- forms of something which has to be done, namely, adjustment to previous economic change. Most of what would be effective in remedying a depression would be equally effective in preventing this adjustment. This is especially true of inflation (i.e. monetary stimulus)”

developments, particularly in countries with badly functioning labour markets. A third possible source of concern might be some rethinking (say, given the threat of protectionism) of the integrated global supply network that has built up over many years. There are grounds for believing that globalization has made a material contribution to lower inflation in recent years, and that a reversal of such trends might have the opposite effect⁴⁶. Fourth, economic downturns commonly result in reductions in capital formation and in total factor productivity. Fifth, and finally, new legislation together with reregulation and nationalisation all have the effect of reducing potential. These uncertainties must be added to those that, even in the past, led to potential “gaps” being very difficult to estimate in real time.

Another concern, given the extent to which central banks have massively increased the size of their balance sheets, is whether they will have the technical skills to reverse the expansion as quickly as they might like. Recall, that all of this is effectively uncharted territory. In particular, the price at which central banks might be able to sell the kinds of assets they have recently begun to purchase remains to be determined. This implies that withdrawing bank reserves could have disruptive effects in some financial markets at least. Thus, a delicate balancing act is required. As the real economy improves, tightening must be “measured” enough not to destabilize still fragile confidence and financial markets, but also fast enough not to allow inflationary expectations to rise too much. This will be particularly difficult if the source of demand expansion was itself a rise in inflationary expectations associated with quantitative easing. And to all this must be added the risk of political pressure being applied by governments worried about the cost of debt service on rapidly rising debts. The experience of the United States and Japan in recent years indicates that the exit problem is not inconsequential⁴⁷.

By way of summary, Keynes worried that the use of monetary policy to reverse downturns would eventually be like “pushing on a string”. For this reason, he advocated the use of fiscal stimulus in severely depressed economic conditions.⁴⁸ Hayek was similarly skeptical about the role of monetary policy. He noted that, if excessive money and credit was the source of the economic problem, it was not self evident that still more money and credit was part of the solution.⁴⁹ Indeed, pre-War business cycle theorists worried that the end game of this monetary and credit expansion might be hyperinflation, as occurred in central Europe in the early 1920’s. While most central banks today seem firmly committed to the pursuit of price

⁴⁶ See White (2008a)

⁴⁷ Consider the process of “measured” tightening which took place in the United States from 2005 to 2007. A principal motivation for the Fed giving advanced warning of its intentions was to allow those exposed to such tightening to cover their positions. In contrast, it could be contended that this policy might have had the opposite effect of that intended. The highly predictable nature of forthcoming policy moves significantly reduced the risks of position taking, and this could have further encouraged the buildup of leverage. Indeed, if the size of the “carry” was constantly declining, an increase in leverage would have been essential to keep up the rate of return on capital. In sum, a shorter term problem might have been avoided, but again at the expense of aggravating a longer term one. Consider also the case of Japan, where high levels of short term Government debt have been said to have led to political pressure to keep policy rates down to ease debt servicing requirements.

⁴⁸ Of course recommending the use of fiscal stimulus in such extreme conditions does not necessarily imply a similar recommendation in the face of minor downturns, much less “preemptive” policies.

⁴⁹ In his later years, however, Hayek admitted that he had been wrong in the 1930’s in resisting the use of monetary and fiscal stimulus to offset the effects of a “secondary depression” See Haberler (1986). By this, Hayek seemed to have meant a downward deflationary spiral sparked by, but independent of, the imbalances he saw as being at the heart of the initial downturn.

stability, the technical questions just referred to could still raise doubts as to its attainability. Both prospective inflation and deflation remain serious risks. All these considerations strengthen the arguments for not getting into such a dangerous situation in the first place. Further support for this proposition is provided by recognizing other longer term problems associated with the maintenance of very expansionary monetary policies in such a situation⁵⁰. These problems were emphasized by many pre-war theorists⁵¹, but can also be illustrated using more recent examples.⁵²

C. Can other policies be used to “clean up” regardless?

Considering the possibility that stimulative monetary policy might either not work effectively in the downturn, or might expose the economy to other risks over a longer horizon, raises the issue of other remedies. Should these also be deemed unreliable in restoring growth, or also have undesirable longer term side effects, then the dangers associated with not leaning against the upswing of the credit cycle become still more evident.

