The financial crisis of 2008: paradigm shifts on risk management and changes in financial services regulation

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The financial crisis of 2008 bears lessons for regulators and academics on the causes of financial collapse, crisis contagion and the regulation of risk. The 2008 crisis was generated in the banking sector, and permitted by lax regulation on how banks lend money. This article outlines the reasons for the crisis, the means of financial contagion from the United States to the rest of the developed world, the response by global institutions and develops an argument in favour of using the institutions of global governance to re-regulate the financial services sector, significantly restricting the use of financial instruments that encouraged the crisis.

The main thesis of this paper is that the financial crisis (1) exposed gaps in the regulation of financial services, (2) exposed limits in efficacy and serious side-effects of relying on central bank LLR functions as a counter-steering mechanism, (3) exposed the incapability of national regulators to fully prevent cross-border contagion and (4) underlined the importance of a paradigm shift, a conceptual rejection of market-based regulation built up after the last financial crisis in the early 1990s as a prerequisite for moving forward on global governance solutions.

This article proceeds as follows. The first section examines the timing, nature and extent of the crisis, followed by the broad reaction of central banks and financial market regulators, so that the gaps in regulation during the 1990s up to the present are clear. The second section provides an analytical framework for studying the reactions of governments, regulators and central banks. It also places the analysis of reactions within the academic literature on international and comparative political economy.

Section three examines how the financial crisis spread from the United States to key developed economies (an important point in illustrating the gap between economic activity and regulation) which experienced system-threatening bank collapses, and looks for similarities and differences in how the central banks, regulators and governments in the United States, the United Kingdom, France and Germany dealt with the threat of spreading bank insolvency. This section is designed to provide evidence for points 3 and 4 of the thesis above. All four of these countries were affected strongly and quickly by the financial crisis, despite varying by a number of factors, including the style of financial market regulation, the relative importance of the financial sector to the national economy (and hence it's political clout), and the public discourses on the dangers of financial practices that might require regulation.

I show by comparison that despite minor differences, financial market regulation in these countries from the 1990s was based on a paradigm stressing centralised principles of regulation, but decentralised/privatised interpretation and implementation, and an incomplete scope of coverage. The decentralised nature of regulation made it extraordinarily difficult for individual countries to contemplate 'gold plating' their own regulations

Section four reviews the activity of global institutions responsible for making key decisions on regulation of financial markets. It shows that a paradigm shift in thinking across global institutions about the nature of regulation is a prerequisite for collective action, for minimum standards to be effectively contemplated.

Section five uses this evidence as the basis for prognoses on the likelihood of new methods of global governance on financial market regulation, in light of the challenges and the predominant approaches of the four countries studied. It concludes that the chances for improved statutory regulation of financial markets have improved due to a paradigm shift on regulatory issues that has spread to the leadership of international bodies responsible for drafting collective rules.

1 Timing, Nature and Extent of the Crisis[1]

The financial crisis of 2008 was caused by three factors that converged to create a shortage of capital underpinning large banks. These factors were (1) the risk-friendly lending policy of American banks throughout the 2000s; (2) the creation of new financial derivatives to—unsuccessfully—spin off the financial risk of non-payment, demonstrating the refusal of banks to accept Basel II-based restrictions on lending based on the risk of default and (3) the unwillingness of banks to continue to engage in collective action, specifically the collective insurance scheme of overnight lending that keeps them solvent.

Risk-Friendly Lending

The financial crisis of 2008 has its roots in the *sub-prime mortgage crisis* in the United States that started in 2007. Throughout the 2000s, banks had knowingly lent money to clients with higher-than-average credit risks on the basis of variable rate mortgages. They expected that the increased revenue from interest payments in times of rising interest rates would at least offset, if not surpass the losses incurred from clients defaulting on their loans. When this relationship reversed and the missing income from defaulted loan payments exceeded the interest payments, the solvency of the banks was threatened.

[1] For an overview, see also Senior Supervisors Group (2008).

Risk Management through Financial Derivatives, Corporate Subsidiaries and Insurers

This lending behaviour of the banks underlined their rejection of limits on lending to riskier borrowers that had been intended in the Basel II Accord on risk management. This reform required banks to respect increased minimum reserve requirements for riskier loans, making them relatively unattractive. Instead of restricting lending, banks responded with the increased creation, sale and purchase of a relatively new form of financial derivative—the collateralised debt obligation, or CDO—to minimise the risk of being hurt by default. In the mortgage sector, these CDOs were known as mortgage-backed securities or more generally, asset-backed securities.

The poor transparency of CDOs and their increasingly common use of these ‘assets’ as normal money for reserve purposes constituted two risk factors for insolvency in the banking system. No one except the fund managers who created the CDOs knew what was actually in them, and although credit rating agencies provided assessments, these turned out to be woefully wrong. The institutional holders relied not only on the assessments of credit rating agencies, but also on insurance by special bond insurers against a decline in the value of the CDOs. These monoliners, as they are known, completed a triangle with credit rating agencies and investment banks to generate investor confidence in the CDO product, i.e. to ensure that it would actually be bought and treated as money. Together, the combination of insurance and ‘independent’ assessments of CDO worth by credit rating agencies was considered sufficient to fulfil the formal demands of Basel II without constraining bank lending.

The original idea was that the banks would sell the debt packages and thereby relieve themselves of the risk of default. Bad debts would be packaged with good debts in a portfolio that could only be bought and sold as a fixed package, so that they would indeed be bought. In theory, the market would decide, with the help of the rating agencies, what these packages were worth and assign an appropriate price. As with any problematic externality, the ability of banks to manage the risk of having bad debts declined with the frequency of banks using this method. With banks buying CDOs from one another (and using them as reserve assets), the banking community simply spread the risk more evenly. Risks were not only diluted within the packets but also amongst the banks, but with risky loans acquiring an increasingly potent concentration within the packages. The toxicity, in this case, the structural weakness of the debt packages, increased over time.

