

Subprime Mortgage Market and Current Financial Crisis

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Abstract

This contribution demonstrates that the August 2007 financial crisis was the result of three forces: financial liberalization, financial innovation and easy monetary policy in a number of countries around the globe. The financial liberalization era allowed financial institutions to initiate a new financial activity, which was based on the discretion of the banks to dispose of their loan portfolio in accordance with risk management. That financial innovation relied heavily on interlinked securities and derivatives, all related to asset backed-securities and subprime mortgages in particular. Subprime mortgages was a financial innovation designed to enable home ownership to risky borrowers. It is, therefore, the contention of this contribution that the origins of the current financial crisis can be explained by these three interrelated features that have been going on since the 1970s. But the root of the current financial crisis is the creation and subsequent developments in the subprime mortgage market, the focus of this contribution.

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1. Introduction

The prevalent view is that the current credit crisis has its origin in the bust of the housing bubble. But what is missing from this view is that the finance of a bubble is only possible through a corresponding increase in credit – no credit, no bubble. Thus at the heart of the current woes lies the excessive liquidity that was put in place in the last ten years or so.³ This liquidity financed in the first instance the internet bubble, but because there was no deleverage following the burst of this bubble the liquidity went on to finance other bubbles, including housing, private equity and commodities. Thus, the housing bubble is a transformation of the previous internet bubble.

The excessive liquidity in the 2000s was the result of three forces: financial liberalization, financial innovation and easy monetary policy in the US and Japan. In the US, Greenspan injected liquidity and cut interest rates following the Asian-Russian crisis of 1997-98, which was only partially drained later on. Afraid of deflation in the aftermath of the burst of the internet bubble, Greenspan cut interest rates from 6.5% to 1% and injected huge liquidity. More important, he was late and slow in draining that liquidity and reversing the rate cuts from the middle of 2004. Ben Bernanke has imitated Alan Greenspan and injected further liquidity following the ongoing credit crisis that erupted in the summer of 2007. This liquidity financed the last and most pronounced phase of the commodity bubble in the first half of 2008 that pushed e.g. the price of oil to \$147 per barrel. The commodity bubble was the last one in the current cycle, as it affected CPI-inflation. Whereas central banks are loath in hiking rates to curb asset price inflation, a surge in CPI-inflation falls squarely into their realm. The surge in commodity prices forced some central banks, like the ECB, to tighten monetary policy, whereas it delayed others, like the Fed and the Bank of England, from the urgently needed rate cuts, thus contributing to the downturn in the autumn of 2008. The acceleration of the economic downturn in the third quarter of

³ Liquidity for the purposes of this paper is to be understood not merely as reflecting monetary aggregates but also including the 'shadow' banking. This is totally unregulated and provides loans that are financed by asset backed securities. The latter's multiplier could be infinite if the yield curve has a positive slope permanently – that is the long-term rate is above the short-term interbank rate, i.e. the LIBOR rate. The LIBOR (London Inter Bank Rate) is compiled by the British Bankers Association (BBA) and published daily between 11am and 12 noon London time. LIBOR rates are averages of interbank rates in major countries worldwide. They are submitted in panels, which comprise at least eight contributor banks; sterling, dollar, euro and the yen have sixteen banks (Gorton, 2008). The following BBA website provides further details: <http://www.bba.org.uk/bba/jsp/polopoly.jsp?d=141>.

2008 burst the commodity bubble and demolished the myth of decoupling between developing and developed countries.

The Bank of Japan has also contributed to this huge liquidity by printing money aggressively over the period 2001 to 2006 through buying back government bonds from financial institutions. The monetary base increased at nearly 20% per annum in the three years to 2004, in what is called the era of ‘quantitative easing’. But even before that the monetary base was increasing at 7% per annum in 1993-99. This huge liquidity bolstered the yen ‘carry-trade’, which acquired its own momentum by leading into yen depreciation that further bolstered yen carry-trade.

It is also true that financial liberalization, which had been going on since the 1970s, along with financial innovations that emanated from that era, played an equally, if not more, important role than easy monetary policy in creating the huge liquidity of the 2000s. The financial liberalization era allowed financial institutions to initiate a new financial activity, which was based on the discretion of the banks to dispose of their loan portfolio in accordance with risk management. That financial innovation relied heavily on interlinked securities and derivatives, all related to asset backed-securities and subprime mortgages in particular. Subprime mortgages are a financial innovation designed to enable home ownership to risky borrowers. It is, therefore, the contention of this contribution that the origins of the current financial crisis can be explained by three interrelated features that have been going on since the 1970s. The first feature is the financial liberalisation policies initiated by governments both in the developed and developing world since that time.⁴ The second feature is an important financial innovation that emerged following the financial liberalization experience. The financial innovation in question is based on the issue of financial structured products, such as Collateralised Debt Obligations (CDOs) that played a key role in the swelling of the subprime market. Other forms of asset backed securities were also issued related to commercial real estate, auto loans and student loans, whereas credit default swaps (CDSs) were issued to insure investors against the risk of default of the issuer.

