

---

## Original Article

# Lost in temptation of risk: Financial market liberalization, financial market meltdown and regulatory reforms

Willi Semmler<sup>a,\*</sup> and Brigitte Young<sup>b</sup>

<sup>a</sup>Economics Department, New School, 79 Fifth Avenue, Suite 1100, New York 10003, USA.

<sup>b</sup>Institute for Political Science, University of Muenster, Scharnhorststr. 100, Muenster 48151, Germany.

\*Corresponding author.

**Abstract** The current meltdown of the financial markets in the United States, which triggered worldwide financial crisis and staggering declines in global growth rates, challenges the assumptions of fast capital market liberalization (CML). Whereas the discussion in previous years has concentrated on the benefits of financial market liberalization, the focus has now shifted to the cost of fast and excessive financial liberalization. In contrast to the theory of perfect capital markets, the article starts from the more realistic assumption of imperfect capital markets. We deal with the benefits but also the potential shortcomings of CML. Too-fast liberalized capital markets, with risk assessments solely left to the market, can trigger boom–bust cycles, the busts precipitated by financial instability, entailing contagion effects and strong negative effects on the real side of the economy. The financial meltdown has created not only new challenges for the central banks around the globe, but has also produced initiatives on new financial regulations. We discuss here the most important recommendations put forward by the G20, the United States, United Kingdom and EU policy proposals for the financial market reforms triggered by the recent financial market meltdown. No final verdict is possible at this time, since the proposals and recommendations issued by the various bodies have to go through the political process. Nevertheless, the regulatory policy fragmentation is already evident between a more liberal position and its tendency to rely more on market modes of coordination and a interventionist position that has more trust in non-market coordination. The challenge for the multilevel governance system of finance is to find a way to *regulate without refragmentation* both at the European and the global level. *Comparative European Politics* (2010) **8**, 327–353. doi:10.1057/cep.2010.10

**Keywords:** capital market liberalization; complex securities; macroeconomic environment; boom–bust cycle; asset bubbles; regulatory responses

---



## Introduction

This article addresses some major issues that are involved in the financial market liberalization, the recent financial market meltdown and policy reactions. Whereas the discussion in the last decade has concentrated on the benefits of the financial market liberalization (see Council on Foreign Relations, 2002), owing to recent credit and financial market events the cost and externalities of fast and excessive financial liberalizations have come into focus. The literature on Capital Market Liberalization (CML) demonstrates that the issues of CML are more complex than, for example, in trade liberalization of goods and services. In contrast to the theory of perfect capital markets, the article starts from the more realistic assumption of imperfect capital markets. Financial intermediation is usually undertaken by imperfect markets and this often leads to failures, disintermediation and market meltdowns. This is frequently observable as boom–bust cycles. We suggest that from this perspective possible benefits as well as costs of CML can be more accurately evaluated.<sup>1</sup>

The article analyzes the recent financial market meltdown, which first started in the US subprime market and subsequently spread worldwide, causing a global crisis in the real economy. Our starting point is that financial market liberalization and the change of macroeconomic conditions have led to financial boom–bust cycles: the boom period triggered overconfidence, overvaluation of assets, overleveraging and underestimation of risk. Yet, in addition the recent boom–bust cycle starting in the real estate sector has been re-enforced, not only by the typical mechanisms of boom–bust cycles, but also by new financial innovations, that have led to the development of new financial intermediations through new complex securities, such as mortgage-backed securities (MBS), collateralized debt obligations (CDO) and credit default swaps (CDS). It is our hypothesis that the complex securities, which were supposed to outsource idiosyncratic risk, have, jointly with the change of macroeconomic environment, accelerated the boom, but also the bust. These innovations provided the micro-mechanism through which the asset price boom and busts were fueled.

One of the main challenges of the financial meltdown is to provide a new national and international framework of regulation. Yet, one can predict that there will be a variation of regulatory responses corresponding to the ‘varieties of capitalism’ (Hall and Soskice, 2001) which stipulates that *liberal market economies* (LME) tend to rely more on markets modes of coordination in the financial sphere, while those with *coordinated market economies* (CME), such as the European countries, rely more on the existing institutional governance structures of non-market institutions.

The remainder of the article is organized as follows. Section ‘CML and its pitfalls’ of the article briefly introduces a historical overview and theoretical



discussion of the successes and negative externalities of CML, which is then followed in Section ‘CML, changing macroeconomic environment and complex securities’ by an analysis of the causes and effects of the current financial market meltdown and its effect on the real side of the economy. The focus in this section is on the complex securities and how they accelerated the boom–bust cycle. Section ‘Asset price boom–bust cycles and central bank policies’ outlines the different actions of the central banks across the Atlantic and illustrates how far they had to turn from their traditional inflation fighting to an interventionist policy in order to contain the financial meltdown. We also discuss here whether financial bubbles are always ‘bad’. Section ‘The fragmented global regulatory response to the financial crisis’ provides an analysis of the proposed financial market reform proposals triggered by the recent financial market events, as suggested by the G20, the United States, United Kingdom and the European Union (EU). Our main prediction here is that the most likely outcome will be a *light touch regulation* championed by the dominant United States and British rule makers in finance. Section ‘Conclusions’ contains concluding remarks.

## CML and Its Pitfalls

### Financial market liberalization: A historical note

Financial markets are supposed to mediate the flows of financial funds. The financial market, traditionally financial intermediaries such as banks, performs the essential role of channelling funds to firms that have potentially productive investment opportunities. Moreover, they also permit households to borrow against future income and allow countries to access foreign funds and, thus, accelerate economic growth. As financial markets expand across borders, they have a significantly impact not only on economic growth, but also on employment and economic policy as well.

Since the 1980s financial market were increasingly liberalized. CML has actively been advocated by such organizations as the International Monetary Fund (IMF) and the World Bank (WB) and has been pursued by many governments since 1980s. Even under the Clinton government, CML has been the strategy, in particular when Larry Summers became Undersecretary of Treasury and when NY Wall Street rose to an influential institution within the Clinton Administration, especially after the appointment of Robert Rubin as Secretary of Treasury. At the same time, the Governor of the Federal Reserve, Alan Greenspan, strongly promoted globalization, in particular globalization of the capital markets. After the fall and break up of the Soviet Union, Greenspan believed that an era of expansion of the world economy owing to



the establishment of global markets for products and financial services was on the horizon (Greenspan, 2008).

Others have maintained that it is not surprising, that the rapid enlargement of the financial market has led to more financial instability which, in turn, had some devastating impacts on the real economy of some countries, in particular emerging markets, see Stiglitz *et al* (2006). For example, the financial crisis in Mexico (1994), in Asia (1997/1998) and in Russia (1998), demonstrated the degree to which a too-rapid market liberalization can lead to a currency crisis, in which a sudden reversal of capital flows was followed by financial instability and a consequent sharp decline in economic activity.

Another example was the information technology (IT) boom–bust cycles of the 1990s. In the United States, and also in Europe, during the period from 2001 through 2002, the financial markets experienced a significant decline in asset prices, commonly referred to as the bursting of the IT Stock Market Bubble. Overvaluation of asset prices and lowering of the risk perception, in combination with a decade of dubious accounting practices, short-sighted investment, and outright fraud (as in the Enron case, for an evaluation of the latter events, see MacAvoy and Millstein, 2004) led to a situation where suddenly equity valuations declined, subsequently with high volatility of asset prices. Yet the new IT boom and the asset price rise and fall were accompanied with increasing globalization of the markets, new financial products and new excitements in these markets. Already then, the operations were undertaken with little or un-checked collaterals on the borrowers side. From this followed another financial market crash, the subprime and credit market crises starting in 2007, still continuing today, which is the topic of this article.