Collective confidence of institutional investors in CDOs proved to be crucial in maintaining their value. When individual investment banks and hedge funds started to reduce their CDO holdings, they initiated a chain reaction that caused the value of remaining CDOs to collapse, and with them, the solvency of the funds and banks holding them. The crisis really took hold once the financial markets believed that a general trend toward 'de-leveraging' the market had been started. This meant that CDO holdings would be disposed of as quickly and thoroughly as possible, if they could be sold at all, and that banks would be forced to sell off further assets in a chain reaction to cover the losses incurred from the last round.[2]

The investment banks were faced with a number of choices on how to react, all of which were damaging. They could shut down the subsidiary hedge funds that traded in CDOs, also known as SIVs or special investment vehicles, and accept a massive blow to public confidence and end their future capacity to raise funds through these vehicles (since investors would lose their money), or they could accept financial responsibility for the losses of the fund, at the price of taking the SIVs onto their own balance sheets, or cross-subsidising the SIV with fresh cash. In either case, the losses of the hedge funds directly affected the profitability, and later, even the solvency of the banks by demanding their resources.[3] This meant that the supposed buffers to the financial solidity of investment banks provided by the separate legal and financial status

[2] See Lo, A. and Khandani, A. (2007). The authors show the chain reaction that follows the shift in financial market expectations on de-leveraging.

[3] The main difference in options is that closing the fund would affect resources in the future, whereas subsidising it or taking it over would affect it immediately.

of the SIVs (and the fact that their activities did not show up on the balance sheets of their parent companies) did not function. At this point, when questions about the solidity of the SIVs had spread to the parent banks themselves, collective mechanisms amongst the banks themselves designed to ensure overnight solvency broke down, starting a systemic crisis to the financial system.

Breakdown of Collective Action

In a third stage, the sub-prime mortgage crisis in 2007 resulted in a systematic withdrawal of bank-to-bank *overnight financing* from the banking systems of the world's most developed economies. This removed one of the most commonly used instruments for fulfilling *minimum reserve requirements* on a daily basis, raising the risk of bank failures and chain reactions within the financial system. This increased the systemic instability of national, and ultimately international financial markets.

The sudden scarcity of overnight financing was rooted in a *collective action problem* under conditions of rivalry amongst banks for access to capital, itself made scarce by banks' unwillingness to lend surpluses on a daily basis. Overnight financing dried up as banks became unsure that they could rely on other banks for overnight finance. Unsure of demands on their own liabilities (the deposits of their clients could be demanded back), uncertain over the prospects of getting lent money back, and generally unsure of the willingness of banks generally to lend money back in a reciprocal fashion in return, banks stopped lending overnight to one another.

In sum, the financial crisis of 2008 was rooted in a genuine shortage of cash caused by an unwillingness to restrict lending to risky clients demanded by the spirit of the Basel II Accord in some banks and a collective action problem that exacerbated the shortage of cash needed for minimum requirements and other banking business. In early 2007, the credit crunch had not yet reached systemically destabilising proportions, but the knock-on effects inhibiting systemic liquidity did.

At the beginning of the crisis, the shortage of cash was the evident *insolvency*—the structural, lasting inability of banks and insurers to meet their financial obligations, resulting in bankruptcy—of a few institutions. After this initial blow to individual institutions, the contagion of the crisis took place through *illiquidity*—the short-term shortage of cash affecting otherwise healthy, i.e. solvent institutions. The longer this illiquidity lasts, the greater the risk of systemic contagion of instability throughout the financial sector, as illiquidity prevents banks from meeting immediate obligations for reserves and cash payouts, possibly generating bank runs in the process.

The challenge to public authorities was twofold from early 2007 onward: to avert the immediate threat of systemic collapse of the financial system; and to take measures to prevent a repeat in the future. The proper mix of central bank policy and financial market regulation had to be chosen. The question under these circumstances is what differences in policy focus existed across countries, particularly in the aftermath of the collapse.

Reactions of Global Central Banks

Central banks were in discussion for two possible reactions over which they had control: the money supply and interest rates. There was a coordinated effort by central banks to increase the money supply of the key OECD economies.

Global central banks performed a lender of last resort function that infused the world's major economies with additional cash toward the end of 2007 to prevent a string of failures and to prevent self-fulfilling runs on banks by investors fearing for their deposits. They increased the money supply quickly after the liquidity problems of autumn 2007 became apparent and by the end of the year, created a new means by which banks could turn long-term assets into liquid capital on an ongoing basis.

The Federal Reserve and the European Central Bank reacted to the credit crunch of 2007 by releasing liquidity into the economy, primarily for the use of the banks. In December 2007, the initial infusion amounted to over 250 billion euros in Europe, rising to 348 billion (Kalse and Schinkel 2008). and over 200 billion dollars in the US, increasing on a regular basis through the rest of the month. In addition, the Fed introduced a new measure for lending money to banks for periods up to a month, rather than overnight. The new Term Auction Facility in the US was intended to increase liquidity in the banking sector by freeing up assets. In doing so, the US adopted a feature familiar to that found at the European Central Bank, Longer-Term Refinancing Operations (LTROs). Combined with the immediate aid, it was hoped that this would ensure that future demand for cash could be easily met by banks.

Central banks differed, however, on the point of whether to lower interest rates. The United States opted for drastic cuts in interest rates. On 30 January 2008 the Federal Reserve reduced the benchmark interest rate by 50 basis points, and by another 75 basis points the following week. Meanwhile, the other major central banks, even of the United Kingdom, resisted calls from the financial community for interest rate cuts, pointing to concerns over inflation that they deemed equally as great as concerns over financial stability.