The third feature springs from the type of new economic policies pursued by a significant number of central banks around the world, which aspire to the New Consensus in Macroeconomics (see, for example, Arestis, 2007). This new policy is entirely focused on monetary policy at the nearly total demise of fiscal policy, and more importantly from the point of view of this contribution, its emphasis on frequent interest rate changes as a vehicle to controlling inflation. The impact of these three types of development has been the creation of enormous liquidity and household debt in the major economies, but in the US and UK in particular, which has reached unsustainable magnitudes and produced the current crisis. This contribution relies on these three features for a possible explanation of the origins of the current crisis. But the root of the current financial crisis is the creation and subsequent developments in the subprime mortgage market, the focus of this contribution.

⁴ It was not just where financial liberalization was overtly introduced, but also where the authorities were required to operate under strict rules. An interesting example is the UK Financial Services Authority (FSA), set up in 1997 when the Bank of England was granted ‘independence’. Although FSA was given sweeping jurisdiction over the British financial sector, it has regulated it ‘diffidently’. In the words of its first chairman “The philosophy of the FSA from when I set it up has been to say, ‘Consenting adults in private? That’s their problem, really,’” (Eisinger, 2008).

We begin with a brief discussion of financial liberalisation in section 2. This is followed in section 3 by an extensive discussion of the financial innovation, the subprime mortgage market, which helped to promote the climate for the financial crisis of August 2007. Section 4 is devoted to the current economic policies as an additional potential source of the current financial crisis. Section 5 attempts a quantitative assessment of the current financial crisis, and section 6 attempts to derive lessons from the current financial crisis. Section 7 summarises and concludes.

2. Financial Liberalization

Ever since 1975 there has been a period, which we may label as neoliberalism, or Washington Consensus or globalisation consensus. The main characteristic of this period has been financial deregulation and free capital mobility, or more succinctly financial liberalisation. This is justified by the 'efficient markets hypothesis', which assumes that all unfettered markets clear continuously thereby making disequilibria, such as bubbles, highly unlikely. Economic policy designed to eliminate bubbles would lead to 'financial repression', a very bad outcome in this view. The principle of financial liberalisation is based on the premise that the financial sector of an economy provides real services, whereby financial instruments, markets and institutions arise to ameliorate market frictions: they can mitigate the effects of incomplete information and transaction costs. The early experience of countries, which went through financial liberalization, leads to the conclusion that what happened in the relevant economies was that financial liberalisation typically unleashed a massive demand for credit by households and firms that was not offset by a comparable increase in the saving rate. Loan rates rose as households demanded more credit to finance purchases of consumer durables, and banks were very happy to oblige. In terms of bank behaviour, banks increased deposit and lending rates to compensate for losses attributable to loan defaults. High real interest rates completely failed to increase savings or boost investment - they actually fell as a proportion of GNP over the period. The only type of savings that *did* increase was foreign savings, i.e. external debt. This, however, made the 'liberalised' economies more vulnerable to oscillations in the international economy, increasing the debt/asset ratio and thus service obligations and promoting the debt crises experienced in the 1980s and 1990s in the main. Financial liberalisation thus managed to displace domestic for international markets. Long-term productive investment never materialised either. Instead, short-term speculative activities flourished whereby firms adopted risky financial strategies, thereby causing banking crises and economic collapse.

Despite, though, the early troublesome attempts at financial liberalization, and the increasing problems and scepticism surrounding the financial liberalization thesis over the years since its inauguration, it, nevertheless, had a relatively early impact on development policy through the work of the IMF and the World Bank. The latter two institutions, perhaps in their traditional role as promoters of what were claimed to be free market conditions, were keen to encourage financial liberalisation policies in developing countries as part of more general reforms or stabilisation programmes. But the near unanimity of the international agencies on the benefits of financial liberalization has never found support by contributors elsewhere. It would appear actually to be the case that financial liberalization is a very controversial issue. Be that as it may, when events following the implementation of financial liberalisation prescriptions did not confirm their theoretical premises, there occurred a revision of

the main tenets of the thesis. Gradual financial liberalisation is to be preferred. In this gradual process a `sequencing of financial liberalisation' is recommended. A further response by the proponents of the financial liberalisation thesis has been to argue that where liberalisation failed it was because of the existence of implicit or explicit deposit insurance coupled with inadequate banking supervision and macroeconomic instability. These conditions were conducive to excessive risk-taking by the banks, a form of moral hazard, which can lead to `too high' real interest rates, bankruptcies of firms and bank failures. This experience led to recommendations, which included `adequate banking supervision', aiming to ensure that banks have a well-diversified loan portfolio, `macroeconomic stability', which refers to low and stable inflation and a sustainable fiscal deficit, and sequencing of financial reforms.

These *post hoc* theoretical revisions were thought sufficient to defend the original thesis of a disappointing empirical record. Despite all these modifications, however, there is no doubt that the proponents of the financial liberalisation thesis do not even contemplate abandoning it. No amount of revision has changed the objective of the thesis, which is to pursue the *optimal* path to financial liberalisation, free from any political, i.e. state, intervention. We suggest that it was essentially the financial liberalization era, which promoted the financial innovation that caused the current financial crisis along with the new monetary policy as argued below.