Yet, we want to recognize that liberalization of financial markets has been seen more positively by others. Champions of the benefits of financial globalization, in general, are found among the American business and financial community, and also the Council on Foreign Relations. The Report by the Council on Foreign Relations, for example, has emphasized the positive effects of CML. The Report advocates CML in particular, transatlantic liberalization, citing mainly the possible benefits of free capital mobility such as: (1) reducing trading costs, and in particular low costs of financial transaction; (2) increase of investment returns; (3) lowering the cost of capital when firms invest; (4) increasing liquidity in the financial market; and (5) increasing economic growth and positive employment effects on both sides of the Atlantic.

Surely, CML has benefits. Whereas part of the academic profession continues to see benefits outweighing the costs of market liberalization for goods and services, other see problems in this approach and are more critical about CML. As indicated before, there are also costs of fast CML, in particular CML with inappropriate sequencing.



## The negative externalities of fast CML

CML – at least in the short run – does not necessarily show the same beneficial effects as product market liberalization. Too-fast liberalized capital markets, for example, with a wrong sequencing and without proper regulation, can trigger financial instability, contagion effects and strong negative external effects on the real side of the economy. Negative externalities of fast CML are cited in the recent publication by Stiglitz *et al* (2006). This book gives a fair account of the pro and cons of fast CML. The major argument of the authors is that too fast a CML leads to financial instability and boom and bust cycles, hampering economic growth in the long run. Taking the view that capital markets are basically imperfect, they argue that CML might not produce the promised benefits as Stiglitz *et al* (2006) summarize:

- national fiscal and monetary policies become difficult to pursue, since national government have to exclusively respond to the signals of the capital market, when pursuing policy objectives;
- boom and bust cycles may be emerging instead of steady development (booms in housing sector, in land prices and equity prices as well as consumer purchases of imported good lead to distortions of balanced growth, and are usually corrected by periods of busts);
- financial instability and credit crises, leading to general contractions of credit and higher risk premia for loans, hamper economic development;
- there are strong contagion effects of financial busts, since capital movements (the inflow and outflow of capital) are fast as compared to the change in trade flows;
- the low-income segment of the population as well as small businesses cannot insure and protect themselves against the risks that arise when bubbles burst and recessionary periods occur (or are prolonged). Indeed, it is those groups which are mostly affected by busts.

Thus the proponents of (fast) CML generally overlook the imperfectly working of capital markets and attribute too much of a self-correcting mechanism to the capital markets. Frequently, there is also a lack of regulatory or supervisory institutions for the banking system, the stock market or real estate market such that there are no stabilizing forces or safety nets for certain countries. This holds in particular, as the recent history of financial events has shown, for emerging markets and developing economies. Yet, even advanced countries with a long tradition of regulatory institutions, such as banking and stock market regulations, are not protected from the negative externalities of financial crashes and busts either – as the recent history has shown.

We want to note that the negative externalities of fast CML have mainly been pointed out by Keynesian tradition, as revived by Hyman Minsky (1975, 1982, 1986) and James Tobin (1980). They have been very influential in studying the interaction between financial markets and economic activity. There is, currently, also another important insight on this interaction represented by Robert Shiller's (1991, 2001) over-reaction hypothesis. This latter research is also influenced by the Keynesian tradition. Another non-neoclassical traditions, also stressing those negative externalities originates in the work by Stiglitz and co-authors. They draw upon recent developments in information economics, wherein systematic attempts have been made to describe how actual financial markets operate by referring to the concepts of asymmetric information, adverse selection and moral hazard.

### **CML, Changing Macroeconomic Environment and Complex Securities**

Whereas studies on the financial crises of the 1990s seem to converge that they were mostly triggered by a sudden drop in confidence in the stability of emerging markets and sudden capital flights, the currently evolving crises, starting in advanced countries, in particular with the US real estate boom–bust cycle, has not been sufficiently analyzed and modeled. We want to put forward the hypothesis that there was a dangerous interaction of a change in the macroeconomic environment, such as financial liberalization, a low interest rate regime, international imbalances – that led to an excessive inflow of fund into the United States – as well as the application of new financial engineering tools, for example new complex securities which were extensively used in the mortgage and financial markets to outsource risk.

As we know from financial history, financial deepening is usually accompanied by waves of financial innovations. Recent new financial innovations are hedge funds and options and derivative instruments. CDOs and collateralized loan obligations are financial instruments where households' and companies' loans are turned into tradable securities. These are relatively new financial instruments that outsource and diversify risk for the issuer of households' mortgages or commercial credits. The numbers of such innovative financial products have grown rapidly. In fact, credit derivatives in the form of CDS, MBS and loan-backed securities have expanded exponentially, but so have financial markets for them which have also expanded. Financial intermediation has become indirect and potential for actual disintermediation has emerged. It was the dangerous interaction of the macro trends with financial market micro-mechanism that produced the boom as well as the sudden collapse of the boom.<sup>2</sup>



## Causes and effects of the current financial market crisis

Before going into more details of the above mentioned interaction of macro and micro changes in the financial market, we will first summarize the financial market meltdown, particular in the United States, how it evolved and how it created contagion effects for Europe and other regions of the world. Let us survey briefly what has led to the financial market meltdown since the middle of last year (2008).

As recent events have shown, reflected also in academic debates, there are large externalities and contagion effects arising from financial instabilities. The evolution of the subprime crisis in the United States and its effect on the financial sector can roughly be described as follows:

- the current financial market crisis originated in low interest rates, rapidly rising household debt, and a bubble in the housing market (high housing prices compared to fundamentals);
- the bubble is accelerated by the outsourcing of risk owing to the securitization of mortgages (that have been packaged and sliced in risky securities of different types, (CDOs) and further extensive use of complex securities such as CDS;
- expectation of returns from investment in real estate and MBS and CDOs have risen (owing to low interest rates, low default rates and high discovery rates);
- liquidity in the housing sector (and financial market) was pumped up by capital inflows which brought the interest rate down on the long end of the yield curve;
- the burst of the bubble was triggered by Bear Stearns' hedge funds' failure, accelerated through the bankruptcy of Lehman Brothers, triggering a credit crunch in the entire banking sector;
- suddenly default risks and risk premia were shooting up resulting in a credit crunch (as in all beginnings of financial downturns);
- feedback to the real sector causes the growth rate of the GDP to fall, with further feedback effects from the real to the financial side, both pulling each other down.

Often a stock market crash triggers the downturn. Yet, this time, the stock market reaction came late, responding to the credit crunch. When the investors in subprime mortgages faced the first fall out, the holders of those securities felt a massive credit crunch. Subsequently many big investment banks in the United States – and in Europe – were threatened by insolvency (see Bear Stearns, Merrill Lynch, Citibank, Morgan and Stanley, and Lehman Brothers actual went bankrupt). But there were also UK banks, such as Northern Rock and German banks affected, Hypo Real Estate and IKB-Deutsche

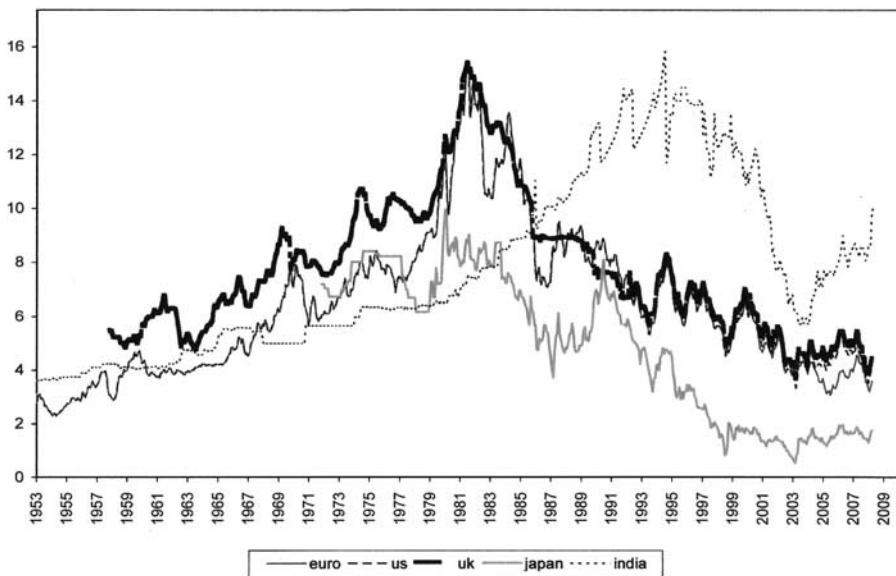
Industriebank as well as several of the German *Länderbanken*). As the credit crisis worsened it spread to Europe and other parts of the world.

