The Dynamics of the Financial Cycle

By William R White

A. Introduction

The purpose of this short note is to investigate the origins of the current economic and financial crisis and to draw some policy lessons. The first of these has to do with policies to extricate ourselves from the current global crisis. Many of the policies being currently suggested seem likely to make matters worse over time. The second, has to do with the policy changes required to avoid similar problems in the future. In effect, we need a new "macrofinancial" stability framework to do this.

The underlying thesis is that the global economy has been on a bad path for many years, and we have now come to the end of the road. Fundamental policy changes are now required, relying much more on supply side reforms than simple demand side stimulus. Accepting this conclusion also demands a different way of thinking about how domestic macroeconomies work and about the requirements for a stable international financial system. This will be a big analytical challenge.

B. The Surprising End of the "Great Moderation"

The "Great Moderation" refers to the almost three decades of unusually good macroeconomic performance in the Advanced Market Economies (AME's) which preceded the onset of crisis in August 2007. The onset of the crisis was a highly non-linear event, and for most policymakers (and others) came as a complete surprise. Moreover, as the crisis deepened and widened, "denial" was the normal response. First said to be confined to the subprime mortgage sector in the US, it was then said to be only a liquidity crisis, then a solvency crisis but confined to the financial system, and only much later was it accepted that it would have significant implications for aggregate demand and unemployment worldwide. Moreover, the associated need for supply side adjustments, that will affect unemployment for a long time, is still not being adequately recognized.

Why this surprise and associated denial? For those in the private sector making huge profits, there was no inclination to question the source of these profits. Similarly, Finance Ministries were satisfied to receive (and generally spend) the associated tax receipts which they judged to be "structural" rather than cyclical. As for central bankers, single mindedly focussed on price stability, prices were stable. Thus, all was well, and would continue to be well.

Above all, however, the surprise was due to an analytical failure. The maroeconomic models used by academics had no room for crises of this kind. Indeed, lasting deviations from full employment were ruled out by assumption. As for the larger and more structural models used by central banks and the IMF and OECD, they were generally constructed to ensure that very bad outcomes could be offset by good policy. All of the models in common use essentially assume linearity, have either no or very primitive financial sectors, and focus on "flows" of expenditures rather than the build up of "stocks" (especially of debt) over time. Since it is this stock element that ultimately leads to non linear outcomes, it is not surprising that the models missed it.

The fact that policymakers' analytical frameworks did not include the possibility of crises had many undesirable implications. Not only was the crisis not forecast, but no steps were taken to prevent it in advance. Moreover, no ex ante measures were taken to allow the crisis to be better managed when it did arrive. Misdiagnosis of the severity of the underlying problem also led to inappropriate policy conclusions which have already had important political implications. For example, recent setbacks for the Democratic party in the US reflected the belief that President Obama should have been focussing "like a laser"on the economy, rather than pursuing the agenda (health care and cap-and-trade) he did. As the crisis wears on, it will surely have other important social and political implications. In this regard, the 1920's in Central Europe provide lessons that should not be forgotten.

C. The Underlying Causes of the Crisis

There are two schools of thought on this. One might be designated the comforting school of "what is different". The other could be called the less comforting school of "what is the same" At the beginning of the crisis, the former school held sway, but more recently the second school has been in

ascendance. This is appropriate. While both schools are right, the latter school is more important than the former.

The school of "what is different" essentially blames the crisis on the use of new and untested financial instruments or procedures. This would include the rise of a shadow banking system (SIV's, conduits and the like), extensions of the originate-to-distribute model, structured products and the expanded role of rating agencies. This school is more comforting because it provides all of those involved in the governance process (internal management, risk committees, supervisors, central bankers and a host of others) with a convenient excuse; namely, that no one confronted with such new ways of doing things could have been expected to forsee the dangers and exposures they would bring in train.

The school of "what is the same" is much less comforting. It begins by noting that we have had financial and economic crises from time immemorial; 1825, 1874, 1929, 1990 and 1997 to name just a few. Moreover, while each had its idiosyncratic components (eg the credit card was invented in the US in the 1920's), basically they all look the same. Some piece of good news (new technology, new discoveries etc.) leads to justified optimism and an extension of credit. This flows into the real economy, boosting spending, and into asset prices, boosting collateral. Both factors boost confidence and lead to more lending, leverage and speculation. Over time, lending standards decline and the quality of loans becomes ever more doubtful.

The process can end either with a sharp rise in inflation, or an economic or financial crisis of some kind. In the case of a crisis, whether it starts on the real side (less corporate or consumer spending due to high debt levels) or on the financial side (overleveraged lenders cut back) is not so important. What is important is that the real and financial sectors interact both on the way up and on the way down. It is that interaction between stock imbalances that further contributes to the non-linearity of this "boom- bust" process.