3. Financial Innovations

A new financial development emerged following the financial liberalization era, which has played an equally, if not more, important role than easy monetary policy in creating the huge liquidity and debt of the 2000s. In terms of financial liberalization in the US, the repeal of the US 1933 Glass-Steagall Act in 1999 was an important event. The repeal of that Act allowed the merging of commercial and investment banking and thereby enabling financial institutions to separate loan origination from loan portfolio.⁵ Banks were no longer obliged to keep their own loan portfolio. It was at the discretion of the banks to dispose of their loan portfolio in accordance with risk management. The repeal of the 1933 Act in 1999, promoted an important financial innovation, which encouraged banks to provide *risky* loans without applying the three C's to each borrower – Collateral, Credit history and Character. This was so since banks could easily sell these mortgages or other loans to an underwriter, or act as an underwriter to sell to the public exotic mortgages backed by low quality securities. This led to the unprecedented growth of the subprime market (loans to borrowers with poor credit history or with questionable ability to service their loans in adverse economic conditions) especially in the last three years to 2007⁶. Banks set up

⁵ Established in 1933 the Glass-Steagall Act was repealed in 1999 thereby opening up competition among banks, securities and insurance companies. The Glass-Steagall Act prohibited a bank from offering investment, commercial investment and insurance services. See for full details: http://en.wikipedia.org/wiki/Gramm-Leach-Bliley_Act#Remaining_restrictions

⁶ `Subprime mortgage origination' in 2005 and 2006 was \$1.2 trillion, 80 percent of which was securitised (see Gorton, 2008). The same study provides further data on the growth of the subprime mortgage market: "The outstanding amounts of Subprime and Alt-A combined amount to about one quarter of the \$6 trillion mortgage market. Issuance in 2005 and 2006 of Subprime and Alt-A mortgages was almost 30 percent of the mortgage market. Over the period 2000-2007, the outstanding amount of agency mortgages doubled, but subprime grew 800 percent! Since 2000 the Subprime and Alt-A segments of the market grew at the expense of the Agency share, which fell from almost 80% (by outstanding issuance) to about half by issuance and 67 percent by outstanding amount" (p. 8). The

Structured Investment Vehicles (SIVs) with a simple legal structure (trust or just a limited liability company) that required a very small capital base. This created a ‘shadow-banking’ working in parallel to banking, but outside the regulatory umbrella and sowed the seeds for the current credit crisis.

That innovation was heralded as “a movement that seems to reconcile socioeconomic equity with the imperatives of profitability in a competitive and turbulent industry” so that “mortgage lending has emerged as the key to revitalizing the inner city, opening access to suburban housing markets, and promoting household wealth accumulation. Prodded by policy makers, the housing finance industry is now racing to tap new markets for homeownership by reaching traditionally undeserved populations of racial and ethnic minorities, recent immigrants, Native Americans, and low- to moderate-income (LMI) households” (Listokin et al., 2000, p. 19).

The new financial innovation was based on the idea that the borrower and the lender can benefit from house price appreciation over short horizons, whereby the mortgage was rolled into another mortgage. The appreciation of housing becomes the basis of refinancing over short periods of time. Borrowers thereby were able to finance and refinance their homes in view of the capital gains as a result of house price appreciation. The appreciation enabled borrowers to turn it into collateral for new mortgages or extracting the equity for consumption. Lenders are also willing to lend to riskier borrowers. When prices of houses rise and the borrowers ‘extract equity’ through refinancing, lenders incorporate high fee prepayments to secure themselves.

The main characteristic of a subprime mortgage market is that it is designed to force refinancing over a period of two to three years. Subprime mortgages are, thus, short term, thereby making refinancing important. But there is a prepayment penalty, whereby too early refinancing is undesirable. Most subprime mortgages are adjustable-rate mortgages, in that the interest rate is adjusted at a ‘reset’ date and rate, where the latter is significantly higher than the initial mortgage rate, but affordable (Gorton, 2008, p. 13). There is, thus, the incentive for the borrowers to refinance their mortgage before the ‘reset’ date. But the prepayment penalty makes too early refinancing undesirable.⁷ In fact, “no other consumer loan has the design feature that the borrower’s ability to repay is so sensitively linked to appreciation of an underlying asset” (Gorton, 2008, p. 19). The subprime mortgage market worked well, precisely as it was supposed to work, over the period 1998 to 2007. And as Gorton (2008, p. 18) reports, the fraction of subprime refinancing, which involved equity extraction is calculated to have been anything between 51.3% to 58.6% over that period.

The next question is how the subprime mortgages were financed. The short answer is securitisation, and as mentioned in footnote 1 between 2005 and 2006 the subprime mortgage origination was about \$1.2 trillion, 80 percent of which was securitised (see Table on p. 20 of Gorton, 2008). Banks set up trusts or just limited liability

⁶ Subprime and Alt-A’ term is defined to refer “to borrowers who are perceived to be riskier than the average borrower because of poor credit history” (p. 7).