First, let us look at some of the above-mentioned macroeconomic trends. Shiller (2007) notes that although it is popular to explain the recent boom in housing prices as the result of low interest rates, the rise did not actually begin until the mid-1990s, long after nominal interest rates had retreated from their highs in the 1980s. Yet the long run downward trend of interest rates resulted in low mortgage rates. For a number of countries, the interest rates are shown in Figure 1.

The historically exceptional rise of home prices is demonstrated in Figure 2, including treasury rates and population growth, where the Case–Shiller index is shown since roughly 1900.

Figure 3 depicts the rise in one-family home sales, and demonstrates the huge increase starting after 2001.

These phenomena were not limited to the United States. In fact, many other countries have experienced a similar upward trend in housing prices. In fact, Ayuso and Restoy (2006) have estimated that Spanish housing prices were overvalued by as much as 32 per cent as of 2004. Often economists use the price–rent ratio as indicating the overvaluation of housing asset. The price rent ratio diverged hugely from historical averages.



**Figure 1:** Long-term nominal interest rates (four countries).

Source: Global Financial Data.



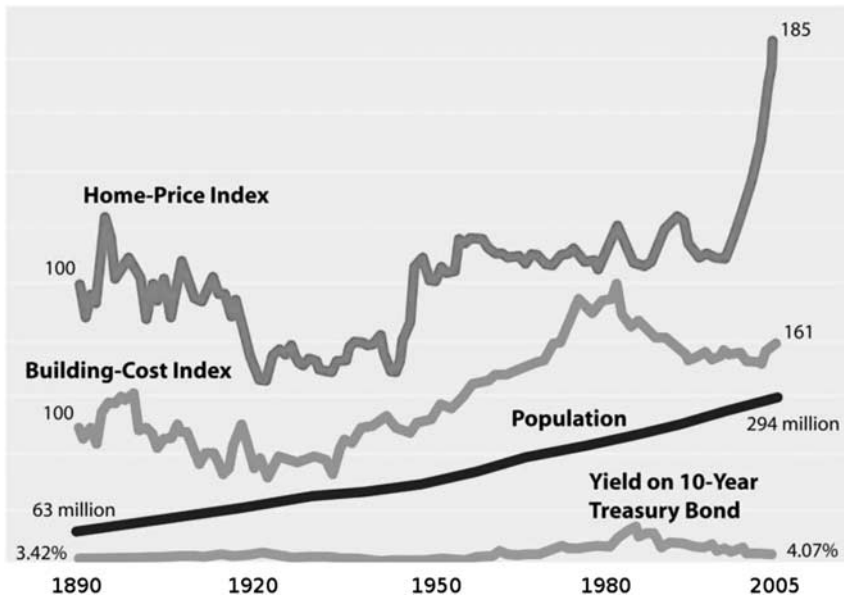


Figure 2: Long-term home prices.

A particular factor in the housing price boom is the consumer debt. According to Hudson (2006), American households are now deeper in debt than at any point in history. In fact, mortgage loans now constitute close to 90 per cent of the increase in debt since the 1990s and make up fully 50 per cent of bank loans in general. This trend can be seen to be driven by a combination of factors, including record low interest rates, which increase the borrowing capability of home buyers, favorable tax treatment of mortgage interest, and the 'wealth effect' (the increased spending caused by the recognition of the value of one's home) benefits to the general economy (Montgomerie and Young, 2010). In the following Figure 4, we can see the increasing debt-service ratio.

There is another trend, ostensibly, independent of interest rate trends. First, the alarming rise in mortgage delinquencies as shown in Figure 5; second, the rapid growth of CDOs during the same period, see Figure 6.

### The link from complex securities to the boom–bust cycle

Our hypothesis is that for the last boom–bust cycles in the United States, starting from the housing market, there was a significant micro–macro link



**Figure 3:** Existing one-family home sales.  
*Source:* National Association of Realtors/Haver Analytics.



**Figure 4:** Debt service ratio.  
*Note:* Federal Reserve, the ratio is the sum of interest and minimum contracted principle to disposable income.

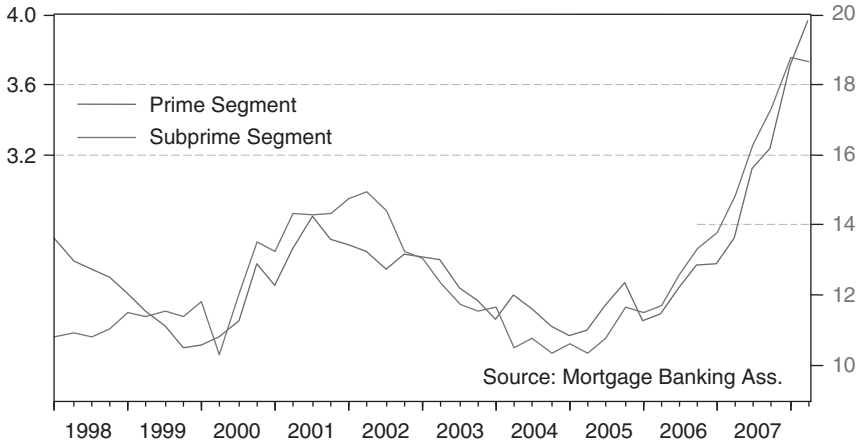


Figure 5: US mortgage delinquencies.

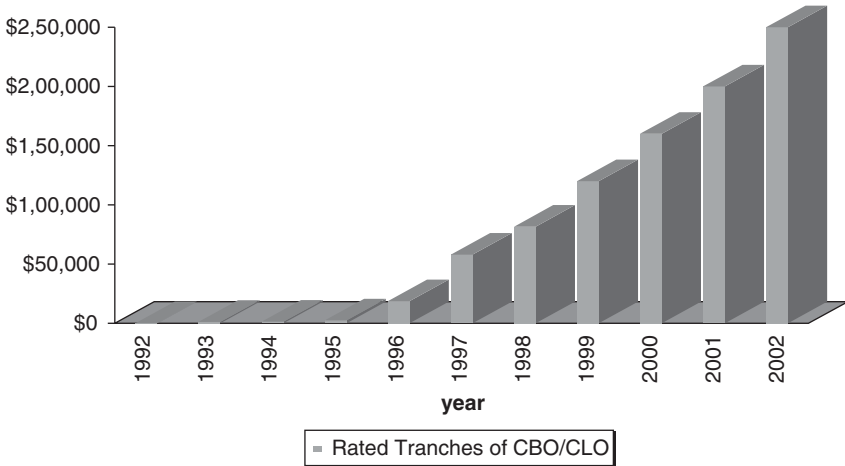


Figure 6: Rated CDO volume (\$ millions).  
Source: Moody's Investor Service.

that accelerated both the boom as well as the bust. Though the feedback effects are complex, the mechanisms are quite simple to understand, for details see Semmler and Bernard (2009b).