Those responsible for oversight of the economic and financial system over recent decades must find this school of thought less comforting. Against the backdrop of history, they failed to see the evidence that history was repeating itself. Prior to the crisis, credit and monetary expansion were at very high rates, lending standards were deteriorating, spreads were at record lows for both high risk and emerging market sovereign borrowers), and the price of getting

insurance for bad financial outturns had never been so low. In addition, asset prices (especially of housing) were rising rapidly and spending patterns in many countries gave clear evidence of excess. Household saving rates fell to zero or even much less in many English speaking countries while investment rose to 50 percent of GDP in China. These patterns (increasingly referred to as "imbalances") should have been seen as clearly unsustainable.

The role of monetary policy in the AME's leading up to the crisis needs special attention. Policy rates in Japan, the US and the Euro area were respectively, zero, one percent and two percent in the spring of 2003.Casual observation reveals an inflection point in almost all of the series just referred to at that time. Further, some financial specialists have contended that many of the financial innovations that characterized the period leading up to the crisis were themselves a response to the low interest rate environment. The search for yield (and greater risk taking) was just one manifestation of this.

Perhaps even more pernicious, many of the new instruments were consciously designed to repackage risk, so that a reasonable probability of a **mildy** costly event would be replaced by a much smaller possibility of a **very** costly event. Since most of humanity suffers from what psychologists call "disaster myopia" this effectively made the risks disappear. In a similar vein, most people were encouraged by lenders (focussed on short term bonuses and service charges) to believe that an increase in the price of their house was an increase in their wealth. Common sense tells us this cannot be true, since the costs of housing services had risen equivalently. However, the increased house price did provide collateral for borrowing and many people gave in to the temptation to use their houses as ATM machines. Some have conjectured that this willingness to borrow might also have reflected a strong desire to "keep up with the Jones's" at a time when median incomes were stagnating while a minority were both earning and spending unprecedented sums.

It also needs to be emphasized that interest rates were that low in the AME's because they had been ratcheting down since the early 1980's. This was the result of central banks being increasingly focused on "price stability", at a time when the opening up of China and other ex-socialist countries was putting significant downward pressure on global inflation. It is highly debatable, at the level of theory, whether this was in fact the appropriate monetary policy

reaction to a series of positive supply side shocks. Further, and a potential second form of error, the top leadership of the Federal Reserve in particular believed that it was not possible to use monetary policy to lean against the upswing of the credit cycle (the boom). Rather, they preferred to ease monetary policy aggressively to moderate the subsequent downturn (the bust) Such easing, without commensurate tightening in the upturn, began in 1987 after the stock market crash, and was then repeated in 1990, 1997, 1998 and 2001 to 2003. It could be contended that this overly easy and asymmetric policy strongly encouraged the buildup of the stock of debt which is now constraining household spending in the United States (and many other countries) going forward.

While the emphasis thus far has been on policy errors in the AME's, the contributing role played by Emerging Market Economies (EME's) and the International Monetary System also deserves to be emphasized. Very rapid monetary expansion in the AME's should generally have driven down their exchange rates. This would be particularly expected in countries where high spending levels had also led to record trade and current account deficits. However, faced with the prospective appreciation of their exchange rates, many EME's decided to resist this tendency even though they were often running large external surpluses. This applies particularly to China and other countries running "export led growth" strategies but also to the oil exporters as well as others.

Due to their "fear of floating", many EME's followed a policy of currency intervention, and often easier domestic monetary policies than would otherwise have been the case. The former policy led to a massive reserve buildup, largely in US dollars, and pushed down long rates in the US encouraging still more debt buildup. The latter policy has imported many of the "imbalances" from the AMEs into the EME's, not least rising house prices, and has also intensified inflationary pressures in many of these countries. China, Indi and Brazil, among many others, now find themselves in just such a situation. In short, the monetary factors leading up to the crisis have become truly global. Moreover, they have by no means been fully played out yet as will be discussed below.

This raises the still more fundamental issue of how much longer we can live with an International Financial System (really a non-system) that allows such outcomes. Under the gold standard, creditor nations would have been forced to spend more domestically and debtor nations would have been forced to retrench. Under Bretton Woods, the IMF at least tried to achieve the same outcome though the effort generally failed because the Fund had no effective influence over creditors. In recent decades, however, international debtors have been allowed to dig themselves into an ever deeper hole using money freely provided by creditors. This raises the particular possibility of an eventual dollar crisis (the end of the Triffen paradox) which would certainly have major implications for everyone, creditors as well as debtors. The current European crisis, which has very similar roots, may be a portent of what is yet to come on a global scale.

