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Was the US subprime crisis the prime mover?: the limits of

the 'critical urbanist' interpretation of the UK financial

crisis

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The aim of this chapter is to challenge the argument popular among 'critical urbanist'

writers that the subprime crisis in the US played a crucial and necessary role in the US

and UK financial crisis. It will be argued that this view exaggerates the role of the

subprime crisis and of the global interconnections between banks. Instead, it is

argued that the banking systems in the US and UK had developed in a fundamentally

unstable way and that this was the primary cause of the financial crises in these

countries, with the subprime crisis playing at most a contingent contributory role.

The focus will be on the structure and operation of the UK banking system and the

UK experience of the financial crisis. The chapter concludes with a discussion of the

very limited reforms that have so far been implemented.

THE 'CRITICAL URBANIST' INTERPRETATION OF THE FINANCIAL CRISIS

1

The analysis of subprime lending

The term 'critical urbanist' interpretation is used here to refer to two strands of argument: one concerns international finance flows, and one concerns sub-prime lending. Harvey combines both strands. He argues that global capitalism has a permanent under-consumption problem and staggers from one crisis to the next; and that the exhaustion of profit opportunities in one sphere or country leads to a search for profit in new sectors of activity, or cities, regions or countries which then undergo booms and slumps (Harvey, 2010: 28-31). As a result, he identifies trends such as the internationalization of banks, the increasing investment in assets such as property and the growth in consumer credit which, he argues, make good the decline in US purchasing power.

For Harvey, the rise in subprime lending and the subsequent crisis over repayment is due to the expansion of capital into a sphere which it had not previously penetrated, namely owner-occupation among low-income households. The strong role that this view gives to subprime lending can be seen when Harvey says that 'the crisis that began in highly localized housing markets in the United States in 2007 quickly spread around the world via a tightly networked financial and trading system that was supposed to spread risk rather than financial mayhem' (2010: 140) and that 'by the autumn of 2008 the 'subprime mortgage crisis', as it came to be called, had led to the demise of all the major Wall Street investment banks through change of status, forced mergers or bankruptcy.' (2010: 2.)

In order to consider this argument, we start by examining critical urbanist academic writing on mortgage lending. We then go on to look at evidence on the scale of the subprime crisis to see whether it can bear the weight that is being placed on it.

Sub-prime loans are those made to borrowers whose ability to repay is considered uncertain and/or whose housing is considered to be a poor risk, and for whom tougher conditions, such as higher interest rates, are charged. ¹ (In contrast, prime loans are made on more favourable terms). Sub-prime loans do not need to be used for house purchase: they can also be used for the refinancing of old house purchase loans, home improvement, or equity takeout for consumption spending (Immergluck, 2009: 68-72, 159-160; Newman, 2009).

Mortgage lending involves banks in making decisions on how much to lend and on what terms, to whom and on what dwellings. According to conventional economic models, lending decisions reflect judgements about the value of the dwelling as collateral for the loan, and about the ability to repay of the borrower. The key idea is that loan terms should reflect risk. However, there is a long critical tradition in urban geography and housing research which argues that this model is not accurate and that US mortgage lending is characterized by red-lining (i.e. red lines are drawn around areas in which prime loans will not be granted) and a refusal to lend to racial minority groups (Aalbers, 2011). For writers who reject the risk-based approach to lending, any place, income or race based variation in lending is evidence of discrimination. For those who accept that lending should be risk-based, on the other hand, only variation that goes beyond what is attributable to the greater riskiness of certain types of

dwelling, area, income group or racial minorities is evidence of discrimination. The critical urbanist tradition has led to a focus on place, income and race-based lending patterns.²

A recent study by Wyly et al (2009) provides comprehensive evidence on these patterns of variation. It uses two exceptionally large national US individual level data sets covering over eight million loans approvals in 2004 and 2006 and allows the impact of place, race and income (but not dwelling) to be taken into account. The authors fit several models that explain lending patterns in terms of various household, lender and area characteristics. However, their best model explains only 35% of the variance and so is far from offering a full understanding of the factors in play – housing characteristics are an obvious omission. Its main conclusion is that in 2006 African-Americans were 3.8 times more likely than white Americans to obtain a subprime loan when income was not taken into account. When income was included, this figure reduced to between 2.3 and 3.3 depending on the model used, showing that African-Americans are more likely to obtain a subprime loan after income differences are controlled for. The study also showed that this likelihood had increased between 2004 and 2006.

This empirical result leads Wyly et al (2009) to elaborate a critique of US mortgage lending practice which they see as remote from the conventional economic model of well-informed buyers having their lending risk assessed by careful salespeople in terms of explicit criteria. Firstly, Wyly et al (2009) argue that subprime loans were (increasingly) marketed to many people who could have afforded prime loans. This is a surprising point since it implies that people who did not need to pay the higher

subprime interest rates nevertheless did so. An explanation for this 'market imperfection' is advanced by Immergluck (2009: 141-2) and Newman (2009: 318) who describe the aggressive marketing methods used to promote subprime loans, the higher fees paid to salespeople as incentives to sell subprime loans, and the unfamiliarity of the new group of borrowers with mortgages and the interest rates they would be paying. Secondly, Wyly et al argue that lenders are bad at distinguishing good and bad risks, and that to avoid 'charlatans' (i.e. unreliable borrowers) they ration credit on supply rather than price (2009: 335), e.g. by drawing red lines on the map or by discriminating on the basis of ethnicity.

Hence the critical urbanist view is that subprime lending is not risk-based as the conventional economic model would suggest and that it generates an undeniable racial bias in U.S. subprime lending.

Standing back from this evidence on lending patterns, it is interesting to look at the interpretations placed upon it. Firstly, the evidence does not lead Wyly et al to demand that lenders reform their practices and adopt 'risk-based pricing'. Instead, they use it to attack the very notion of 'risk-based pricing', claiming that 'the theory⁴ of risk-based pricing has become doctrine and ideology, used for well over a decade to blame consumers for the consequences of an abusive industry, to justify a deregulatory stance that encourages 'usury' as innovation, and to sustain the mirage of an 'American Dream' backed by high-risk, predatory credit' (2009: 350). Others more familiar with the US housing scene will be able to judge the merits of these claims. However, there can be no doubt that Wyly et al see risk-based pricing as the fount of most if not all evil in the US housebuilding and mortgage industries. This

position is somewhat surprising since at the same time these authors claim that riskbased lending has not been practised.

