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**THE END OF A GREAT ILLUSION:  
CREDIT CRUNCH AND LIQUIDITY MELTDOWN**

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## Abstract

This paper argues that the credit crunch is the result of a particular problem in the world financial system, that is, of the phenomenon of 'liquidity illusion.' At the heart of this still poorly understood phenomenon lies the spiral of financial innovation and its effects on systemic liquidity. I examine the political-economic mechanisms that had sustained the illusion of liquidity during the boom years, and the mechanisms which contributed to its evaporation during the ongoing crisis.

My analysis demonstrates that that while increased investment inflows have been one of the factors behind the North Atlantic credit boom of 2003-2007, the boom – including housing and securitization bubbles – has disguised the fact that the financial system in Anglo Saxon economies has become *progressively illiquid*. Drawing on the scholarship of Hyman Minsky, I identify three pillars of the liquidity illusion -Ponzi finance; collective thinking by investors; and the credibility function performed by the credit rating agencies – and examine their role in the unravelling of the global liquidity illusion.

## Introduction

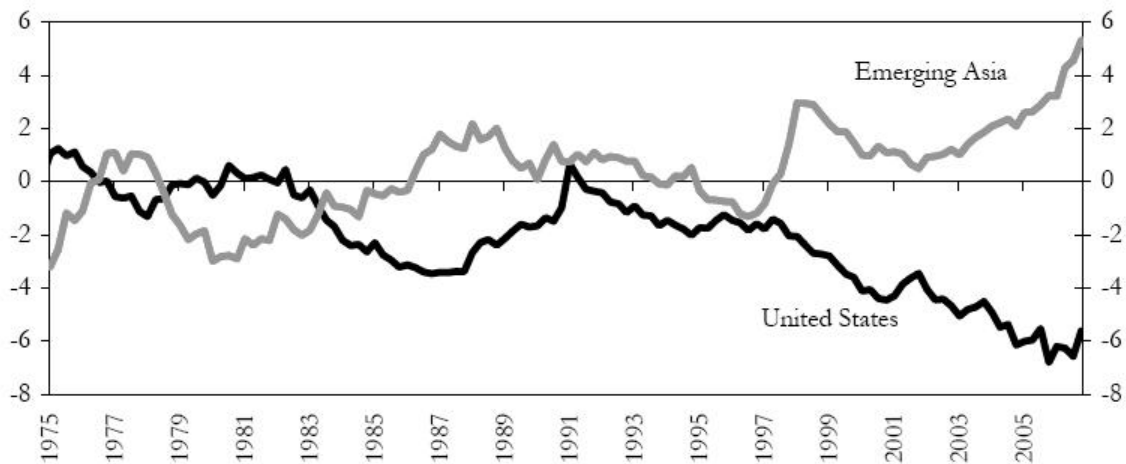
In what follows, I explain the global credit crunch as the outcome of one grand illusion: the illusion of liquidity. Specifically, I argue that the widely perceived benign financial conditions of 2003-2007, or what Ben Bernanke (2005) has termed a period of a 'global savings glut', have led most observers to conclude that the years of large capital inflows into the US and other industrialised economies, as well as historically low real interest rates, have facilitated the creation of 'excess liquidity' in the global financial system. According to these observers, the homeownership boom in the USA and its continuing rupture are the result of a structural discrepancy: the tendency of Asian and other exporters to spend their surpluses in mature financial markets, rather than in under-capitalised emerging economies. This structural discrepancy, Bernanke and others have argued, is the root causes of the current crisis; hence solutions to the continuing meltdown are to be found in making the Asian nations use their savings more efficiently and develop their financial markets domestically.

Below, I argue that this reasoning is profoundly mistaken. While during 2002-2007 the world has indeed witnessed an unprecedented discrepancy between savings in the large emerging markets and savings in mature capitalist economies, the growth of financial flows from Asia into the North Atlantic economies is not synonymous with greater 'liquidity' of the financial system as a whole. In fact, while investment inflows have been one of the factors behind the credit boom of 2003-2007, the credit boom – including housing and securitization bubbles – has disguised the fact that the financial system in Anglo Saxon economies has become *progressively illiquid*. At the heart of this problem lies the spiral of financial innovation and its effects on systemic liquidity. Drawing on the scholarship of Hyman Minsky, I argue therefore, that the credit crunch is an outcome of this progressive illiquidity of the financial system driven by private financial innovation and deregulatory policies. Below, I examine the political-economic mechanisms that had sustained the illusion of liquidity during the boom years, and the mechanisms which contributed to its evaporation during the ongoing crisis.

# I. The Boom and ‘Excess’ Liquidity

In 2005, Ben Bernanke observed an anomaly in the global financial system. Explaining the upward climb of the U.S. current account deficit from a global perspective, he noted that there has been “a remarkable reversal in the flows of credit to developing and emerging-market economies, a shift that has transformed those economies from borrowers on international capital markets to large net lenders” (2005). He elaborated why the Asian countries and other raw material exporters chose to transfer their savings into the mature markets. According to him, in the 1990s, emerging economies in Asia and Latin America were net importers of capital (in 1996, they borrowed \$80 net on world capitals markets). The unproductive use of these inflows (explained by bad governance or avoidance of fiscal consolidation) resulted in the financial crises of the late 1990s. Trying to rebuild their economies in the wake of the crises, Bernanke continued, these countries “increased reserves through the expedient of issuing debt to their citizens, thereby mobilizing domestic saving, and then using the proceeds to buy U.S. Treasury securities and other assets. Effectively, governments have acted as financial intermediaries, channeling domestic saving away from local uses and into international capital markets. A related strategy has focused on reducing the burden of external debt by attempting to pay down those obligations, with the funds coming from a combination of reduced fiscal deficits and increased domestic debt issuance. Of necessity, this strategy also pushed emerging-market economies toward current account surpluses.”

**Figure 1: Current account imbalances (In percent of GDP, 1975Q1–2006Q4)**



Sources: Dataset as described in Section 3.3.

Note: Emerging Asia comprises China (P.R. and Hong Kong), India, South Korea, Singapore, Thailand, and Indonesia.

Source: Bracke and Fidora 2008, ECB WP 2008

This substantial shift in the current accounts of developing and emerging-market nations, a shift that transformed these countries from net borrowers on international capital markets to large net lenders, was one of the factors driving the unprecedented deficit in the U.S. current account

(Table 1). Overall, Bernanke argued, this shift by developing nations, together with the high saving propensities of Germany, Japan, and some other major industrial nations, has resulted in a global saving glut. The increased supply of saving boosted U.S. equity values during the period of the stock market boom and helped to increase U.S. home values during the more recent period, as a consequence lowering U.S. national saving and contributing to the nation's rising current account deficit (2005).