Fiscal stimulus is the obvious way to increase demand. However, the level of government debt in many jurisdictions is already so high as to invoke concerns about “Ricardian Equivalence”. That is, seeing through the “veil” of government, taxpayers might tighten their belts as governments loosen theirs. In this regard, the muted response of the US economy to the fiscal package of 2007 was particularly disappointing. Moreover, in some cases, further fiscal stimulus might even lead risk premia and interest rates to rise, which would further mute the overall stimulus provided to spending⁵³. If such fears were also to interact with concerns about monetary financing, exchange rate depreciation and eventual inflation, as discussed above in the case of the United States, the negative feedback would presumably be even greater. In Europe, the fact that sovereign spreads have already begun to move up in countries with high debt levels (particularly in Central and Eastern Europe) is of increasing concern. So too has been the recent increase in CDS spreads for sovereign debts issued by a number of countries, and the growing threat of rating downgrades. In sum, even fiscal stimulus might have its limitations and longer term dangers.

Of course, the ultimate remedy for a problem of over indebtedness is to recognize the facts, and to write off in an orderly way those debts that cannot be serviced. However, here too there are grounds for concern. Unlike previous sovereign debt crises, when all the principals involved could be assembled in one room, there are now literally millions of households whose debts will not be serviced under the initially agreed conditions. Moreover, many of

⁵⁰ See White (2006) for a fuller description of all these problems.

⁵¹ The classic reference providing an overview of such theories is Haberler (1939).

⁵² First, as was seen in Japan, low rates can actually encourage forbearance and impede the balance sheet restructuring and/or bankruptcies necessary to reduce excess capacity. Second, this environment can encourage mergers and acquisitions having little long term merit. Third, as seen in Japan in the early 1990’s and many countries more recently, very low rates sustained for long periods can impede the functioning of the interbank market leaving the central bank as the market maker of last resort.

⁵³ At the time of the Swedish banking crisis and associated deep (if short) recession, the authorities felt it would be imprudent to use discretionary fiscal stimulus to offset the downturn. This was particularly so since the Swedish krona had been under much pressure and the current account deficit was still large. See Heikenstein (1998). In the current downturn, the Irish government has also chosen to use tighter discretionary fiscal policy to offset a massive deterioration in the fiscal position arising from automatic stabilizers and a sharply weakening economy. Many other countries have stated the view that high initial debt levels imply they can do nothing more than let the automatic stabilizers work.

these debts are encumbered by second mortgages⁵⁴, or are parts of structured products implying that property and foreclosure rights are less clear⁵⁵. These complications will impede any process of negotiating debt reduction, implying that the ultimate losses could be much larger than otherwise.⁵⁶ The new reality of credit transfer instruments is a further complication, since it implies that the interests of creditors are no longer aligned. Some creditors now profit more from a default than a negotiated settlement.

Compared to these problems, the difficulties facing policymakers in restoring the normal functioning of the financial system might actually seem less daunting. Yet, it is obvious from recent developments, especially but not exclusively in the United States, that even this task can be highly complicated. Alternative approaches (price support, recapitalization, “bad” banks and temporary nationalization) all have both advantages and disadvantages that must be assessed and weighed. The complications posed by large, internationally active and complex international banks are also substantial. Moreover, however it is done, support for the financial system, will have costs for taxpayers (or at least potential exposures) which could also spark the fiscal concerns just noted above.