The Bank of England made it clear on 22 January 2008 that it would not lower interest rates further to follow the lead of the Fed on 21 January. Bank Governor Mervyn King noted that inflation was already at the uppermost limits of its 2.0% target, at 2.1%, and that the economic contractions in housing and construction taking place in the United States were not evident in the UK. He therefore signalled that it was unlikely that the interest rate cut of 0.25% in December 2007 would be bettered (Elliott, Seager and Bowers 2008). He was supported the next day by the monetary policy committee, which kept rates stable, causing another slide in UK financial markets (Hunter 2008).

A similar story could be seen at the European Central Bank, where the President, Jean-Claude Trichet underlined in January 2008 that the inflation rate in the euro zone, at roughly 3%, was already exceeding the bank's target of 2% and had to be contained.

Crash despite Liquidity

The crash includes, but goes beyond the crash in stock prices on global stock markets to include banks, credit creation, and threatening the existence of the insurance industry. The stock market crash of 2008 followed the emergency measures taken in December and coincided with the year's corporate reporting season for the fourth quarter of 2007. At this point it became clear that CitiGroup, the parent company of CitiBank would continue to lose over 14 billion US in one quarter alone due to default loans. Bank of America and Wachovia would also write down bad loans, casting doubt on the scope of their financial problems (White 2008).

The question is not one of whether there will be a downturn as a result of the crisis, but how deep it will go and how long it will last. Investment banks in New York were estimating losses of 400 billion dollars in late 2007, an estimate repeated months later at the G7 conference in Tokyo, after much more information on the extent of shortfalls became known. Given standard banking practices, this means a contraction of at least 4 trillion dollars, or over 30% of US GDP (13 trillion dollars) in 2006 or nearly 15% of all G7 economies (27 trillion) combined. These are conservative estimates. On the other end of the spectrum, Nouriel Roubini estimates losses of 1 000 billion dollars, equivalent in credit reduction to 77% or 37% of output respectively.[4]

[4] http://www.rgemonitor.com/blog/roubini/5/5/

In response to this damage, regulation is being discussed at the global level in the Joint Forum, to be implemented by national governments.

2 *Analytical Approach*

There are four possible approaches to avoiding financial collapse in a situation where credit has become scarce. One is to rely extensively on *central banks as lenders of last resort* to banks and insurers that become insolvent as a result of overly risky lending. This further expands credit and lowers interest rates at the price of higher inflation. A second approach is for *governments to re-regulate banks and insurers* to pre-empt a renewed creation of credit bubbles. This is in the spirit of the Basel I and II conventions on banking regulation, which addressed similar problems in the 1980s and the 1990s, and would imply a Basel III solution with far sharper teeth than its predecessors. This challenges financial institutions and policy-makers to pursue economic growth and development in ways other than rampant credit creation.

A third approach is to *allow banks and financial markets to collapse*. There are theoretically good reasons for allowing this, particularly avoiding moral hazard issues, but only if contagion of insolvency to other financial institutions can be contained. The fourth option, which contains this threat, is to *re-nationalise banks and financial institutions that become insolvent*, as was discussed briefly in the UK's Northern Rock case in the interest of systemic stability and depositor protection, rejected, and then revived once private investors failed to save the bank.

Given these four options, why was the initial reaction limited largely to the first option? Related to this question is: why was the credit bubble allowed to develop in the first place, and could the reasons for regulatory inaction before the crisis erupted also prevent an effective public sector response after it? In searching for answers, we must remember that the pattern of activity we wish to explain was highly similar across countries from the early 1990s, i.e. despite disparities in the economic importance of the financial services sector in the economy.

The answer to these questions lies in two parts. I propose that in the field of international finance, dominant policy paradigms at the national and international levels helps us understand best whether regulatory action is preferred (at the national level) and explain whether it is feasible (first at the international level, then at the national level, as collective action by governments denies mobile capital the power to evade regulation in weakly regulated jurisdictions).

At the national level, dominant policy paradigms provide better answers to the responses of national governments and regulators under the conditions set out above than two competing approaches to understanding similar policy movements across countries: policy learning and transnational capitalist class/regulation school approaches, which generate similar expectations to functionalist modes of explanation.

The *policy learning* approach suggests that new events and insights draw public attention to the need for certain policies at a particular point in time. An early version of this argument revolves around the power that economic ideas can wield over disoriented governments in times of policy uncertainty (Hall 1989). Verdun detects learning effects for countries that emulate their more successful counterparts in European monetary policy, focusing on the convergence of European monetary policy on the German model in the 1980s and 1990s (Verdun 2000).

There is some initial indication that learning occurred in the recent crisis. After an initial wave of bank bailouts, regulatory authorities working in the Joint Forum began to review the existing risk management framework that banks, insurance companies, listed companies and securities traders must abide by, drawing lessons from how the bubble preceding the crisis was allowed to form. The prospects that they will succeed in improving regulation for financial stability, however, depend not only on lessons learnt, but also on the determination and ability of regulators to resist continuing pressure from the financial services sector to take a light-handed approach to the creation and trade of derivatives that drove much of the financial sector since the early 1990s. This would happen if the public response is limited to the provision of liquidity through central banks and regulation is rejected.

