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The Need for a Longer Policy Horizon: A Less Orthodox Approach

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Global imbalances might be addressed better by analysing them from other viewpoints than the orthodox views. The Austrian school of economics provides some clues as to the origins of internal and external imbalances and other worrisome developments. Perhaps the most important message of these earlier thinkers is that policymakers should try to avoid the build-up of dangerous economic imbalances in the first place.[2]

At the heart of the analytical framework used by most modern policymakers still lies the IS/LM model. David Laidler (1999) contrasts the IS/LM model with the analysis by the Austrian school. He notes that the IS/LM model is essentially static, whereas "the passage of time is a central feature of Austrian theory". While the accumulation of stocks (say, debt levels) is evidently impossible in a one-period model, the evolution of such stocks and related "imbalances" is another central feature of the more dynamic Austrian approach. Moreover, while modern macroeconomics has many ways of dealing with expectations about the future, few, if any, follow the Austrians in assuming systematic errors of judgment about future investment returns and associated

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[2] Keynes had doubts about the efficacy of monetary policy in deep contractions and thus recommended the use of fiscal policies. The Austrians doubted the efficacy of both monetary and fiscal policies, and therefore tended to put more emphasis on preventive actions rather than *ex post* interventions.

misallocation of resources. Further, whereas most modern models assume a smooth adjustment from one equilibrium situation to another, the Austrian approach stresses growing imbalances and periodic crises. Finally, whereas the IS/LM approach implies a highly activist policy response to shocks, Austrian theory suggests some policy actions might, over time, make things worse, not better. As Laidler concludes: "It would be difficult in the whole history of economic thought to find coexisting two bodies of doctrine which so grossly contradict one another."

There is a need for a new *macrofinancial stabilisation framework* to insure against systemic financial imbalances that may eventually have a severe impact on economic output and unemployment. Such a framework would be based upon two main principles. First, it requires a more symmetric policy response to the expansionary and contractionary phases of the financial cycle. This would imply a focus on longer-term outcomes of policy decisions than currently is fashionable. Second, it is essential that all agencies of government involved cooperate more closely. This framework, with its objective of containing financial imbalances, would ideally have both a domestic and an international dimension.

At the domestic level, monetary policy would have to react more to internal financial imbalances than it currently does. This is defined below as a framework of *augmented inflation targeting*.[3] As for the domestic regulatory authorities, they might be advised to adopt a *macroprudential regulatory framework*, one that puts more emphasis on the health of the financial system as a whole, rather than the state of individual institutions as is currently the case. Finally, recognising that "keeping one's domestic house in order" is not sufficient to ensure international stability, there is also a need for a *new international monetary order* to help prevent the build-up of external imbalances that could eventually culminate in stress on a global level. Recall that, before they broke down, this is precisely what the gold standard and the Bretton Woods systems were designed to do.

This chapter is divided into four parts. Section 1 focuses on the past.

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[3] Morris Goldstein (2002) has suggested something similar, "managed floating plus", for use in emerging market economies. For Goldstein, the "plus" is avoidance of the currency mismatch problems which caused so much damage during the Mexican (1994), East Asian (1997-98) and Argentine (2001) crises. Evidently, this is only one form of financial imbalance among many.

After identifying some stylised and often puzzling economic trends observed over the last few decades, some alternative explanations for these trends are suggested. It is concluded that a "less orthodox" analytical approach in the Austrian tradition has significant merit. Section 2 focuses on the present. Assuming the correctness of the less orthodox analysis, it describes existing financial imbalances and suggests ways that policymakers might deal with them. Section 3 looks to the future. Following the less orthodox interpretation of what has been going on, it proposes a new domestic policy framework that might reduce the chances of generating harmful financial imbalances in the future. Section 4 looks at some parallels between a domestic macrofinancial stabilisation framework and the international monetary system.

1 Secular Trends

1.1 Stylised Economic Facts

Looking back over the last few decades, four sets of observations stand out.[4] The first two must be judged welcome, the last two less so. The first is the general reduction in both the level and the volatility of inflation. The second is the robustness of real economic growth and, again, a general reduction in short-term volatility. The third is the increasing prominence of credit, asset price and investment "booms and busts", often accompanied by financial crises of various sorts. The fourth observation is that of increasing global imbalances, not least in importance, the rising external deficit and debt of the United States. The objective of Section 1.2 below will be to suggest a single set of factors capable of explaining the simultaneous observation of all four phenomena.

Since the peak levels of the late 1970s, *inflation* has fallen sharply on a worldwide basis. While most attention has been focused on the industrial countries, emerging market countries have had the same experience. Even in Latin America, where many countries previously were afflicted with recurring bouts of hyperinflation, inflation has now almost everywhere been reduced to single digits. Perhaps even more remarkably, this trend was not permanently interrupted in the aftermath of very large currency depreciations in Argentina and Brazil

[4] For more explicit documentation of these facts, see Borio and White (2004) and Borio *et al.* (2003).

in the late 1990s. Indeed, inflationary pressures have receded so much in some countries that outright deflation has either actually emerged for some time (for example in Japan, China and Hong Kong SAR) or threatened (for example in the United States, Germany and Sweden). At these low inflation levels, the variability of inflation has also decreased. Shocks to inflation now seem less persistent, with inflation following a more mean-reverting path. In sum, inflation seems much better anchored at low levels than in the past.

Over the last two decades, the trend of global *output growth* has risen while the variability of output growth (excluding crisis-hit countries) has fallen. Periods of expansion in the industrial countries have lengthened while growth rates in many emerging countries have risen sharply. China, for example, has been growing at nearly 10 percent per annum for almost 20 years. India's trend growth rate has also risen sharply compared to 20 years earlier. As for volatility, output fluctuations have generally diminished since the mid-1980s, with the United States perhaps showing the greatest improvement. In contrast, countries hit by crisis (Japan, the Nordics in the late 1980s and East Asia in the late 1990s) experienced rapid output growth and low volatility, but only until the crisis hit.

If these first two sets of facts – low inflation and steady growth – are rather satisfying, the third and fourth – booms and busts and increasing global imbalances – are less so. Over the last few decades, the global financial system has been subject to a growing number and increased variety of disruptive incidents.[5] Short-term price volatility in financial markets has at times been a source of disruption. Various systemic events (e.g. the Mexican crisis of 1994 and the subsequent Asian crisis of 1997-98) remind us of the growing capacity of financial markets to transmit shocks, not only across borders, but across markets as well. A number of high-profile institutional failures (Drexel Burnham Lambert and Barings) have also drawn attention to the potential of bankruptcies to cause systemic problems, even if such problems have to date been avoided. Finally, losses due to operational risks in the financial sector have been rising, reflecting the decline of prudent governance during recent boom years[6] and the increasing complexity of modern financial systems.

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[5] For a fuller analysis, see White (2004a).

[6] See Fisher (1933), who emphasises the influence of greed and outright fraud at the end of the financial cycle.

But perhaps the single most remarkable development in financial markets over the last few decades has been the prominence of credit and asset price *booms and busts*, often associated with rapid rates of growth of real fixed investment. In the industrial countries, there was a sharp run-up in credit and asset prices, particularly equity and real estate, in the early 1970s. A second cycle began in the mid-1980s, which turned to bust (particularly in the Nordic countries and Japan) in the early 1990s. Moreover, we appear to be well into the boom phase of a third cycle, dating from the upturn of the late 1990s. While rapid credit growth in the industrial countries has been evident throughout this last cycle, equity prices were affected first (leading in particular to very heavy investment in the telecommunications sector) but have since been supplanted by rapidly rising housing prices (and associated heavy investment in residential construction). This house price phenomenon now has almost global reach, with a number of emerging market economies (especially China) also showing large increases. Among the major economies, only Japan and Germany have avoided such increases, presumably because they are still recovering from the bust phase of the last credit, asset price and investment cycle.[7] In many emerging market economies, domestic tendencies to credit, asset price and investment booms were reinforced by capital inflows turning subsequently into outflows, initiating and aggravating the following busts (see White, 1998).