Finally, and for the sake of completeness, two other sets of policies have been suggested as potentially useful in the face of major economic downturns. On closer examination, both have serious drawbacks. The first is, in principle, extremely sensible as a medium term proposition. Policies that encourage declining industries to adjust quickly should be pursued (including debt write downs and bankruptcies) since they serve to ensure that factors of production are available to support emerging industries⁵⁷. Unfortunately, in practice, the short term effects of such policies would be to make the downturn more severe and, thus, they have never had much (if any) political support. Indeed, as has been seen recently with respect to the global car industry, great efforts are being made by the official sector to prevent its inevitable downsizing from happening. The second set of policies has to do with wages. It was suggested by the Hoover administration, in the United States in the early 1930’s, that industrial wage levels be maintained since wage income would contribute to consumption and aggregate demand. Unfortunately, the implication was lower profits and a lower demand for labor. While this left the overall effect on the wage bill and consumption indeterminate, the lower profits did imply lower investment.⁵⁸ In sum, there are no magic bullets in these policy suggestions either.

⁵⁴ Ashcroft and Schuerman (2008) estimate that by 2006 around 40 percent of AltA and 25 percent of subprime mortgages were encumbered by a “silent second” mortgage. The “silent” refers to their contention that, in most cases, this fact was hidden from the bank that subsequently bought the mortgages to incorporate them into structured products.

⁵⁵ Indeed, many structured products contain clauses expressly ruling out changes in the original debt instruments.

⁵⁶ A further very practical complication is that renegotiating contracts to mutual advantage takes time. The current institutional infrastructure in the United States, and perhaps elsewhere, is simply inadequate to the task. Consider that there were 3 million foreclosure filings in the US in 2008, and that most observers think the problem is likely to get worse going forward.

⁵⁷ Schumpeter (1934) and others in the Austrian school emphasized the crucial importance of such adjustments. A number of private sector commentators have recently made similar points, noting that expansionary policies are likely to impede necessary longer term adjustments in the auto, real estate and financial services industries. In all these sectors, there is significant global overcapacity. See the article on “zombie companies” In Business Week, 15 January, 2009, as well as Tett (2009) for a set of broader concerns about how needed corporate restructuring is currently being impeded.

⁵⁸ For a fuller discussion of this wage issue, see Haberler (1939), Chapter 11.

D. Conclusion: the need for a new macrofinancial stability framework

The current global economic and financial circumstances are already extremely difficult. Moreover, a variety of other risks now seem all too plausible; financial disruptions, currency crises and uncertain price developments among them. This raises the question of steps that might be taken to reduce the likelihood of similar risks arising in the future; i.e. crisis prevention. Such steps would seem desirable in themselves. Moreover, they would seem all the more desirable today given the need to take unprecedented measures to manage the current crisis. Many of these measures will clearly have undesirable side effects over the medium term, consistent with the analysis above.⁵⁹ A credible commitment to an institutional framework to ensure that similar problems would not arise in the future might then go some way to offset these undesirable side effects.

Not surprisingly in current circumstances, the possibility that liberalized financial systems might be inherently “procyclical” is already receiving increasing attention. Similarly, the possibility that accumulated imbalances might significantly reduce the effectiveness of stimulative monetary policy is being increasingly accepted. In particular, it cannot be denied that the period of financial market turmoil, which began almost two years ago, has been met with an extraordinary and creative response on the part of central banks. Nevertheless, the financial turmoil has continued unabated and the real side of the global economy looks increasingly vulnerable.

Moreover, looking forward, there are grounds for belief that the problem of procyclicality could well get worse. Three major structural shifts within the financial sector have encouraged procyclicality; securitization, globalization and consolidation. After some pause associated with the current crisis, these secular trends seem likely to resume since they have been driven in large part by improving technology, which will not be easy to roll back by government decree. In addition, there are grounds for belief that fair value accounting, in spite of the unwanted contribution it makes to the procyclicality of the system, will be increasingly adopted. Whatever its faults, it seems better than the available alternative accounting benchmarks. Finally, the great advantage of Basel II is that it allows relative risk weights to change to reflect changes in underlying fundamentals. But, at the same time, it also allows the absolute weights to change over time. Evidently, in and of itself, this too could exacerbate procyclicality. In sum, there are numerous grounds for belief that the problem of procyclicality, already severe, will worsen going forward.