⁷ Gorton (2008) offers an interesting contrast between a subprime mortgage, as explained in the text, with “a standard , prime, 30 year, fixed rate mortgage”. Unlike the subprime mortgage, “(w)ith a prime mortgage, the borrower repays principal over time, and the mortgage matures after 30 years. The borrower may repay the mortgage, typically without penalty. The borrower may benefit from house price appreciation, but the lender does not (directly) benefit” (p. 13).

companies, what is known as Structured Investment Vehicles (SIVs), which required a very small capital base.⁸ This created parallel banking outside the regulatory umbrella and sowed the seeds for the current credit crisis. The SIVs operations were financed by borrowing from the short end of the capital markets, the rate of which is linked to the inter-bank rate of interest, the LIBOR rate. This short-term capital was then used to buy the risky segment of the loan portfolio of the mother company. The loan portfolio was then re-packaged in the form of Collateralised Debt Obligations (CDO), which was sold to other banks and to the personal sector. In the process and so long as the inter-bank LIBOR rate remained below the rates of CDOs, SIVs made profits.

CDOs are financial securities that bundle different kinds of debt. They range from corporate bonds to securities underpinned by mortgages to debt backed by money owed on credit cards, and thereby cut debt into slices. These slices are sold to investors in the form of bonds. While the slices contain the same debt, they differ in terms of which pay the most interest and which are least at risk of losing money. Slices that pay lesser amounts of interest are the last to get wiped out by losses if there are defaults in the debt pooled in the CDO. Slices that pay more feel the pain more quickly. This is the way that some high-risk debts can be packaged to receive investment-graded credit ratings. This is a result of the CDO structure and the diversification gained by bundling different debts. At the same time, CDOs use borrowed money to amplify returns. The popularity of CDOs grew as low interest rates caused investors to embrace products that offered the promise of higher yields. Advocates argue that CDOs allow investors to buy into higher-yielding securities while taking on the same risk as they would with safe, lower-yielding securities. They also insist that CDOs are another tool that allow financial markets to further spread risk so it is not concentrated in financial institutions but shared with the personal sector, thereby reducing systemic risk. But the opponents think CDOs are an example of financial engineering gone haywire. CDOs are 'more sleight of hand' than a sound way to generate diversified returns. They are a method for Wall Street to repackage securities as a way to make more money. Indeed, Wall Street has made millions of dollars in fees in recent years by creating CDOs, selling them, servicing them and helping investors trade them. They are vehicles generally used by institutional investors, such as pension funds or hedge funds, not individual investors.

As a result, these days banks hold few traditional liquid assets, such as government bonds; they are loaned up with claims of varying quality on the private sector, largely based on residential or commercial property. The housing bubble burst when the yield curve became inverted with long-term interest rates lower than the inter-bank LIBOR rate of interest. This confirms the myopic attitude of financial institutions in making profits and raises the issue of whether management acts in the best interest of shareholders in the long run. The cynics would say that as the remunerations of management are linked to current profits they have an incentive to make risky investments that would hurt in the long run the interests of shareholders. If and when these investments turn sour a new management would be called in to clear the mess. The old management will walk away with huge profits.

⁸ A large number of SIV's assets were in the form of subprime residential mortgage-backed securities and commercial-backed securities.

The complex structure and highly illiquid nature of the CDO market has complicated the task of credit rating institutions, which erroneously assigned AAA-status to many worthless papers. The overstated credit rating has contributed to the growth of the CDO market in the upswing of the cycle, but also to its downfall in the downswing. This aggravated the losses of financial institutions during the credit crisis. The CDO market, which at the peak hit \$10 trillion, injected huge liquidity into the system. This was not reflected in monetary aggregates and, therefore, not monitored by central banks with respect to its implications for financial markets and the economy. The sale of CDOs to international investors made the US housing bubble a global problem and provided the transmission mechanism for the contagion to the world economy and Europe, in particular. The complex interlinking of securities, structures and derivatives resulted in asymmetric information and loss of information, especially so in terms of the risks involved, which unknown to anyone (Gorton, 2008, 45). The chain of interlinked securities does not allow the location of the risk involved to be determined in that its resting place cannot be ascertained. Ultimately, loss of confidence emerged since establishing the underlying mortgages was not possible.⁹ Interestingly enough, while this interlinking implied spreading the risk around, it resulted in loss of transparency as to where the risks in question would eventually emerge. The banks were so greedy in providing risky loans that in the upswing of the cycle the pace of accumulation was faster than the pace of unloading them from their books. Thus, when the credit crisis started many banks found a higher than desired stock of CDOs in their balance sheets. The losses from CDOs exacerbated the losses of financial institutions. For reasons of reputation, many banks were forced to incorporate the balance sheets of the SIVs into their books.

In normal times financial innovations reduce risk and convince central bankers that there is a minimal systemic risk of contagion. This is indeed what happened in the first year of the subprime crisis. Prior to the eruption of the credit crisis in August 2007, central bankers on both sides of the Atlantic had underestimated the systemic risk from the collapse of the subprime market. They claimed in the spring of 2007 that only a few individuals and institutions would be hurt with minimum damage to the economy as a whole. This led the Fed Chairman to keep interest rates high as late as August 2007. But there was a drastic reversal of that policy following the plunge of equity prices and the widening of credit spreads in August 2007. The Fed injected liquidity and cut interest rates aggressively from 5.25% to 1.0% over the period August 2007 to October 2008. The Fed also took extraordinary steps over this period to extend liquidity to brokers and investment banks in addition to commercial banks. In the US, when all programmes are put together, the total liquidity injected into the system amounts to \$7.4 trillion or 50% of nominal GDP. This huge liquidity poses problems for an orderly deleverage of the financial system in the future unless it is drained after the panic phase of the bubble dissipates.