In many instances the bust phase of the cycle has been accompanied by a crisis in the financial system. Examples include the banking crises in the Nordic countries and Japan in the late 1980s, the Mexican crisis of 1994 and the severe banking problems encountered in East Asia in 1997 and 1998. The resulting costs for the real economy were greatest when banking crises and foreign exchange crises coincided.[8] Even in cases where the bankruptcy of financial institutions was avoided, the stress put on the financial system by incurred losses was often intense and led to significant economic "headwinds".

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[7] The fact that it has taken Japan and Germany so long to recover fully from these earlier experiences of credit excesses attests to the potentially enormous costs of these boom-bust cycles. For a further analysis of such costs, see Hoggarth and Saporta (2001).

[8] It is important to note that, in most cases, the banks themselves had no direct currency exposure and thus thought that they were safe from the effects of currency depreciation. In reality, they were still exposed indirectly to market risk because their customers were exposed.

Similar "headwinds" are arising from high levels of corporate and household debt, and an associated overhang of the capital stock. The overhang of corporate debt and unprofitable capital investment in Japan has been the primary reason for Japan's very poor economic performance over the last decade (see Koo, 2003). A similar point can be made for Germany, in the light of the massive expansion of the construction sector in the early 1990s induced by German reunification. The weakness of corporate investment in Asia (ex China) in the aftermath of the excesses leading up to the Asian crisis is also notable. More recently, the weakness of investment (and therefore corporate borrowing) in the United States and continental Europe in the aftermath of the shared boom of the late 1990s warrants particular attention.

The fourth observation about longer-term trends is that of growing *external imbalances*. These must be judged unwelcome in the light of historical precedents which have commonly involved recessions as debtor countries adjust (see BIS, 2003, Chapter IV). The trade deficit of the United States has been trending upwards since the early 1980s. While this trend was interrupted in the late 1980s, it then re-emerged to such a degree that by 2006 the US deficit stood at 6.5 percent of GDP. Moreover, while the implications for external debt were mitigated for a long while by net services inflows on the US international asset/liability position, these flows have recently turned negative. They are now compounding the effects of the trade deficit on external debt accumulation. Similar external trends seem evident in the case of a number of other English-speaking countries. In contrast, most other regions have recently run either larger external surpluses (continental Europe, Asia) or smaller deficits (Latin America).

The same factual points about financial imbalances leading to periods of stress over the last few decades can also be made in a more chronological way. First, there were the sovereign debt crises of the early 1980s followed by the global stock market crash of 1987. After this, the property bubble burst in many countries in the late 1980s. The Mexican crisis of 1994 was followed by the East Asian crisis of 1997-98. The Russian default of 1998 had repercussions for the Brazilian real, and contributed to the failure of LTCM. In 2000, the NASDAQ crashed and subsequently took a large number of broader indices with it. More recently, sizeable monetary and fiscal easing has helped to buoy the prices of financial assets globally. Nevertheless, risks to the sustainability of the current global economic expansion continue to receive widespread attention, as will be discussed in Section 2 below.

1.2 Alternative Explanations

The Orthodox Explanation

What has been referred to elsewhere as the *"more orthodox"* explanation of these secular trends can be simply put (Borio and White, 2004). Recognising from long experience the problems caused by high and variable inflation, central bankers collectively determined to reduce both. They have succeeded admirably, and we are now reaping the real side gains associated with that success. Trend growth is now higher, absent the dead weight losses associated with high and variable inflation, and cyclical fluctuations are now less pronounced. This is because monetary policy no longer has to lean periodically against rising inflationary pressures, with the associated likelihood of tipping the economy into recession. Thus, we have a coherent explanation for two of the four secular trends outlined above.

As for the third secular trend, i.e. the episodes of financial volatility and instability, the orthodox explanation provides two essentially benign interpretations. On the one hand, these could be only transitional problems. Learning to live with low inflation, a more liberalised financial sector, and the phenomenon of constantly improving financial technology is bound to take time. With time, and ongoing improvements to the financial infrastructure, the frequency and severity of financial disturbances are bound to decline. On the other hand, there is also a train of thought that higher financial volatility might actually be welcome since it is the vehicle through which we obtain less real side volatility. More "complete" financial markets allow a transfer of risk to those most capable of bearing it. Shocks capable of having disruptive effects on the real economy are, therefore, increasingly being harmlessly dispersed before the real side is affected.

Finally, the orthodox view of the fourth secular trend, i.e. widening global imbalances, links them to improved relative growth prospects in deficit countries and inflows of foreign capital driven by higher expected rates of return. In particular, the relatively rapid rate of productivity growth in the United States has led to capital inflows which have in turn strengthened the dollar and led to a current account deficit (see Greenspan, 2005). A variation on this theme is that high saving propensities in Asia, in particular, have outstripped the potential for profitable domestic investments (Bernanke, 2005). The upshot has been a capital inflow into the United States in particular and, again, an associated current

account deficit. Underpinning these orthodox interpretations are the highly liberalised financial markets found in many countries with external deficits. Such financial markets provide many alternative investment opportunities, thus promoting capital inflows which in turn drive the current account.

Whichever strand of "more orthodox" thought one wishes to emphasise, the bottom line is that these third and fourth secular trends (increased financial volatility and global imbalances) are not a source of concern and need not prompt any rethinking of the basic policy lessons learned during the earlier period of high inflation.

A Less Orthodox Explanation

However, a *"less orthodox"* explanation emphasises the interactions between three profound structural changes that have been ongoing over the last 20 years and that have allowed domestic financial imbalances to build up, with subsequent effects on external imbalances.

The first structural change has been "real side" developments, not least the re-entry of China and other command economies into the market economy, which have put persistent downward pressure on global inflation since the late 1980s. The second has been the increasingly single-minded focus of monetary policy on keeping inflation at low levels, with its corollary that "with inflation under control, all is well". The third development has been the liberalisation of financial markets, again globally, with the pace of change augmented by technological progress. The interaction of these three forces provides another set of explanations of the stylised facts. Unfortunately, this less orthodox approach also leads on to the conclusion that current circumstances of steady low inflation and robust real growth may not be sustainable. Moreover, this approach suggests that a new policy framework may be needed to help stabilise the financial system, since it leads to the conclusion that current problems are not transitional but rather endemic in the new global economy.

Turning first to persistent *disinflationary forces* in the 1990s, it must be recalled that the decade began with widespread recession and large amounts of excess capacity, in Japan in particular. Throughout the decade, there was persistent liberalisation in many industrial countries and the growing influence of technological advances on productivity growth, particularly in the United States. Globalisation and the impact of massive increases in the supply of many kinds of manufactured

goods, especially from China, were a further disinflationary factor, with the prices of many traded goods falling consistently over the decade. The increasing contestability of labour markets in many industrial countries, and the threat of production being moved to lower-cost countries, were further disinflationary influences. Moreover, these additions to global supply were occurring at a time of fiscal retrenchment in many countries, especially those in Europe, and a collapse of investment demand in Japan and Germany, as well as East Asia (ex China) after the Asian crisis. Finally, the longer these forces have been acting to keep down inflation, the more strongly entrenched low inflationary expectations have become. This has particularly been the case against the backdrop of the effectiveness of new inflation targeting regimes in some countries, and anti-inflationary rhetoric from central banks almost everywhere.