This underlines that, contrary to the assumptions of the policy learning camp, *policy paradigms are often plural, not uniform, and contested*, not the 'last idea standing' after a period of politically neutral policy failure. Blyth draws attention to the use of policy paradigms as weapons in political contests over public policy. Unlike Notermans, who argues that policy ideas simply justify the interests of dominant political groups, within existing financial market and labour market institutions, Blyth argues that policy paradigms both shape and are shaped by the political process. Policy learning is correct about a change in thinking, but it is unrealistically critical about public policy disagreements that are endemic to regulation issues, that build up to and follow major shifts of public policy. I suggest we get a better sense of why things happen when we endogenise

The *regulation school/transnational capitalist class* argument is that financial capital gets what it wants from governments and prevents what it doesn't want by using its mobility to blackmail elected officials intent on imposing restrictions or costly regulation. This is really very similar to traditional *functionalist* arguments that de-territorialised capital operating on a global scale has decisive advantages over territorially-based states, both in terms of financial bargaining power and the incapacity of national governments to regulate extraterritorially. It adds, however, the expectation that public policy will serve the accumulation of financial capital at the expense of other public interests because of capital's strategic economic, and hence *political* power over priorities. This is thought to explain the light-handed regulatory approach to financial capital in general, an expectation that could easily be extended to the lax regulation of derivatives (and private equity, for that matter) that fuelled the financial bubble preceding the financial crisis.

And yet, RS/TCC theories and functionalist theories have different expectations about the prospects for international cooperation on improving the regulation of the financial services sector. Whilst the former group is only really consistent with a light-handed approach to financial services typical of the period until February 2008, the latter group's premises expect national governments to institute global governance wherever possible in order to re-assert public policy goals on actors and events that extend across national boundaries. I remain sceptical that the former set of theories can explain the current move to restrain and regulate financial capital, pushed by some of the world's leading financial investors, and equally sceptical that functional theories can explain the timing or extent of financial market regulation, given the broad and unremedied deficiencies of the Basel II system for a decade and a half.

This article does not attempt to explain policy paradigms at the national level. Instead, it uses them as a starting point to assess the prospects for generating global governance rules that enable the regulatory capacity of national governments. I suggest that successful attempts at global governance build on paradigms held at the national level, that in turn enjoy at least a permissive, if not a positive political consensus. In those areas where basic public policy norms and prescriptions are far apart, i.e. where legal and regulatory pluralism is at its strongest, effective global governance institutions are highly unlikely. In those areas where they are close together, the prospects and likelihood are much greater. The prospects of more extensive regulation of financial services increased in early 2008 precisely because the remaining critics of regulation abandoned the old policy paradigm as untenable. It then became the hour of the regulators, with broad support from OECD governments. With the possible exception of the United States, I suggest a ‘tipping point’ was reached in which long-standing critiques of the former policy paradigm were finally given more support in light of existing policy failure.

This article starts from the assumption that the incentives for the financial services sector to evade regulations diminishing the risk of systemic collapse are larger than the incentives to adhere to stringent regulation, and that they will resist new rules that require a more conservative approach to lending money and preventing bankruptcy.[5] This can only happen, however, if it successfully dominates public policy discourse on the nature of the risks that they run and the appropriateness of risk management strategies, particularly those that rely on market mechanisms (specifically the use of financial instruments to ‘price risk’ through the market) instead of regulating it with statutory rules. Although some influential voices criticised bank practices and lax regulation long before the crash (Stiglitz 1999, Kaufman 2000), demands that the financial sector should provide more insight into its instruments and practices fell on deaf ears in most OECD capitals even in mid-2007. This had changed, however, in early 2008,[6] adding to calls for change by Warren Buffett, George Soros and Alan Greenspan.

This means there is a good case for public policy makers to insist not only in stronger statutory regulation of risk but also to ensure that financial services regulators have the expertise and authority to insist that the institutions they regulate demonstrate the level of risk in the financial instruments they create as never before. Financial service providers that generated the crisis are bound to try to divert attention away from regulatory responsibilities and promote the lender of last resort option.

[5] For on overview of the importance of derivatives trading to bank profits, see Risk (2007).

[6] Exemplary is the UK and US’s rejection of German demands that private equity firms provide information on their financial structures and risks, and UK conversion to a pro-regulation stance. See interview with the German finance minister Peer Steinbruck ‘Banken müssen die Infektionsgefahr bekämpfen,’ *Die Welt*, 13 February 2008.

The key importance on public policy discourse provides us with an opportunity to observe how uniformly the cause of the financial crisis and the policy responses to it are handled at the international level (with reference to the Basel Accords) and within various national polities, with their notedly different normative attitudes to financial markets and regulatory restraints on financial institutions. The sequencing of prior national convergence of policy paradigms and global governance agreements is crucial to generating evidence to support the hypothesis that global mechanisms build on national preferences and enable them only in those circumstances where legal pluralism has been previously overcome.

Section 3 examines the development of policy paradigms in public policy pronouncements and innovations on the causes and effects of the credit crunch, and the implications for regulation of banks, insurance companies, credit rating agencies regarding the creation, use, evaluation and trading of CDOs on securities markets. It gets at these paradigms by looking at public policy in both monetary policy and regulatory responses to bank and insurance collapses resulting from the credit crunch. Particular attention will be paid to whether there is evidence that the public sector has re-thought the sufficiency of the existing risk management paradigm and called for qualitatively more stringent conditions.

Section 4 examines the activity of the Joint Forum in generating regulation at the international level and searches for supporting evidence that international regulations build on the *prior* consensus of national governments on the purpose and method of regulation. The role of existing committees at the European level in generating common positions will be looked at as well.

Section 5 draws final conclusions and implications.

3 Reactions of National Financial Sector Regulators

The United States, the United Kingdom, France and Germany are selected here as countries in which the credit crisis spread fairly rapidly, causing bank failures, and in which the regulatory response can therefore be readily compared. Similarities in monetary policy are notable, particularly the injection of liquidity into financial markets by the central bank in order to prevent liquidity shortages from becoming a chronic source of instability to the financial sector.