All major central banks have an aversion to bailing out speculators when asset bubbles burst, but ultimately, as custodians of the financial system they have to do exactly that. They justify their actions as stemming from the goal of preventing the burst of the bubble from taking its toll on the economy. The intention may be

⁹ In 2006 new synthetic indices of subprime risk were introduced; the so-called 'ABX' indices. For the first time ever information about subprime values and risks was gathered and made known. The ABX information and the lack of information about location of the risks led to the loss of confidence referred to in the text.

different, but the result is the same: speculators, careless investors and banks are bailed out. Thus instead of encouraging de-leverage and taking steps to drain the excess liquidity that has been at the root of all problems in the current decade, central banks rushed to act as lender of last resort and prevent the risk from becoming systemic, thereby posing a threat to the whole financial system in the long run. The Fed adopted a risk management approach to the current crisis with the epitome the bailout of Bear Stearns in March 2008, which set a precedent for the bailouts of Fannie-Mae, Freddie-Mac and AIG in September 2008, but the bankruptcy of Lehman Bros, which fuelled the losses of financial institutions and aggravated the financial crisis. After the collapse of Lehman the US policymakers have not allowed anyone to fail, with the latest example being the Citigroup bank.

The Fed, for reasons of moral hazard, suggested a low price for the takeover of Bear Stearns by JP Morgan, which, however, penalised shareholders and not the management that was responsible for the bad investments. While there is no doubt that the Fed response is right in the short run, it is wrong from a long-term perspective. The prodigious liquidity injected since the outbreak of the crisis came back to haunt us through the last phase of the commodities bubble in the first half of 2008, as it fanned CPI-inflation and called for central banks to act. Some central banks, such as the ECB, hiked rates, while others were prevented from cutting rates at a time that growth was weakening, thus precipitating the downturn in the global economy since the third quarter of 2008. The commodity bubble burst in the summer of 2008, as expectations of decoupling between the growth rate of Brazil, Russia, India and China (the BRIC Countries) and the mature economies were dashed, in view of the international contagion of the credit crisis.

More recently, middle of September 2008, what began in August 2007 with market turmoil surrounding US subprime mortgages became a financial storm of historic proportions. The US government announced sweeping actions to head off wider market disruptions, including plans to purchase distressed mortgage related securities on a massive scale, as well as a one-year guarantee of money market mutual funds. Consequently, one may restate the problem by suggesting that financial innovations and closer links between banks transformed what started in August 2007 as a liquidity crisis into a solvency issue for the financial sector.¹⁰

The credit crisis can be seen as unfolding in three stages. In the first stage credit spreads are widening as banks become unwilling to lend to each other for fear of contagion from potential losses on the assets of the borrowing banks. In the second stage the losses of the financial institutions are unravelling, while in the third stage the ramifications to the economy are felt. Credit spreads have widened since the summer of 2007, although coordinated central bank efforts have succeeded at times in suppressing them. The losses of financial institutions have reached so far nearly \$1 trillion, as asset-backed securities have lost around eighty percent of their value. In this process the systemic risk to the entire financial system heightened to the point of collapse, as Fannie Mae and Freddie Mac that hold or guarantee nearly half of mortgage-backed securities (\$5.4 trillion) came to a bankruptcy point and had to be bailed out by the US Treasury. In spite of the bailout of the two giants in the US

¹⁰ The Bank of England (2008, Chart 6, p. 8) provides 'projected ultimate credit losses on subprime asset backed securities'; these are estimated to reach \$170 billion.

mortgage market and the near collapse and eventual bailout of AIG, the systemic risk remained high with the bankruptcy of Lehman. The crisis has brought the demise of the investment-bank model and the remaining institutions (Morgan Stanley and Goldman Sachs) are running for cover behind the façade of commercial banks. As noted above, the Citibank bank is the latest victim in this process.

The ramifications to the economy are likely to stem from the response of the banks to these losses – tightening of lending standards, higher cost of lending, lower availability of credit, hoarding of money balances. The only certain way that banks will get out of this mess in the long run is through a very steep yield curve in government bonds. The Fed will likely adopt a zero interest rate policy, while the 10-year yield will hover around 3% offering 3% gain in the banking system. The financial crisis will impair growth and reduce the rate of growth of potential output, as even companies with good ideas and profitable new products will be denied credit. But the financial crisis will enable households and companies to curb their debt through time, thus rebuilding their impaired balance sheets. But as asset prices (houses and equities) fall the net wealth of the personal sector will be further eroded, thus forcing the savings ratio up and consumer expenditure down. With consumption falling companies will respond by shedding their labour force, cutting production and curtailing investment expenditure, thus further harming the incomes of households. This is the asset and debt deflation process.