Turning to the second structural development, the growing focus of *monetary policy* on resisting inflation, it seems paradoxical, in face of the tough rhetoric in the industrial countries, that the occasions when it seemed necessary to raise policy rates became rather less frequent. Indeed, an evaluation of real interest rates in the major industrial countries indicates a persistent trend towards easing, with the sharpest declines being seen after 1997. By the middle of 2005, real policy rates in most large countries were still not much above zero, in spite of record global growth in 2004, while the gap with potential growth rates remained large.[9] In Japan, where the policy rate has been zero for many years, the policy of "quantitative easing" pushed up the Bank of Japan's balance sheet to 28 percent of GDP in early 2005. The more single-minded focus on inflation made it less evident that policy rates needed to be tightened materially in upturns. Perhaps still more important, it implied that there could be much more substantial policy easing in the face of actual or potential economic slowing and the associated threat to job creation. The implications of these generally low levels of policy rates, as well as the asymmetric nature of policy responses, are returned to below.

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[9] A Wicksellian perspective would contrast the level of the "financial" rate with the "natural" rate, with longer-term estimates of the latter generally related to the potential growth rate of the economy. See BIS (2004), pp. 71-3, for an analysis of the "real policy rate gap". Perhaps the greatest gap of all is seen in the case of China, where real policy rates are around zero while the real potential growth rate of the economy is thought to be around 9-10 percent per annum.

It should also be noted that the trend towards policy ease in the face of persistent disinflationary pressures in the industrial countries, has also had repercussions in many emerging market economies (EMEs). In particular, as the value of the US dollar has trended down since 2001, many EMEs (particularly in Asia) have intervened heavily in foreign exchange markets to prevent their own currencies from rising in response to capital inflows. While vigorous attempts have been made to ensure domestic sterilisation of the associated injection of cash reserves, and thus avoid associated inflationary pressures, these efforts have not been wholly successful. Consistent with this interpretation, real policy rates in Asia (ex Japan) also hovered around zero in the early years of this millennium. Moreover, the subsequent recycling by official reserve managers of these inflows, back into the industrial economies and in particular the United States, has arguably helped push down long rates further. Given the continuing primacy of the US dollar as the global reserve currency, and the dominant role of the Fed, these international developments might be judged consistent with a global trend to easier monetary policies. These expansionary monetary policies, carried out in an environment of continuing price stability, have certainly contributed to the maintenance of global spending at high levels. They have raised growth in the upturns while reducing the severity of downturns to date. In themselves, both outcomes must be judged welcome.

Yet, even before turning to some other longer-term potential side effects, it should be noted that the kind of spending that has been stimulated is not as self-evidently welcome as the effect on aggregate spending. In a number of English-speaking countries (the United States, the United Kingdom, Canada, Australia and New Zealand), what has been observed is a decade-long reduction in the household saving rate and a significant increase in consumption as a share of total aggregate demand. In Japan and a number of other countries (in both Europe and Asia), a similar phenomenon can be recorded. In China, in contrast, the proportion of spending which is now made up of fixed investment was thought to be almost 50 percent. Clearly, very low household saving rates could well rise again to more normal levels. As well, very high investment rates could fall back and also imply the potential for significant resource misallocations. Both sets of imbalances imply some limits to the sustainability of the good growth performance seen to date.

The third structural aspect of the less orthodox interpretation has

been the *liberalisation of the global financial system* supported by associated technological progress. These developments have sharply increased competitive pressures in the financial services industry. Such pressures, in turn, increase the incentives to engage in risky behaviour (see Rajan, 2005), particularly if boards of directors increase the emphasis they put on "shareholder value", and if structural rigidities impede cost cutting. These pressures will be augmented by any safety net provisions that might be in place. It is well known from options theory that the value of guarantees goes up as the environment becomes riskier.

Competitive pressures have led over time to changes in both financial structure and financial behaviour. While the process of adapting to a more deregulated environment will eventually end, as the orthodox interpretation stresses, the process of change with its associated risks could go on for a long time.[10] Moreover, there is an important argument supporting the view that these are not just transitional problems. Periodic financial crises were part of the landscape prior to the 1930s when heavy financial regulations were imposed for the first time. This clearly raises the possibility that a re-liberalised financial structure could permit forms of behaviour that could also pose dangers to sustained economic expansion, and potentially the health of the financial system (see Bordo and Eichengreen, 2000).

As to recent changes in financial structure, the growth of financial markets in recent years has been remarkable, as has the process of globalisation and consolidation within the financial industry. The upshot of these developments is that the financial system is now much more complex, opaque and fast-moving than ever before. For example, risks can now be quickly transferred off balance sheets, but who finally bears that risk can no longer be easily established. Nor can the resilience of the system to shocks be easily determined. These changes have also implied a marked increase in the variety of credit sources and, generally speaking, reductions in both the costs of financial services and the intermediation costs of credit. Clearly, there are both advantages and disadvantages attached to these recent developments. These must be carefully assessed and weighed before passing on the policy conclusions.

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[10] It is now generally accepted that periods of financial deregulation can be particularly dangerous periods, potentially leading to financial instability as both markets participants and supervisors cope with unfamiliar circumstances. Technological breakthroughs might have similar side effects.

As to changes in financial behaviour, Borio, Furfine and Lowe (2001) document the extent to which financial systems are "inherently pro-cyclical"; that is, perceptions of value and risk move up and down with the economy as does the willingness to take risks. This tendency can be seen clearly in a large number of financial measures. Credit spreads, asset prices, internal bank risk ratings, and such accounting measures of expected losses as loan-loss provisions all move pro-cyclically. Moreover, this pro-cyclicality then interacts with the real economy in ways that can amplify economic fluctuations. In an upswing, the greater availability of credit leads to higher asset prices, which then serve as collateral for more borrowing. Moreover, similar incentives may lead to higher levels of fixed investment, which increase demand in the short run and promise increased profits over time.

To some degree, such behaviour patterns are perfectly natural and desirable. If, in an upturn, real prospects for gain are improving, markets should recognise this. However, problems of "excessive optimism" can easily arise if markets extrapolate good times in an unwarranted way. There are many precedents for this in history.[11] A modern example would be to misinterpret a cyclical upturn as marking the beginning of a permanent "New Era", perhaps reflecting some technological improvement. In fact, history is replete with such examples.[12] The danger then becomes that disappointed expectations revert too far in a pessimistic direction, and that balance sheet exposures slow spending further. On the one hand, this could reflect a spontaneous drawing-back by an overextended household or corporate sector. On the other hand, an exaggerated unwillingness on the part of the financial sector to provide credit could also be the problem. And, as Bernanke (1983) reminds us in his reflections on the Great Depression in the United States, a combination of both forces could produce a result more damaging than just the sum of the parts.

In addition to a general tendency for liberalised financial systems to

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[11] Evidence that this is a long-standing failure of the human psyche is to be found in the Bible in the Book of Genesis. In the parable of Pharaoh's dream, the story of the seven fat years and the following seven lean years leads on to the conclusion that, while we might hope for the best, we should prepare for the worst.