Having constructed risk-based pricing as a 'theory', Wyly et al then go on to propose their own theoretical alternative for understanding sub-prime lending, namely, Harvey's analysis of class-monopoly rent. Harvey's (1977) classic analysis of mortgage lending patterns in Baltimore in 1970 showed how different lenders operated in different neighbourhoods, leading to low interest rates and strict housing code inspection in more affluent areas, and high interest rates and weak inspection in poor areas. However, paradoxically, he showed that even at that time high interest loans were being given in run-down inner city areas to ethnic minorities rather than that all loans were being refused as the standard redlining story has it. But Harvey's analysis of segmented markets in mortgage lending does not, in my view, require an acceptance of the notion of class monopoly rent. Nor is it obvious what analytical purchase class-monopoly rent theory offers in understanding subprime lending today. It is not clear that any class exercises monopolistic control over housing, land or finance and the theory does not lead to usable hypotheses about how subprime loans are promoted, by whom, to whom and on what conditions. Certainly, Wyly et al's effective empirical demonstration that income and race are factors affecting subprime lending does not require acceptance of the theory of class-monopoly rent.

Finally, if one is left confused by Wyly et al's theoretical argument, one is left even more confused by their policy recommendations. Mortgage lenders seem to be blamed for not lending and for discriminatory non-risk-based lending, and also for their ideology of risk-based pricing. Does this imply that Wyly et al believe that there is a

right to home ownership with a prime mortgage for households of all incomes, irrespective of differences in risk? This confused vision propagates the possibility of homeownership for all and underplays the need for private and social rented housing with rent subsidies, controls and protection of tenants' rights for households who cannot afford homeownership.

The relevance of this strand of academic writing to understanding the subprime crisis is that, having accurately identified subprime loans as a source of real difficulties for poor and minority households who find themselves enmeshed in financial transactions which often lead to arrears or foreclosure, critical urbanists exaggerate the role of subprime lending in the wider financial crisis and do not consider the numerous sources of instability in the wider financial system.

Evidence on the role of subprime lending in the financial crisis

To explore the argument that subprime lending played a key role in the financial crisis in the US which had international repercussions⁵, we need to examine evidence on the scale and trends in this lending and trends in the issuing of mortgage-backed securities⁶ based on subprime loans since it is the rise of these 'toxic assets' that is held to have precipitated the collapse of confidence among banks.

New subprime mortgage lending in the US rose from 8.6% of total residential mortgage lending in 2001 (\$190bn out of \$2,215bn) to 20.1% in 2006 (\$600bn out of \$2,980bn (Gotham, 2009: 365). Moreover, as Immergluck points out, in the 2002-6 'second boom' in high risk lending, loans were more likely to be for house purchase,

to be 'exotic' products, e.g. those with low initial interest rates which increased sharply later, those with low down-payments or those with high loan to value ratios (2009: 71, 87-91). Secondly, Immergluck shows that 'the issuance of mortgage-backed securities in the subprime market increased from \$87 billion in 2001 to almost \$450 billion by 2006' and a related loan type, Alt-A loans (in between prime and subprime loans), showed a similar sharp rise from \$11bn to \$365bn (2009: 94-5). There is thus evidence of the rise in volume of an increasingly risky type of mortgage and of securities based on it.

Thirdly, foreclosure rates for subprime loans rose from 5.7% in 2005 to 17.0 % in 2008 Q2 (Immergluck, 2009: 136) and by 2008 28% of US subprime loans were 45 days in arrears, compared with 14.5% of Alt-A loans and 8% of prime loans (IMF, 2009: Figure 1.21). Immergluck pinpoints the start of the '2007-8 mortgage crisis' as being April 2007 (2009: 183). However while this data demonstrates fast growth in the issuing of subprime loans and subprime backed securities, it does not demonstrate that this growth was either the main cause or even the precipitating factor in the financial crisis.

The following counter-arguments need to be considered. Firstly, subprime loans were never more than a minority (20%) of all mortgage loans and they were dominated by other types of mortgage such as prime mortgages, corporate mortgages, credit card debt, and student and car loans. It has not been demonstrated that other types of assetbased loans were any less problematic than subprime mortgages. Secondly, total US asset-based securities based on assets other than residential and commercial mortgages rose from \$400bn in 1996 to \$2,400bn in 2007 (FSA, 2009: Exhibit 1.5).

Thus subprime-based securities (\$450bn in 2006) represented under 20% of total securitized credit. Thirdly, the securitization process combined mortgages of different types and what happened to subprime mortgages may have been mitigated by the experience of other types of mortgage. Fourthly, as will be shown below, there were numerous other sources of instability besides subprime loans, such as derivatives trading and the shadow banking sector.

Thus the fact that subprime loans were disproportionately likely to end in arrears and foreclosure (the subprime crisis) and that these problems were concentrated among the lowest income groups and racial minorities, does not prove that this crisis was the trigger that caused the wider financial crisis. On the one hand, the effects of the other developments in mortgage markets just listed need to be assessed, On the other hand, there were many other sources of instability, all of which contributed to the financial crisis, which are considered below. At most, therefore, the sub-prime crisis was a contingent and partial rather than a necessary or sufficient cause of the financial crisis.

AGAINST THE CRITICAL URBANIST INTERPRETATION: A. THE CONTEXT

In this section we consider the global, policy and regulatory context in which US and UK banks acted.

Global macro-economic imbalances

At the level of the world economy a critical context is the five-fold rise in macroimbalances on current account between 1998 and 2008. This means that countries which are running a current account surplus, such as China, have ended up holding debt mainly in the form of what was then considered low-risk or risk-free government debt of deficit countries such as the US (Bank of England, 2009: 48). The expanded volume of these balances drove down interest rates which had the paradoxical effect of binding the US and Chinese governments together and so arguably aiding global political stability. The low interest rates in turn fuelled a credit expansion especially in the US and UK (but also in Spain and Ireland) which led to cheaper mortgages, rising house prices and banks becoming less concerned about creditworthiness. Thus the boom in bank lending was due in part to the supply-side effect of the rise in global macro-economic balances.