**Table 1. Global Current Account Balances, 1996 and 2003**  
(Billions of U.S. dollars)

Countries	1996	2003
<b><i>Industrial</i></b>	<b>46.2</b>	<b>-342.3</b>
United States	-120.2	-530.7
Japan	65.4	138.2
Euro Area	88.5	24.9
France	20.8	4.5
Germany	-13.4	55.1
Italy	39.6	-20.7
Spain	0.4	-23.6
Other	12.5	25.3
Australia	-15.8	-30.4
Canada	3.4	17.1
Switzerland	21.3	42.2
United Kingdom	-10.9	-30.5
<b><i>Developing</i></b>	<b>-87.5</b>	<b>205.0</b>
Asia	-40.8	148.3
China	7.2	45.9
Hong Kong	-2.6	17.0
Korea	-23.1	11.9
Taiwan	10.9	29.3
Thailand	-14.4	8.0
Latin America	-39.1	3.8
Argentina	-6.8	7.4
Brazil	-23.2	4.0
Mexico	-2.5	-8.7
Middle East and Africa	5.9	47.8
Eastern Europe and former Soviet Union	-13.5	5.1
<b>Statistical discrepancy</b>	<b>41.3</b>	<b>137.2</b>

The widening homeownership in the US, in turn, was supported and facilitated by the technique of securitization – an ability of price the risk in mortgages and other loans, and to diffuse it efficiently through the advanced system of financial intermediation to those who are most able to bear it :

“The development of a broad-based secondary market for mortgage loans also greatly expanded consumer access to credit. By reducing the risk of making long-term, fixed-rate loans and ensuring liquidity for mortgage lenders, the secondary market helped stimulate widespread competition in the mortgage business. The mortgage-backed security helped create a national and even an international market for mortgages... This led to securitization of a variety of other consumer loan products, such as auto and credit card loans” (Greenspan, 2005).

At the time, a similar understanding of the global savings glut and global liquidity was also offered by the BIS. The Bank noted that by early 2006, the combined holdings of China and other large emerging markets increased to an estimated \$1.25 trillion by early 2006, from just over \$800 billion at end-2004 (2006: 103-104). The BIS also commented that “conditions in the major financial markets remained calm and accommodative for much of 2005 and early 2006, reflecting the surprisingly strong performance of the world economy and still abundant liquidity “ (2006 Annual Report: 98).

Meanwhile, the Asian countries were criticized for keeping their debt markets under-developed and shallow. In April 2007, Fitch estimated that China held \$350 billion worth of U.S. Treasury securities at the end of 2006; it had an additional \$230 billion in U.S. agency bonds. “Large Asian holdings of U.S. debt are usually attributed to the region’s penchant for undervalued home currencies, which lead to chronic trade surpluses and a buildup of foreign reserves”. This excess liquidity, or savings glut, according to observers, was factor stunting their growth. As of April 2007, the Asian sovereign bond market (valued at \$830 bn) was less than a tenth the size of its U.S. and Japanese counterparts. The European market is 12 times as large. The data for the state of the markets for securitized debt confirmed that the financial systems in Asian economies were too shallow. According to the BIS, in Hong Kong, India and South Korea, only 1% of housing loans are securitized, while in Japan and Malaysia, the ratio is between 5 and 6 % . This compared with 68% in the USA. The explanation for this discrepancy was found to be in the nature of markets openness and competition: “Asian savings sit in savings accounts, creating vast pools of liquidity that enable banks to offer mortgages and loans at rates with which the originators of securitized loans can’t compete” (Tan 2006, S&P’s analyst, cited by Bloomberg) Barry Eichen-



green (2004)<sup>1</sup> noted that “Asian countries’ strong fiscal balances, while admirable on other grounds, have not been conducive to the growth of government bond markets,” Barry Eichengreen, an economist at the University of California at Berkeley. Analysts have concluded that “a liquidity glut is militating against Asia’s capacity to generate an adequate supply of financial assets that will allow it to keep its savings at home”<sup>2</sup> (Mukherjee 2007).

Exiting theoretical analyses at the time also noted an anomaly in the world economy, reading it as a two-fold problem. While the saving and liquidity glut of Bernanke was one of them, the second unprecedented feature of the global economy was the “benign financial market environment, low long-term interest rates, low risk aversion, the hunt for yield, and the perceived abundance of global liquidity, all of which prevailed at least until the turmoil episode that hit global financial markets during the summer of 2007” (Bracke and Fidora 2008: 5). While authors have noted that there is no unifying conceptual framework to help us understand the problem of global excess liquidity, their conclusions point out that global imbalances, and global excess liquidity, were mostly accounted by ‘monetary shocks’ – understood as a change in the money supply.

We know how the saga of securitisation and abundant global liquidity has ended: as recession engulfs economies around the world, the effects of the global credit crunch continue to unravel. How come then, that ‘excess global liquidity’ so quickly turned into a global liquidity meltdown and the international credit crunch? Why, despite the desperate attempts by the world’s central banks to restore confidence and liquidity in the markets, banks are reluctant to resume lending to each other and the world’s financial markets are frozen? Below I argue that the liquidity glut hypothesis has been a flawed reading of the roots of the housing and securitization boom and bust, since it ignores the fundamental problem of the interaction between financial innovation and liquidity.

## 2. Artificial Liquidity and Liquidity Illusion

Liquidity is the elephant in the dark room that is the global financial system. Everybody knows that liquidity is important, yet few would brave defining what it is, or how to gauge it accurately.

<sup>1</sup> 2004, “Why Doesn’t Asia Have Bigger Bond Markets?”

<sup>2</sup> Mukherjee, A., 2007, “Asia’s or excess savings keep the region’s debt markets shallow”, Bloomberg New, 9 April.

One of the disturbing aspects of ‘liquidity’ is that its meanings and functions as a financial category vary according to the context and level of economic activity, as well as to the phase of the business cycle (Nesvetailova 2008). Liquidity of the market or a portfolio of assets during ‘good’ times is not the same as liquidity during an economic downturn or a financial crisis. Assets that are easy to sell when economic agents share a sense of optimism about their profitability, liquidity and safety, often turn out to be unwanted and expensive bundles of ‘illiquid’ debt when the sense of optimism evaporates. Hence ‘liquidity’ can evaporate literally overnight.