[12] The introduction of toll roads, canals, railways, the automobile and urban electrification were all associated with expectations of massive profit increases. Many years later, the users of the new technology profited from it, but the original providers almost universally failed to do so given the extent of competitive pressures.

be more prone to boom and bust behaviour, these tendencies could become more evident in the context of easy monetary policies. At the heart of the matter is the "search for yield" when nominal risk-free rates are very low, a problem that could well be compounded by lingering elements of money illusion after a period of high inflation. Moreover, it now seems well documented that the appetite for risk in financial markets rises as policy rates are reduced (see, for example, Tsatsaronis, 2000). Being able to borrow at very low interest rates provides incentives to credit creation, carry trade behaviour and leverage, all of which have been increasingly evident in financial markets in recent years. In particular, it is clear that credit expansion has been highly correlated with asset price increases in each of the three medium-term cycles referred to above.

Asymmetric monetary tightening and easing also has significant implications. In the upswing, bubblelike tendencies emerge, but meet with relatively little resistance from monetary policy. Moreover, the expectation that monetary easing will be the response to any emerging difficulties could possibly accentuate such risk-seeking behaviour. In effect, it provides a kind of macro safety net to go along with the more traditional micro ones (e.g. deposit insurance, lender of last resort, too big to fail).[13] As noted above, the subsidy value of all these safety net provisions rises along with the degree of risk in the system. Given the combined incentives provided to pro-cyclicality by a liberalised financial system and a generally accommodative but asymmetric monetary policy, the building-up of financial imbalances and the recurrence of bouts of financial instability would not seem surprising.

This line of thinking also leads to a less orthodox explanation of the secular trend towards growing global imbalances. Those countries with the biggest external deficits (the United States, the United Kingdom, Australia and New Zealand) also tend to have the biggest internal imbalances. Rising asset prices in such countries (recently, for housing in particular) have led to higher perceptions of wealth, and more spending. Domestic absorption has thus, gradually, exceeded domestic production and the external deficit has risen accordingly. But this observation must then logically raise the question of why countries

[13] See White (2004a) for a fuller description of the increasing use and changing character of safety net instruments. In particular, as markets have become more important, there has been a trend to more "generalised liquidity infusions" to deal with market disruptions.

with external deficits are more prone to internal imbalances than other countries. A possible answer is suggested by the fact that these countries have also been among the most advanced in developing complete, liberalised financial markets.[14] Moreover, it could also be argued that such countries have also tended to have relatively easy monetary conditions,[15] sometimes accompanied by the asymmetric conduct of monetary policy.

Nevertheless, in evaluating the implications of the interacting structural changes identified by the less orthodox approach, a puzzle remains. Continuing low inflation is relatively easily explained. So too is the observed tendency for occasional but recurring financial crises and growing trade imbalances. But focusing on the reality of intermittent "busts", how can one reconcile this approach with the remarkable steadiness of real growth in the industrial countries in recent decades? One possible explanation is the success to date of aggressively asymmetric monetary policies designed to lean against the economic downturns associated with the end of financial cycles. Consider that policy rates in many countries were lowered sharply at the beginning of the 1990s in response to the property collapse and the weakness of banking systems.[16] Indeed, they have remained very low in Japan ever since. In 1997, when traditional macroeconomic considerations would have called for a tightening of policy, rates were generally left unchanged in the light of the Asian crisis. In 1998, still further into the upturn, policy rates were lowered in some countries in response to the Russian debt moratorium and the LTCM crisis. After the collapse of the NASDAQ, rates were again lowered aggressively and have only recently begun to rise again in some countries.

The success of policy in stabilising the economy in each of these individual cases could, however, have had some unwanted side effects. The first has to do with time inconsistency. Monetary easing in each

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[14] Recognition of this fact raises still more starkly the trade-off between the allocational efficiency of liberalised financial markets (at a moment in time) and their possible instability (over time).

[15] One measure of this is the "real policy rate gap" as defined in a footnote above and as documented in BIS (2004), pp. 71-3. This "gap" at the end of 2003 was significantly greater in the United States than in either continental Europe or Japan.

[16] It is noteworthy that the easing in the United States at the beginning of the 1990s, and after 2001, was significantly greater than would have been called for by a Taylor rule. See BIS (2002), Chapter IV.

case implied that existing imbalances were never addressed throughout restraint. Rather, each new phase of expansion either wound up expanding initial imbalances (say, external trade or internal debt imbalances) or served as the starting point for increases in asset prices in some new financial market; first equities, then bonds, then yield spreads, then houses, and so on. The second side effect is essentially arithmetical. If policy rates are to be lowered more aggressively in downturns than they are raised in upturns, then they are more likely eventually to be pushed to the limit of the zero nominal bound. According to this way of viewing recent developments, the legacy of the three structural changes identified above raises concerns. Should there be a belated unwinding of financial imbalances, cumulated over a long time period in response to asymmetric policy easing, it would be hard to resist them with further monetary easing to the extent that policy rates are already very low. Moreover, with initial inflation levels also low, such developments might easily tip some economies into an outright deflation that could prove hard to manage given the cumulative build-up of debt that has occurred over time.

Such considerations serve to raise the two questions discussed in Sections 2 and 3. First, what evidence is there that the global economy is currently exposed to some of the dangers noted above? Second, assuming that one accepts the less orthodox interpretation of recent events as plausible, if not necessarily compelling, where might prudent policymakers think about going from here?

2 Current Exposures: Do They Warrant a Policy Response?

Viewed from the perspective of the less orthodox approach, a number of indicators pointed in mid-2005 to significant internal and external imbalances in the current global economy. Here, imbalances are defined as persistent and significant deviations from long-term norms.[17] To the extent that there were to be a tendency for these imbalances to revert to the mean, implicitly a statement that these significant imbalances were also unsustainable, there would also be the potential for some slowing of global economic growth. Whether this reversion was gradual and

[17] As will be discussed in Section 3, the simultaneous observation of a number of such imbalances has historically been a useful predictor of subsequent financial crises and slowdowns in output growth. See Borio and Lowe (2002).

more likely to be benign, or more rapid and disorderly, would depend very much on real/financial interactions that are hard to predict. In particular, the dampening effects on inflation of the positive supply shocks noted in Section 1 might, or might not, be overwhelmed by the effects of the easing of monetary policy over the last few years. And the financial system might prove more or less resilient in the face of macro-economic shocks, given the offsetting forces of more risk-taking versus better risk management and supervision.

2.1 Internal Imbalances

With respect to *internal imbalances*, in the United States and a number of other countries (primarily but not exclusively English speaking), the principal indicators of potential difficulties would be the currently historically low ratio of household saving and an associated historically high ratio of household debt. The capacity of modern financial systems to facilitate the withdrawal of equity from higher house prices has given strong support to both trends. Moreover, even as the supply of credit has risen, the demand for this credit has been encouraged by historically low interest rates. While debt service requirements have generally not risen sharply, and asset levels greatly outstrip liabilities, both of these positive factors might be considerably reduced were interest rates to rise back to more normal levels. Moreover, it must be recognised that the liberalisation of financial and other markets has fostered the transfer of risk to households in many new ways,[18] and it is not obvious that households have the expertise to adequately[19] limit their prospective exposures.

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[18] First, consider the trend away from defined benefit pension schemes to defined contribution schemes. Second, consider the extent to which pension funds (and insurance companies) have deviated from "immunisation" principles in recent years. Both trends threaten the security of post-retirement income. Third, consider the growing use of variable pay and contract employment, which threaten the security of household income prior to retirement.