The evidence for a convergence on regulatory policy toward banks is at the moment patchier, but the first signs of movement, i.e. taking ex ante restrictions on CDO development seriously, are already noticeable. This is particularly important in the case of the United States, which has a strategic influence on global norms of financial market regulation by virtue of the depth and breadth of its own capital markets.

United States:

During the first phase of the credit crunch in 2007, American officials in the Treasury and Federal Reserve went to great lengths to play down or deny the risk that defaulted mortgages could threaten the stability of the financial system or affect the real economy. The implication was that neither central bank action nor regulatory change was necessary. This happened despite initial signs from other government bodies that the mortgage market was generating defaults with systemic implications. In other words, a contest developed over whether a downturn was expected only in the mortgage sector, or whether it would spread to the financial sector, and when that occurred, whether the downturn would spread to the wider economy. Although it may seem puzzling at first to deny that a mortgage crisis might happen without already affecting the economy as a whole, the view of the sub-prime crisis initially was that its effects would be limited to borrowers with unstable employment and income histories on the periphery of the American economy, leaving the middle-class economy largely unaffected. The fears of contagion to the middle-class economy would have a much broader impact, and would be transmitted through bank failures (with declining credit provision for the economy) and stock market corrections (generating a reverse wealth effect for consumers with stock portfolios, who would then borrow and spend less) to the core of growth and consumption in the US economy.

Although the government body Freddie Mac stopped buying defaulted mortgages from banks on 27 January 2007 due to excessive demand, and thereby increasing the risk of bank insolvencies, both the Treasury Secretary and the Federal Reserve Chairman argued on 6 and 8 March respectively that there was no threat of a credit crunch. Afterward, the argument was that the collapse of the real estate market would not affect either the financial sector or the real economy. Bernanke insisted on 17 May that the contraction would not spread beyond the real estate market despite the collapse of New Century, a major mortgage lender on 11 March. Bernanke held this position despite evidence that investment banks were being forced to re-assume control of insolvent subsidiary hedge funds devoted to trading in ABS/CDO paper, such as UBS's takeover of two funds on 3 May.

The private sector, specifically listed companies issuing quarterly financial reports and credit rating agencies issuing ratings, was the first to provide counterfactual evidence to the claims of the Fed and the Treasury. Listed companies did this by announcing operating losses, both in the hedge funds and in their core mortgage lending operations. The first write-downs (of ABS-based losses against profits) took place at Goldman Sachs in June, followed by Bear Stearns' losses, followed by the closure of two hedge funds the same month. The collapse of the mortgage lender Countrywide followed on 24 July.

In this context of waning confidence in mortgage lenders and asset-backed securities, the credit rating agencies moved to downgrade mortgage-backed securities, starting with Moody's' downgrade of 399 derivatives on 11 July. By this point, concerns about profit levels in individual banks had developed into a widespread fear of systemic instability of the financial system as a whole.

US government officials stuck with their policy of denying the systemic implications of the credit crunch until 9 August, when the Federal Reserve first reacted to widespread panic on financial markets with an immediate injection of 24 billion dollars into the economy, followed by a series of further injections amounting to more than 300 billion dollars by the end of the year.

This constituted a shift from the central bank's previous approach toward an even more accommodating monetary policy than that known under Alan Greenspan's leadership. A key change of the Federal Reserve's monetary policy under Bernanke's leadership is the tendency to push money into the economy to support both the real economy and the financial economy. Under Greenspan, the Fed would inject money into the economy to keep the financial sector afloat under what became known as the 'Greenspan put', but restrict the money supply if he saw the real economy showing signs of growing inflation.

The split between the financial sector and the Fed was apparent in November 2007. Alan Greenspan and Warren Buffett argued that the troubles of the financial sector would contaminate the rest of the economy as well, whilst George Soros saw a financial market crash, but not yet one affecting the entire economy (Leroux 2007). At the World Economic Forum in January 2008, Soros sided with Greenspan and Buffett (Evans and Strasburg 2008).

On December 12 2007, the Federal Reserve finally adopted the change in thinking that had developed in the private sector about the nature of the crisis and the appropriate response, and opted to make liquidity more readily available to the financial sector on a lasting basis, supported by an accommodating monetary policy (lower interest rates). Evidence for the shift is provided both by a conference of experts hosted by the New York Federal Reserve Bank on 12 December, in which the Bank recognised that the old system of financing and risk management through the sale of CDOs on securities markets had broken down, so that the tightening of credit and the rise of risk premia for loans was generating the ‘risk of an adverse, self-reinforcing dynamic in which concerns about overall liquidity magnify concerns about credit problems.’(Geithner 2007) It responded both with an additional injection of fresh cash in coordination with the central banks of the UK, Euroland, Canada and Switzerland. It also announced a decision to extends lending to banks beyond the usual overnight discount facility for periods up to a month under the new Term Auction Facility, which would allow banks to put up other sorts of collateral than Treasury bonds in return for cash.

The Federal Reserve also noted with satisfaction that two factors prevented the credit crunch from having an even worse impact than it already had done. The first factor was that the investment banks who owned the SIVs with trading losses often had enough capital to cover the losses incurred due to strong profits. As the crunch held on into 2008, however, the ability of banks to continue subsidisation of losses with depleted resources was shown to be very thin indeed. The second factor the Fed credited with averting greater crisis was the purchase of large shareholdings in American investment banks and insurance companies, including the monoliner MBIA, by foreign sovereign funds, including state funds from China, Singapore, Russia and the United Arab Emirates.

In line with its reputation for having some of the most intrusive regulatory bodies in the OECD world, US regulators also proved the most aggressive, once the nature of the crisis had been admitted, in investigating and prosecuting key actors in the old risk management system as economic criminals. This activity required no new law, but was built on existing corporate governance legislation requiring financial reporting, independent audits and punishing fraud. The issue of SIVs and off-balance-sheet reporting was not covered, as these were still deemed legal and proper.[7]

[7] See Donnelly, S. (2007) on the applicable issue in the context of International Accounting Standards.