What gives rise to confusions, or more accurately, delusions, about liquidity conditions at a given market is the fact that a liquidity crunch is often manifested by the disappearance of buyers and sellers from the market in times of stress. Indeed, this is precisely what has been happening in the aftermath of the sub-prime fiasco, when markets for inter-bank lending have come to a standstill. By a common fallacy, many observers tend to conclude that ‘liquidity’ denotes the volume and / or the ease (or velocity) of financial transactions. To a large extent, this is a mistaken belief that has led regulators and market watchdogs to misread many important crisis signals. The notion of ‘liquidity’ is not confined to *the ease and volumes of trades*; it also describes the quality of assets in a given market, or a system of markets. Here, one of the most important lessons from the past decade of crises is the recognition that the fluidity, or velocity of financial circulation – the key products of financial deregulation and the liberalisation of credit – are not synonymous with *liquidity of the system as such* (cf. Warburton 2000: 91). This particular argument has been reiterated by many post-Keynesian scholars, but has not as yet, found resonance in most economic studies of finance or policy circles.

On the contrary, the orthodoxy of both economic and IPE interpretations of the post-1971 financial evolution holds that with the globalisation of markets and removal of capital controls across borders, the liquidity of the global financial market has increased exponentially. As these studies maintain, there were two key factors that underpinned such an expansion. First, it was the growing volume of ‘international liquidity’ in the form of dollar-linked reserves within member states of the Bretton Woods regime. This process started well before the collapse of the fixed exchange rate arrangement in 1971, and was further fuelled by the establishment of the Euro-market and the expansion of the domestic money system in the member states which paralleled, yet exceeded, the gold standard volume of liquidity (Kindleberger 1970: 211; Spero 1982: 40). In this period, the loans issued by American banks to the Euromarket expanded the availability of world reserves, netting complex inter-linkages between private and official liquidity (Parboni 1980: 44-45; Burn 1999). Second, since the early 1970s, the spiral of private financial innovation facilitated both by the globalisation of markets and by the rapid IT advance into the finance

sector during the past three decades, is believed to have increased the overall liquidity of the global financial system:

“...in almost all cases, additional liquidity is created through secondary markets in financial instruments. With derivatives markets being able to satisfy private liquidity demands even in the face of possible losses on cash positions, there is little incentive for capital to flow out of cash positions and into productive investments” (Watson 1999: 67).

While the volumes and types of securities being traded in today’s financial markets have indeed reached unprecedented volumes, such expansion of trade and sophistication of financial products are not synonymous with greater liquidity of the global financial system as such. In fact, the belief that the proliferation of financial derivatives and securitisation techniques has enhanced global liquidity has been one of the illusions driving the subprime bubble in the USA, and the latest bout of securitisation. This delusion, I argue, is one of the major reasons why the world markets were shaken by the sub-prime crisis in the summer of 2007.

The origins of liquidity illusions are many. Partly, they lie in the sheer complexity, and obscurity of deregulated credit. Historically, in the liberalised financial system, financial innovation has driven credit structures far beyond the gaze of regulatory authorities, blurring the line between ‘money’ and ‘near-money’ in the process (Levy-Garboua and Weumuller 1979). Crucially, financial innovation has also altered the institutional organisation of global credit. At present almost half of all global lending is siphoned off through tax havens and offshore financial centres, and there is plainly no way of knowing when highly complex pyramids of credit reach critical proportions (Palan 2004; Palan et al. 2009).

The globalisation of markets complicates the challenge of discerning liquidity dynamics. For instance, in the wake of the Bretton Woods collapse, the emergence of new forms of financial intermediation and a wide variety of financial products have led many analysts to assume that issues of the adequacy of international liquidity have become obsolete in the regime of deregulated and privatised credit. Essentially, deregulated financial systems were assumed to fulfil liquidity-balancing functions by themselves, and liquidity management has become a marginal concern for monetary and financial authorities. Particularly in the low inflationary environment, the expansion of private international credit markets have led many commentators to conclude that ‘the concept of international liquidity has lost its strategic significance for the conduct of macroeconomic policy’ (in Horne and Nahm 2000). Existing literature on the issue of liquidity reflects this assumption: while in the analyses of the consequences of the Bretton Woods collapse concerns

about international liquidity and liquidity provision were raised by some IPE scholars (Kindleberger 1970; Cohen 1998), in the past decade, the analyses of liquidity have come to be dominated by more specialised and mathematical studies of financial risk (Scott 2005).

And yet the current crisis clearly shows that the need to understand the nature of liquidity in a dynamic and systemic context is urgent. Liquidity, or rather, lack of it, has been at the epicenter of the continuing financial turmoil since its start in August 2007. Various descriptions of the fall-out from the American subprime mortgage fiasco, a global credit crunch, or a crisis of securitization, the financial crisis of 2007-2009 has been underpinned by the rapid evaporation of liquidity. 'Liquidity' has vanished, in particular, from the markets for complex financial derivatives which had thrived during the securitization boom; liquidity has also evaporated from the inter-bank markets, signaling banks' reluctance to lend to one another. Liquidity strains have been cited as the key trigger of major casualties of the credit crunch, such as Northern Rock in the UK, Bear Sterns, IndyMac and Fannie and Freddie in the USA.

Liquidity has also vanished from the markets for complex portfolios of securitized loans, mortgage backed securities (MBSs), asset-backed securities (ABSs), collateralized debt obligations (CDOs) and a plethora of other obscure financial instruments over the past two years. During the 2002-2007 'liquidity boom' financial strategists could confidently sell highly complex instruments such as synthetic derivatives or 'CDOs square' in large quantities to clients across the world. Few buyers, it transpires, bothered to inquire what the obscure labels actually meant. The market for these products appeared highly liquid and profitable. Indeed, only weeks before the crisis erupted, leading policy makers were concerned with what they saw as a structural 'liquidity glut' ( BIS 2006: 98; Rajan 2006). In the matter of days in August 2007, these worries turned into the fear of a global 'liquidity meltdown.' When the boom came to a halt, synthetic financial products became unwanted parcels of debt, and their markets have lost their liquidity.