[19] In the United States, for example, there has been a marked increase in the use of variable rate mortgages, albeit from low levels, particularly by people on lower incomes who would not have been eligible to receive a mortgage carrying a higher fixed rate. The use of "interest only" mortgages has also been rising sharply. Finally, the proportion of US houses purchased to rent (i.e. to generate income) has also been growing rapidly – a trend also seen in the United Kingdom and Australia.

In continental Europe, both corporate and government debt levels as of mid-2005 remained very high, measured against historical norms. The former reflects, in part at least, heavy corporate borrowing associated with the period of strong investment in the "New Era" environment of the late 1990s. The latter reflects many decades of large government deficits, followed by an inadequate degree of fiscal consolidation in the late 1990s in spite of the incentives provided by the Stability and Growth Pact and the opportunities provided by relatively rapid growth. In Japan, corporate debt levels are much reduced and household balance sheets remain strong. Yet the level of government debt is historically high and a massive deficit increases it each year. In China and a number of other Asian countries, the debts of many state-owned enterprises (SOEs) are likely in the end to prove unserviceable. Given the recent very high level of credit growth and investment spending in China, it is possible that some more recent loans will also prove unserviceable, the ultimate indicator of capital misallocation.

Debt, *ceteris paribus*, acts as a claim on future revenues and slows spending over time. To some degree, this can be offset by the positive effects of higher wealth on spending. However, it needs to be stressed that a large part of what statisticians (and common sense) define as wealth at the level of the individual is not obviously the same thing at the aggregate level. It could be argued that the higher house prices are simply a change in relative prices and do not increase wealth in aggregate. In effect, the higher price of a house (of benefit to the owner) is offset by the discounted costs of higher rents in the future (either explicit, or implicit, for owner-occupied dwellings). Any associated increase in net spending generated by such "wealth" is a borrowing from the future that will have to be repaid. If house prices fall, the homeowner, who borrowed against higher equity, will have to retrench. If house prices do not fall, then those purchasing more expensive housing services will have to economise on something else. In contrast, real wealth is generated by increased saving, investment and/or increases in total factor productivity.[20] Only with respect to the third of these factors are there some grounds for optimism, at least in the United States. Finally, the "headwinds" posed by debt must be evaluated against the backdrop of unfavourable demographic trends in many countries. These will slow the rate of growth of potential output and make it increasingly likely

[20] Such changes can legitimately drive up the price of equity. Here, unlike the case of house prices, there are winners but no offsetting losers.

that debt burdens will enter the realm of "unsustainability".[21] This could lead to an increased likelihood of financial disturbances as creditors seek to "outwit the crowd and pass the bad or depreciating half-crown to the other fellow".[22]

It must also be noted that the prices of many assets, both financial and real, also looked high as of mid-2005 against the benchmark of historical valuations. This also implies some scope for unwinding, with attendant risks. In spite of recent, measured, upward movements in the US policy rate, the US long bond rate did not rise significantly, and long rates in Europe even fell. Corporate spreads have also narrowed, driving those on high-risk bonds to historical lows. Spreads for sovereign issues have moved similarly. Valuations for equities in industrial countries, based on actual earnings, are lower than they were in 2001, but still remain well above the ratios observed before the IT boom. And, while valuation levels still look reasonably modest in EMEs, the price increases seen over the last year or so have been very great. As for residential property, there has been, as noted above, almost a global trend towards sharply higher prices.

With respect to each of the prices cited above, idiosyncratic arguments have been presented to justify what is being observed in the light of underlying fundamentals in that particular market. However, a complementary but simpler explanation also suggests itself. All these prices are high because of strong demand for assets induced by very low global policy rates. In effect, existing ample liquidity is being used to purchase "illiquidity". This interpretation is also consistent with the very low level of implied volatility (uncertainty) in options markets, made more extraordinary given the increased uncertainties about the future currently being expressed by many economists. In practice, liquidity is being sold in the form of put options by those eager to receive premia inflow in an environment of very low interest rates (see Rajan, 2005). However, if this is part of the explanation for higher asset prices, it must also be asked why recent moves to tighten policy in the United States have not had more effect. One explanation is that

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[21] Sustainability is defined here in the rather narrow sense of the primary deficit needed to stabilise the relevant debt/GDP ratio. This required primary deficit depends on the gap between the real rate of interest on the debt and the potential growth rate, multiplied by the initial ratio of debt to GDP.

[22] As described by Keynes (1936), p. 155, in his famous chapter on "The state of long term expectations".

"measured tightening" lowers rather than eliminates the expected rates of excess return from purchasing such assets. Indeed, it is not inconceivable that well anticipated tightening of this sort might even reduce risk premia and encourage more leverage to maintain expected rates of return (see Kaufmann, 2005). If so – and this is highly speculative – the eventual reversion of valuations to levels closer to historical norms would be sharper, and the interaction with higher debt levels more contractionary.[23]

2.2 External Imbalances: The US Deficits

If a case can be made for being concerned about current internal financial imbalances, *external imbalances* are receiving even greater attention. In particular, the US trade deficit is now increasingly seen as being unsustainably large, and the services deficit will also widen as interest rates rise back towards normal levels. The root cause of this deficit seems to have been the secular shift down in the household saving rate analysed above. The US fiscal deficit, which is currently very worrisome, was in fact improving throughout the 1990s even as the current account was worsening. Nor can relatively high investment levels in the United States be the principal contributing factor. In fact, business investment collapsed in the early years of this decade, but the current account continued to worsen. If household consumption has been the principal counterpart to foreign lending, debt service will eventually prove more onerous than it would have been had borrowing been directed to productive investments capable of generating foreign currency returns.

To date, the quantity of inflows of longer-term private capital to the United States has remained adequate. Nevertheless, their quality has been steadily deteriorating. Durations have been shortening, and flows have increasingly been into "safe" assets like Treasuries or Government Sponsored Enterprises often perceived to benefit from a government guarantee. Central banks (particularly in Asia) have in recent years provided the largest share of the required financing for both the US current account and fiscal deficits. Dooley *et al.* (2003, 2004) have suggested that this support is likely to continue for many years. However, Roubini and Setser (2005) as well as others have suggested a long list of

[23] A second possibility is that financing for carry trade activity may have moved to other low-rate jurisdictions.

reasons why central banks might choose to limit that support going forward. Asian central banks, or others such as oil producers, may judge their share of dollar-denominated assets as being excessive. Public sector "rebalancing" could in itself have effects on G-3 exchange rates. Were private sector investors, currently also with long dollar investment positions, also to rebalance in response, then the implications for exchange rate movements could be greater still. The bottom line is that changes in investor preferences are not inconceivable, and this could catalyse an unwinding of external balances as well.

If one accepts the concept of internal and external imbalances, and agrees that currently observed deviations from historical norms are significant, the next question is how a reduction of these imbalances might affect global real growth and price levels in various countries. As noted above, given the complicated nature of the problem, point predictions have little value. On the one hand, a general easing of domestic demand pressures in low-saving countries, allied with the opposite trend in high-saving countries with excess capacity, might redress many of the imbalance problems without doing great harm either to global growth or to the maintenance of generally low inflation everywhere. A lower dollar would probably be the product of such trends, which would also have the advantage of mitigating disinflationary pressures in the United States (arising from the assumption of more saving) and inflationary pressures elsewhere (arising from less saving). On the other hand, were continued rapid consumption growth in the United States to spark an eventual flight from dollar-denominated assets, the feedback effect on policy rates and asset prices might in turn have unwelcome effects on the global economy. A similar conclusion might follow from a "hard landing" in China.[24]

If the precise nature of the outturn is unclear, the policies needed to shift the balance in favour of a more benign outturn are somewhat more evident.[25] Higher saving rates in deficit countries, like the United States, would be encouraged by higher policy rates. Indeed, presenting both an opportunity and a challenge, tightening monetary policy in the United States might eventually lead to stronger effects than in the past because of the interaction between debt service requirements and asset

[24] For a fuller analysis of whether current external imbalances constitute a "problem", see White (2005).