Central bank policy

Central banks are inclined to blame external forces for negative national economic trends. However the role of central banks was not passive since they adopted loose monetary policies. The UK House of Lords Economic Affairs Committee received very different responses regarding their relevance from Jacques de la Rosière, Chairman of the EU High Level Group on Financial Supervision and from Mervyn King, Governor of the Bank of England. For the former, the 'piling up over 10 or 15 years of easy—too easy—monetary policies' is a fundamental factor (along with global macroeconomic imbalances) (House of Lords Economic Affairs Committee, 2009, Q352), while for the latter 'Wherever monetary policy was loose, it certainly was not in the UK,' (House of Lords Economic Affairs Committee, 2009: Q479) Likewise, the report by the UK Financial Services Authority on the causes of the

financial crisis makes no reference at all to government policy (or the role of regulatory authorities) as a factor at either global or UK levels (FSA, 2009: 11-38). In fact, de la Rosière's view is the more convincing. In no EU countries were housing costs included in the consumer price index whose level central banks targeted (Goodhart, 2009: 2). This means that they targeted low inflation but ignored asset price inflation. Their policies therefore contributed to the uncontrolled expansion of lending.

Loose monetary policies were also a response to the demand for increased credit as US and UK households sought to preserve their standards of living in a period of rising income inequality and falling real incomes (Kumhof and Ranciere, 2010; Irvin, 2011.)

Regulatory policy

In the USA, the Glass-Steagall Act was passed in 1933 to prevent banks engaged in retail deposit taking from also engaging in investment banking, which ranges from advising on mergers and acquisitions and underwriting share issues to trading on behalf of the bank ('proprietory trading'). The post-war fragmented regionalized banking system with its local regulators gave way by the 1980s to a system in which nationwide banks emerged subject to federal regulation. Banks were allowed to merge in part to avoid strict state-level controls on interest rates, and securitization (see below) was encouraged. Deregulatory pressure from the 1980s onwards led to the abolition of the Glass-Steagall Act in 1999 and fuelled the expansion of retail banks into more risky activities, such as dealing in mortgage-backed securities. (Some

banks, such as Goldman Sachs, remained purely investment banks.) Fannie Mae and Freddie Mac, the government housing finance agencies, became important players in securitization (Gotham, 2009).

In the UK, the special relationship between government and finance capital has a long history from London's pre-modern position as a trading centre, to the Depression and post-war period when low inflation and the value of sterling were placed above full employment as policy goals and 'short-termism' became the conventional critique of the City by British business. More recently, the treatment of financial services as an economic sector which could promise the UK a post-industrial future has been given high priority by successive governments. This sector grew from 5.5% of GDP in 1996 to 10.8% in 2007 helped by the deregulatory turn of policy in the 1980s which strengthened London's position as a financial centre vis a vis New York.

Prior to the general election in 1997, Labour leaders were desperately keen to win the support of business to avoid the risk of an 'investment strike', the great fear of Labour governments historically (Miliband, 1961). Led by Tony Blair and Gordon Brown, they thus wooed City leaders and assured them that it would be 'business as usual' if Labour was elected. The incoming Labour government in 1997 introduced two innovations: the Bank of England was made independent and tasked with keeping inflation at a low level and a Financial Service Authority (FSA) was created through the merger of specialized regulators. (In 2001 the FSA also gained responsibility for mortgage lending, previously under a specialist regulator.) The Bank of England staff responsible for its previous role as regulator of individual banks were transferred to the FSA. The words 'light touch' described the FSA's regulatory approach, although

this term emerged later as a critique of the FSA. (The FSA was and is financed by the finance industry rather than by government, via a variety of fees – and, more recently, fines.)⁸

Crucial to the success of light touch regulation was the performance of the economy where, according to the then Chancellor, Gordon Brown, the boom and bust cycle had been transcended and a way found to achieve unbroken economic growth. Light touch regulation was partly a matter of economic philosophy and partly a matter of 'what works'. According to Lord Turner, Chair of the FSA,

'I think there was a philosophy of regulation which emerged, not just in this country but in other countries, which was based upon too extreme a form of confidence in markets and confidence in the idea that markets were self-correcting, which therefore believed that the fundamental role of the supervision of financial institutions, in particular banks, was to make sure that processes and procedures and systems were in place, while leaving it to the judgment of individual management to make fundamentally sensible decisions.' (House of Commons Treasury Select Committee 2009: Q2156)

It is not surprising, therefore, that the regulation of the finance sector in both the US and UK has been weak. In the 1980s, self–regulation and a multiplicity of specialist regulators with few teeth were the norm. The term 'regulatory capture' (Wilson, 1980), devised in studies of public-private sector relations to refer to the situation where the regulated are in control of the regulator, was only too apt. The FSA seemed to be acting on behalf of the finance sector rather than as its regulator.

Financial regulation showed the generic shortcomings of regulation. The ideology was that effective regulation meant maintaining good relations with the regulated and relying on education, persuasion and setting an example rather than imposing financial penalties or taking firms to court. Regulators depended on information supplied by the regulated, often had less specialist expertise than the regulated, offered salaries which were too low to attract the most able, and employed staff whose loyalties were divided since their careers would continue in the industry being regulated, etc. (Miller, 2009). In addition, there was an assumption that self-interest would ensure good behaviour, i.e. the finance industry would not take inordinate risks that threatened its own survival.

To explore further what is meant by regulation it is useful to examine its organization and forms. Normative theories of financial regulation see it as a means of a) protecting individual financial institutions, the financial system and society generally against the risk of a bank collapse, and b) protecting clients, especially uninformed 'retail' clients, as opposed to professional clients. Regulation thus applies differentially to financial institutions depending on their level of riskiness and their clientele. Institutions which are not 'public-facing' or which are considered less risky, such as insurance companies and securities firms, are most lightly regulated. Unlike banks, they are not in the inherently risky position of borrowing short and lending long, and they do not have the power to expand credit. The main forms of regulation are via capital and liquidity requirements. These restrict the activities of financial institutions by requiring them to hold capital assets to back their trading and lending activity, and liquid assets to be able to repay depositors. Capital requirements are a

response to the Wall Street crash when trading on margin was identified as the main cause.