In this respect, scholars and market analysts aiming to understand the relationship between liquidity and financial fragility have used several relevant concepts. Keynes (1936) wrote about the 'fetish' of liquidity – a false sense of security an investor develops about the liquidity of the market as opposed to the liquidity of his own portfolio. Warburton (2000: 91) referred to 'debt delusion' as an inherent problem which arises from confusing the large volumes and easiness of trade, and the popularity of financial instruments with greater 'liquidity' as such. More recently, Claudio Borio of the BIS used the concept of 'artificial liquidity' to describe a fragile pre-crisis condition of the market, typically at the very peak of an investment boom (2000; 2004), while Avinash Persaud used the term 'liquidity black holes' to describe 'episodes in which the liquidity

faced by a buyer or seller of a financial instrument virtually vanishes, reappearing again a few days or weeks later' (2003a, 2003b: 2; 2002; Lagana et al. 2006).

From these and other studies of the relationship between liquidity and financial fragility (Aglietta 1996; Bookstaber 2000; Minsky 1977, 1982, 1986; Nesvetailova 2007; O'Hara 2004; Pettis 2001), I have teased out three core elements that sustain the liquidity illusion during the boom period, thereby creating a state of artificial liquidity of the market, or an economy, as a whole. They are: Ponzi-type of finance, which develops in a climate of deregulated credit and thriving financial innovation; the market's underlying faith that the financial innovation will be rewarded - by political means if necessary (in other words, a type of moral hazard); and finally, a structure of authority which legitimizes the products of financial innovation in the market and hence ensures their liquidity (credit rating agencies in the case of the current crisis). As we shall see below, each of the three elements requires a distinct regulatory condition that allows the liquidity illusion to flourish. When combined, the three pillars set up the workings of artificial liquidity (the boom phase) which inevitably ends in a meltdown (the crisis phase). In what follows, we show that the three pillars of the liquidity illusion, or artificial liquidity, have been at the epicenter of the ongoing crisis.

### 3. The Three Pillars of Artificial Liquidity

#### PONZI FINANCE

In his financial instability hypothesis, Hyman Minsky (1982, 1986) used the notion of 'Ponzi finance' to describe a condition of acute financial fragility, in which an economic agent can pay his debts and interest only by borrowing anew. For Minsky, 'Ponzi' is a method of financing old debt with new debt. In Minsky's original taxonomy, Ponzi finance is a phase in the evolution of a financial cycle, which developed after hedge finance turned into speculative and then, into Ponzi. This process of transformation denotes the spiral of financial innovation and the progressive under-estimation of risk by financial agents, particularly during periods of economic optimism. But when analyzing the working of the Ponzi principle today, one should not forget that in essence, Ponzi is a pyramid scheme, typically - as the allusion to the fraudster Carlo Ponzi implies - containing an element of deception or fraud. Many believe that the epicenter of the continuing credit crunch - the subprime mortgage industry in the US - was a giant Ponzi scheme (Fish and Steil 2007; Dorn 2008; Ee and Xiong 2008; Kregel 2008; Wray 2008).

The subprime industry was Ponzi for several reasons. First, the practice of providing people with uncertain credit histories, no prospects of higher incomes and often no jobs, with 100% (or sometimes higher) mortgages, was deception on a very large scale. From the very start it was clear that many of those subprime borrowers would be unable to pay their mortgages if, or rather when, the interest rates on their loans rose. Any Ponzi scheme can thrive only as long as it attracts new participants. In the USA, subprime lending was justified by the belief that the rising values of property would suffice to repay the loans, and like in any Ponzi scheme, this belief proved to be self-fulfilling. According to Jan Kregel (2008) once the bottom layer of properties was inflated through the creation of massive demand, the entire U.S. housing market entered into a bubble phase. Housing markets, however, are notoriously cyclical. It was this fact, along with the actual terms of the subprime loans that the scores of financial advisers who sold the products, forgot to mention to their clients.

Second, the terms of borrowing and the conditions for repayment appear, in retrospect, to be the key block in the Ponzi pyramid of subprime loans. Ponzi-type methods employed by lending institutions included large pre-payment penalties, low ‘teaser’ rates that reset at much higher rates, knowingly inducing a borrower to loan terms that she will not be able to meet (Wray 2008: 51).<sup>3</sup> The reasons why subprime industry flourished for a prolonged period go beyond economics. On the one hand, subprime lending mushroomed in the USA (and to a lesser extent in other Anglo-Saxon countries such as the UK, Australia and New Zealand) due to historically low interest rates in the 1990s and 2000s that presented ample opportunities for borrowers. On the other hand, low interest rates were available in many other regions – notably in continental Europe and Japan - which have avoided the spread of similar Ponzi schemes on the back of their own subprime sector. To me, this suggests that the Ponzi pyramid of subprime finance, and the related securitization boom, had been shaped by the political climate in the Anglo-Saxon economies, and correspondingly, by the benign and ill-informed view of financial and monetary authorities on the risks posed by the expanding bubble of artificial liquidity. In fact, the boom of housing finance and related securitization markets was celebrated by many officials on both sides of the Atlantic, since the political benefits of making housing more affordable to those who could never afford to own their own home, were high.

<sup>3</sup> Often, borrowers were lured in into taking a mortgage on their new home without being told that they would be unable to pre-pay it, to change the terms of the mortgage, and that their interest repayments after the initial ‘teaser’ periods would be up to 6% higher than the market average: in other words, they were simply trapped into the subprime net (Kregel 2008).

## FINANCIAL INNOVATION

Subprime lending was a time-bomb waiting to explode. Nevertheless in a wider context, it would have played an important, yet still a relatively minor role in sustaining the boom of 2002-2007, had there not been a second pillar to the liquidity illusion. That pillar consists of a series of financial innovations that created a sense of the unprecedented and infinite liquidity of the subprime-related financial markets – a financial technique that transformed tranches of fundamentally illiquid debts into easily tradable, liquid securities.

The two went hand in hand. The CDO<sup>4</sup> market grew in parallel to the subprime boom in the USA, and fed upon it. In 2004, the monthly issuance volume of cash and synthetic CDOs stood at just over \$20bn. During the following years, it expanded rapidly, with the synthetic CDOs growing at a higher rate than cash CDOs. By the first quarter of 2007, monthly issuance of CDOs stood at more than \$90bn (BCBS 2008: 32). By mid-2007, just before the start of the credit crunch, the outstanding value of CDOs in the US market stood at \$900 billion. Of this, about 17% has been created out of sub-prime mortgages, with an average credit quality of BBB. Another 30% has been created out of leveraged loans in the form of CLOs (Dodd 2007; Lipsky 2007).