The FBI opened criminal investigation of 14 banks on 30 January 2008 in the search for evidence of wrongdoing. ‘"We're looking at the accounting fraud that goes through the securitisation of these loans," said Niel Power, head of the FBI’s economic crimes unit.’ This included the banks that securitised the loans, the investment banks that bought them developers and sub-prime lenders. At the state level in Connecticut, where many financial service providers have offices, the state attorney widened the scope of the investigation even further to cover ‘all major rating agencies and bond insurers in a widening probe of industry practices related to the sub-prime mortgage crisis. He said this includes MBIA and Ambac, the two monoline insurers who guarantee municipal loans’(Wearden 2008).

United Kingdom:

In the UK, the same transmission mechanism operated as in the US, but the initial impact on the banking sector was smaller. Stock markets dropped as they did in New York. Inter-bank lending decreased as well. In contrast, one bank became insolvent, demanding a public sector reaction. As noted above, the Bank of England shared with its American counterpart a policy of releasing more liquidity into the financial market, but not its introduction of a fully accommodating monetary policy. The consequences of the crisis, while severe, were thought to be limited and quickly quarantined, so that more drastic measures were not necessary. The public debate was over whether the public hand or the private sector should step in to prevent liquidation of *a single* private bank.

The key difference to the situation in the US is that in the UK, it was not immediately obvious that the country’s biggest banks were affected by fears of insolvency. In the UK, the collapse of the Northern Rock bank in January 2008 allowed the government to treat the insolvency as a single case that could be isolated and quarantined from the rest of the financial system, thereby preventing insolvency contagion throughout the financial sector. After initial attempts by the Treasury to find a private investor to take over the bank failed, the decision to nationalise Northern Rock was taken on 19 February, with emergency legislation introduced to Parliament the next day. All three political parties supported the nationalisation, with the Conservatives demanding that Northern Rock be denied any advantage over private banks in providing financial services (Wintour 2008).

Public attention focused then as well on poor internal governance and raised questions about the quality of regulation. Banks and financial markets are regulated by a triumvirate of the Treasury, the Bank of England and the Financial Services Authority, all of which were involved in discussions about how best to supervise financial services companies. As in the United States, the general trend was to increase the grip of statutory regulators over market participants.

There was consensus across the Conservative opposition and the Labour government that bank regulation should be improved, but disagreement over the form. Whilst the Conservative opposition favoured a (traditionally light-handed) role for the Bank of England relying ultimately on its role as lender of last resort, Chancellor Alistair Darling announced that the Financial Services Authority, the statutory regulator, would be given powers to withdraw depositors' money from a bank on their behalf (preventing panic lines outside bank premises), to force a bank to sell part of its business, or even to take control of the board of directors (Inman 2008).

France:

France witnessed a far more dramatic bank failure, but by a slightly different transmission mechanism. It also showed a distinctively statist approach to correcting the problem, and a distinct French public attitude toward the trader found neither in the US or the UK. As with Germany, monetary policy was handled by the ECB. This means that the main response to the financial crisis was in French banking regulation. Throughout the credit crunch in the US in 2007, French banks maintained that they had no significant ABS or CDO holdings that would damage their positions, a position that regulators did not challenge.

In France, the main bank collapse coupled trading losses with other forms of poor corporate governance. In January 2008, Société Générale was hit by a 4.9 billion euro trading loss incurred by Jérôme Kerviel, a trader who had previously worked in the bank's internal risk management division and circumvented its controls whilst incurring ever greater losses. The financial instruments involved were equity derivatives rather than CDOs (Pratley 2008). Kerviel had lost leveraged bets that global stock markets would rise at a time when they then fell in value rapidly.

The main results of the SocGen collapse were twofold. The first was a focus on how financial market regulation is implemented and enforced. Banks are regulated by the Banking Commission and by the Banque de France. When SocGen collapsed, attention focused on whether known problems in the internal corporate governance of French banks were not regulated in a sufficiently robust way. Both the central bank and banking regulator pointed to internal governance failure as the main culprit. Central bank president Christian Noyer criticised SocGen for not implementing 17 Banking Commission recommendations on internal governance in 2006 and 1007 to improve risk management, revealing weak regulatory capacity. Within SocGen, a movement to impose an external audit on the bank's finances was still alive by February 2008, but awaited the fate of a takeover bid that might alleviate the pressure for an audit, as the CEO wished. Meanwhile, the government of Nicolas Sarkozy demonstrated the robust will of the private sector to engage in 'industrial policy' by ensuring a merger with BNP Paribas to keep SocGen in French hands and keep a strategic investment bank in Paris (Gow 2008).

Public discourse in politics, regulators and the media in France underlined that the SocGen collapse had been quarantined and the risk of contagion controlled. Christine Lagard, the finance minister, introduced new regulations, but above all, sanctions on banks to try to improve corporate governance. At the time of writing, the strength of this project was uncertain (Barriaux 2008). Unique to France is the public support for Kerviel as a scapegoat and a general criticism of the financial services sector as the real villains in the story (Samuel 2008).

Germany

As in France, monetary policy was not an issue in Germany due to the country's membership in the euro zone. As in the UK, German banks made large losses investing in US mortgage-backed securities. In contrast to the UK, however, not one but three banks became insolvent. In two of these cases, the public sector stepped in to cover losses as the ultimate owner. Attention was still focused on saving the banks and limiting contagion in early 2008, rather than on internal governance. Mortgage-backed securities, however, were dealt a devastating blow in public opinion.