Whatever normative theories of regulation claim, the actual coverage and level of regulation is a matter of power politics with the regulated institutions fighting hard against efforts to regulate them. For example, hedge funds have avoided regulation of their liquidity or capital by claiming that they were 'private' and take in money exclusively from the very wealthy who are well-informed investors and can afford to lose their investments. In fact this is inaccurate; since 2002 UK pension funds and insurance companies have been able to invest in hedge funds and by 2010 20% of hedge funds' investment funds were supplied by pension funds. However, not only are there great differences in the level of regulation between sectors of finance, but these encourage firms to change their form, their activities or their legal status to reduce their level of regulation and increase their profitability, i.e. to engage in 'regulatory arbitrage'. How this leads to the creation of the shadow banking sector is discussed below.

The trend towards weaker regulation can be clearly seen from the following figures. Between 1968 and 2008 the capital ratio for UK banks fell from 15% to 8% and the liquidity ratio fell from 30% to 3% (data for 'broad ratio') or 15% to 3% (data for 'reserve ratio') (Bank of England 2009: 8, 43). The median equity leverage ratio increased from 21:1 to 31:1 (for the ratio of assets to equity), between 2000 and 2008 (FSA, 2009: 19), or from 20:1 to 48:1 (for the ratio of assets to shareholders' claims) (IBC, 2011: 128) These measures underestimate the degree of risk being run by banks

since they exclude assets which are held off balance sheet precisely so as to allow very much higher levels of leverage (FSA, 2009: 20).

AGAINST THE CRITICAL URBANIST INTERPRETATION: B. US AND UK BANKS' BEHAVIOUR.

Having sketched in the regulatory background we now examine US and UK banks' role in the financial crisis, by focusing on new types of financial product, the creation of the shadow banking sector, and on the banks' business model which shapes bankers' attitudes to risk and reward. I shall argue that these are the three key sources of instability in the banking sector which, together with global macroeconomic imbalances, loose central bank policy, and weak regulation, are the prime cause of the financial crisis in these countries.

'Financial innovation' - the rise of securitized credit and derivatives.

The low interest rates of the mid-1990s ushered in a period in which banks sought ways of making good these losses by innovatory financial products. There were two main kinds of innovation: securitized credit and derivatives.

Securitized credit¹¹

The traditional model of bank lending is known as 'originate and hold': banks originate loans to companies and individuals against assets such as corporate

headquarters and housing and hold the loan until it is repaid. The new model is known as 'originate and distribute'. This started in the corporate sector but by the late 1990s had extended to residential mortgages. ¹²

The concept is that the bank which owns the asset (e.g. a corporate or residential mortgage) sells it for cash to another financial institution or 'structured investment vehicle' (SIV) set up for the purpose. Typically these entities were located in the 'shadow banking sector' (see below) and were not subject to regulatory control. This entity then issues securities to investors which are backed by the expected income flows, e.g. from mortgages, a process known as securitization. These securities or 'collateralized debt obligations' (CDOs) are parcelled up and 'tranched' according to their degree of risk from AAA (least risk) downwards, and a credit-rating agency, paid by the issuer, confirms the level of risk of each tranche. The theoretical advantage of securitization for the financial system is that it spreads risks arising in particular regions, asset types and sectors of the economy across financial institutions of many types located throughout the country.

The advantages of securitized credit for the original bank are twofold. First, it transfers risk: the original bank is no longer liable if households default on their mortgages, or corporations default on their loans. Instead, the entity which issues the securities takes on this risk. There can even be an incentive to the original bank not to pass on information about the riskiness of the loan in order to avoid future liability (Immergluck, 2009: 107). The importance of this is that if a bank loan stays with the original bank it is part of the denominator in the bank's capital ratio, requiring more capital to be held, whereas if it is transformed into a securitized asset held by an

unregulated SIV this is not the case. This leads to the second advantage: the bank is enabled to expand its lending capacity. The sale of the original loan or mortgage increases the bank's liquidity, allowing it to make new loans. So, for a given volume of deposits, a greater volume of loans can be generated. The result is to expand the supply of credit.

However, this scenario assumes that there is no connection between the original bank and the financial institution or SIV. In practice this may not be the case and the latter bodies can range from being legally separate and independent entities, to legally separate but wholly controlled entities, to wholly owned and wholly controlled subsidiaries of the original bank. These can be seen as different ways of reconciling the tension between banks' wish to avoid regulation and minimize taxation, and their wish to draw on their reputation to help sell asset-backed securities. The result is that in a crisis if a SIV is legally independent but is perceived to be the responsibility of the bank, a bank may choose to support it in order to preserve its own reputation, even though legally it does not need to. Where this happens, the transfer of risk is less than it would otherwise be.

Turning to the disadvantages of securitized credit, there were two problems concerning risk transfer. The first is that the underlying theory was based on mathematical models which proved inaccurate. In part they relied on assumptions which were not met, e.g. that there would not be a simultaneous decline in asset prices across the whole country; and in part they were based on data drawn from short periods of steady growth or on no data at all. The second problem is that the transfer of risk was less than expected. As explained above, banks often chose to use entities

which they controlled or had relations with to hold asset-based securities so that the transfer of risk was only on paper. In other cases, banks ended up holding CDOs because no buyer could be found. In particular, the least risky (or 'super-senior') CDOs could be hard to sell since the interest rates attached to them were too low to attract buyers, who were most attracted to the most risky CDOs offering high interest rates (Tett, 2009: 244). Goodhart teasingly uses the term 'originate and pretend to distribute' (2009: 54) to describe this situation, but this does not distinguish between the intentional and unintentional paths to holding rather than distributing, and ignores the critical role of the shadow banking system.

Paradoxically, however, if securitization risks had been completely transferred to the shadow banking sector, this would have increased the instability of the financial system, given the lack of transparency and lack of regulation of that sector (FSA, 2009: 18).

The other problem with securitized credit was that since the credit-rating agencies were paid by the credit issuers they were incentivized to support issuers' judgements of the riskiness of securities. They also became over-dependent on income from asset-based credit issuers for their own financial survival (Immergluck, 2009: 116-120.) It was assumed by some observers that the agencies' concern for their own reputations would guarantee the quality of their work, but this proved not to be the case. Also there was a general intellectual failure to understand what risk was being rated (Goodhart, 2009: 17-19). ¹³

Total securitized credit in the US grew from \$400bn in 1996 to \$2400bn in 2007, and in the UK new securitized credit rose from £20bn in 2000 to £180bn in 2007 (FSA, 2009: 14) One third of new securitized credit issued in the UK in 2006 and 2007 was for residential mortgages (FSA, 2009: 14).