According to Kregel (2007, 2008), at the centre of this process lay a transformation of the US banking system. Institutionally, the spread of securitization is related to the way risk has been modelled, valued and traded, by banks and financial houses since the liberalisation reforms were introduced in the 1980s in the USA and in other states.<sup>5</sup> These reforms gave rise to a new type of banking emerged, now known as ‘originate and distribute’ (ORD) model. Under the new principle, the bank is no longer an institution focused on taking deposits and giving out loans. Instead, it is a competitive financier seeking to maximize fee and commission income from originating assets, managing those assets in off-balance-sheet affiliate structures (SIVs), underwriting the primary distribution of securities collateralized with those assets, and servicing them. Crucially in the discussion of financial fragility, the banker today pays less attention to credit evaluation since the interest and principal on the loans originated will be repaid not to the bank itself, but to the final buyers of the collateralized assets.

<sup>4</sup> Also collateralized loan obligations, CLOs.

<sup>5</sup> In this element, Kregel notes, the ongoing financial crisis does differ from the context Minsky identified originally, yet the consequences will still be severe: it may still lead to a process of debt deflation and recession. Kregel, J., 2007, “Minsky’s cushions of safety. Systemic Risk and the Crisis in the US Subprime Mortgage Market”, Policy Brief, Levy Economics Institute of Bard College.

The adoption of the ORD model of risk-trading has underpinned a phenomenal rise in commission fees and income from capital-market related activities for banks. According to one estimate, between 2004 and 2006, earnings from derivatives trading and capital-market-related activities at the top ten global investment banks have risen by almost two-thirds, from \$55 billion in 2004 to \$90 billion in 2006 (*The Economist*, 17 May 2007). As a reflection of these changes, the profits from the sales and trading operations had not only been growing, but also assuming a greater share of the investment banks' revenues (over 90% for the Americas, over 80% for Europe, Middle East and Africa, and just over 40% for Asia Pacific).

In this spiral of financial innovation, driven by the aggressive search for profits and desire to outperform your competitors, the usual trend of a Ponzi scheme prevailed: 'old style' prudent banking was derided as boring and conservative, while the risk-takers were considered sophisticated, innovative and shrewd. As long as this market atmosphere was supported by the belief in robust economic 'fundamentals', the under-valuation of risks, especially the liquidity risk, the aggressive expansion of new borrowings, and in many cases, the use of quasi-legal investment techniques and outright swindling, flourished.

## **MAKING BAD DEBTS LIQUID: THE ROLE OF THE CREDIT RATING AGENCIES**

Yet no matter how exuberant, canny or short-sighted financial strategists might be, illusions of prosperity, including the liquidity illusion, can only be sustained over periods of time if there is some credibility to new instruments. In other words, something or someone was needed to sustain the collective belief in the liquidity of what were, in essence, bundles of bad debts, and make the complex structures of IOUs 'worth – or seem to be worth – more than the sum of its parts.' That someone, Lowenstein (2008) writes, was the credit rating.

As he explains, the escalation of securitization has given the credit rating agencies unprecedented power. The tradability (synonymous for many with 'liquidity') of mortgage-based securities fundamentally depended on the ratings they acquired. Here, two complex processes have been at work: first, vehicle finance, driven by regulatory avoidance, manipulation of legal ownership of assets, and 'creative accounting'; and second, the technique of layering securitization structures. Credit ratings agencies have been pivotal to both.

First, from the very beginning of the securitization boom, a central objective in ensuring the marketability of securitized debt has been to enable the rating agencies to grade the credit risk of the assets in isolation from the credit risk of *the entity* that originated the assets. Rating agencies



demanded legal opinions that the securitized assets represented a so-called ‘true sale’ and were outside the estate of the originator in the event the originator went bankrupt (Baron 2000: 87). Such separation was absolutely essential for the approval stamp that the risk was redistributed and taken away from the originator’s books. This role was played by scores of offshore Special Purpose Vehicles (SPVs) set up specifically as sham operations to isolate the originator from the product they sold. Once the assets have been isolated from the insolvency risk of the originator, there was no additional credit risk analysis required on the purchaser (*Credit Magazine*, May 2008).

Risk analysis, however, was required by credit rating agencies, and it is in this task that they have failed most miserably. Again, as Lowenstein explains, in the euphoric climate of 2006, the Moody’s analyst had, on average, a day to process the credit data from the bank. The analyst was not evaluating the mortgages but rather, the bonds issued by the SPV. The SPV would purchase the mortgages. Thereafter, monthly payments from the homeowners would go to the SPV. The SPV would finance itself by selling bonds. The question for Moody’s was whether the inflow of mortgage checks would cover the outgoing payments to bondholders. For the bank, the key to the deal was obtaining an AAA rating — without which the deal wouldn’t be profitable. The secret to making ‘subprime’ into an ‘AAA’ asset lay in the innovative technique of layering various types of assets according to their seniority. The highest-rated bonds would have priority on the cash received from mortgage holders until they were fully paid, then the next tier of bonds, then the next and so on. The bonds at the bottom of the pile – the ‘equity’ tranche - got the highest interest rate, but would absorb the first losses in case of defaults (Lowenstein 2008; IMF 2007b).

The interesting aspect is that the rating of the tranching CDO is for 87% “super-senior” and “senior” (i.e. 75% AAA and 12% AA), thus much higher than the BBB rating of the underlying “mezzanine” tranches from the RMBS. The new CDO has also a “mezzanine” tranche, which however is only 4% of the CDO. Thus via “financial alchemy” of the rating agencies, a considerable part of the CDO tranches receives much higher credit ratings (namely AAA and AA) than the original BBB tranche of the RMBS, linked to residential mortgages.<sup>6</sup> The main reason for this is that the correlation between the various “mezzanine” tranches is perceived to be lower than between the mortgages in the individual mortgage pools, because the “mezzanine” tranches are backed by different mortgage pools. For example, the correlation between the “mezzanine” tranche from a RMBS backed by a pool of mortgages from New York and the “mezzanine”

<sup>6</sup> Bank of Spain: on the inherent weaknesses of this process, see Mason and Rosner (2007a and 2007b); The Banker (2008).

tranche from a RMBS backed by a pool of mortgages from Alaska is perceived to be lower than the correlation between the mortgages in either the New York or Alaska mortgage pools. As a result, the debt issued by the SPE/SPV usually has a higher rating than that of the underlying or collateral debt. This has allowed institutional investors in certain countries to invest in such debt (Bank of Spain 2008: ?) Amidst the global meltdown, we have not – as yet- heard of any AAA defaults. But these tiers of ‘super-senior’ debt may hide more risks (Kochen 2000), and thus prove to be as illusory as the liquidity boom that was based on them.