[25] A fuller description of current policy options is provided in BIS (2005), Conclusions.

prices. Fiscal tightening in the United States would also be very welcome. Both steps would contribute to re-establishing both internal and external balance, hopefully in the context of a gradual decline in the real effective value of the US dollar. In China, steps to slow an overextended investment sector have already been taken, though it is not yet evident whether they have been successful in restoring internal balance. As for external balance, it seems clear that Asian countries in general should have higher real exchange rates, though the particularities of how this might be achieved are less clear. Evidently, if policy is to be directed to slowing domestic demand in what are currently the two main drivers of global growth, the United States and China, complementary steps must also be taken to speed up growth elsewhere. In particular, continental Europe, Japan and emerging Asia (ex China) must again become sources of demand growth. In all these areas, and in China as well, structural reforms to encourage growth in the non-tradables sectors are required for both internal and external reasons.

As evident as these policy prescriptions might appear to some, there is a reasonable likelihood that they might not be implemented. Fiscal tightening in the United States is by no means assured. Complementary easing in Europe and Japan is constrained by the legacy of already high government debts and other commitments. Structural reforms will take time and will encounter resistance from entrenched interests; look at the difficulties being encountered in implementing the EU Services Directive. Moreover, export-oriented growth strategies in Asia will probably contribute to there being less upward movement in Asian nominal exchange rates than there should be. These impediments to desired policies could result in a further build-up of the internal and external imbalances just identified. These imbalances in turn would pose a greater potential threat to global output and employment going forward.

3 Towards a Domestic Macrofinancial Stabilisation Framework?

The three structural/regime changes identified in Section 1.2 clearly have delivered many economic benefits. Nevertheless, it is hypothesised that they also have certain harmful side effects – in particular credit, asset price and fixed investment cycles – that can eventually feed back negatively on both growth and employment. The policy challenge is to reconcile the secular gains in "efficiency" with the periodic costs of disruptions arising from a kind of financial overreach. There would be

two key elements in making a domestic macrofinancial framework operational. First, there must be a convincing assessment that systemic imbalances are emerging that have the capacity to impose economic costs. Second, given such an assessment, incentives must be in place to ensure that policies will be implemented to offset such risks in as market-friendly a way as possible.[26]

3.1 Key Elements of a New Domestic Framework

How can we best *evaluate whether systemic imbalances are building up* that require a policy response? In principle, one wishes to gauge changes in the expected losses, measured as the product of the probability of financial stress (PFS) and the economic losses given stress (ELGS). Unfortunately, neither is easy to calculate with accuracy. The underlying analytical problem is the complexity associated with real-financial linkages (going in both directions), the interactions of heterogeneous participants in real and financial markets, the likelihood of responses to shocks that are likely to change over time, and the non-linearities imposed by bankruptcy considerations and regulatory constraints. Moreover, making efforts to predict expected losses even more difficult, both PFS and ELGS could well be evolving in response to structural developments, but with even the direction of the effects being subject to dispute. For example, some contend that PFS might be raised by new kinds of risk-taking made possible by new technology. Others argue that it seems more likely to be reduced given the new culture of risk management engendered by the Basel II process. ELGS might also be rising in the light of the continuous monetary stimulation given to the system, and the rising risk of bankruptcies due to higher debt levels. But, it could also be argued that ELGS might have been reduced by the progressive implementation of codes and standards that improve the functioning of financial institutions, markets and payment systems under stressful conditions. Perhaps the only thing that is clear, as surveyed in a recent paper by Sorge (2004), is the substantial increase in analytical work being carried out on these difficult questions.

Regardless of the difficulties faced by more academic researchers, many official agencies are paying increasing attention to data that indicate future financial vulnerabilities. Their ultimate motivation has been the recognition that the economic costs associated with recent

[26] Much of this is drawn from White (2004b) and Borio (2003).

financial crises have commonly amounted to many percentage points of GDP. The IMF, for example, has suggested a list of Financial Soundness Indicators for individual countries and now uses them actively in conducting Financial Sector Assessment Programs. While a major step forward, this work suffers from the same problems just noted. Generally, being micro data aggregated up to macro dimensions, they can provide only limited information about the distribution of risks within the system or the interplay between market participants that can cause one kind of risk (say, market risk) to be transformed into another (say, credit risk or liquidity risk). A parallel can be drawn with the stress tests now being regularly conducted by major financial institutions. They rarely, if ever, consider the possibility of other major players being similarly affected by shocks and reacting in the same way.

Some researchers at the BIS have recently tried to address a number of these issues. Borio and Lowe (2002) look at factors driving PFS and demonstrate that financial crises in industrial and emerging market countries have generally been preceded by a combination of above trend growth in credit and asset prices. In another paper, they apply their methodology and find that overvalued real exchange rates also play an explanatory role in the case of emerging market economies. Goldstein and Turner (2004) rather emphasise how the ELGS in emerging market countries can be affected by currency mismatch problems. All of this work has been promising enough to indicate that further work might well prove very useful.[27]

What would be the core elements of a macrofinancial stabilisation framework, one that would *ensure an appropriate response* when financial vulnerabilities were identified? The first point to note is that it would preserve the traditional microprudential standards that are designed to improve the soundness of financial institutions, financial markets and the underlying legal and payments infrastructure. This would contribute to reducing PFS and ELGS, as noted above. Yet, a macrofinancial stabilisation framework would also imply an additional set of concerns directed to ensuring the stability of the financial system as a whole.

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[27] A notable aspect of the Borio-Lowe work is that their asset price data could not include house prices since such historical data were simply unavailable at the time. A recent joint conference by the BIS and IMF was directed towards resolving this critical data problem. More recently, Fitch Ratings have used the same methodology, extended to include real estate prices, to assess the financial strength of banking systems.

Perhaps the most important change would be an enhanced need for supervisors to recognise that they might sometimes face a "fallacy of composition" problem. That is, recommending what seemed right for a single institution might well exacerbate system-wide problems were other institutions to do the same thing. A good example might be recommending the sale of risky assets in stressful situations. Clearly, if broader-based selling reduced market prices, and thus the value of remaining assets, everyone might wind up weaker. Further, given a macrofinancial focus, the monitoring of the component bits of the financial system would also have to change to ensure a greater focus on weaknesses likely to have knock-on effects elsewhere. One implication is that banks, as providers of liquidity, should rightly receive more attention, and that bigger institutions need closer monitoring than smaller ones. Indeed, to reflect these externalities, capital requirements might even be calculated differently. Finally, given the growing importance of markets, both to provide financing and to transfer risks, market monitoring and the evaluation of structural developments affecting markets (for example credit derivatives) would have to be further enhanced. This conclusion is supported if we note that the financial institutions themselves are now crucially dependent on market-based services of various kinds. In fact, a number of steps in this direction have already been taken.