The fundamental conclusion to be drawn from balancing all the arguments above is that we need a new macrofinancial framework to resist procyclicality⁶⁰. This can be done in a market friendly way. The intention must be to preserve the efficiencies generated by new financial developments, while at the same time mitigating inherent threats to safety and stability. Focusing on a the development of a new framework to reduce procyclicality, the fundamental problem, could also mitigate the tendency for politicians to rely on heavy handed and punitive regulation designed primarily to stop the recurrence of yesterday’s

⁵⁹ For example; consider all the longer term problems of monetary easing noted above. Note that major increases in the ratio of government debt to GDP reduce the policy room for manoeuvre going forward. Private sector debt reduction invites moral hazard, and further consolidation in the banking sector has the unwanted implication that still more banks become “too big to fail” or even “too big to save”

⁶⁰ This suggestion is presented in more detail in White (2005) and in various BIS Annual Reports. See also Borio (2003) and Borio and Shim (2008)

problems. While some such changes are surely needed⁶¹, care must be taken to address underlying causes of problems as well as their symptoms.

The central characteristics of such a system would be three in number. The first one would be an increased emphasis on **systemic** exposures. In particular, attention would be focused on the dangers associated with many different economic agents (households, corporations and financial institutions) having similar exposures to possible common shocks, and also the possibility of common responses. It is the shared exposures that contribute the most to systemic problems within the financial sector and to the joint vulnerability of the real and financial sectors.

Given that this is essentially a macroeconomic problem, rather than one confined to the financial system, it might also be suggested that central banks (with their “top down” view of things) should be given ultimate responsibility for resisting procyclicality and systemic distress⁶². Such a mandate for the central bank would in fact be consistent with the generally accepted view that price stability should be its principal objective. This consistency becomes obvious if one accepts the fact that price stability can be as easily threatened by deflation as inflation, if a boom-bust cycle is allowed to become sufficiently severe. Indeed, a deflationary spiral might in the end prove significantly more dangerous than an inflationary one since, as suggested above, monetary instruments can lose their potency in the face of high debt levels and the zero interest rate bound.

If central banks are to be given responsibility for “macroprudential” or systemic issues, what should be the role of traditional regulators? Evidently, there would still be need for a “microprudential” form of regulation that would focus on the safety and soundness of individual institutions, particularly those that are large and complex. While this function could also reside in the central bank, it might be better to leave this in a separate institution also charged with ensuring appropriate market conduct and consumer protection. This “Twin Peaks” model (now in place in Australia and being suggested elsewhere) has the particular advantage of clarity about institutional objectives, a characteristic which also helps to ensure accountability of the agencies responsible.

A second characteristic of such a framework is that it would be much more **symmetric**. That is, the instruments used to resist procyclicality would attempt to lean against the upturn of the credit cycle rather than relying on cleaning up after the bubble had burst. In effect, “preemptive tightening” would replace “preemptive easing”, for all of the reasons suggested above. This argument having been accepted at the level of principle, it must also be accepted that the practical implementation of such a policy would not be without difficulties.

As suggested above, conventional models (especially those based on recent data) are not likely to be very helpful in identifying problems which accumulate slowly during upturns and then suddenly materialize. That is the principal reason why most forecasters missed the current downturn. In contrast, indicators of growing “imbalances” in the economy do seem to have useful predictive powers⁶³. Unusually rapid credit and monetary growth rates,

⁶¹ See the report of the Financial Stability Forum (2008) to the G-8 for a long list of useful suggestions.

⁶² This is consistent with the thrust of the proposals made recently by the de Larosière group and by Lord Turner, for the Euro area and the UK respectively.

⁶³ See Borio and Lowe(2002) and Borio and Drehmann (2008)

unusually low interest rates, unusually high asset prices, unusual spending patterns (say very low household saving or unusually high investment levels) all ought to attract the attention of those charged with resisting procyclicality. Unusually high external trade positions (whether deficits or surpluses) are another indicator that unsustainable exposures are being built up⁶⁴.