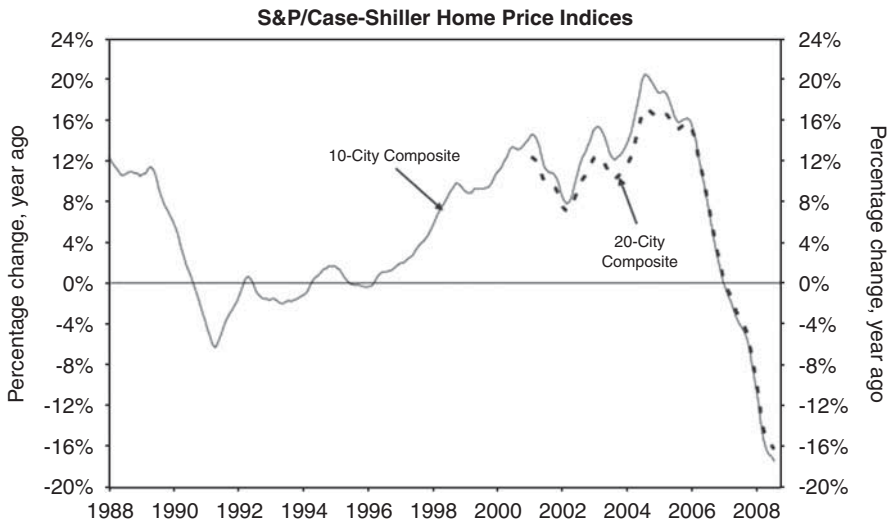
With complex securities, such as the CDOs, there is a bundling of risky assets, re-assigning the risks into different classes, called tranches. The tranches

generally consist of 1, 2, 3 or 4 assets defaulting. A clever trader could take a long position in a risky tranche and go short in another tranche. Yet, for example, the different assets might not, in fact, be independent of each other. In other words, one asset defaulting makes the chances of others defaulting more or less likely. This phenomenon is called *default correlation* and, along with default risk, is an important driver of the overall structure. Further complications can be introduced by mixing different risky assets of different types, taking more complex positions within the tranches, and by investing in multiple products. All of this is usually simulated with computers, which can keep track of the details.

To put it another way, a MBS is a type of CDO – see the rapid rise in Figure 6 – in which the defaultable assets are mortgages instead of bonds or CDS. The rise of this industry has exactly mirrored the housing boom as shown in Figure 3 earlier. These securities are simply another example of the scheme described above. MBSs operate by grouping together mortgages and using the interest income produced to compensate investors for taking positions in which varying levels of default, called tranches, are guaranteed. The incentive to form such a structure is motivated primarily by the surplus cash generated – that is not used to compensate investors.

The regular interest payments from those mortgages are income to the Special Purpose Vehicle (SPV), an entity designed for this purpose. Different tranches are assigned with appropriate attachment points. If the number of defaults remains below the lower attachment point, the investors in that level simply collect the pre-arranged premium. However, once the percentage exceeds the lower attachment point, defaults are paid out of the capital posted by the investors of that tranche. Once the upper attachment point is reached, the next tranche takes over since the lower tranche is effectively exhausted. Investors in the MBS will demand compensatory interest commensurate with the assumed default risks and recovery values. These are paid from the interest income from the mortgages. The difference between the two cash flows is profit to the SPV investors. As long as it is profitable to construct these instruments, liquidity in the mortgage market will only be limited by the default probabilities, recovery values and the rates obtainable elsewhere. Interested readers can find out more about this in Semmler and Bernard (2009b).

Figure 7 shows the actual collapse of the housing price in the United States. It should be pointed out that the housing market, unlike many other markets, is highly dependent on the banking system. Most homes are purchased through debt financing. Actual delinquency rates are shown in Figure 5. When those rise, default correlation becomes a critical component in the burst of the bubble. This mechanism is simulated in a model by Semmler and Bernard (2009a). It demonstrates how underlying financial market instruments can influence prices and macro-phenomena in extreme ways and can produce such



**Figure 7:** The collapse of house prices.

a severe collapse in housing prices. Here the role of high debt, delinquency rates and the correlation in the default process are taken into account.

Figure 8, taken from Semmler and Bernard (2009a), shows how the housing price collapse can be replicated by simulating the asset prices from MBS. The simulation demonstrates the extreme sensitivity of SPV profits and home prices. As discussed and analyzed in Semmler and Bernard (2009a), there is an extreme sensitivity of both the asset price of complex securities as well as the housing prices to delinquency rates of mortgages, time varying interest rates, default correlation and recovery rates. It explains why, given the fragile macroeconomic environment, this led to such an accelerated downturn in the United States in 2008.

Surely, overconfidence, undervaluation of risk and overleveraging played an important role accompanying the above non-robust pricing process. But these facts are only understandable against the empirical background and the sketched micro-mechanism arising from the pricing of the new complex securities, as demonstrated in our simulations.

### Asset Price Boom–bust Cycles and Central Bank Policies

An important question is thus whether central banks can control boom–bust cycles. As the financial meltdown evolved in the United States, the asset price bubble and bust became a great challenge to the central banks. The central

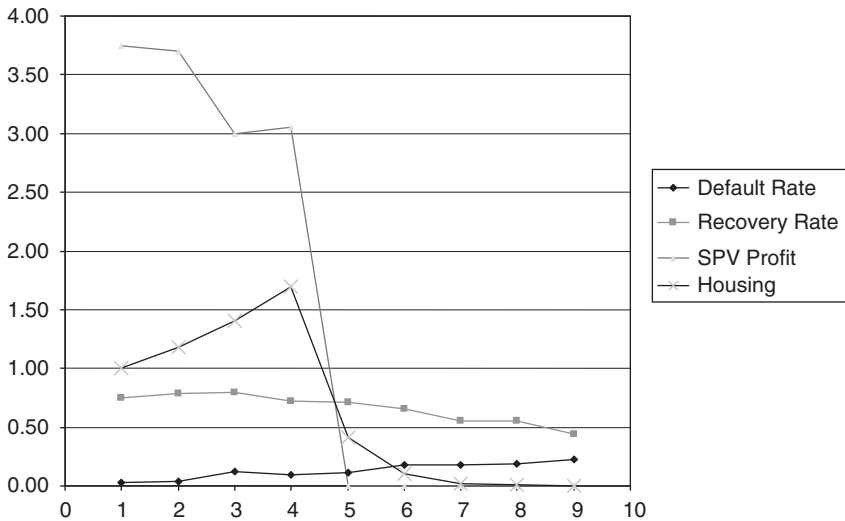


Figure 8: Simulation results on CDO pricing.  
Source: Semmler and Bernard (2009a).

banks were forced to heavily intervene in the financial markets. Although traditionally only inflation targeting was the proclaimed goal of the central banks, both the Fed and the European Central Bank (ECB) have moved away from this and were forced to intervene with non-traditional means.

### Asset price bubbles and monetary policy

This was not entirely new, since a strong sporadic intervention had already taken place under Alan Greenspan, since the 1990s. A detailed evaluation of the central banks' action with respect to the stock market, during the technology bubble, and their potential success/failure can be found in Greenspan's recent book (2008). It was well understood at the time, of course, that monetary authorities can and should not target specific levels of asset prices. There are fundamentally justified movements in asset prices, as for example for bond prices, credit costs, stock prices and exchange rates. Although asset price misalignments are difficult to measure as are potential output, future inflation rates and equilibrium interest rates, nevertheless these movements should not be ignored. For a more detailed analysis of these issues, see Cechetti *et al* (2000), as well as Semmler and Zhang (2002), and Semmler *et al* (2006). Monetary authorities should help to provide stability for the



financial market and reduce the likelihood of financial instability. In the earlier literature, with a view to the 1990s, this was discussed with respect to the extreme changes in asset prices, in particular stock prices.

Now, with the outbreak of the credit crisis triggered by the subprime sector and the subsequent financial meltdown, in particular in the credit sector, central banks' intervention in the credit sector became a major issue. As mentioned above, traditionally only inflation targeting was the proclaimed goal of the central banks, yet both the Fed and the ECB undertook drastic actions, also coordinating world-wide measures to prevent the credit crisis from spreading and to avoid a financial market meltdown. In November 2007, joint actions of Western central banks were undertaken to provide more liquidity for the private sector, in particular for the banking sector. Moreover, the US Fed provided more liquidity in the first quarter of 2008, first with a plan to inject US\$200 bill and then actually assisting in bailing out Bear Stearns by JP Morgan in the middle of March 2008. Moreover, up to the time this article was written in June 2009, the short-term interest rate in the United States had been reduced from 5.25 to 0.25 per cent. Finally, in the second quarter of 2009 the Fed undertook a drastic action to buy \$700 bill worth of treasury bonds to inject liquidity into the market.