A first guiding principle for a macrofinancial framework would be that both regulatory and monetary policies should be applied more symmetrically over the cycle. This suggestion has parallels in prescriptions for fiscal policy that emphasise running surpluses in upswings to "preserve some room for manoeuvre". In the case of regulatory policy, more symmetry would imply that more capital should be built up in good times. Not only would this help restrain credit excesses, but it would also allow capital to be run down in bad times[28] to cushion the economy from associated credit constraints. Tightening monetary policy in the face of excessive credit growth would also attenuate the worst excesses and could also obviate the need for radical easing later that might trigger the zero lower bound problem. This would not be an inconsequential advantage should an unwelcome degree of disinflation emerge in such an environment.

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[28] The reference in the text to "fallacy of composition" problems might seem almost like an invitation to forbearance should bad times put pressure on capital ratios. The way to reconcile a macro perspective with avoiding forbearance is to ensure that levels of capital rise earlier in the upswing.

The practical implementation of a more symmetrical regulatory policy might be carried out in various ways. Were the regulators to be quite confident in their predictions that systemic risks were rising to dangerous levels, they could have recourse to discretionary action. Cash reserve ratios, liquidity ratios, loan-to-value ratios, risk weights for regulatory capital, collateral requirements, margin requirements and repayment periods could all be tightened. In contrast, were the authorities to be more doubtful about their capacity to predict stressful events, they might rely more on some simple rule to enforce more prudent behaviour. Goodhart and Danielsson (2001) suggest relating prudential norms to the rate of growth of loans or asset prices. These prudential norms could affect the pricing of risk, provisions for losses (for expected losses) or the accumulation of capital (for unexpected losses). In Spain, a system of "dynamic provisioning for losses" has already been brought in. Provisions must now rise with loan levels on the assumption that losses in the future will be similar to those experienced in the past, but measured over the full economic cycle.[29]

As for a more symmetrical monetary policy, this too might rely on either discretion or a rule. Examples of the former might be seen in the recent behaviour of a number of central banks. In recent years, both the Bank of England and the Reserve Bank of Australia have raised policy rates in the face of rising house prices and debt, even though projected inflation was not obviously inconsistent with target ranges. The Sveriges Riksbank, for similar reasons, did not initially lower interest rates as much as might have been expected given the extent to which they were actually undershooting their inflation target in 2005. As for more rule-based behaviour, the two-pillar approach of the ECB could also be noted, even if a great deal of discretion has been maintained in reacting to deviations from the monetary reference value. Moreover the suggestion here would be to use the monetary pillar to resist financial excesses in general rather than inflationary pressures in particular.[30]

The above comments refer to substantial issues in formulating policy, but, in the real world, processes and institutional arrangements are also important. A second guiding principle for a macrofinancial framework

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[29] Most provisioning to date assumes that loan losses over the next year will be similar to last year. Such simple extrapolation lies at the heart of pro-cyclical risk assessment.

[30] In fact, this seems increasingly to be the way the ECB views the "monetary pillar" of its approach. See Issing (2005).

would therefore be the need for closer cooperation on financial stability issues between the various interested agencies in the official sector. As to policy processes, an important first step would be agreement among involved agencies that an imbalances problem was emerging. This might be followed by orchestrated statements of concern.[31] This alone might prompt both creditors and debtors to rethink their investment strategies.

As to institutional arrangements, the most important problem to avoid is macrofinancial stability issues falling between the cracks. That is, the agencies involved see problems building up, but assume that somebody else will do whatever needs to be done. One practical way to avoid this would be to set up a committee of senior representatives of central banks, regulatory agencies and treasuries to monitor events and identify problems. Interestingly, such a committee exists at the international level – the Financial Stability Forum, whose secretariat resides in Basel – but there is no domestic counterpart in many countries. In countries where committees having similar representation have been set up to facilitate crisis management and resolution, the simplest approach would be to widen the mandate to encompass crisis prevention as well.

3.2 Impediments to a New Framework and How They Might Be Removed

There are many *practical impediments* to the implementation of a domestic macrofinancial stability framework. Some are of a general nature, while others apply more specifically to prudential authorities and still others to monetary authorities. As will be discussed further below, how strongly one feels that these impediments should be removed depends critically on how strongly one believes that there is a systemic problem to be dealt with in the first place.

Impediments

As to the general problems, the existence of normal institutional inertia and preference for the status quo needs no further comment. But, in addition, it must be admitted that there remains considerable uncertainty as to whether the massive structural changes seen recently in the financial area are likely to be the source of significant systemic problems

[31] This recommendation for statements of concern, followed by action if need be, parallels much of the literature on the efficacy of foreign exchange intervention.

or not. Orthodox and less orthodox views diverge. Arguments can be put forward that recent trends towards marketisation, globalisation and consolidation all increase the risk of systemic problems. Yet, reasonable arguments can also be posited in the opposite direction, with the overall resilience of the financial system to numerous recent shocks being cited as the final proof that all is well. The expression "so far, so good" has always had a particular resonance.

Moreover, it is not only the official community that would need to be convinced of the desirability of a new framework. Periods of financial excess in the private sector are also periods of profit increases for many who will resist giving them up. Intellectually, the idea that the public sector knows better than the collective wisdom of the market will be strongly disputed. Practically, a whole host of lobbyists and enlisted media will be engaged to argue the case that "this time is different". And to this must be added another cause for hesitancy, linked, paradoxically, to an eventual acceptance that a problem could be developing. It is a fact that such an intellectual turning point is only likely when the imbalances are already very well developed. Thus, steps to mitigate the imbalances are feared because they might catalyse the very crisis everyone wishes to avoid.

There are further, specific impediments to prudential authorities conforming to the general suggestions made above. The first is that they do not have a long tradition of concern about issues having to do with macroeconomic stability. Thinking systematically about the health of the financial system as a whole, rather than individual institutions, is already a big leap. Extending this further to recommend changing the setting of regulatory instruments, when the financial system seems in good health but corporate and household lending looks excessive, could easily be a leap too far. Second, in practice, most prudential authorities do not have the powers ascribed to them above, and obtaining such powers would not be easy. Consider, for example, the traditional opposition of both the accounting profession and the tax authorities to forward-looking provisioning for expected losses. And finally, there is again the "fallacy of composition" problem. How could the prudential authorities convince individuals to act in ways that seemed to conflict with their own best interests? And even if some could be convinced, how could they be assured that others would not free-ride on their decision? One implication of this is that the prudential net would have to be cast very wide. Another is that the use of monetary policy might also have to be contemplated in the face of growing financial imbalances.

What impediments could prevent central banks from operating as the new framework would suggest? The most obvious problem is that the objective of monetary policy in many countries has been identified as low inflation, generally narrowly defined as some version of the consumer price index (CPI). Thus, if inflation were under control and the new framework suggested that policy rates had to rise, there would be a chance that over the forecasting horizon the policy target would be undershot. Some worry that this would undermine the credibility of the whole regime.[32] At the very least, there would have to be a public explanation of what would look like an inconsistency. A second problem, already observed, would be securing an intellectual acceptance of the need to focus on the simultaneous observation of a number of indicators before changing policy rates. To date, there has been some tendency for policymakers to equate the proposed macrofinancial stability framework with "targeting asset prices". Since there are many well known objections to this latter proposal,[33] acceptance of the former framework clearly suffers from this association.

Removing Impediments

Given enough conviction that a macrofinancial framework was needed, it might be *possible to remove these impediments* to action. Consider the assertion above that policymakers would be biased towards inaction by uncertainty as to whether systemic problems were truly building up. In effect, they would tend to balance off the known costs, in terms of output losses associated with tighter policy, against the uncertain losses associated with future systemic problems. This argument might easily be turned on its head given acceptance of a minimax optimising strategy that put greater weight on avoiding "truly bad outcomes". Moreover, the bias to inaction could be further reduced by more research indicating the extent to which internal governance and market forces had historically contributed to pro-cyclical financial behaviour. Another promising research approach would be to further improve the

[32] In the limit, some might contend that the authorities were no longer interested in keeping down inflation. However, it is hard to see how this could be concluded from policy actions that were even tighter than those needed to control inflation.