D. Policy Responses to Date and their Limitations

Recently, a number of scholarly studies have examined historical data to identify the key characteristics of the recovery phase after downturns triggered by financial crises. The principal conclusion of these studies is that such recessions are generally unusually severe and protracted. Unemployment rates generally are still above pre crisis levels ten years later, while house prices remain below pre crisis levels. Household saving rates rise sharply while investment falls commensurately, and government deficits and exports rise to satisfy the National Income Accounts identity. Even after ten years, the process of deleveraging is often ongoing. Generally speaking, the severity of the downturn is closely linked to the size of the debt build up (often proxied by a debt to GDP ratio) in the period preceding the crisis.

What evidence do we have that “this time it’s different”? The answer is, not much. It is now over three and a half years since the crisis broke, and there are already widespread concerns that it is not over yet. This is partly due to the fact that the various imbalances identified as triggering the crisis are in large measure still intact. In particular, the process of deleveraging of debt (affecting both debtors and creditors) has in fact hardly begun. Perhaps more ominously, the increase in the debt/GNP ratio was significantly higher in the build up to this crisis than the average build up in the various crises identified in the historical studies. Further, to the extent that exchange rate depreciation and

increased exports were agents in previous recoveries for individual countries, this seems less likely when a large number of countries have been affected simultaneously, as is currently the case.

Could public policies (in particular monetary and fiscal stimulus) make a material difference? It is first important to note that this issue was the essence of the debate which took place between Hayek and Keynes in the early 1930's. Hayek's view at the time was that the downturn was the inevitable result of the excesses of the preceding period, and should be allowed to run its course. Activism would only make things worse. Albeit, he did admit much later that "secondary depressions", which built on themselves, should be resisted. Keynes took the view that policy, particularly fiscal policy, could be effective and should be used to combat "Deep Slumps". As we all know, Keynes' views prevailed and became common currency in the post War period. However, whether Keynes would have supported the use of monetary and fiscal easing an a habitual response to slight downturns, and even prospective downturns, seems highly debatable.

There have been echoes of the Keynes-Hayek debate in recent transatlantic discussions about the effectiveness of stimulative monetary and fiscal policies in the AME's. The authorities in the US and UK have been much more in the Keynesian camp while the central Europeans have had more sympathy with Hayek. These biases (for and against macroeconomic stimulus) have received further support from each block's historical experience. For the US, the defining historical moment was the Great Depression, whereas for the Europeans it was the hyperinflation of the 1920's.For completeness, it should be noted that the Japanese authorities appear divided amongst themselves. Evidently, the Ministry of Finance has signed on to Keynesian prescriptions, whereas the Bank of Japan is more Austrian in its focus on the processes that led to the Japanese bust in the first place.

These differences of view are not inconsequential. They will undermine international cooperation going forward and could have important exchange rate implications.Consider that at the last G20 meeting there was agreement on the need for fiscal consolidation as the recovery proceeded. Since then, the Europeans have generally moved firmly in that direction. In contrast, in the United States a fiscal stimulus package has recently been agreed that could

amount to a trillion dollars. This could well have significant effects on exchange rates, but in which direction remains to be seen. On the one hand, more short term growth in the US might allow interest rates to rise sooner than otherwise, supporting the dollar (the Fleming Mundell hypothesis). On the other hand, the implications for US soverign debt might spark a rise in the global risk premia on dollar denominated assets. This would drive up US long rates while causing the dollar to depreciate.

1) The effectiveness of monetary policy

The view of the Federal Reserve to date is that monetary policy can be effective in restoring aggregate demand , and they have advanced plausible arguments. However, it is also not hard to construct counterarguments. Their first argument is that economic models all indicate that policy can be effective. The counter argument, implicitly raised above, is that models are not reality. Second, the Fed would argue that easing has always worked to stimulate the economy in the past. The counterargument, again implicit above, is that each bout of easing has had to be more vigorous than the preceding one, precisely because of the "headwinds" of accumulating debt induced by lower rates. In the end, easing will cease to work at all. Thirdly, when asked to look at the actual experience of long lasting slumps (in particular the US Great Depression and the more recent Great Recession in Japan) , the Fed's view is that they were a by product of policy error. The authorities were not Keynesian enough. The counterargument relies on the much richer spectrum of historical experience referred to above. Are we to believe there was policy error in every case, or rather that the depth of the downturns was in large part shaped by what happened prior to the crisis?