For the interested observer, this change in direction of monetary policy from inflation targeting to heavy intervention in the financial market did not come without surprise. Ben Bernanke, now the Fed Chair, had already written several academic papers that advocated a strong intervention of the central bank in case of a financial market meltdown, see Bernanke *et al* (2004). Already in his earlier papers, Bernanke and co-authors had put forward the idea that the central bank should buy private assets if interest rate policy no longer worked. This not only would prevent a further fall in asset prices, but in particular drive down the long-term interest rate. Though the paper originally was written with an eye on the Japanese long period of stagnation, starting in the 1990s, when the zero inflation rate and almost zero interest rates did not leave any room for monetary policy, Bernanke and co-authors had hinted of a possible US application. Now, in fact the US central bank did apply this non-traditional monetary policy, although the success awaits future evaluation.

In contrast to the Fed, the ECB was always more conservative in its monetary policy stance, first by applying the two pillar concept and second giving more attention to the inflation rate than to output or the financial markets and its possible externalities to the real economy. The two pillar concept means that the ECB pursues the tradition of controlling the money supply, as advocated by the Bundesbank, but at the same time it pursues direct inflation targeting through discretionary interest rate setting. Further development in the financial market sector and spillovers of the financial



meltdown to the EU had also tested the ECB. In response to the financial crisis, it mainly focused on interest rate reduction and provision of liquidity.

Overall, the claim of the recent monetary concept, that the central banks should restrict themselves to inflation targeting, giving some weight to output targeting, came under stress not only in the 1990s, but particularly since the outbreak of the subprime crisis, the ensuing credit crisis and the financial meltdown. It would indeed be too easy a concept to suggest that the modern central bank undertake some fine-tuning of the economy, engineering interest rate changes in some direction and steering the economy toward some steady employment. The boom–bust cycle, this time a finance fueled boom–bust cycle with wide spread financial instability and meltdown, has become the central challenge for central bank policy.

### **Are bubbles always bad?**

It is a mistake to think that all bubbles are bad; in fact some bubbles leave the economy significantly better off – with higher productive capacity, which might even include better labor relations with job training and higher wages and income in the long run. A good example is the technology bubble in the United States in the late 1990s. The United States had a bubble and strong growth – Europe had no bubbles and no economic growth. Recent financial market innovations also enhanced economic growth and facilitated the purchase of houses for the low-income sector. But the latest financial bubble coincides with slow productivity growth, stagnating US household income, and higher poverty rates. Except for the larger than average growth in office buildings, creation of new financial instruments, and an increase in housing stock, this bubble does have more negative effects, even apart from the costs in lost output. In general, bubbles can produce or enhance uneven income distribution (tides do not lift all boats, but mainly yachts) and they may lead to misallocation of resources (for example, the huge build up of optical fiber in the United States). And even before bubbles bursts, they create financial instability; other sectors may be pulled into unwarranted booms. As above discussed, with bubbles bursting there are huge externality effects, since falling asset prices after the bubble will pull down other asset prices, the value of collateral will fall, loans will be called in; credit markets will contract, and financial institutions will suffer. Many completely ‘innocent’ agents – who made no unwarranted or speculative decisions – are dragged down, and this will spill over into the real side of the economy, thus leading to a negative impact on employment and output.

The latest boom–bust cycle had all the making of a bad one. The fast liberalization of the financial market in the two previous decades, a decrease in





risk perception, an increase in risk taking, overleveraging and relaxed financial market regulation, inexperienced and loose supervision, relaxed disclosure requirements, the lax screening and monitoring of financial institutions and weak accounting standards were not only found in emerging markets, but also in the United States and other advanced countries.

## The Fragmented Global Regulatory Response to the Financial Crisis

At the start of the crisis in 2007, few would have expected that the latest financial market meltdown would trigger such a worldwide debate on the need for new financial regulation and oversight. Not only the United States responded with recommendations for an overhaul of the financial regulatory structure, we truly witness a global response to this truly historic event.

### A fragmented global response

Owing to the huge financial losses of US investment banks, mortgage firms and commercial banks, regulatory institutions, governments, commissions (such as the Security and Exchange Commission [SEC]) and the Congress have put forward new ideas on the oversight and regulation of the financial markets. A similar discussion has started in the EU, in many of the member states of the EU, the emerging economies through the G20 summit, the IMF, the Bank for International Settlement (BIS), and the UN-The Commission of Experts on Reforms of the International Monetary and Financial System (also known as Stiglitz Commission).

Although members of these bodies strongly agree to improve the regulatory framework of financial markets, but serious differences remain on whether regulation should be of a *light touch* market-oriented approach or whether more public authority is needed in the wake of the international financial crisis (Helleiner and Pagliari, 2009). While the United States and EU play the dominant role in global financial markets as both the largest and most liquid financial markets worldwide, they operate under quite different regulatory regimes (Hall and Soskice, 2001; Lütz, 2002).

These national differences were played out at the start of the G20 meeting in London in April 2009. French President Nicolas Sarkozy and German Chancellor Angela Merkel (*l'axe franco-allemande*) called for an encompassing state regulation including regulation for hedge-funds and tax heavens, going as far as threatening to walk out of the G20 meeting if agreement on strict regulation of financial products among the G20 members should not be forthcoming. In contrast, US President Barack Obama and the British Prime

Minister Gordon Brown came to the meeting to gain consensus primarily on further financial stimulus to provide liquidity for the banking system (*Financial Times*, 2009). A few days before the G20 meeting, the Anglo-Saxon strategy was strongly rebuffed by the then holder of the EU presidency, the Czech Prime Minister, Mirek Topolánek. He referred to the massive injection of liquidity into the economy as a 'road to hell' (Barber and Luce, 2009). Similarly, Angela Merkel, in an unusually stern attack on the *unconventional* monetary policies of the Fed, Bank of England and ECB, warned that '(W)e must return to independent and sensible monetary policies, otherwise we will be back to where we are now in 10 years' time' (*Financial Times*, 2009a).

Now two years into the crisis and despite the severity of the financial meltdown, the worst since the Great Depression of the 1930s, there is little momentum to create a new and global *Bretton Woods II* system as championed by Nicolas Sarkozy before the first G20 meeting in Washington DC. Fragmentation and great variation among and across national political economies have emerged in the areas of accounting and prudential rules, oversight of rating agencies, personal accountability, levels of capital requirements, transparent pricing and risk management, and regulating and licencing new financial products (Helleiner and Pagliari, 2009; Smaghi, 2009). These differences in regulatory responses are neither new nor surprising. The variation in regulatory responses at the macro level is because of the different regulatory models exemplified in the 'varieties of capitalism' approach, which stipulate that 'LME' tend to rely more on markets modes of coordination in the financial sphere, while those with 'CME', such as the European countries, rely more heavily on the existing institutional governance structures of non-market coordination (Hall and Soskice, 2001).

At another more meso and institutional level, conflicts of interests between individuals and collective interests also plague financial markets. Financial markets are essentially global, while regulation and supervision remain in largely national competences (Smaghi, 2009). This latter point is all the more problematic in the EU between the EU regulatory bodies and the member states. While cross-border banking integration at the European level has increased since the creation of the European single market and increased coordination has been achieved by the creation in 2004 of the Committee of European Banking Supervisors (CEBS) in the framework of the so-called Lamfalussy architecture for financial regulation, nevertheless the supervisory control remains firmly under national competence (Padoa-Schioppa, 2004; Mügge, 2008; Véron, 2008). The present crisis has 'exposed the fact that financial supervision has not kept pace with market integration' (Lannoo, 2008, p. 1). The inadequate response to the crisis is further aggravated by the regulatory competition among EU-member states created by the lee-ways left to national regulators to interpret European



directives. The incentive to compete among its members on regulatory and oversight tasks is thus much greater than the need to cooperate concerning the supervision of large and complex institutions in Europe as well as at a global level (Smaghi, 2009).