4. Current Economic Policies

The major policy implication is that monetary policy has been upgraded in the form of interest rate policy, while fiscal policy has been downgraded. A major objective of policy is “maintaining price stability” (King, 2005, p. 2). King (2005) also argues that “Far from being ineffective, a monetary policy aimed at price stability has proved to be the key to successful management of aggregate demand” (p. 2). However, the experience since the credit crunch of August 2007 does not seem to validate this claim. Be that as it may, this policy is undertaken through Inflation Targeting (IT). Fiscal policy, by contrast, in the last ten years has been concerned with broadly balancing government expenditure and taxation. Its importance has been effectively downgraded as an active instrument of economic policy. The downgrade of fiscal policy is based on the usual arguments of crowding out of government deficits and thus the ineffectiveness of fiscal policy has relied on an assumption (see, however, Arestis and Sawyer, 2003, for a critique and a different view).

An important assumption that permits monetary policy to have the effect as described above and within the NCM theoretical framework is the existence of temporary nominal rigidities in the form of sticky wages, prices and information, or some combination of these frictions. So that, the Central bank by manipulating the nominal rate of interest is able to influence real interest rates and hence real spending in the short run. In the long run, changes in interest rates affect inflation but have no impact on real spending or the level of economic activity, or indeed the level of unemployment; all of which can only be affected by the supply side of the economy.

The financial liberalization policies pursued since the 1970s and the financial innovation, both discussed above, have produced excessive liquidity in the system thereby increasing household debt substantially. The excessive liquidity, which

became apparent by the early 2000s, was not merely the result of financial innovation, itself promoted by the financial liberalization experience as discussed above. It has also come about from the type of monetary policy following the introduction of the new monetary policy framework, the focus of which, as shown above is frequent manipulation of interest rates. In the US at the time, the Fed Chairman, Alan Greenspan, injected liquidity and cut interest rates following the Asian-Russian crises of 1997 and 1998, which was only partially drained later on. In view of the deflation dangers in the aftermath of the burst of the internet bubble in March 2000, Alan Greenspan cut interest rates in a sequence of steps from 6.5% to 1.0% and injected huge liquidity into the US economy. Moreover, he was late and slow in draining that liquidity and reversing the rate cuts. Ben Bernanke, the new Fed Chairman after Alan Greenspan, imitated his predecessor and injected further liquidity following the ongoing credit crisis that erupted in the summer of 2007.

This experience has resulted in a serious build-up of household debt and asset holdings. Looking at debt statistics, we find that between 1998 and 2002 outstanding household debt, including mortgage debt, in the UK was 72.0 percent of GDP; between 2003 and 2007 it shot to 94.3 percent of GDP. In the same periods as above, outstanding household debt jumped from 76.7 percent to GDP to 97.6 percent of GDP in the case of the US. And in the Euro Area from 48.5 to 56.6 respectively (see BIS, 2008, p. 29). Clearly, this has made household expenditure more sensitive to short-term interest rate changes. Consequently, the dangers with the current conduct of monetary policy are clear: frequent changes in interest rates can have serious effects: low interest rates cause bubbles; high interest rates work through applying economic pressures on vulnerable social groups. Monetary policy, therefore, that depends on manipulating the rate of interest to control inflation cannot prevent the ramifications of the credit crisis. It surely is the case that regulatory and prudential controls have become extremely necessary.

Many commentators during the crisis have advocated policies that avoid moral hazard. Central bankers share these concerns, but as custodians of the financial system they have to take action when markets are dysfunctional. In the current crisis they have injected temporary liquidity and provided direct loans to banks in trouble, but at a penal rate. At the beginning of the crisis central banks refrained from lowering rates that would turn the temporary injection of liquidity into a permanent one, thereby avoiding moral hazard issues. But as the crisis deepened the Fed, but not the ECB, cut interest rates and turned temporary liquidity into permanent. This raises the issue of whether merely concentrating on inflation central banks are rather too monolithic. The Fed's focus on issues other than housing has given us the overheated housing market this decade, the unravelling of which is threatening to plunge the US into the worst recession in the post World War II era. The experience of many countries, including of course the US, shows that successful control of CPI-inflation does not guarantee control of asset price inflation. The thrust of the argument is the 'paradox of credibility', implying that, the more a central bank succeeds in keeping prices stable, the more likely that signs of an overheating economy will show up first in asset bubbles.

5. Quantitative Effects

The model discussed in Arestis and Karakitsos (2004) provides an assessment of the short-term effects of this asset-debt deflation process. US relative house prices, which have already fallen by 18% since their peak in July 2006, are likely to be eroded by another 18% by the end of 2009. Even nominal house prices, which have already fallen 12% in the same time period, are likely to fall by another 18% by the end of 2009. The model suggests that the trough of the housing market is likely to be hit towards the end of 2009. A year after house prices peaked equity prices commenced to fall, thus putting further downward pressure to the wealth of households. Financial wealth has declined by 9% by the end of June 2008, from its peak in September 2007, and the model suggests that further losses are likely with the benchmark S&P 500 bottoming at around 700 by the end of 2009. This is dragging the US economy into recession through a weakness in consumption. Inflation will dissipate to 1.5% in the next twelve months, while the Fed has already cut the fed funds rate to 1%. However, the risks are on the downside as house prices are likely to overshoot their long-run equilibrium, thus triggering second-round effects in bank losses and the wealth of the personal sector. The precise forecast will depend on the final estimate of the bank losses, which have now reached \$1 trillion.