In Germany, both private and public banks found themselves insolvent due to speculation in American mortgage instruments. This challenged the Bundesbank, the Federal Financial Services Authority BaFin and state governments with threats to the stability of the banking system, which state governments attempted to deny as long as possible before being forced to allow them to be bought to end acute insolvency problems. BaFin found itself seeking buyers for two state banks, WestLB and SachsenLB, that had speculated and lost money in the American housing market and had become insolvent in the summer.

Sachsen LB, state bank for the state of Saxony, required over 17 billion euros in new credit in August 2007 after many of its investments in American asset-based securities became worthless. Neither the Bavarian nor the Northern banks showed interest. The state bank of Baden-Württemberg, LBBW agreed in principle to buy the bank on 27 August at a price that was first determined in December (Luttmer and Clausen 2007). but demanded that Saxony to inject new capital into the bank and to assume the 17 billion euros in losses beforehand.

WestLB, the state bank for North-Rhine Westphalia, also required 2 billion euros of fresh capital in January 2008 after losses from its 23 billion euros in CDOs and take them off the balance sheet. The owners: the state government and savings banks, provided the cash and took further responsibility for 5 billion in losses in a deal arranged by the Bundesbank and BaFin (Dougherty 2008).

IKB ran into similar difficulties but lacked the backing of a state government and was only saved from collapse in September 2007 by a support package financed by other banks, in turn lobbied vigorously by BaFin and the Bundesbank. In January 2008, the state-owned KfW bank said that it would support IKB with 5 billion euros, and eventually saddled the public sector with default risks of 24 billion euros to prop the bank up (Marschall 2008).

Comparison

The four examples shown here shed some light into the mechanisms by which the financial crisis spread from the United States to other countries with developed financial markets, and the challenge of quarantining the contagion. The practice of depending on financial derivatives to drive the profit margins of investment banks was discredited in all countries to some degree, particularly focusing (regulatory) attention on (1) the point of contact between bank and borrower, where the risk of default is most prevalent, on (2) the point of treating asset-backed securities and CDOs as investment-grade[8] financial assets, and on (3) the poor

[8] i.e. as an asset with a low risk of default.

effective capacity of special investment vehicles to shield investment banks from losses incurred in derivatives trading.

In the case of cross-border contagion, the latter point proved important for non-American banks and their SIVs trading in American-based derivatives. Just as the collapse of OECD investments in Thailand had severe knock-on effects in the 1990s after the collapse of the East Asian bubble, the collapse of OECD investments in America are having knock-on effects in the current decade. In these four countries, we can see a greater interest in the investment strategies that banks employ and the regulatory rules by which they must abide. This constitutes a significant shift in thinking away from benign neglect of off-sheet investment in financial derivatives under the Basel II regime, suggesting fertile ground for the development of more robust conditions on mortgage banks, investment banks, bond insurers (in the US) and credit rating agencies.

4 Global Governance Reactions

At the global level, the financial crisis of 2008 generated a contest between the private sector, which attempted to ameliorate the crisis' fallout and forestall cries for increased regulation on the one hand and the public sector on the other, which began informing itself on the crisis at the end of 2007 and discussing regulatory measures in early 2008. In the private sector, American banks attempted to establish a global insurance fund whilst credit rating agencies admitted mistakes in their systems and pledged to adjust them. In the public sector, the Joint Forum, which incorporates a number of international regulatory bodies in the banking, exchange and insurance sectors, began meeting in January 2008 to discuss the appropriate reaction. Not only was financial stability at stake, but the overall regulatory relationship between the financial sector and internationally networked regulators.

This period, marked by discussions of global regulators, politicians and business people, show the first sign of a paradigm shift that rejects critical laissez-faire aspects of the risk management model that had been in place under Basel II, and proposes more stringent regulation and restrictions on actors in the financial services sector. These projects are currently under discussion and construction. Based on increased willingness in the G7 countries to upgrade regulation, discussed above, and the willingness of the Joint Forum to support these goals, the likelihood of a more demanding regulatory environment for financial stability has risen. The key question now is whether the regulatory output will focus on procedural and informational safeguards on the creation and sale of derivatives, or whether their use will be restricted altogether. The first two options seem likely, the third unlikely.

Private-Sector Responses

Investment Banks

Private sector responses to the financial crisis are visible in the banking sector and in the credit rating agencies. Attempts by banks to investigate the internal governance reasons for the previous business model based on SIVs handling ABS and CDO paper was conspicuously absent. The main internal changes were that several CEOs were forced to vacate their chairs in favour of new leaders. The new executives had above all the task of ensuring the banks did not turn insolvent and that the non-performing assets were disposed of in a way compatible with that goal. The latter goal meant a progressive write-down of loans against profits each quarter (at the expense of full disclosure about the extent of losses), whilst the first of the goals meant (1) finding new investors and (2) restoring collective action in overnight lending.

American banks tried in autumn 2007 to create their own liquidity fund to insure individual banks against insolvency, reaching beyond the shores of America to recapitalise investment banks. On 15 October, a consortium lead by Bank of America, CitiGroup and JP Morgan Chase proposed the development of a superfund, to be called the ‘Master Liquidity

Enhancement Conduit', literally a cash pipeline that would buy bad loans from the subsidiary fund companies of the major investment banks. This was a plan that the US Treasury department had promoted as well (Associated Press 2008). In the end, the so-called M-LEC plan failed because American banks expected European and Asian banks to help fund it, and they were not willing. Private global governance proved to be a failure and collective action was not restored.