### **The more specific regulatory responses so far**

#### *(a) The Group of 20 and the UN-Commission of experts on reforms*

The *Group of 20* (G20) summits, starting with the first meeting in Washington on 15 November 2008 and continuing in London on 2 April 2009 signaled for the first time that global financial governance can no longer be restricted to the G7/8 (created in 1975), but need to be more inclusive of developing countries at the leader's level. Accepting a widening governance framework in finance in the wake of the present crisis is perhaps the most significant result of the G20 summit (Helleiner and Pagliari, 2009). However, the United Nations Commission (Stiglitz Commission), which presented its report before the G20 summit argued that the G20 needs to even further broaden and include the G192 in order to deal with impacts of the crisis and responses to the crisis on poverty and development. In particular, the Report points to the global instability caused by the current dollar-based reserve system and advocates a greatly expanded role of Special Drawing Rights of the IMF. 'Short term measures to stabilize the current situation must ensure the protection of the world's poor, while long-term measures to make another recurrence less likely must ensure sustainable finance to strengthen the policy response of developing countries' (United Nations Commission, 2009, p. 2).

While the G20 Summits did pay, at least lip service, to the plight of the developing countries hit by the impact of the financial crisis, the major focus of the summit was on the reforms of the global financial architecture. Despite the initial cross-Atlantic strident verbal exchange before the G20 Summit in London in April 2009, the final declaration was regarded as a remarkable success. The members agreed to enhance the role of the Financial Stability Forum (FSF) for financial oversight in the successor organization, the Financial Stability Board (FSB), with a strengthened membership and mandate. It includes all the G20 countries and other FSF members, as well as the European Commission as the rule-making body of the EU, in cooperation with the BIS and the IMF. The purpose is to enhance better coordination, including macro- and micro-prudential supervision, between the international and national levels. It includes the creation of an early warning system of macroeconomic and financial risks and a supervising structure to prevent regulatory arbitrage. Two additional points gained strong backing at the G20. It was agreed that that there is need for greater personal



accountability of the executive financial decision-makers and that compensation schemes should be linked to the firm's long-term goals. This action was in response to the worldwide public outcry to the huge bonuses being paid to CEOs as compensation for focusing on risky and short-term financial gains (Lannoo, 2009). Furthermore, the G20 recommended quite stringent actions against tax heavens, an issue particularly important to the Germans. It was agreed to enforce disclosure and economic sanctions against banking secrecy (Group 20, 2009). The results on financial reforms are thus better than anticipated, but it remains to be seen between now and the Summit to be held in Pittsburgh in September 2009 whether real actions follow these recommendations.

*(b) US-White Paper on financial reforms*

On 17 June 2009, US President Barack Obama unveiled the long-awaited White Paper on financial market reforms prepared by the Secretary of the Treasury, Tim Geithner. Financial media pundits speculated that the Gramm-Leach-Bliley Act of 1999, abolishing the Glass-Steagall Act (separating commercial banks from investment banking), would be reversed. Namely, the abolition of this act has been blamed by many for the market turbulence that led to the financial crisis. Others speculated that there would be some consolidation of the multilayered batchwork of regulatory federal and state institutions, which have evolved over more than a century in response to financial crisis, market innovations and regulatory reforms. There are five federal banking regulators, including the Federal Reserve, which monitor commercial banks. The SEC monitors the securities market while the Commodity Futures Trading Commission (CFTC) regulates futures. Insurance, on the other hand, is supervised almost entirely at the state level. But as the *Financial Times* noted, the White Paper represents the 'art of what is politically possible' between 'a diverse galaxy of regulators, Capital Hill barons and industry lobby groups' (*Financial Times*, 2009b, p. 3). The most important reforms mentioned in the White Paper address four major areas.

First, the White Paper grants supervision of financial companies and new systemic risk regulatory powers to the Federal Reserve. Banks are required to hold more capital and hedge funds have to register with the SEC. A newly created *Council of Regulators*, chaired by Tim Geithner as Secretary of the Treasury, is to advise the Fed on its tasks to monitor the systemic risks. The *Council* consisting of the leaders of the top eight regulators, including the new Consumer Financial Protection Agency, would coordinate policy and prepare a report to Congress once a year. However, this new body has no enforcement powers, nor can it veto any of the Fed's decision. The idea behind the strongly expanded role of the Fed to monitor financial institutions is the belief that



macro-prudential regulation is needed to avoid systemic risks rather than supervising individual banks. Before the financial meltdown, the focus was on micro-prudential oversight assuming that if bank supervisors ensured the safety of individual banks, systemic stability would follow (Plender, 2009). The second important reform is the creation of a special insolvency regime for financial firms, a solution to the *to big to fail problem* witnessed after the Lehman Brothers demise in September 2008, which so devastatingly demonstrated that the government did not have the legal authority to seize and wind up failing complex financial firms. Under the new proposal, the Treasury secretary would have the power to invoke a special bankruptcy regime and 'sell or transfer all or any parts of the assets of the firm in receivership to a bridge institution or other entity' (United States – Dept of the Treasury, 2009). Creating the insolvency regime recognizes the fact that Lehman Brothers, as a non-bank financial institution, was only subject to the bankruptcy Chapters 11 and 9 designed for industrial companies. This new insolvency regime would apply to both banks and large non-bank financial firms.

Third, the President also targeted to reign in excessive risk taking on the securitization markets by forcing lenders to retain at least 5 per cent of the credit risk of loans that are securitised. Asset-backed securities including the over-the-counter derivative market will have to register and face new reporting rules. The Fed's consumer protection role as a fourth issue is to be transferred to a New Consumer Financial Protection Agency. The Office of Thrift Supervision, which was the primary regulator of federal savings associations (thrifts) is to be shut down. The new Consumer Financial Protection Agency is to ensure that any company that provided financial products or services related to consumer lending, such mortgage brokers, debt collectors and credit counsellors would adhere to strict rules. Finally, the White Paper emphasizes also the international role of coordination on the supervision of large global financial firms and stresses higher overseas standards on capital requirement (United States – Dept of the Treasury, 2009).

In the meantime, members of the US-Congress and financial media pundits have critiqued the vagueness on crucial details and the practical implications of the White Paper (Tett, 2009). There are two major points, which could lead to a regulatory turf war in the coming months. Many in the US Congress, in particular the Senate, do not want to see the Fed increase its power to include the macro-prudential supervision of large financial firms. Some Republican Senators have argued that the Fed does not have the expertise as a systemic risk regulator, and that the Fed should not be rewarded with additional regulatory power when in fact the Fed is held responsible for creating easy money and thus contributing to the asset bubble in the first place. As a result, the Fed should adhere to its exclusive role of setting monetary policy (Luce, 2009). On the opposite side are academics



and former members of the Board of Governors of the Federal Reserve, such as Frederic Mishkin, who argues ‘that we desperately need a systemic regulator and the Fed is the only logical choice’ (Mishkin, 2009). Another turf war brewing over which agency will control the derivatives is between the SEC and the CFTC. The SEC, which was severely criticized for neglecting its oversight responsibility in the Bernard Madoff investment fraud as well as its failure to intervene in the investment banks of Lehman Brothers and Bear Stearns, is targeted to gain new powers to oversee the credit derivative markets. However the CFTC continues to be responsible for regulating interest rate, foreign exchange and commodity derivatives. Thus similar financial instruments are regulated by both agencies, which could in the words of the former SEC chair, Harvey Pitt, lead ‘to more regulatory overlap, gaps and arbitrage’ (*Financial Times*, 2009c, p. 2). A last important issue is proprietary trading through which the big investment firms have enriched themselves, but this may be watered down in the final version of the bill currently in the Senate.