Finally, there is the ackward fact that policy rates in the AME's are effectively at zero and can be lowered no further. The Fed's response (and presumably that of the Bank of England) is that Quantitative Easing (changing the size of the central bank's balance sheet) and/or Credit Easing (changing the composition of that balance sheet) will work to stimulate spending. These are essentially untested propositions. Moreover, the fact that different central banks often believe different things about how these processes might work is not encouraging. The ECB, for example, sees its "non-standard" policy measures, not as monetary policy at all, but as a means of restoring market

functioning so that standard measures (low policy rates) can be transmitted to the real economy more effectively. Finally many of the suggested channels seem to conflict with what has been accepted wisdom for many years.

Even if we are to accept that ultra-low interest rates and non standard measures will eventually stimulate spending, we must ask at what cost. First, could the result be yet another in the series of bubbles we have experienced so far. Recent developments in the EME's have been referred to and could be just such a bubble. Second, while helpful for recapitalizing banks (who play the yield spread), very low rates penalize insurance companies, pension funds and other forms of saving. This could contribute to more risk taking and more financial instability. Third, the crisis is already estimated by the OECD to have lowered the level of potential in the AME's by an average of three percentage points. By lowering saving, and encouraging the survival of "zombie" companies and "zombie" banks, potential could be lowered even further. Indeed, evidence is accumulating that this has been an important element explaining Japan's secular stagnation.

And finally, there is the concern that QE might in the end lead to a sharp increase in inflation. For those, like the Fed, who focus on the domestic output "gap" as the driver of inflation, such an outcome seems almost impossible. Yet, an "irrational" increase in inflationary expectations cannot be ruled out, particularly if the dollar were to take a sharp tumble at the same time as the the prices of imported goods (in foreign currency) were rising. This kind of phenomena was seen in Latin America over decades, and historical studies also indicate that inflationary outcomes often follow bubbles and busts. It also needs to be emphasized that, in a world where both prospective demand and prospective supply are subject to unusual uncertainties, policy misjudgements can by no means be ruled out.

2) **The effectiveness of fiscal policy**

A number of arguments can be put forward to support the idea that fiscal expansion is an effective way to support economic recovery. As with monetary policy, however, counterarguments are not hard to find. First, some would contend that fiscal multipliers are relatively large. The counterargument is that the there is no convincing empirical evidence for this, and that theory in recent decades (especially the concept of Ricardian Equivelance) actually points

in the opposite direction. To add to the confusion, multipliers might differ across countries depending on how attentive taxpayers are to growing government liabilities. Second, it has been contended that policy can be made more effective if "timely, temporary and targeted". Unfortunately, each of these propositions conflicts with what conventional wisdom over the last two decades has deemed to be either practical or appropriate.

It is also argued that resolute government action to resist the downturn and encourage recovery will increase investor confidence in a self fulfilling spiral of lower interest rates and more private spending. The counter argument is that fiscal expansion will destroy confidence prompting either a sovereign credit crisis, or a currency crisis, or perhaps both. Over the last few years, we have seen evidence of both results, with the outcomes seemingly dependent on market perceptions of the longer run costs associated with fiscal expansion.

The longer run costs of fiscal expansion have much to do with starting conditions. Countries with initially high debt levels run a greater risk of an adverse response to higher deficits and still more debt. Recognizing such exposures, the Irish and Hungarian governments (among others) actually took steps at the beginning of their respective recessions to use discretionary tightening to offset some of the influence of automatic stabilizers. Initial conditions must also take account of off balance liabilities. In many countries, pensions and medical care for the aged are likely to cost governments more than the servicing of contractual debt obligations.

At the present juncture, even the official liabilities of many of the AME's imply a government debt to GNP ratio that is set to rise forever on the basis of current policies. Evidently, this cannot happen, but the question is how the "unsustainable" might be stopped. Will it be through an orderly application of fiscal discipline, or in a more disorderly way including recourse to much higher inflation? What is sure is that the magnitude of the "swing" in the primary surplus required to stabilize the debt to GDP ratio is very large. Indeed, while subject to significant uncertainty, it has been estimated to be over ten percentage points of GDP in Japan, the UK, the US and Ireland. Of course, this raises broader social and political issues. The prognosis looks even worse when one factors in recent evidence that sovereign debt levels, above a threshold of around 80 to 90 percent of GDP, further reduce potential growth. Most AME's are either at that threshold already or are very close.

3) The effectiveness of other policies to maintain the "status quo"

Governments have been very active in two other domains as well. Significant steps have been taken to support the financial system in the AME's. Moreover, government subsidies of various sorts have been used to support employment and also whole industrial sectors. As with the macro policies just discussed, there are persuasive short term arguments to justify what has been done. Nevertheless, these policies again have downsides from a longer term perspective.