[33] Which asset price to target? At what level? Would bursting the bubble in one sector cause major damage elsewhere in the economy? How to sell the policy to the public?

financial vulnerability indicators suggested by Borio and Lowe, among others.

As for getting the private sector to support the idea of a new framework, a process of public education would be useful. It is worth recalling that during the 1960s and much of the 1970s there was little public support for fighting inflation, but now the desirability of such policies is commonly acknowledged. The fact that so many central banks already publish a financial stability review indicates that this process of education is already under way. Moreover, a clear commitment to leaning against financial excesses might also change people's behaviour, inducing more prudent recourse to credit and speculative behaviour. Further progress in providing better official measures of "imbalances" would of course be crucially important in this regard.

Turning to the particular impediments to action facing prudential regulators, the current "culture" of microprudential surveillance could be supplemented with macroprudential concerns focused on systemic exposures. More regular contacts between central banks and regulators, together with Treasury counterparts, would help to build a common culture based on shared objectives, mutual trust and a similar understanding of emerging problems and possible solutions. Kapstein (1992) describes just such a process as being responsible for the continuing success of the Basel Committee. If this could work at the international level, where initial suspicions are evidently greater, it could surely also work at the national level. All this said, the capacity of participants in a liberalised financial system to evade regulatory actions cannot be underestimated. This forces one back to a consideration of the role of monetary policy.

The principal impediment to using monetary policy to resist financial excesses is that it can be seen to conflict with the desire to stabilise inflation at a low positive level. Perhaps the first heretical point to raise is whether this should always be the objective of policy, given the reality of ongoing positive supply side shocks. There was a lively debate about such issues prior to the First World War,[34] and the issue needs to be addressed again.[35] As noted above, resisting a "good deflation" (supply-driven) could over time rather result in fostering conditions that might

[34] For an overview, see Selgin (1997).

[35] A historical overview indicates that periods of falling prices were not generally characterised by depressed output and growth. In this regard, the early years of the Great Depression, 1930-33, were truly outliers. See BIS (1999), pp. 78-80. See also Borio and Filardo (2004).

lead to a "bad deflation" (demand-driven). Nonetheless, presuming maintenance of this objective for the time being, perhaps a regime of "augmented inflation targeting" might be suggested. This would still allow concerns about financial excesses to be expressed in terms of price objectives, albeit over a rather longer policy horizon. In effect, leaning against emerging imbalances might cause an undershoot of near-term inflation objectives. This would be judged acceptable since not doing so would risk a boom-bust cycle that could result in an even bigger undershoot of prices.

As a practical matter, a central bank would normally continue to focus on controlling inflation over traditional horizons. However, it would also make it clear, through its public monitoring of financial vulnerability indicators, that policy would occasionally have to be conducted in a way that reflected these longer-term concerns about prices. Evidently, this would imply some convergence in the subject matter of a central bank's inflation review and its financial stability review[36] and perhaps even some organisational changes as well. Given the real-financial interactions that lie at the heart of the analysis in this chapter, it is by no means clear that such changes would be undesirable.

4 Towards an International Macrofinancial Stabilisation Framework

In a sense, it is odd that domestic financial imbalances are not ranked higher on policymakers' list of priorities, since international imbalances have been a source of concern for centuries. Indeed, earlier versions of the international monetary system were all designed to prevent such imbalances from getting dangerously out of hand. Against the backdrop of the so-called "impossible trinity", the gold standard incorporated a process (not always smooth) of automatic adjustment of trade imbalances. It retained a fixed exchange rate and free capital flows while giving up monetary independence. Under the Bretton Woods system, countries kept fixed exchange rates and independent monetary policies but gave up free capital flows. The IMF essentially played the role of policeman, disciplining in particular countries running large external deficits. Subsequently, after increasingly free capital flows brought an end to the

[36] Sveriges Riksbank has already begun inserting boxes on financial vulnerability indicators into its regular inflation review.

Bretton Woods system, floating exchange rates were assumed to be the mechanism through which trade imbalances would be reduced before they attained disorderly proportions. Given the size of recent current account imbalances, this last supposition is being increasingly challenged. Principal worries are that a sharp decline in the demand for dollar-denominated assets might generate instability in global financial markets, or that protectionist pressures might rise sharply.

The underlying problem is that we no longer have a coherent system that somehow forces countries to alter their relative degrees of domestic absorption, and associated exchange rates, so as to reduce external imbalances in an orderly way. A number of important creditor countries, particularly in Asia, have taken significant steps to hold down the value of their currencies against the dollar, thus impeding the needed downward adjustment of the dollar on an effective basis. In sum, we do not really have a freely floating rate system. Moreover, the IMF has never had much influence over creditor countries, and currently has little influence over the biggest debtor country, the United States. Thus, we are not back in the land of Bretton Woods either. While it is logically possible that policy measures consistent with resolving domestic imbalances might resolve external imbalances as well, this should not be assumed. In any event, it is not likely to happen. This leads on to the question of whether there are institutional changes that might be recommended to strengthen the international adjustment process. Three possibilities might be considered.

First, consideration could be given to going back to a more rule-based system. A number of academics and others have suggested reverting to the gold standard or establishing a single international currency. More realistically, one might recommend a small number of more formally based currency blocks (say, based on the dollar, euro and renminbi/yen), but clearly they would have to float more freely against each other. Nor would such a system avoid the possibility of excessive capital flows, based on misguided optimism about one currency block or another, leading to disruptive exchange rate changes and associated international resource misallocations.

Second, consideration could be given to a system more like that of Bretton Woods, but with the IMF accorded substantially more power to force both creditors and debtors to play their appropriate role in the international adjustment process. An associated requirement might be augmented resources for the Fund, to avoid countries feeling that they had to build up their own foreign exchange reserves to very high levels

as a form of "self-insurance". By way of opening a discussion of such issues, Mervyn King recently said, "I am not convinced that the future of the Fund is primarily as an occasional lender of last resort for middle-income countries suffering financial crises." (King, 2005, p. 4). Of course, convincing countries to voluntarily give up sovereignty in this fashion would not be an easy sell.

Third, consideration could be given to informal cooperative solutions, based on the mutual recognition of interdependencies and the need to avoid circumstances that could lead to systemic disruptions. At the very least, this would require representatives of large creditor countries to share views with debtors as to whether problems were emerging and, if so, what policies might help resolve them. This is probably the most plausible way forward in current circumstances. However, similar to the difficulties that arise in dealing with domestic imbalances, the impediments to cooperative action arising from different perceptions of systemic risk, different cultures and analytical models, and simple national interest should not be underestimated.

5 Conclusion

All policy choices involve trade-offs and judgment, and policy in the area of macrofinancial stability is no exception. It is hard, on the one hand, to question the benefits of the more stable macroeconomic environment we have experienced over the last 20 years and the policy framework that has produced it. On the other hand, evidence of emerging strains is not difficult to find and future problems cannot be ruled out. What is being suggested here is that financial imbalances, both domestic and international, need more systematic attention, and that this might be accomplished through an evolutionary adaptation of the current policy framework. While there are clearly impediments to this happening, none would seem insuperable, at least to those who believe that there is a problem that needs fixing.

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