*(c) The EU-de Larosière Report and the Turner Review (United Kingdom)*

There is shared agreement across the Atlantic that the new regulatory framework has to include macro-prudential oversight to ensure systemic stability. As already set forth in the White Paper of the US-Treasury Department, both the Turner Review, chaired by Lord Turner, chairman of the United Kingdom’s Financial Services Authority and the EU-Larosière Report, chaired by Jacques de Larosière, the former managing director of the IMF, echo the critique of the micro-prudential regulatory approach which has contributed to an unbalanced regulatory regime before the crisis (de Larosière Report, 2009; Turner Review, 2009). The EU-Commission accepted the main recommendations of the de Larosière Report (European Commission, 2009) in May 2009, which rests on two pillars: macro-prudential supervision and micro-supervision. To upgrade macro-prudential supervision, the EU recommends establishing a new body called *European Systemic Risk Council* (ESRC), to be chaired by the ECB president, and set up under the auspices of the ECB. The purpose of the ESCR is to pool and analyse all information, relevant for financial stability, pertaining to macroeconomic conditions and to macro-prudential developments in all the financial sectors. Furthermore, it should facilitate a better flow of information between the ESRC and the micro-prudential supervisors, and to put in place an effective macro-prudential risk warning system, the *European Systemic Risk Board* (de Larosière Report, 2009, p. 46). That the ECB should chair the ESCR was – as soon as this news hit London – received with much apprehension by the British. A second core recommendation focuses on the creation of a *European*



*System of Financial Supervision* for micro-prudential supervision of large cross-border institutions. The European System of Financial Supervisors (ESFS) will have a direct impact on cross-border fund managers which are to be created out of the present advisory bodies (Committee of European Banking Supervision [CEBS] for banks, Committee of European Insurance and Occupational Pension Supervisors [CEIOPS] for insurers and Committee of European Securities Regulators [CESR] for securities). These so-called Level 3 Committees created under the Lamfalussy framework in 2004 (see Mügge, 2008) designed to ensure national watch-dogs have proven quite insufficient to ensure financial stability in the EU and its Member states (Smaghi, 2009). As a result, the de Larosière Report suggests that these bodies should be transformed with real binding powers, to coordinate the application of supervisory standards and guarantee strong cooperation between the national supervisors. The CESR which presently covers regulation for fund management will become the new *European Securities and Markets Authority*. While colleges of supervisors will be set up for cross-border institutions to function as linchpin in ensuring a balanced flow of information between home and host authorities, the power to carry out day-to-day supervision will continue to remain in the hands of national supervisors (de Larosière Report, 2009, pp. 46–48).

In summary, policy actors across the Atlantic have fundamentally converged on the need for systemic regulation in finance, but huge differences remain in *how* to formulate a prudent policy response. Differences are primarily owing to the varieties of the regulatory environment and the conflicts of interests within the multilevel governance system of the United States and the EU, the European member states and the members of the Euro-area, and the EU member states and Brussels. Differences are also visible in the primary targets selected for regulation. The United States has so far focused on banking regulation and consumer protection, the EU (particularly France and Germany) is eager to reign in hedge funds and private equities. Another conflict has opened up in regard to the EU draft on Alternative Investment Fund (hedge funds and private equities). The Americans agree with the British that funds themselves should register and not require alternative fund managers to seek authorization. Both countries strongly oppose the leverage cap suggested by the EU-draft, which would put limits on the amount hedge funds can borrow. Particularly London sees its hedge fund dominance threatened (3/4 of Europe's hedge fund assets are managed in the United Kingdom) by the EU proposal (*Financial Times*, 15 July 2009). A further area of difference has emerged in the how to regulate rating agencies. The EU parliament has already approved legislation that requires credit rating agencies operating in the EU to register and be supervised. The proposed legislation by the US Treasury would not fundamentally change the business of ratings. Credit rating agencies opinions are protected under the First

Amendment of Free Speech in the United States and thus their recommendations are protected. The new legislation would not change this situation (*Financial Times*, 23 July 2009).

No final verdict on the outcome of the regulatory structure is possible at the moment, since the proposals and recommendations issued by the various bodies have to go through the political process and in many cases will be amended before enacted around 2010. Nevertheless, the fragmentation is quite evident between a tendency to rely more on market modes of coordination in the financial sphere, while another tendency relies more heavily on the existing institutional governance structures of non-market coordination. Though initially it was believed that the EU non-market oriented economies would push for more regulation, in the meantime we witness almost the reverse in that the US regulatory reforms being debated in the Senate (May 2010) envision tighter regulation for financial markets than is the case in the EU. Yet the financial crisis has made visible another conflict line in the EU between national supervision and the freedoms of the single market. Three objectives are in conflict: financial integration, financial stability and national supervisory autonomy (Smaghi, 2009). The three cannot be achieved simultaneously. In order to achieve more financial stability there is either the road to increase national powers over finance, meaning a less integrated EU market, or a greater degree of European integration. Thus the challenge is to find a way to *regulate without refragmentation* (Véron, 2008) both at the European and the global level.

## Conclusions

The current meltdown of the financial markets in the United States, which triggered worldwide financial crisis and staggering declines in global growth rates, challenges the assumptions of fast CML. Whereas the discussion in previous years has concentrated on the benefits of financial market liberalization, the focus has now shifted to the cost of fast and excessive financial liberalization. In contrast to the theory of perfect capital markets, the argument presented in this article starts from the more realistic assumption of imperfect capital markets. Boom–bust cycles have always existed, but they had largely been contained by public sector oversight, financial market and industry regulation, elements of planning (for example, in the post-war period) and responsible control of risk through the financial intermediaries. Recent CML and financial disintermediation, where control has shifted to market self-regulation through new financial engineering tools, has created the worst boom–bust cycles since the Great Depression. The latest crisis arose from a combination of a change in the macroeconomic environment interlinked with an aggressive use of imperfectly



understood financial market innovations. Central was the outsourcing of risks by traditional banks and investment banks. This was done through the securitization of credit risks through MBS, CDOs and CDS – which were supposed to diffuse the risks, but instead build up systemic risks.

The financial meltdown has created not only new challenges for the central banks around the globe, but has also produced global initiatives on new financial regulations. No final verdict is possible at this time, since the proposals and recommendations issued by the various bodies have to go through the political process. Nevertheless, the regulatory policy fragmentation is already evident between a tendency to rely more on market modes of coordination and more trust in non-market coordination. The challenge for the multilevel governance system of finance is to find a way to *regulate without refragmentation* both at the European and the global level.

### About the Authors

Willi Semmler is Professor at the Department of Economics at The New School, New York. He is author or co-author of more than 85 articles in international journals and is author or co-author of 11 books. He is a member of the New York Academy of Sciences and has been a visitor of Columbia University, Stanford University and the Cepremap in Paris. Recently, the second edition of his book 'Asset Prices, Booms and Recessions' (Springer Publishing House, 2006) was published. He is also co-editor of 'Foundations of Credit Risk Analysis' (Edward Elgar, 2007).

Brigitte Young is Professor of International Political Economy, Institute of Political Science, University of Muenster, Germany. She is a member of the EU-Network of Excellence, 'Global Governance, Regionalisation, and Regulation: The Role of the EU' (GARNET). She was an Expert Advisor to the Enquete-Commission of the German Parliament on 'Globalization of the World Economy' (2000–2002), served on the Warwick Commission on 'The Multilateral Trade Regime' (2007), and is a German delegate to the COST Research Project 'Systemic Risks, Financial Crisis and Credit'. She has been a research Fellow at Georgetown University, has taught at Wesleyan University, at the Free University Berlin, and was a guest professor at Science Politique in Paris 2008. Her research areas include economic globalization; regulatory responses to the global financial crisis, regulatory regimes and global financial governance, and feminist macroeconomics. Two books will appear 2010: *Gender and Macroeconomic Governance* (with Isabella Bakker and Diane Elson), and *Gender Knowledge and Knowledge Networks in International Political Economy* (with Christoph Scherrer) Baden-Baden: Nomos.