How might these indicators influence the setting of policy instruments? Here, much more work remains to be done, particularly with the calibration of monetary instruments. Nevertheless, all the arguments presented above suggest that interest rates in the expansion phase of the credit cycle would have to be tighter than inflation control alone would warrant. Absent higher interest rates, the underlying problem of excessive credit expansion will be extremely difficult to address. This will be particularly the case if current trends to disintermediated finance continue, implying that currently regulated institutions account for a steadily shrinking proportion of total credit growth. Evidently, this policy would then have to be explained to the public, currently conditioned to believe that meeting price stability objectives is sufficient to achieve good macroeconomic performance.

Regulatory policies would have a similar bias, with measures being taken to ensure that risk spreads (for expected losses), provisioning (for changes in expected losses) and capital (for unexpected losses) were built up in good times and run down in the bad⁶⁵. Similarly, these regulatory actions would also have to be explained, particularly to the accounting profession and the fiscal authorities. Both groups, for understandable microeconomic reasons, have in many cases strongly opposed such policies in the past. Note as well that the use of such regulatory actions would likely be insufficient to deal with the underlying problem of credit growth and the wide range of imbalances to which it might lead. As recently indicated by developments in Spain, contracyclical measures such as “dynamic provisioning” allowed Spanish banks to be better prepared for the downturn (thus moderating the need to tighten credit conditions more recently). However, they did not prove very helpful in moderating the preceding upturn. Again, one is led to the conclusion that both regulatory and monetary instruments will have to be mobilized to deal effectively with the procyclicality problem.

Regulatory instruments do have one natural attribute. In the face of the many impediments to the discretionary use of both regulatory and monetary instruments⁶⁶, it is not difficult to envisage the introduction of regulatory rules that would avoid many of these problems. Dynamic provisioning as introduced by the Bank of Spain, is one possibility. Another possibility would be to continue to calculate capital requirements as currently proposed under Pillar 1 of Basel II. This relates capital requirements to the perceived risk of the portfolio of individual institutions. This figure might then be grossed up (using the existing authority of Pillar 2) to reflect system wide imbalances indicating the growing risk of systemic disturbances. Such an approach would act to offset the inherent procyclicality of Basel II, while building on its strengths at the same time.

The issue of how to deal with currently unregulated institutions also needs further reflection, since there can be no doubt that tighter requirements on regulated players will

⁶⁴ These might be defined as “macro systemic indicators” of potential systemic stress. In addition, there might well be other “micro systemic indicators” (for example, measures of leverage or concentration in financial markets) that might also provide useful warning signals of accumulating stress. See Borio and Dehmann (2008)

⁶⁵ This suggestion is consistent with the thrust of the argument in Brunnermeier et al (2009)

⁶⁶ White (2005)

encourage migration elsewhere. The creation of SIV's and conduits to escape the capital requirements of Basel I attest to this. Presumably, the scope of regulation will have to be extended, at least to systemically important players, though in a globalized world this too has pitfalls. For this reason too, automatic (rule based) regulatory measures might still prove insufficient to deal with the underlying problem of procyclicality. In this case, both regulatory and monetary policies might also have to be tightened in a discretionary way at a second stage.

A third characteristic of such a macrofinancial stability framework is that the authorities involved would have to be much more mutually **supportive** than they appear to be at the moment. This implies more cooperation, both nationally and internationally. With respect to national authorities, silo mentalities currently prevail in many countries. With respect to international cooperation, national authorities remain almost wholly driven by questions of national interest. Hopefully, this might be changed.

At the ***national level***, assuming adoption of the Two Peaks model which allocates ultimate responsibility for different objectives to different agencies, central bankers and regulators should work much more closely together. This would involve ongoing discussion about both the indicators of growing imbalances and exposures and the appropriate policy responses. Central bankers (mostly economists) and regulators (often from a legal or accounting background) need to recognize that they have a great deal to learn from each other. Their respective "top down" and "bottom up" approaches also complement each other. Treasuries should actively encourage such cooperation since, should an unresisted boom turn to bust, it is the taxpayers who ultimately have to pay for any resulting bailouts.