Derivatives

The second type of innovative product, the derivative, is a contract concerning a future value, such as the price of a commodity, or the level of a share price, interest rate or currency, rather than a contract for the purchase or sale of the underlying commodity, share or currency itself. The contract may be entered into because the business needs to buy the commodity or foreign currency in the future and wishes to insure against the risk of future price increases or currency appreciation. 'Hedging' of this kind can be considered a normal business transaction.

However, derivatives can also be purchased for speculative purposes. Firms with no business need for hedging can, for example, purchase an option to buy shares in another company, to buy a foreign currency, or to invest in sovereign debt at a given price in the future. Here, in effect, the firm is speculating on the future value of the company, the currency or the government's ability to borrow. The firm deliberately takes on (potentially unlimited) risk in the hope of profit. When the entity purchasing the derivative is not regulated and when the existence of the transaction is unknown because it is not conducted on a public exchange, the potential risk to an individual firm can be very great.

At the systemic level, the effect on risk of derivative transactions depends on two factors. The total amounts involved are limited by the fact that there are two parties to every transaction, so for every loss made on a derivative transaction there is a potential gain. However, the incidence of this risk depends on the distribution of derivative losses, which will also depend on how the counterparty has laid off the risks on the transaction. ¹⁴ In practice, derivatives have been held largely in the shadow banking sector to avoid regulation so it is impossible have a realistic overall picture of the risks created by derivative trading.

The world-wide scale of derivatives trading grew from \$60tn in the mid-1990s to \$600tn by 2007 (FSA, 2009: 81). (This compares with world GDP of \$55tn in 2007, which is an indication of the dominance of derivatives held for speculative reasons.)

But the net risk if parties default is estimated at 'only' \$3tn (Bank of England, 2008: 21), which is of the same order of magnitude as the total scale of securitized credit (\$2.4tn in the US). Derivatives can of course impact on the future underlying value in question, as in the case of currency speculation. As the FSA (2009) points out, insurance policies cannot be taken out by persons without an insurable interest in the object assured to avoid creating harmful incentive effects. It has been suggested that derivative trading should be similarly constrained.

In sum, banks, under pressure on their profits, created securitized credit products of uncertain value ('toxic assets'), and derivatives with vast potential risk whose distribution among financial institutions was unknown. It was the uncertain

distribution of the risks caused by these innovations which in September 2008 precipitated the breakdown in trust between financial institutions needed for continued trading. No sensible party could be expected to enter a contract with another party who might be bankrupted by being overloaded with toxic assets or derivative claims.

The shadow banking sector

The shadow banking sector has already been touched on because it refers to the institutional domain in which financial products such as securitized credit and derivatives are often held. However, there is a danger that it does not receive the recognition that it deserves in contributing to the financial crisis. Hence its separate treatment here.

The unregulated, 'shadow' or 'grey' banking sector is not a marginal phenomenon as its name and 'off-balance sheet' character suggest but is arguably as, if not more, important than the regulated sector as a source of systemic instability. Moreover it is in part a creation of the mainstream financial institutions in their attempts to avoid regulation and minimize taxation, as when they create hedge funds or SIVs which operate in the shadow sector (Blackburn, 2008, Farhi and Macedo Cintra, 2009). Mainstream financial institutions are thus also involved in the shadow sector. Needless to say this is not part of their public image and they are only too happy to dissociate themselves from the non-bank 'other'.

All regulatory rules create boundaries between regulated and unregulated domains, and these act as incentives to regulatory arbitrage, i.e. to transfer activities to the unregulated (or less regulated) side (Goodhart, 2009: 101). This is much more than an academic point since the scale of the incentives to make such transfers is enormous. The incentive is that capital and liquidity controls can be avoided, and if the entity conducting the activity is registered in a tax haven, there is a tax saving too (Shaxson, 2011: 8-32, 244-278.). (A disproportionate number of tax havens are in UK-controlled territories.)

The attraction of SIVs used to hold securitized assets or derivative contracts is that they are in the shadow sector and are therefore more profitable. In fact it has been suggested that a key attraction of securitization and derivatives was not their theoretical capacity to reduce risk but the opportunity they gave to avoid regulation by moving activities into the shadow sector. ¹⁵ SIVs allowed banks to avoid or reduce regulation and increase profits in three ways (FSA, 2009: 21): a) capital does not need to be held in respect of off-balance sheet subsidiaries, so the expanded use of such entities allowed banks to grow without regard to (the admittedly weak) capital requirements, b) under Basel I regulations, entities that are financed by credit of under one year's duration are not required to hold capital; SIVs were typically financed for 364 days, and c) where SIVs are set up in tax havens they can avoid paying corporation tax. This is the case, for example, with the Jersey-based Granite trusts, worth £40bn, which are controlled but not owned by Northern Rock, and which were left untouched when Northern Rock was nationalized. Thus the role of SIVs is inseparable from attempts to avoid regulation and to minimize taxation.

Estimates of the scale of the shadow sector are by definition hard to come by. In the US in 2007 SIVs, hedge funds, etc. controlled \$6.5tn, compared with banks as a whole \$10tn (Timothy Geithner speech 9 June 2008, cited in Tett, 2009: 263). In the UK the Turner report shows the growth of SIVs, one element in this sector, as rising from \$100bn to \$300bn between 2003 and 2007 (FSA, 2009: 20), and 80% of EU hedge fund activity is conducted in the UK. Since Autumn 2008 the UK grey sector is considered to have shrunk, due to the decline in securitization, but it could expand again when conditions are favourable.

The riskiness of the shadow banking sector has several sources. The main reason is that the absence of capital, liquidity and leverage controls means that there are no built-in safety limits to speculative activity, and the value attributed to assets becomes hard to judge. A second reason is that the activity is funded using short-term credit which is more vulnerable to withdrawal. It was the drying up of short-term credit because of suspicion about the value of the 'toxic' assets held which precipitated the Northern Rock nationalization. Thirdly, the sector is set up 'off-balance sheet' which means holdings lack transparency and no body has oversight of the scale and incidence of risks.