In the case of the financial sector, it must be admitted that the imprudent behaviour of bankers and many others in the financial sector contributed materially to the costly events now unfolding. Significant reform, rather than maintenance of the status quo, would then seem desirable. In the case of support for old jobs and traditional production sectors, this seems to fly in the face of a changing global environment. With the rise of the EME's, and a new pattern of comparative advantage, governments of AME's should be encouraging change in production patterns rather than resisting them.

The crisis first erupted in the US financial sector and, as noted, it was first thought likely to have only limited implications beyond the markets for sub prime mortgages. As the turmoil spread out, central banks first turned to measures (many of an unprecedented nature) to restore liquidity to markets that had dried up, and to institutions in need. Later, governments urged private recapitalizations, helped arrange mergers and acquisitions, and themselves took significant equity positions in many financial firms.

However, what was also noticeable was a marked reluctance both to nationalize financial institutions or to declare them insolvent. The former tendency seemed to arise from some deep ideological position in the US and U K governments respectively. The latter tendency seemed to reflect, not only the absence of adequate legislation, but a fundamental uncertainty about what the implications of insolvency might be. This uncertainty was underlined by the problems following the bankruptcy of Lehman Brothers, and was due largely to the size, complexity and interdependence of many of the firms in trouble (the "too big to fail"" problem). The whole process could be characterized the as "muddling through" rather than a systematic attempt (as in the Nordic countries in the early 1990's) to restructure the industry as a whole.

This “muddling through” approach did maintain a functioning financial system, which is a notable achievement. Nevertheless, it has had a number of implications. Perhaps the most important is that it is not yet clear that the financial systems in the AME’s have been fully restored to good health. Many banks (especially in Europe) have huge maturity rollovers to deal with in 2011 and 2012. Nor is it clear that capital levels are high enough to deal with still uncertain prospective losses on toxic assets, property and even sovereign credit risk. Any further easing in economic growth, or worse a “double dip” recession, would also bring further losses, and if this led to a further tightening of credit conditions that would hurt the real economy even more.

Looking somewhat further ahead, these policies to support the financial system have also had a number of undesirable side effects. First, the failure to deal with problems definitively may have increased the unwillingness of financial institutions to lend, both to each other and to non financial borrowers. These tendencies were likely aggrevated by the prevailing uncertainty about future financial regulation, Second, through mergers and acquisitions, the “too big to fail” problem is now even more serious than it was before. Third, as a result of the involvement of central banks in the support of the financial system, issues concerning their future “independence” arose in a number of countries. In the US in particular, the Fed’s actions have led to calls for more oversight by Congress and more binding legislation.

In seeking to support financial stability, central banks have taken a number of highly unusual actions which have raised questions about the institutional status quo. Not only did they allow the size of their balance sheets to swell enormously, but their actions often had important distributional implications (who to support and not support, for example) as well. Since actions with distributional implications are traditionally decided in the political realm, this poses a serious threat to the “independence” of central banks going forward. This threat will be further increased when it is recognized that central banks can choose whether to take out insurance against deflation or inflation. Evidently such a choice has enormous implications for redistribution between creditors and debtors, with highly indebted governments likely to prefer an inflationary outcome. Finally, to the extent that “price stability” and “financial stability” are seen as macro phenomena with monetary roots, these two objectives cannot be pursued independently. In short, the institutional relationships affecting central banks seem likely to change.

As for measure s to support both existing jobs and industrial sectors, governments have again taken a variety of actions. As to the former, the most widespread policy has been subsidies for short-time working. These have been used most actively in the manufacturing sectors of continental Europe and Japan. The idea is to reduce layoffs and the associated likelihood that workers might subsequently loose contact with the job market. This would push up the so called "Natural Rate of Unemployment". As to the latter, perhaps the most notable example has been the support of the US and Canadian governments for the domestic car industry. In a similar vein, programs to substitute "cars for clunkers" were seen almost everywhere.

These efforts to maintain the status quo also have important downsides over the longer term. During the boom period, supply capacity in a number of industries became too large relative to underlying demand. In the AME's, financial services, retail distribution, construction, transportation (including car production) and a number of related industries grew too much. They should now be allowed to shrink, not encouraged to stay as they are. Evidently, there will the need for active labour market polices and retraining to help minimize the resulting problems of frictional unemployment.

Still more troublesome, unsustainable global trade imbalances also built up. This implies that countries with large trade surpluses should be taking steps to produce more non tradeable goods and services, while countries with large trade deficits should be doing the opposite. In contrast, it is remarkable that the countries which have relied the most on short time work have generally been countries with large trade surpluses. In the specific case of China, the government has recently used a variety of means to support export industries and we have seen Chinas' already massive trade surplus grow even bigger in recent months. In short, the jobs being saved seem likely to be jobs that will disappear with time.