In the second quarter of 2008 households reduced for the first time their mortgage debt by more than 3%. The model suggests that mortgage debt will decline by 13% by the end of 2009. The net effect of the decline in house prices and equities and the reduction of debt on personal sector wealth has so far been -10%, but it is likely to be slightly bigger by the end of 2009. Consumers are likely to retrench as a result of the decline in wealth, thus prompting firms to shed labour. Job losses will mount in the next twelve months and bottom probably at the end of 2009. The combined effect of a fall in net wealth and real disposable income will curb consumption growth to 1% in 2008 and just 0.1% in 2009. Businesses are bound to curtail investment. The model suggests that investment will fall -6% in 2008, but increase less than 1% in 2009. Export growth, the only robust component of aggregate demand so far, will be halved in 2009. The overall effect on GDP is expected to be 1.5% in 2008 and just 0.6% in 2009. CPI-inflation will decline in the course of the next twelve-months in response to a widening negative output gap and because of the burst of the commodities bubble, as the theory of decoupling between BRIC and western world has collapsed.

The process is likely to involve second-round effects. As house prices and equity prices continue to fall the losses of financial institutions are magnified with further deflationary effects on the economy. The risks are on the downside with house prices likely to overshoot their long-run equilibrium of 30%. In the absence of policy intervention these second-round effects take hold and the asset-debt deflation process deepens. Judging from the experience of past crises, such as Japan in the 1990s, the Great Depression in the 1930s and the railways in the late 1800s, the deflation process takes around ten years to unwind. However, the Paulson rescue plan should speed up the process of adjustment and the asset-debt deflation process might take two to three years. Two parameters will shape the accuracy of the forecast – the extent of house price drop and the losses of financial institutions.

6. Lessons from the Current Financial Crisis

The US housing market is not the cause of the credit crisis and the current woes of the global economy. It is simply the symptom of the huge liquidity that was put in place

by 'bad' financial engineering and some mistakes in the conduct of monetary policy, especially in the US. This liquidity has financed a number of bubbles in the last ten years with a major impact on the economy (internet, housing, and commodities) and a few more (shipping and private equity) with a minor impact on the economy. From a European perspective micro-economic fundamentals and country specific factors have differentiated the countries in the euro-zone area with housing bubbles emerging in some countries, like Spain, but not in others, like Germany. Thus, what is needed is both a macro- and micro-perspective to understand the full story.

From a macro-perspective liquidity is the real culprit. Without this excessive liquidity there would have been no bubbles – no credit, no bubble. Although one might point to some errors on the part of the Fed in removing the accommodation bias on a number of occasions in the last ten years, 'bad' financial engineering has played by far a more important role in creating this prodigious liquidity. 'Bad' financial engineering purports to find loopholes in the law and the regulatory environment to make money. 'Bad' financial engineering has resulted in a 'shadow-banking' that developed and worked in parallel with regulated banking. The 'shadow-banking' operated outside regulation and control of the authorities. So, whatever was not allowed in regulated banking was developed in the 'shadow-banking'.

The backlash of the greed of financial institutions is likely to be increasing calls for strict regulation of the industry. As the taxpayer is called to clean up the mess of the banks tougher regulation of the industry is very likely to ensue. But from a policy perspective it should be recognized that regulation is backward rather than forward-looking. Smart people will always take advantage of any given legislation by finding loopholes. Regulators will always react with a long lag to close the loopholes and in some occasions, like the current crisis, too late to prevent a calamity. A better approach than over-regulation is for the central bank to have a target on asset prices in a way that does not impede the functioning of free markets and does not prevent 'good' financial innovation. Since securitization implies the transfer of assets and the risk to the personal sector the ideal target variable for a central bank is the net wealth of the personal sector as a percent of disposable income, which is a stationary variable and therefore a target range can be set. In the US, for example, this can be a range around 5-times the net wealth of the personal sector. In this way the central bank will monitor the implications of financial innovations as they impact net wealth, even if it is ignorant of these innovations as in the case of SIVs. With a wealth-target the central bank will act pre-emptively to curb an asset upswing cycle from becoming a bubble. Information on the constituent components of net wealth is available in the US with one-quarter lag, a month after the release of the NIPA accounts, thus making it useful for policy analysis and targeting. In the euro-zone there are huge efforts to compile such data, a prerequisite for targeting.