The threat which the shadow banking sector represented to the US and UK financial systems only became apparent too late. The fact that it was allowed to develop to the extent it did is likely to be linked to the fact that the mainstream banks were heavily involved in it, and exerted strong pressure to shield it from regulation.

Banks' business model and attitudes to risk and reward

Banks operate according to a business model in which success and remuneration is based on return on equity, or 'shareholder value'. In contrast to the classical image of banks as taking in deposits, creating credit, and lending to households and businesses, it has been argued that banks today are engaged in 'retail mass marketing and wholesale trading' and have become 'transaction-generating machines' (Engelen et al., 2011: 115). Domestic customers are now targeted with the sale of all manner of policies and in the UK bank non-interest income as a proportion of net interest and non-interest income has risen to 53.9% in 2007, in the US to 39.3% and France to 75.2% (Engelen et al 2011:116; Dymski, 2012a). The wholesale money market has become the major source of funds, and proprietory trading is a more significant activity. The scale of the UK banking sector has grown to 500% of GDP. This compares with 400% for France, 200% for Germany and 80% for the US (Engelen et al, 2011: 226, dates of data not given). Banks were very successful in maximizing return on equity in the 2000s, especially relative to other industrial sectors (Engelen et al, 2011: 103). Their return on equity was of the order of 20%, but their return on total assets was very modest, i.e. about 1% (Engelen et al 2011: 108-9). However, their success came about through their ability to expand their asset base via debt finance especially on wholesale markets, rather than equity expansion (IBC, 2011). Much of this borrowing is linked to the role of offshore financial bodies, set up to avoid regulation and taxation (IMF, 2009a). A key incentive to borrow is that interest paid on loans is deductable before taxes are calculated. In other words, wholesale borrowing rather than deposit-taking was the means they used to achieve profitability. The fact that borrowing came from within the financial sector increased endogenous

risk in this sector. The Vickers report also notes that banks are currently undersupplied with the loss-absorbing assets needed in a crisis.

This business model has direct effects on banks' internal structure and remuneration patterns (or what is sometimes known as 'bonus culture'). The internal power balance between the departments of a bank favours those which generate the highest earnings, namely the trading departments (or investment bank type activities) where staff are incentivized by bonuses which relate directly to the short-term gains they make. The 'compensation ratio' (between remuneration and total income) is often around 40% which encourages risky activity where profits are highest. Until recently, bonuses could not be 'clawed back' if bank performance turned out to be poor. Bonuses have attracted huge political opprobrium since as well as their multi-million pound level, they are also paid even when a bank is making a loss. ¹⁶ The extent of distribution of income via salaries, bonuses and dividends, rather than their retention to increase the capital of the bank, and hence its lending capacity, has been a consistent complaint of the Bank of England (2010: 6).

By contrast, back-office staff are less well paid and receive at best small bonuses. Departments responsible for risk management are marginalized since they threaten the earnings of the most powerful departments. (This was clear in the case of the HBOS risk control head who was sacked for raising doubts about the sustainability of the bank's growth strategy.) However, Lepinay's (2011) study of a French bank questions whether risk management departments were capable of understanding the risks being run and suggests that there was deliberate concealment of the riskiness of certain

products because to reveal the details would have given a competitive advantage to rivals.

One of the more intriguing defences the banks have advanced is that the riskiness of their behaviour was unknown to them. In other words they were not concealing what they were doing from external actors but were genuinely in ignorance of what they were doing. There is some truth in this argument. In front of Parliamentary Select Committees, bank chief executives and chairmen have revealed their limited knowledge of how products worked, and how they relied on their middle level staff for such an understanding. As shown earlier, these innovative products were built on uncertain foundations, but these uncertainties were not communicated to, or understood by, senior bank staff. Any doubts about them were set aside because in the short term securitized credit and derivatives trading delivered profits growth, and bonus levels depended on the continuation of that growth. However, against this 'ignorance' interpretation is the evidence that staff who questioned the growth strategies of banks or drew attention to the increasing risks being taken were marginalized or sacked. This suggests that there was a conscious attempt by bank leaders to run banks at very high levels of risk to maintain expansion and profits growth.

What is interesting about analyses of bank behaviour in the last two decades is that there is no pretence that internal controls were effective. The assumption that banks' self-interest in their own survival would rein in excessive risk-taking has proved to be unfounded. They no doubt believed that the UK was going through a golden age where failure was inconceivable, or that they were 'too big to fail' and that the state

would always step in to prevent a bank failure, a belief that proved well-founded in the UK in 2007-8, though in the US, the investment bank, Lehmans, was allowed to fail. The internal power structure of banks in which the highest earners have the greatest weight must have shaped these beliefs.

A key factor in this banking culture is government support for the banks. The Financial Services Compensation Scheme which protects depositors up to £85,000 per institution is a direct benefit to individual savers, but it is a collective benefit for banks in that it smoothes the flow of deposits to them and does not discriminate between banks according to whether they undertake more or less risky activity. The Moreover, the lack of any separation between retail and investment functions in 'universal' banks (which undertake both types of activity) means they are free to allocate funds from retail depositors to investment banking, with obvious implications for their willingness to lend to households and businesses.

In brief, banks are run according to a business model in which growth and bonuses are interlinked and where there is little disincentive to excessive risk-taking. This also reflects the FSA's light touch regulatory approach which did not challenge bank practices.

Another insight into how banks operate can be gained from examining UK banks' views of the financial crisis as reported to the House of Lords Economic Affairs Committee. Bank leaders have been swift to deny responsibility for their behaviour. Instead they have redirected blame: a) towards the external regulators (the FSA in the UK), who were supposed to have been regulating individual banks, b) towards their

own non-executive directors, for not standing up to the executive directors, c) towards representative groups of investors such as pension funds and insurance companies, for being insufficiently activist, and d) towards auditors, for being incompetent.¹⁸

It is of course quite possible to find fault with all of these groups. The FSA has admitted its inadequate inspection of individual banks as in the case of Northern Rock (FSA, 2008) but claims to have learned from this experience (FSA, 2009). Select Committee reports have revealed the weakness of non-executive directors who are not appointed for long periods, who are expected to devote little time to the job, who lack research resources to challenge board members, who lack expertise, and who typically share the culture of those they are suppose to be checking (House of Commons, 2009; House of Lords Economic Affairs Committee, 2009). Investor activism is a relatively recent phenomenon and activist investors mainly have to be content with 'symbolic' victories due to the dominance of 'passive' shareholders who support the company board in every vote. Lastly, auditing of the larger banks is carried out by one of the four main accountancy firms so competition is slight. Moreover, these firms also work as consultants to the banks as well as auditors; their consultancy income varies from 9% to 34% for the six largest banks (House of Lords Economic Affairs Committee, 2009; Q345). Hence the accountancy firms be disinclined to probe too far.