## 4. Artificial Liquidity as a ‘State of Mind’

The broadening of securitization to include new markets and increasingly esoteric financial products, meant that origination standards in the newly securitized assets were driven by the requirements of investors as much as by the credit views of the firms that originate the credits (BCBS 2008: 7). Here, the illusion of infinite market liquidity became self-fulfilling. As one former risk manager recalled recently: “The possibility that liquidity could suddenly dry up was always a topic high on our list but we could only see more liquidity coming into the market – not going out of it” (*The Economist*, 9 August 2008: 68). Therefore it was the continually growing demand for, and turnover of the newly minted securities - as much as the efforts of brainy financial engineers - that created, and sustained the illusion of liquidity during 2002-2007. At the same time, artificial liquidity of such magnitude was built not only on the desire and ability of financial institutions to make debts liquid (to innovate and trade), but also on their underlying confidence in the *quality* of liquidity they have supplied.

Confidence in these new instruments was generated, in part, by the notorious moral hazard factor: the belief on the part of financial institutions that they will be bailed out in the event of a crisis, since their individual collapse could trigger a contagion of defaults by other institutions. They had good reasons to believe so. Recent history of American finance provides abundant examples of such cases of moral hazard – which goes some way in explaining the willingness of US banks to take on inordinate risks. In all major systemic crises of the past 20 years – the fallout from the Tequila crisis of 1994-1995, the Asian crisis of 1997-1998, the LTCM fiasco of 1998 and even the dotcom collapse of 2000-2001 - Western financial institutions were, directly or indirectly, saved from bankruptcy by the Fed’s injections of credit and commitment to stand by the Wall Street (Dymski 2008).

In the fallout from the subprime crisis, the moral hazard phenomenon was only validated, but propagated further: the nationalization of Northern Rock in the UK, the takeover of Bear Sterns in the US, the Fed-orchestrated support for Fannie and Freddie, as well as the sheer scale of liquidity injections by the world's major central banks since August 2007, only confirm the fact that moral hazard has been a major factor contributing to excesses and exuberance of today's financiers.

## SUSTAINING THE LIQUIDITY ILLUSION: THE DEMAND SIDE

In this way, the shift in the US banking system to the ORD model underpinned the massive expansion of the Ponzi mode of financing. No longer accountable for the quality and creditworthiness of loans they are taking on, banks and other financial houses eagerly took on bundles of bad debts on the assumption that they were writing the risk off to other parties. Yet this risk-dispersing capacity of the new markets for 'credit risk transfer' (CRT) proved to be illusory. Much of debt was in fact, recycled through the banking system: in the end, the banks ended up not only selling off bad debt, but also buying bad debts from others. In addition, they recycled the bad debts to other institutions such as hedge funds, but when the crisis erupted, they ended up taking back some of these bad debts back on their books in attempts to avoid a complete meltdown of the system.

Here a crucial, yet at the time unnoticed, development took place. The expansion of the subprime industry was financed not only by the US domestic market. It appears that American financial institutions managed to convince (primarily) their European counterparts of the value of 'sophisticated' debt instruments and the risk-dispersing capacity of securitization. Although the key players of the rapidly growing CRT markets included many non-bank institutions, banks on both sides of the Atlantic began to actively trade in highly complex instruments of credit risk transfer.

The thriving securitization process, and the wider process known as the financialisation of the economy,<sup>7</sup> gave politicians and many other observers an impression of abundant global liquidity (Bernanke 2006; Studwell 2006). While the financial services industry accounted for only about 16% of corporate output in 2007, it racked up more than 40 % of corporate profits. From 2000

<sup>7</sup> See Aglietta and Breton (2001), Blackburn (2006), Cutler and Waine (2001), French and Leyshon (2004), Froud et al (2002) for key literature on the subject.

to mid-2007, the American stock market value grew at about 6 percent per year, while the value of financial services stocks increased by 78%. And though total corporate profits roughly doubled, business investment was almost flat – a clear sign of troubles to come (Morris 2008). The U.S. banking system, cheered on by the Fed and the government, has played a key role in (a) propagating the liquidity illusion internationally and (b) in expanding the subprime market beyond the considerable capacity of U.S. banking system.

Long considered to the most innovative and competitive, the US banks led the way in securitization techniques, experimenting and financing new customers for debt-based securities. Operating primarily through their London subsidiaries, Wall Street banks eyed the large European market. Since 2000, the revenues of the biggest American banks generated from trading in Europe have doubled. Not surprisingly, European banks and financial institutions, particularly the so-called ‘universal banks’, were keen to emulate the success of their American brethren, and since about 2002, have adopted wherever they could<sup>8</sup> US financing strategies.

Indeed, European banks have not only caught up with the trend, but excelled in it. Since 2002, the pace of debt and share issuance in Europe has outstripped that in the USA. Of this group, the best known is probably the Swiss UBS, which traditionally had gained most of its profits from private banking services, selling tax avoidance schemes world-wide<sup>9</sup>, but discovered the charms of new opportunities MBS and ABS trade offered. It is likely that in its search for new lines of business, the UBS was reacting to the growing pressure on tax havens from the EU, the OECD and the FATF. By 2006, UBS became one of the top share underwriters in the USA (*The Economist*, 17 May 2007a).

By the first half of 2006, securities markets overseas overtook the US domestic market; in the early 2007 they were expanding three times faster than the American markets (*The Economist*, 17 May 2007b). The debt boom attracted some financial institutions in Asia and in other emerging markets, yet fundamentally, it was a North-Atlantic phenomenon. This observation stands at odds with today’s characterizations of the crisis as a ‘global credit crunch’, yet we believe that the build-up of the artificial liquidity bubble, as well as the fallout from the crisis, centre critically on the dynamics of the North Atlantic political economy. In this regard, regulatory differentials and local and regional circumstances have played a key role in determining whether the banking system will participate heavily in trading in the new esoteric securities.

<sup>8</sup> Which in many cases also meant using their London subsidiaries.

<sup>9</sup> At the time of writing, an important case of UBS involvement in tax fraud is being heard by US jury.