E. A Possible Way Forward

The broad conclusion to be drawn from the above comments is that policies of macroeconomic stimulation are no longer likely to work effectively in many countries. Indeed, continuing to rely on them seems likely to make our current problems not better but worse. The same can be said for many of the other policies pursued so far. What then can be done if governments can no longer rely on quick fixes?

In principle, there is a way to restore sustainable global growth even given our current bad starting point. However, it will rely on more international cooperation, more policies directed to debt reduction and debt restructuring, and structural policies to raise potential growth in ways that are compatible with sustainable patterns of international trade. Unfortunately, even if the political will can be found to pursue these policies, they will take considerable time to bear fruit. Whether social and political order can be maintained in the interim thus become a very significant issue. Moreover, absent concrete progress in reducing existing imbalances, the danger looms of yet another, and potentially even more serious, economic and financial crisis.

1) International cooperation

International cooperation must be premised on the understanding that creditor and debtor countries are mutually interdependent. If debtors fail to pay, because they cannot or will not, then it is the creditors that suffer the losses. Cooperation comes down to efforts to minimize the size of those losses. To this end, countries with large current account surpluses should be spending more, and those with deficits should be spending less. In addition, the nominal exchange rates of creditor countries should be allowed to rise, leaning against any potentially inflationary pressures arising from more spending. This is particularly important in China today, where inflationary pressures are becoming a serious domesticproblem. Resulting shifts in the terms of trade would contribute to the desired shifts in saving patterns, while the exchange rate changes in themselves would affect the demand for imports and exports such that they reduce global imbalances.

Against the backdrop of concern about renewed internal imbalances in many countries, the particular kind of spending also matters. In China, and a number of other creditor countries, there is a need to stimulate domestic consumption which is currently very low. Current extraordinarily high investment levels need to be cut back, before they too culminate in a crisis of unprofitability. Allied with this would be deregulation of product markets in China and most other creditor countries to make it much more profitable to produce domestic (non tradeable) services. In the United States and a number of other debtor countries, the main need is to cut consumption, allowing more room for investment in tradeables. Evidently, this latter development will not

occur without an exchange rate incentive and without confidence that creditor countries will allow foreign made goods and services to be imported. The dangers posed to global growth by a rise in protectionism is well understood. What is less well understood is that even the fears of protectionism can be very harmful.

Unfortunately, there are significant impediments to achieving the degree of international cooperation required. First, there still seems to be strong "go it alone" mentality in both the US and China. The former attitude reflects the traditional (if fading) status of the US as the global hegemon. The latter, with arguably much more ancient roots, reflects a profound unwillingness (apparently broadly shared by ordinary citizens) not to be pushed around by foreigners. China's rejection of calls for a renmimbi revaluation seems to reflect such attitudes, as well as internal political pressures from State Owned Enterprises (SOE's) whose profits might suffer. Second, a number of creditor countries, not least Germany, still have an attitude of moral superiority that suggests required policy adjustments should be primarily carried out by countries (like Greece, Ireland and Spain) running large trade deficits. This threatens a more deflationary outcome in a European environment already threatened by deflation. Finally, many creditor countries with large reserve holdings in US dollars (in particular China and Japan) are perfectly aware that they are in a Catch 22 situation. Allowing their currencies to rise could help avert a potentially more disastrous outcome over time, but only at the expense of substantial (and up front) revaluation losses on their reserve holdings. In effect, for countries with large foreign debts denominated in domestic currency (the US today and the UK in the early 1930's), depreciation is an informal method of achieving debt reduction.

2) Debt reduction

If debts are unsustainably high, and/or threaten to impede recovery in many jurisdictions, then a more formal form of debt reduction has many attractions. This applies to household debts in many jurisidictions, but to some sovereign debts as well. In some countries (like in the euro area) depreciation is not an option, and in some others (where debts have been incurred in foreign currency) depreciation would actually increase the burden of debt service.

In fact, there has been recourse to debt reduction and restructuring since ancient times, justified on the grounds that "half a loaf is better than no loaf". Moreover, it is generally recognized that delay in recognizing harsh facts (you will not be repaid in full) results in the losses being greater than otherwise. Debtors are given more time to make still more losses, or will "gamble for resurrection" with the creditor's money. Another argument for debt reduction in the euro area (affecting sovereign debt in particular) is that many debtor countries have become highly uncompetitive. However, using domestic deflation to restore competitiveness would only only worsen those debt burdens. Again, a Catch 22 situation for the creditors.