As for mutual support at the ***international level***, countries wishing to counter procyclical tendencies at home must pay more attention to the international dimension. Three points seem particularly important.

First, the oversight of internationally active financial institutions must have an international dimension. In many cases, foreign banks are so important that their failure could threaten macroeconomic stability in the host country (think of Central and Eastern Europe). At the same time, the international exposure of some banks is so large that losses elsewhere could threaten the health of the home country (think of Iceland). Indeed, it is not inconceivable that the home country would not have the fiscal means to save a bank that might be thought in principle "too big to fail". Everyone would then pay a price for the disorderly failure of a bank that proved "too big to save".

Second, more recognition must be given to the fact that international economic and financial linkages have been steadily growing. One implication of this greater integration is that domestic indicators of procyclical behavior will under estimate the threat posed to stability (and to inflation as well) to the extent that other countries are subject to similar pressures. A second implication, now all too evident, is that a "bust" in an important debtor country (say the US) can have significant effects on output in creditor countries (say Germany, Japan and China) that do not in fact seem to share the domestic imbalances generated by procyclical tendencies. From a policy perspective, this greater integration implies that everyone has a legitimate interest in encouraging debtor countries with domestic excesses to moderate them. But, by the same reasoning, creditor countries also

have a responsibility to change their own policies to the extent that they are encouraging excesses elsewhere by providing the financing to sustain them.

Third, and closely related, much more attention needs to be paid to the role of exchange rates in fostering procyclical behavior. The efforts of many countries in emerging market countries to prevent their currencies from rising against the US dollar, both through easy monetary policies and explicit intervention, effectively imported US “imbalances” into their own countries. Moreover, since the US dollar has been trending down over this last decade, this policy served to increase their domestic inflationary pressures as well. Moreover, these policies not only had undesirable domestic effects but undesirable international implications as well. First, by preventing the US dollar from falling and by lowering US long term rates in the process of reserve accumulation, both the elasticity and absorption channels of trade adjustment were impeded. As a result, global trade imbalances became ever bigger and more dangerous. Second, with many currencies prevented from moving against the US dollar, an unwarranted degree of upward pressure was diverted to freely floating currencies like the euro⁶⁷ For all of these reasons, it is now in the interests of all countries to rethink urgently what currently passes for an international monetary system.⁶⁸

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⁶⁷ Against this backdrop of very easy global liquidity conditions, another problem also emerged. Smaller countries that wished to tighten their domestic monetary policy found such efforts undermined by international capital flows which pushed down long rates and pushed up asset prices. In principle this should not happen if the theory of Uncovered Interest Rate Parity (UIP) prevails. In practice, UIP seems to prevail only over long horizons implying that unhelpful capital flows can continue for long periods. This was clearly a problem for New Zealand and for the United Kingdom as their central banks sought to tighten policy in the years preceding the crisis of August 2007. Indeed, as the US dollar continued to weaken, even as domestic policy rates rose from 2005 onwards, capital inflows provided a significant degree of offset to the general thrust of US policy. This raises the broader issue of whether even the United States must now be treated as a Small Open Economy.

⁶⁸ This gives some urgency for calls to reform the Fund itself (the question of “chairs and shares”). If large, emerging market countries shared a sense of “ownership”, the Fund might find it easier to produce a more universal floating exchange rate system, at least among the bigger currency blocks. Moreover, a more effective Fund might also find it easier to convince the large creditor nations (China, Germany and Japan in particular) that in a closed global economy everyone must contribute to measures to reduce global trade imbalances. Indeed, the need for creditors to adjust takes on added importance when the overall environment is deflationary rather than inflationary. This is, of course, precisely the set of circumstances we face today. Against this background of external imbalances, the fact that the United States has introduced by far the largest set of domestic stimulus measures looks positively anomalous.

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