Within Europe itself, the securitization boom was most pronounced in the UK. The UK securitization volume accounted for the bulk of the total European level (EU-15) level, having reached its peak in late 2006- early 2007. Only from the early 2007 onwards this trend reversed itself, and the securitization volume in EU-15 far exceeded the UK market (IMF 2008: 19). Here, instructively, we should note that Spanish banks, which had been prohibited from taking risky assets off their books and hiding them in SPV structures, have escaped the crisis relatively unscathed.

Key buyers of CDOs were hedge funds, banks, asset managers and insurance companies. Of these categories, CDOs assumed greater weight in the portfolios of hedge funds (comprising around 47% of their portfolios), while for banks the figure stood at about 23%. Interestingly, as far as quality of these securities is concerned, it appears that banks got the worst deal: their share of 'AAA' tranches of assets was smaller than that of the hedge funds, while the bottom layer of these tranches (the so-called 'equity' layer, the most risky) was proportionately much higher than for any of the other types of buyers. In terms of a regional distribution, US financial institutions purchased the bulk of ABS CDOs (around 75%), Europeans – around 15% and Australian/Asians – no more than 10% (IMF 2007a: 15).

Therefore the CDO trade was critically tied to the US mortgage market, but was internationalized as the North Atlantic boom of securitization. During 2002-2007, various types of CDOs became Ponzi parcels that tied the two regions in a web of bad, highly overpriced, debt.

## 4. Time to Pay Up: When 'Liquid' Assets Become Bad Debts

Over the course of 14 months, the financial crisis has evolved from its initial stage of a subprime mortgage fiasco in the USA to a North Atlantic credit crunch, the crisis of the securitisation industry, and most recently, to a systemic cross-border banking crisis. The statistics of the eventual fallout from the crisis reflect the very North Atlantic character of the preceding boom. According to the IIF, of the \$387bn in credit losses that global banks have reported since the start of 2007, \$200bn was suffered by European banking groups and 'only' \$166bn by US banks. There have been of course, significant banking write-offs in other regions, but Asian and Middle Eastern banks appear to have been less caught up in the frenzy. In fact, liquidity as such has not disappeared completely, but seems to remain elsewhere in the financial system, primarily in the holdings of the sovereign wealth funds of Asia and the Middle East. The data also shows that Euro-

pean institutions have raised only \$125.5bn of capital to compensate for the losses compared with nearly \$141bn raised by their US rivals (Tett 2008).

One line of conclusions that emerge from the analyses of the crisis lessons suggests that it is the recklessness and greed of financiers and bankers that got us into this conundrum. The new rescue measures involving temporary nationalization of the banking system and a freeze on executives' bonuses seem to reinforce this understanding of the origins of the meltdown.

Yet this reading of the roots of the crisis does not explain why in countries with highly deregulated financial systems – like the USA and the UK – the bankers turned out to be particularly reckless, while in places like Spain or Japan, the bankers seem to have been somewhat more cautious. Individual incompetence – common far beyond the banking system – has certainly been a factor in the continuing malaise. History tells us however that ineptness is not specific to the 21<sup>st</sup> century. Clearly, the nature of the crisis has little to do with the bankers *per se*, but rather with the regulatory environment they operate in. The deep-seated cause of the crisis therefore, is not managerial or operational, it is structural: it lies in the bout of the liquidity illusion that preceded it and was underpinned by the deregulated credit system and driven by financial innovation. And unless the system of financial regulation is radically changed, we will end up doing no more than rebuilding the house of cards that was the massive illusion of liquidity and wealth during 2003–2007, and that got us into the gaping hole.

Analyzing the risks of financial innovation, Kindleberger (1988) argued that typically, it is the institutions who are the latest to join in the innovation-led boom that suffer the most from the inevitable bust. The fate of the Swiss UBS amidst the current turmoil is a case in point. The latest kid on the block of investment banking, UBS became the largest European casualty of the crisis. As of 9 August 2008, UBS has written off \$38.2 bn off its books. The bank also said it will post \$19bn of fresh write-downs in the quarter. As of August 2008, only two European banks, HSBC and Santander, still have a market cap of more than \$100bn, compared with five in January 2007 (*Financial Times*, 10 August 2008).

Admittedly, the concept of 'European' or 'American' institutions, or European or American losses, is difficult to ascertain. Today the largest banks and financial institutions operate internationally. Irrespective of their nationality, many conduct a good portion of their wholesale banking activities through centers such as London, as well as offshore financial centers such as Caymans or Jersey, which are considered among the largest financial centers in the world (Palan et al, forthcoming). Existing nationality-based statistics are not sensitive enough to these develop-

ments. Nevertheless, even if the statistics must be considered rough, they are indicative of certain trends.

This analysis raises two issues. The first, and oddly largely missing in current discussions, is the clear sign that the magnitude of the artificial liquidity bubble was made possible by the combined efforts of American and European banks and financial institutions, and to a far lesser degree, by the Asian financial institutions. This observation is highly significant in the context of the debate about the future of the so-called ‘Anglo-Saxon’ capitalism.

As this article showed above, there had been a long-running debate about Asian savers subsidizing the US consumer through massive purchase of US treasuries. What is less known, yet no less important, is that one-tenth of all US mortgages are in the hands of institutions and governments outside the country. At the end of March 2008, one-fifth of the securities issued by Fannie May and Freddie Mac and a handful of smaller quasi-government agencies, worth around \$1.5 trillion, were held by foreign investors (Timmons and Werdigier 2008). Between them, China and Japan hold more than \$600bn of these bonds. As our analysis shows, an additional third tranche of the massive subsidy to US consumers was provided by European savers purchasing CDOs through their banking system. Therefore, the American consumer-led boom of 2002-7 relied not on one, or even two foreign subsidies, but on three massive subsidies from overseas. Considering these figures – which remain under-estimated in most discussions of the crisis - the sustainability of the ‘Anglo-Saxon’ capitalism, heavily dependent on foreign subsidies, comes into question.

## Restoring Liquidity: an Atlantic Divide?

The regulators’ response to the crisis, just like the crisis itself, has evolved, and one can detect two distinct phases in the international effort to tame the meltdown. The first phase of *ad hoc* approaches to market turbulence lasted from August 10m 2007 until the Brown-Darling rescue plan was announced on October 9, 2008. During this phase, the efforts of the regulators centered on opening up the markets, unblocking credit lines and, through massive monetary injections, and making lenders lender to each other. The *ad hoc* attempts at transatlantic regulatory coordination during this phase did not help either, and markets continued to fall.