Overall, the blame directed by UK banks to these outside groups is consistent with the banks' failure to acknowledge having any responsibility themselves. In January 2011, although the banking reforms introduced at UK and international level were minimal, Bob Diamond, chief executive of Barclays, argued before the Treasury Select

Committee that it was time to stop castigating the banks and to 'move on'. Related to this, the UK Coalition government (2010-) has blamed the previous Labour government for its economic mismanagement and for the need to introduce sharp public spending cuts, thereby diverting attention from the banks' own role.

THE CAUSES OF THE FINANCIAL CRISIS: SUMMARY

It has been argued that the prime cause of the US and UK financial crisis was the operation of the banking systems in the two countries which in a context of global imbalances, loose central bank monetary policy, light touch regulation and implicit government guarantees of a bailout, developed business models which rewarded extreme risk-taking. This led to the rapid expansion of securitization and trading in derivatives, and wholesale borrowing as risk was transferred from the mainstream banks into a shadow banking sector which escaped regulation and minimized taxation. In principle, these 'innovative products' were about reducing risk; in practice, because their values were obscure and their incidence unknown, they greatly increased systemic risk. The result was an unstable system which could have been triggered into crisis in a variety of ways.

It is certainly true that subprime lending was one element of the credit expansion in the US which preceded the financial crisis and hence that it probably contributed to the crisis because subprime loans were one of the types of asset which was involved in the expansion of securitization. However they were not the only type of asset involved. As shown earlier, in terms of volume, subprime lending was dwarfed by other types of securitized credit and by the various kinds of derivative. There are no

figures that would allow us to identify the precise causal contribution of these various factors.

It is not being denied that investment funds flow internationally or that banks operate internationally, though they do so to varying extents. But the critical urbanist explanation which emphases these processes and structures does not explain the particular severity of the financial crisis in the US and UK. Only an approach which emphasizes distinctive national conditions can do so. The fact that the US and UK have been at the epicentre of the financial crisis and that there has not been a global financial crisis supports the idea that the prime cause lies in the structure and dynamics of the banking system of these two countries.

It is not being claimed that the different levels of financial crisis experienced in different countries can all be explained by their differing degrees of involvement in the UK and US practices outlined here. Some countries have not experienced financial crises (and ensuing economic crises) (Canada, Australia), while others were affected only minimally (China) On the other hand, there were countries whose financial crises were due to other specific national features, in combination with international forces. For Greece, the scale of public sector debt, which had been deliberately concealed, was crucial. In Iceland, the finance sector had grown to over 1000% of GDP and involved banks where owners, borrowers and shareholders were fatally intertwined. In Spain, despite controls preventing banks from owning securitized assets, the key domestic causes were an enormous housebuilding boom (in 2006 Spain built as many houses as France, Germany and the UK together) and the local savings banks whose lending policies were under political control (Garcia,

2010). Lastly, Ireland also had a rapid housebuilding boom in which a network of bankers, builders and politicians were involved. This is not to deny that UK banks lent to Ireland or to Iceland but these countries together with Spain and Greece had financial crises with specific domestic features which were distinct from those in the UK and US. The conditions described here for the US and UK are thus one route to financial crisis but not the only possible one.

Hence we deny the 'critical urbanist' argument that the financial crisis was triggered by the subprime mortgage crisis and have suggested that, because of their understandable dislike of subprime lending, critical urbanist writers have jumped to the conclusion that it must have been central to the financial crisis, without demonstrating it. By staying on the familiar territory of mortgage lending they have failed to recognize the internal structural weaknesses of the US and UK financial systems which made them unsustainable. This reflects an underestimation of the degree of autonomy of developments within finance within global capitalism. ¹⁹

As Farhi and Macedo Cintra have written,

'The financial crisis that started in the US in mid-2007, as a result of increasing default rates and the devaluation of real estate property and of financial assets linked to the US subprime mortgages, has given renewed strength to the debate about the current architecture of the US and international financial system, its potential risks and its mechanisms of supervision and regulation. This specific architecture turned a classic credit crisis into a financial and banking crisis of vast proportions, reaching a systemic dimension.' (2009: 2, emphasis added)

This quotation distinguishes the structure or architecture of the system in which the financial crisis broke out from the contributory processes, and argues that it is the former which deserves the label prime cause. This is precisely the view taken here.²⁰

ATTEMPTS AT REFORM

It follows from the above analysis that, to be effective, reform attempts must be directed at changing the structure and dynamics of the financial system and not simply at sub-prime mortgage lending. The fact that the proposed reforms have had this wide scope is recognition of the limited causal role of the subprime crisis. What progress has been made? For brevity, I will concentrate on the UK.