Instead, state funds from East Asia and the Middle East bought into banks to keep them afloat. Therefore, no institutional innovations to keep western-owned financial institutions afloat, but straightforward Asian investment coupled with voting rights. In other words, the main private response to the reduction of bank capital in the US is a shift in ownership toward non-American sovereign wealth funds. The UAE Fund, for example, bought its way into CitiGroup (7.5 billion dollars), whilst the Singapore (11 billion) and other Arab (2 billion) funds had bought into UBS (10 December 2007). This change has important implications for international political economy that are beyond the scope of this paper.

Credit Rating Agencies

Credit rating agencies came under particularly heavy fire for their highly positive ratings of ABS and CDO paper, and of the monoliners that insured it. In February 2008, credit rating agencies began to accept criticism of faulty rating practices and announced that they would undertake changes. Moody's made announcements to this effect on 5 February (Mackenzie and Ishmael 2008), followed by Standard and Poors on 7 February (Tett, Hughes and Van Duyn (2008). These announcements preceded an increasing number of rating downgrades issued for company debt. In March 2008, the consultation procedure at these two agencies was still underway, and no details were forthcoming about how far they would go to ensure better ratings results in the future, or why ratings could be so inaccurate in the past. As seen above in the case of investigations in New York, regulatory authorities had the impression that the involvement of the agencies in the bubble was criminal in nature, though it was not clear whether they viewed the crime as gross negligence or active market abuse (wilful misrepresentation for financial gain). Criticism was levelled at the fact that credit rating agencies are paid by the companies it is rating (Mackenzie and Ishmael 2008). The credit rating agencies certainly did not admit flaws in their approach until the Joint Forum of financial service regulators in Basel announced on 3 February 2008 it would begin investigating the agencies' behaviour and consider regulatory action. Without public threats of regulation backed by a rejection of the old risk management paradigm, the agencies would have done nothing.

The Joint Forum and the G7

The Joint Forum is a group composed of the Basel Committee (responsible for banking regulation, famous for the Basel I and Basel II accords), the IAIS (International Association of Insurance Supervisors) and IOSCO, the International Organisation of Securities Commissions. As an organisation, it is in a unique position to set rules for the regulation of banks, insurance companies, credit rating agencies, considering the relationships that they have with one another. If there is a place where we will see the three areas of regulation joined up internationally, it will be here.

IOSCO set up a subprime task force on behalf of the Forum on 6 November 2007 with four main goals:

> enhanced transparency by issuers of structured products and appropriate due diligence from investors; risk management process for intermediaries; valuation

> and accounting issues; and the roles and duties of credit rating agencies. (IOSCO 2008).

It met in Amsterdam on 3 February 2008 to review the progress of its research and its upcoming recommendations in March 2008 to overhaul the 2004 code of conduct for credit rating agencies (Giles, Tett and Grant 2008). Among the options discussed were requirements for agencies to publish the models and provide quality controls on the information on which the assessments were based. The most radical option, however, is the proposal to ban rating agencies from acting as consultants to investment banks on structuring CDOs if they also rate that institution and instrument (IOSCO 2008). Such a measure would mirror similar measures in the accounting and audit industries designed to prevent conflicts of interest between the financial control functions of auditors and accountants and their role as consultants for the financial engineering needs of corporations and banks. EU Commissioner McCreevy called on companies to rely less on ratings agencies altogether and do their own research (Giles, Tett and Grant 2008).

Malcom Knight, head of the Bank of International Settlements, stated that the role of credit rating agencies would have to be reviewed in the context of Basel II regulations (Tett 2008). Also on the table, however, were demands from the BIS to extend extensive financial reporting requirements applicable to banks to other areas not currently visible on balance sheets (Giles, Tett and Grant 2008).

These and other aspects of the financial crisis and the appropriate response were discussed in a more political setting at the G7 summit in Tokyo on 8-9 February. In the communiqué, banks were called on to make a full and speedy disclosure of losses so that financial markets could put the shock behind them (Tijd 2008), underlining the theme of transparency being discussed within the Joint Forum. There was no mention, however, about whether but there

The Joint Forum released its regulatory recommendations in April 2008. Many of the recommendations demanded better corporate financial controlling of banks, better attention to illiquidity risks and stress tests (performance under adverse market conditions) and disclosure of risks to the investment community. In this sense, it continued to rely on private management of risk. However, it also argued in favour of stronger statutory regulation of capital requirements and increased resources for financial service regulators to get the job done (Joint Forum 2008: 27-29). This switch away from self-regulation reflects that a change in thinking had taken place from the more private-sector response favoured as late as 2006. This is the first step to enabling common enhancement of statutory regulation in OECD countries.

5 Conclusions:

The financial crisis of 2008 underlines the need to review the regulation of risk management of banks, but also of bond insurers and the reporting activities of credit rating agencies. The crisis is a serious threat to financial stability that has already required cash injections into the global economy, with inflationary implications.

The crisis was initially the product of risk management techniques developed by banks to conduct business despite Basel II restrictions. This was supported by a policy paradigm that condoned the use of SIVs, CRAs and monoliners to provide widespread confidence in ABS and CDO paper, regardless of how good the information was. The information provided by banks and rating agencies was poor. Private sector actors were neither willing nor capable of taking corrective action without the immediate threat of regulation, but demanded (1) more liquidity in the monetary system (2) direct bailouts or buyouts by private investors and Asian sovereign funds.

Political attitudes to regulation became more positive toward the end of 2007 / early 2008, after initial attempts to increase liquidity had run their course, and there was time to start learning the regulatory lessons of the crisis. Political openness to more stringent regulation amongst regulatory and political authorities enables discussions at the global level to collectively agree on an approach that can be transformed into more specific rules at the national level. The initial response has been to build on changes in thinking within individual countries to advocate a collective shift to greater statutory regulation, and a reduction in self-regulation that typified Basel II. The ideational step has therefore been taken to launch Basel III, which will re-balance the business-regulator relationship in favour of the latter.

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