Asset-led business cycles, like the current one, Japan in the 1990s and the US in the 1930s, produce a larger variability in output than inflation. In the upswing of the cycle output growth surpasses historical norms giving the impression that potential output growth has increased, thus creating a general feeling of euphoria and prosperity, as it did in the second half of the 1990s in the US. But in the downswing the recession is deeper than normal, and even more important, it lasts for a long time with many false dawns, as in the case of Japan. As asset prices fall the past accumulation of debt becomes unsustainable and households and businesses engage in a debt reduction

process by retrenching. This depresses demand putting a new downward pressure on asset prices thus creating a vicious circle. The policy implication is that in asset-led business cycles guiding monetary policy by developments in inflation alone will not prevent the bubble from becoming bigger than otherwise. Monetary policy should be formulated with at least two targets: inflation and the output gap. In addition, there are merits for a mild, but not excessive, wealth targeting. The problem with excessive wealth targeting is that there are three targets and just one instrument – interest rates. Although a rate hike might reduce the output gap, diminish inflation and curb the net wealth of the personal sector, the impact on each target would be felt with a variable lag. This differential speed of adjustment of each target to monetary policy poses perils to the central bank task of stabilising the economy along the potential output growth path. Thus, strict adherence to the fulfilment of each target by the central bank may cause instability rather than stability.

But these are long-term policies, and as such they are not helpful in getting out of the current one. The burst of a bubble in the last five hundred years has entailed asset and debt deflation that has triggered retrenchment on the part of households and firms with severe consequences for profits, the incomes of households and jobs. The deflation process is usually long and painful and the evidence of the last three episodes (1870s, 1930s and Japan in the 1990s) is that it usually lasts for ten years. The policymakers' efforts so far have concentrated on unfreezing the credit markets and restoring confidence in banks by pumping liquidity and guaranteeing bank loans so that the interbank market can start to function again. They have also assigned public funds to recapitalise banks by buying mostly preferred shares and increased the guarantee limit on deposits to deflect runs on depository institutions. In the US the Fed has, in addition, extended credit facilities to non-depository institutions and has lowered the quality of assets that it accepts as collateral for lending. Although these measures may be adequate to ease the panic phase of the burst of a bubble, they are inadequate to deal with the crisis in the long run, as they deal with the supply side of credit, but not with the demand for it.

The challenge for the policymakers is to break the vicious circle between falls in house prices and bank losses if they are to shorten the asset and debt deflation process to less than ten years. This requires preventing households from falling into negative equity; otherwise, delinquencies rise and bank losses mount; mortgage-lenders repossess the properties and dump them into the market that only causes lower house prices and even higher bank losses. Spending public money to cover the losses of the banks without supporting households to keep their homes and encourage others to obtain new mortgages is like throwing money into a black hole. Hence, the policies that should be pursued are on both sides of the credit market: demand and supply. Unless demand for credit and demand for the general products of the banks are boosted in the months ahead, no amount of money can salvage the financial system. Dealing just with the supply side of credit by ignoring its dependence on demand will be a waste of resources. Hoarding of cash by banks, mutual funds, hedge funds, businesses and individuals will be a terrible blow to demand for credit that will trigger new losses for the financial institutions in the new-year, thus creating a vicious circle. We are now in what Keynes called a 'liquidity trap'. Monetary policy does not work in this environment and neither does fiscal policy in the form of tax cuts; people will hoard the extra money – they will not spend it. What is needed is public works. A new

Fannie Mae should be created, along the original model of the ‘New Deal’, as the current one does not inspire confidence. The new Fannie should take from the banks the loans to all those who are threatened with foreclosure or business bankruptcy and offer them affordable loans to boost demand.

Although the measures adopted so far are dealing with the panic, the policymakers are inconsistent in their long-term objectives in that they want both deleverage and high asset prices. They should either engineer an orderly deleverage, while at the same time accepting that in the new long-run equilibrium asset prices would be substantially lower; or they should flood the system with liquidity to prevent the erosion of asset prices, but knowing that deleverage would not materialise. In other words the policymakers are not clear as to whether they target in the long-run deflation or inflation. It is a hard fact of life, however, that from a long-term perspective the first target is what makes sense; otherwise, the excess liquidity that financed so many bubbles in the last ten years will not be drained and will carry on financing new bubbles. Irrespective of whether the policymakers target deflation or inflation, the forces of deflation are more powerful than those of inflation. So, even if the policymakers wished to reflate asset prices, they might find it extremely hard to achieve their objectives.

7. Summary and Conclusions

We need to regulate financial engineering. Securitization implies a transfer of risk from banks to the personal sector and makes banks more willing to promote both lending and the sale of asset backed securities to the personal sector. We should avoid the problem of fraud in the subprime arena; the problem has never been with the subprime model *per se*. It is this financial engineering that allowed US housing to become a bubble. Financial engineering is so complex that central banks would have a tough time if they wanted to measure, monitor and control the total liquidity in the economy. New policies are desperately needed, and targeting the net wealth of the personal sector is one such policy suggested in this contribution. Above all we should not lose sight of the fact that this crisis is the result of regulatory failure to guard against excessive risk taking in the financial sector. Policy makers must ensure that it does not happen again. Work has actually started to rebuild the architecture and the leading industrialised countries have already put forward recommendations for better prudential regulation, accounting rules and transparency. The role of credit agencies will also need to be rethought, with greater public scrutiny. In a globalised world, these efforts will have to be broad-based if they are to be effective. As for the real sector it ought to be emphasised yet again that under current circumstances public spending is the most effective means of getting the economy out of the current financial and economic trouble.

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