On October 9, 2008, we entered into the second phase of crisis management. The new rescue plans announced the US Treasury and EU leaders are based on the British solution to tempor-

arily nationalize and recapitalize the banking system. The formulation of these schemes suggest that the world's policymakers have finally realized that restoring confidence simply by injecting more cash into the markets does not address the underlying problem of systemic illiquidity; neither does it tackle the web of poor quality debt that had been the centre of the liquidity illusion of 2003-2007. As the new requirements of recapitalization show, policymakers seem to have finally turned to the pervasive problem of the lack of 'quality' liquidity - and hence solvency - that has been driving the meltdown since its start in the summer of 2007.

Interestingly, both phases of the policy response to the crisis have been marked by a slight, yet important, difference between the US and Europe.<sup>10</sup> Up until the nationalisation of Fannie and Freddie and the collapse of Lehman, the US response has been simply to restore confidence by adding liquidity into the markets. The Fed pumped the markets with hundreds of billions of dollars, indicating that its generosity knew no limits. Here, an important conceptual detail of the US bailout plan stands out. The US official reflection on the lessons from the crisis, as articulated by the US Treasury Secretary in *Blueprint for a new system of regulation* published in March 2008, stressed that innovation and market competition remain the priority for the US economy. Specifically, the so-called 'objectives-based' plan (as opposed to 'functional' approach that had existed so far) for a new regulatory framework the Blueprint advocated, is designed to address specific market and business failures, rather than question or re-think the very principles of the functioning of the financial system.

Things in Europe were somewhat different, though not decisively so. On the face of it, the EU's regulatory response echoed the themes of the US March 2008 Blueprint. In spring 2008, the EU joined the US in acknowledging the need for international policy coordination in the financial reform, not least because the risk of a cross-border banking crisis was deemed high. Yet significant divisions, both conceptual and policy-related, between the US and Europe gradually came to the surface. First, there are important differences between US and European officials in drawing lessons from the risks and benefits of financial innovation and liberalisation. The European 'Roadmap' for a new regulatory structure is built around four conceptual areas: qualitative improvement and transparency for investors; upgrading valuation standards, strengthening prudential frameworks and risk management in financial institutions, and reviewing the role and use of credit rating agencies in the financial markets. Second, specific regulatory norms suggested by the EU include higher and tighter capital and liquidity requirements for all banks operating in

<sup>10</sup> Nesvetailova, A. and R. Palan, 2008/2009, "A Very North Atlantic Credit Crunch. The Geopolitical Implications of the Global Liquidity Meltdown", *The Journal of International Affairs*, Fall 2008/Winter 2009.



Europe, including European units of American banks. These measures would make it more expensive to package and sell obscure products like MBSs in Europe, and thus put a hurdle on the further evolution of securitization. It is far too early to say how far these plans would go, yet it is clear that the ideology of the policy response to the crisis has been quite different on the two sides of the Atlantic.

In this respect, the UK-style temporary nationalization of the banking system may become an important step in framing a new Anglo-Saxon regime of financial regulation. The Brown-Darling rescue plan contains a vital element of conditionality of the new liquidity provisions to the banking system, and the goal of restoring the credit circulation not only within the financial system but also within the ‘real’ economy. As trillions of dollars of public money is being offered to save the banks from a structural meltdown, some concerns about accountability and conditionality attached to this support line and lessons that need to be drawn from the crisis are legitimately being raised. Provided there are no further collapses of financial institutions, this second phase of the regulatory effort may eventually prove to be a success. Indeed, in the wake of the announcements that both the US and the EU are following the British lead in the recapitalization plan, market indices around the world jumped up. But these signs of markets having finally ‘bottomed out’ and eventually, of stabilization, is precisely where the danger lies. The major problem with the nationalization/recapitalization packages is that despite their long-needed focus on assuring the quality of banks’ capital bases, the designers of the new plans have not, as yet, raised the sensitive question about the role private financial experimentation has played in the current crisis.

What is particularly disappointing in today’s debates is that the fundamental process at the epicentre of the crisis - the ability of financial engineers to transform obscure debts into ‘liquid’ assets - is not being questioned. No-one is seriously challenging the idea that innovation has become a highly destabilizing factor in world finance, that it has moved many segments of the financial system – liquidity management being one of them - beyond the reach of any regulatory authority; and that despite appearances, confidence itself is not synonymous with liquidity of the system as a whole. The deep-seated, systemic cause of the current turmoil – the illusion of liquidity and wealth that has blinded so many people during the boom of 2003-2007 - is still not being addressed. I fear therefore, that the initial shifts within the European policy reaction to the crisis that had begun to raise these issues earlier this year will be sidelined under the effect of the new recapitalization plan and amidst the optimism that seems to be slowly returning to the markets.

## Conclusion

In 1986, Hyman Minsky suggested that Great Depression can happen again and famously said that stability is destabilizing. In 2000, Claudio Borio of the BIS observed that while “markets are assumed to be liquid, loans are known not to be.” In 2003, Warren Buffet warned that derivatives are weapons of mass destruction. In 2005, Avinash Persaud predicted the mechanics of the current crisis practically to the last detail. Nobody likes to hear skeptics at the height of boom, and this is only natural. What is more puzzling however, is that even if critics are taken seriously in the time of crisis, few remember their warnings once the financial cycle and market ‘liquidity’ are restored. This is one of the reasons why previous attempts to formulate an international regime of financial regulation, also known as Global Financial Architecture, typically be spurred on by a financial crisis, would gradually fade away as the period of stability and optimism resumes. This is what happened to the 1988 Brady Report; the 1999 US Priorities for a Global Financial System, and various Basel-centered initiatives for international financial cooperation.

Today, when the advanced economies are facing their biggest threat since the 1930s, there is a unique window of opportunity to rethink the fundamental principles of the operation of deregulated finance system, its relationship to the rest of the economic system, and crucially, the role that private unregulated financial innovation has come to play in it. It is also a chance for the EU to take the lead in establishing a new (*really* new) regime of global financial regulation. The issue of liquidity, and the many facets of liquidity illusion that had blinded so many parties until it was too late, is one of the most challenging, but urgent. Because when confidence eventually returns, and observers and policymakers will start talking about restored and plentiful liquidity in the markets, the illusion of wealth and liquidity will be recreated again.

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