## Notes

- 1 For a more detailed study of financial boom–bust cycles, see Semmler (2006).
- 2 For details of such an approach, see Semmler and Bernard (2009a).

## References

- Ayuso, J. and Restoy, F. (2006) House Prices and Rents in Spain. Banco de Espana. Documentos de Trabacho, no. 9.
- Barber, T. and Luce, E. (2009) EU leader condemns US ‘road to hell’. *Financial Times* 26 March: 1.
- Bernanke, B., Reinhard, V.R. and Sack, B.P. (2004) Monetary Policy Alternatives at the Zero Bound: An Empirical Assessment. Federal Reserve Board, Washington: DC, no. 48.
- Cechetti, S.G., Genberg, H., Lipsky, J. and Wadhvani, S. (2000) Asset Prices and Central Bank Policy. International Center for Monetary and Banking Studies and Cener for Economic Policy Research. Geneva Reports on the World Economy, no. 2.
- Council on Foreign Relations. (2002) Building a Transatlantic Security Market. authored by Benn Steil, [http://www.cfr.org/publication/8282/building\\_a\\_transatlantic\\_securities\\_market.html](http://www.cfr.org/publication/8282/building_a_transatlantic_securities_market.html).
- European Commission. (2009) Driving European Recovery. Speech by EU Commission President presenting the EU-Commission’s contribution to the Spring Council, 4 March, [http://www.europa-eu-un.oirg/article\\_8434\\_en.htm](http://www.europa-eu-un.oirg/article_8434_en.htm).
- Financial Times*. (2009) Brown asks for Europe to back global stimulus. 25 March, p. 2.
- Financial Times*. (2009a) Merkel mauls central banks. 3 June, p. 1.
- Financial Times*. (2009b) White paper sets out skilful compromises. 18 June, p. 3.
- Financial Times*. (2009c) Merger proposal is notable for its absence. 19 June, p. 2.
- Greenspan, A. (2008) *The Age of Turbulence*, 2nd edn. London: Penguin.
- Group 20. (2009) G-20 Working Group 1, Enhancing Sound Regulation and Strengthening Transparency. Final Report, 25 March, [http://www.g20.org/documents/g20\\_wg1\\_010409.pdf](http://www.g20.org/documents/g20_wg1_010409.pdf).
- Hall, A.P. and Soskice, D. (eds.) (2001) *Varieties of Capitalism. The Institutional Foundations of Comparative Advantage*. Oxford: Oxford University Press.
- Helleiner, E. and Pagliari, S. (2009) Towards a new Bretton Woods? The first G20 leaders summit and the regulation of global finance. *New Political Economy* 14(2): 275–287.
- Hudson, N. (2006) The new road to Serfdome. *Harpers Magazine*, May.
- Lannoo, K. (2008) It’s high time to create a truly European system of financial supervisors. Centre for European Policy Studies, Commentary, 26 June, <http://www.ceps.eu>.
- Lannoo, K. (2009) What’s next after the London G-20? Centre for European Policy Studies. CEPS Commetary, 9 April, <http://www.ceps.eu>.
- Jacques de Larosière (2009) The high-level group on financial supervision in the EU. Chaired by Jacques de Larosière, Brussels, 25 February, [http://ec.europa.eu/internal\\_market/finances/docs/de\\_larosiere\\_report\\_en.pdf](http://ec.europa.eu/internal_market/finances/docs/de_larosiere_report_en.pdf).
- Luce, E. (2009) White Paper sets out skilful compromises. *Financial Times* 18 June: 3.
- Lütz, S. (2002) *Der Staat und die Globalisierung von Finanzmärkten. Regulative Politik in Deutschland, Großbritannien und den USA*. Frankfurt/Main, Germany: Campus.
- MacAvoy, P. and Millstein, I. (2004) *The Recurrent Crisis in Corporate Governance*. Stanford: Stanford University Press.
- Minsky, H.P. (1975) *John Maynard Keynes*. New York: Columbia University Press.
- Minsky, H.P. (1982) *Can it Happen Again?* Armonk, NY: ME Sharpe.
- Minsky, H.P. (1986) *Stabilizing an Unstable Economy*. New Haven, CT: Yale University Press.



- Mishkin, F. (2009) Why all regulatory roads lead to the Fed. *Financial Times* 23 June: 9.
- Montgomerie, J. and Young, B. (2010) Home is where the hardship is: Gender dimension of indebtedness and homeownership, unpublished manuscript.
- Mügge, D. (2008) Widen the market, narrow the competition. The emergence of supranational governance in EU capital markets. Unpublished Dissertation, University of Amsterdam.
- Padoa-Schioppa, T. (2004) *The Euro and Its Central Bank: Getting United after the Union*. Cambridge: MIT Press.
- Plender, J. (2009) Analysis: Respinning the web. *Financial Times* 22 June: 5.
- Semmler, W. (2006) *Asset Prices, Booms and Recessions: Financial Economics from a Dynamic Perspective*, 2nd edn. Heidelberg/New York: Springer Publishing House.
- Semmler, W. and Bernard, L. (2009a) Banking, complex securities, and the credit crisis. *Economic and Political Weekly* XLIV(13): 133–149.
- Semmler, W. and Bernard, L. (2009b) Boom-bust cycles: leveraging, complex securities and asset prices, under review, [http://\(www.newschool.edu/nssr/cem\)](http://www.newschool.edu/nssr/cem).
- Semmler, W., Greiner, A. and Zhang, W. (2006) *Monetary and Fiscal Policy in the Euro-area*. Amsterdam: Elsevier.
- Semmler, W. and Zhang, W. (2002) Asset Price Bubbles and Monetary Policy Rules: A Dynamic Model and Evidence. CEM, Bielefeld University. Working Paper.
- Shiller, R.J. (1991) *Market Volatility*. Cambridge: MIT Press.
- Shiller, R.J. (2001) *Irrational Exuberance*. New York: Random House.
- Shiller, R.J. (2007) Low Interest Rates and High Asset Prices: An Interpretation in Terms of Changing Polular Models, Yale University, Working Paper.
- Smaghi, L.B. (2009) Conflicts of interest and the financial crisis. *International Finance* 12(1): 93–106.
- Stiglitz, J., Ocampo, J.A., Spiegel, S., Ffrench-Davis, R. and Nayyar, D. (2006) *Stability with Growth*. Oxford: Oxford University Press.
- Tett, G. (2009) Insight. Schapiro gets troops ready for regulatory turf war. *Financial Times* 26 June: 23.
- Tobin, J. (1980) *Asset Accumulation and Economic Activity*. Oxford: Basic Blackwell.
- Turner (The) Review. (2009) A regulatory response to the global banking crisis. Financial Services Authority, March, [http://www.fsa.gov.uk/pubs/other/turner\\_review.pdf](http://www.fsa.gov.uk/pubs/other/turner_review.pdf).
- United Nations. (2009) The Commission of Experts on Reforms of the International Monetary and Financial System. Chairperson: Joseph Stiglitz, 19 March, [http://www.un.org/ga/president/63/commission/financial\\_commission.shtml](http://www.un.org/ga/president/63/commission/financial_commission.shtml).
- United States – Department of the Treasury. (2009) Financial regulatory reform. A New Foundation: Rebuilding Financial Supervision and Regulation, [http://www.financialstability.gov/docs/regs/FinalReport\\_web.pdf](http://www.financialstability.gov/docs/regs/FinalReport_web.pdf).
- Véron, N. (2008) Europe's Banking Challenge: Reregulation without Refragmentation. *CESifo Forum* 9-4/2008: 51–59.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.