Unfortunately, there are again many impediments to such policies. For household debtors, in particular in the United States, the sheer scale of the problem is daunting. There are many millions of households under water, and the physical apparatus to renegotiate the debt burden is lacking. In addition many mortgages are encumbered by second mortgages or have been wrapped up in structured products that explicitly forbid restructuring of the underlying securities. Inadequate documentation to allow legal rulings is another emerging problem, and potentially a serious one. If banks cannot prove they own a property, how can they foreclose on the occupants? As for restructuring or forgiving sovereign debt, there would be serious worries about contagion (particularly in Europe) once this process began.

Finally, with respect to all forms of explicit debt reduction, some creditor must formally recognize the losses. This raises the question of whether the creditors can remain solvent in such circumstances. In the limit, it also raises the question of whether the initially solvent governments of countries where such banks reside have the resources to support their banks in such circumstances. Concerns of such a nature may help explain the fierce resistance to date of the German and French governments to suggestions of the need for debt restructuring in some of the peripheral countries in the euro zone.

3) Structural reform

A complementary way to make the burden of debt more bearable is to grow your way out of it. If demand side measures have lost their potency, then structural measures to increase potential growth are the only alternative. The need for this is further enhanced by the fact that the crisis itself is estimated by

the OECD to have reduced the level of potential by an average of three percentage points in the OECD area. Note in this regard that both creditor countries and debtor countries have been affected by a likely increase in long term unemployment and lower participation rates. Moreover, there has also been a decline in the effective capital stock due to both a higher cost of capital and accelerated obsolescence, related in large part to the "imbalances" referred to above.

Over the years, the OECD has done a massive amount of work on such issues. Their publication "Going for Growth" provides a handy summary of much of this work as it applies to labour markets, product markets, financial markets, pensions, environmental issues and many issues related to the efficient provision of government services. Perhaps the suggestion closest to being a "silver bullet" has to do with raising the effective age of retirement, particularly in countries with significant debt problems and the threat of a deep economic downturn. The income from more work (from people living longer) could allow both more spending and more saving, while reducing the burden of future pensions at the same time.

Unfortunately, as with the other desirable measures discussed above, structural reforms are not easy to carry out. Consider the point just made about later retirement, and recall the riots and protests in France last fall in response to very modest proposals in this regard. Conscious of the political economy aspects of such reforms, the OECD has in recent years done a great deal of research into what they now call "Making Change Happen". Evidently, such work calls for close collaboration between economists, political scientists, sociologists and potentially other disciplines as well.

F. Moderating Future Crises

Financial and economic crises of the broad sort we are living through have been recurrent features of life for millennia. They have occurred under widely different monetary and regulatory regimes, and have their basic roots in human nature. The implication is that future such crises are inevitable and we should be taking steps in advance to moderate the associated costs. Since we are not yet out of the current crisis, it might seem odd to be so forward looking. Yet, the crisis has presented a political window of opportunity for financial reform which has not yet been fully exploited. Three particular

suggestions might be made. However, each one suffers from being either analytically controversial, or politically difficult, or both.

First, policy instruments should be used more actively to "lean against the wind" during the upswing of the cycle when rational exuberance is being transformed into irrational exuberance. Agreed, it is not easy to know when to do this, but the problems are not inherently more difficult than the problem of measuring the "output gaps" which drive policy decisions today. It is likely preferable that policy instruments be determined by rules (like dynamic provisioning for example) rather than discretion, since there could be a marked reluctance for the authorities to act at times when rising asset prices give the appearance of permanent increases in wealth. The authorities, as well, can get caught up in the prevailing optimism.

A variety of policy instruments could be considered to help lean against the wind. There now seems general agreement on the use of regulatory instruments for such purposes; provisioning, capital requirements, loan to value ratios, primary and secondary reserve requirements, etc. While there is less agreement on the use of the monetary policy rate, a debate is at least underway. Less consideration has been given to the use of tax policy. The tax deductibility of mortgages and corporate debt clearly contributes to higher levels of indebtedness. These provisions might also be changed to have a more counter cyclical influence.

Second, we need a serious reexamination of the use of monetary policy to "clean up" after the burst of credit bubbles. This has been standard practice over the last twenty years, if not even longer, as noted above (the so called "Grenspan put. Moreover, as this monetary policy easing seemed to have had diminishing effect over time, not only was it used more vigorously, but also other supportive measures (like QE1 and QE2) had eventually to be used as well. The extraordinary measures of the last two years must then be seen as the inevitable result of the moral hazard implicit in the policies followed earlier. Thus, of even greater importance than devising an "exit policy" from the current extreme policy settings is devising an "exit strategy" from the unsustainable path on which we have put ourselves.

Third, we need to take measures ex ante to ensure that we can more easily manage financial crises when they do occur.

One important issue is that of institutions that are so big/complex and interdependent that their failure would have huge and essentially unpredictable implications. In sum, they currently cannot be allowed to fail. To deal with this, we must take steps to lower the Expected Economic Loss (given the failure of such an institution) to acceptable levels. This could be done by some combination of lowering the probability of default, and lowering the loss given default.

To lower the probability of default, capital requirements could be raised (on average) and made both more countercyclical and more tailored to the contribution made by individual institutions to systemic risk. There are proposals extant for dealing with each aspect of this suggestion. In addition, risk taking could be reduced, either by regulation or by legislation, to preclude financial institutions with "utility" like functions from undertaking certain other functions like proprietary trading

As to lowering the potential losses given default, what is required first is domestic legislation allowing the rapid closure of financial institutions and, second, the requirement that institutions develop "living wills" to provide guidance as to how such legislation would be practically applied. For internationally active institutions, further requirements would be international agreements on information sharing, burden sharing in the case of default, and prior agreements as to how different national laws would be applied in a coherent and non conflictual way. None of these suggestions will be easy to implement. Political economy considerations should likely dictate where priorities should be established.

The "too big to fail" issue is only one of the problems that could lead to financial crises having greater costs than might have been the case. In particular, it was contended above that measures to date to address the issue of systemic risk have been inadequate. Interactions within the financial system and between the real economy and the financial system constitute a "complex" system which might be thought to share characteristics with other complex systems. Scientists working on earthquakes, forest fires, epidemics, and other such systems contend that systemic crises are essentially unpredictable and also highly non linear in terms of outcomes. Recall , for example, how in the Asian and LTCM crises, market risks became transformed into counterparty

risks, and then liquidity risks, and how operational breakdowns were only just avoided. The conclusion this points to is that we need a deeper understanding of how systemic crises propagate themselves, and then need to focus on the steps needed to prevent this from happening. In the area of forest management, for example, artificial fire breaks and a regular clearing out of underbrush (by letting small fires burn) are examples of good practice.

Against this background, it is worth noting here that the "risk weight" approach underpinning the recently issued Basel 3 proposals effectively ignores all these systemic interactions. Indeed, the references to systemic risk in Basel 3 are very much "add ons" rather than fundamental to the proposals themselves. Some commentators have gone even further to argue that the whole risk based approach of Basel 3 threatens to aggravate systemic problems. Attempts to game the system of risk weighted charges (as indicated in the past by the rise of the "shadow banking system") encourages higher leverage. At the same time, such actions also increase interdependence and thus systemic risk. As we attempt to deepen our understanding of the character of systemic problems, this suggests the possibility of an interim solution; namely, to demand much higher capital ratios for all banks and to base those requirements on the size of unweighted assets.

Crises would also be managed better if certain procedures were decided upon in advance. Without explicit agreements on what governments will do and will not do, an emergency will inevitably result in the application of the worst and most costly safety net instruments available. For example, in the absence of explicit and limited deposit insurance in most European countries, they wound up in the end (following an initial decision by Ireland) guaranteeing essentially all the liabilities of European banks. Arguably, the continuing crisis of sovereign debt in Europe has its roots in that particular shortcoming of past safety net procedures.

Consistent with the discussion of debt reduction above, there needs to be adequate legislation to deal with the bankruptcy of financial institutions. This is still required, even if relatively greater reliance has been put on measures ("bail-in bonds" for example) designed to avoid bankruptcy in the first place. Again as noted above, there is an international dimension to all of this and getting agreed standards and practices will not be easy. The fact that the

recent Dodd-Frank bill in the US emphasizes early and orderly closure, while the Europeans seem to prefer the “bail in” alternative, gives some indication of the continuing problems in this area.

G. Concluding comments

We have been on a bad policy path for many years. Unfortunately, when the current crisis hit, the policy response was essentially “more of the same”. And in the United States at least, the failure of those policy measures to get traction has been met with “still more of the same”.

In contrast, the main theme of this short note is that virtually everything we believe we know about the management of the aggregate economy needs to be rethought. Making analytical progress is an essential first step to doing things in a better way. In addition, however, as also stressed in this note, many policies have both upsides and downsides, and balanced decisions will nevertheless still have to be taken. Finally, if the gains from globalisation are to be maintained, some significant degree of international coherence will have to be forged. Each of these steps poses enormous challenges. However, a failure to act could prove very dangerous, and coping with such dangers could prove even more challenging.