Ring-fencing of banks

In 2011 the Independent Banking ('Vickers') Commission reported. Its brief was to enquire into the systemic risks and level of concentration²¹ of the banking system (IBC, 2010, 2011). It rejected the complete separation of retail and investment banking in favour of 'ring fencing' these activities into two kinds of bank, but allowing them both to be owned by the same group. The report suggests that this would allow the group to support the retail bank from 'group' funds; it does not raise the question of draining funds from the retail bank to deal with problems in the investment bank. The solution also means that the group continues to benefit from the government guarantee to retail depositors, a significant subsidy in the current system. A key point is that proprietory trading, derivatives, and securitized assets would not

be permitted in retail banks; however, there are many grey areas concerning the allocation of activities between retail and investment banks. ²² The Report also requires divestment of bank branches by the Lloyds HBOS group which was created as a crisis response, and required the overriding of competition regulations. A weakness of the report is that the ring-fenced system need only be in place by 2019. Unlike all the Report's other recommendations, which are the outcome of careful argument, the 2019 date is not. This suggests that it was a political judgement the Commission was asked to incorporate but for which it could not give a reasoned argument. The Coalition government said it would accept the Report's recommendations but, following lobbying, stated that the most internationalised banks would not need higher capital ratios, rejected the idea of a nationally set leverage ratio, and allowed retail banks to conduct some risky activities. By 2012 there was mounting criticism of this watering down of the report's recommendations. By

Form and strength of regulation

A new system or financial regulation will be introduced in 2013, splitting the FSA into an industry-facing body, the Prudential Regulation Authority, which will be part of the Bank of England, and a consumer-facing body, the Financial Conduct Authority. This solution was advocated by the Conservative Party when in opposition. The Bank has established a Financial Policy Committee in parallel with its existing Monetary Policy Committee to recognize its new responsibility. This structure has the

advantage of concentrating information on financial institutions in one place, unlike the previous split between Bank and FSA.

However, more important, are the planned changes in the type of regulation. On paper these are radically different; the question is whether in practice they will be deliverable. Whereas in the past regulation was reactive and 'the presumption was that supervisors should not be exercising judgement on what might happen in the future; this was for management' (BoE/FSA, 2011: 5), the PRA will make such judgments. This means a 'hands-on' approach with extensive access to firms' data and powers to force a firm to adopt the PRA's views rather than its own, for example about levels of capital, liquidity, riskiness of new products, the firms' risk management structure and culture. These will be backed up by fines, legal powers and the power to close down a firm's activities. Firms which have greater capacity for systemic destabilization will be subject to closer regulation. 'The PRA's most senior supervisors will be closely and routinely involved in supervision of the most significant firms.' (BoE/FSA, 2011: 12) Hence the newspaper headline 'FSA to sit in on Board meetings.' Firms are not expected to engage in 'creative compliance' or regulatory arbitrage (BoE/FSA, 2011: 4). This means a sea change from past practices. The new pattern of regulation amounts to something approaching 'joint management', and must be unique. ²³ It addresses the self-destructive tendency of financial firms, but raises questions about its feasibility due to limited PRA resources and firms' concealment of information.

In addition, in 2009 an Act was introduced to specify the powers of the Bank of England, Treasury and FSA in relation to bank resolution, i.e. how to proceed in the

case of banks which were failing, powers which were revealed as shockingly absent in 2008.

Capital, liquidity and leverage controls

All of these controls have the effect of reining in bank activity to a more stable level. In 2010 and 2011 the G20 approved the Bank of International Settlements 'Basel III' rules which require higher tier one and core tier one capital ratios (8% and 6%, instead of 4% and 2%), an additional 2.5% for systemically important banks, and tougher criteria for what counts as capital. Engelen et al note that they are 'much less stringent' than those initially proposed (2011, 114). However, these too will only be fully implemented in 2019. These capital ratios are below current UK banks' capital ratios which indicates the feebleness of the reform, and the character of the G20 decision-making process which tends to proceed by consensus. The 'rational' argument for these limited measures was that at a time when depression threatens it was dangerous to introduce controls which might reduce bank lending. But this is special pleading which reflects lobby influence. Banks currently have a surplus of funds and are currently criticized for refusing to lend. They have failed to meet promises to lend to small businesses, and have preferred to use money borrowed at 0.5% for proprietory trading in derivatives and other speculative activities.

Interestingly, the Vickers report is critical of the Basel III capital ratios and proposes higher levels for retail banks which it thinks should be subject to national rather than international controls (IBC, 2011: 91-3). The Report's criticism of debt finance does

not appear in its final recommendations, but it recommends that equities should rise to 10% of assets (compared with the Basel III minimum of 4.5%) (IBC, 2011).

Basel III also includes a proposal to study liquidity ratios and leverage ratios and introduce proposals by 2019, but the chances that they will diverge much from current levels are low, though in the UK leverage ratios have fallen from 30:1 to 20:1 since 2008.

Derivatives

The global total of derivative contracts has increased from \$600tn to \$700tn between 2007 and 2010 (FSA, 2009: 81; BIS, 2011). There have been national level discussions of the need for central registries, central clearing, and a higher capital requirement for over the counter trading but no real progress has been made in the UK, US or elsewhere (FSB, 2011a).

Securitization

From 2007 to 2010 the global total value of securitized assets has fallen from \$12.1tn to \$3.4tn (IMF, 2011). The European Banking Authority has required originators of securitized credit to retain 5% of the value, as has the US Dodd-Frank Act. Otherwise, no action has been taken.²⁴

Remuneration

In 2011 controls were introduced requiring 50% of bonuses to be paid in shares with 40% spread over 3-5 years ahead, and making them dependent on bank performance. However, the effect of these controls was limited by banks raising basic salaries and reducing the role of bonuses. The PRA will also apply the EU directive introduced in January 2011 concerning remuneration principles and disclosure, but this does not concern the level of salaries and bonuses. In 2012 some banks announced they would link staff salaries to customer satisfaction rather than sales acheived.

Shadow banking sector

The importance of this sector was recognized in only two places in the Vickers Report (IBC, 2011: 90, 134). In each case it was pointed out that if stricter regulation were adopted it would force institutions to move activities into the shadow banking sector. The report contained no proposals to regulate it or reduce its size. In contrast, Chow and Surti's analysis of the Vickers and Volcker solutions concludes that 'enhancing oversight of the shadow banking sector is essential to prevent migration of systemic risk in response to tighter constraints on regulated banks' business models (2011: 31). At international level the IMF (2009b) and BIS (2010) are trying to persuade national governments to adopt reforms. The G20 based FSB has published a set of recommendations which include obliging banks to include on balance sheet the liabilities of all entities they sponsor, limiting the size of these exposures, and preventing banks from giving implicit support to non-sponsored entities (FSB, 2011b). They are also seeking to gather data on the operation of hedge funds. From past experience, these are not likely to make the transition to policy very soon. However, in 2010 the EU passed a Directive on Alternative Investment Fund

Managers which will come into effect in 2013. It will impose new regulations on hedge funds and private equity concerning leverage, transparency and remuneration and its effect will be greatest in the UK where hedge funds are concentrated. How much bite it will have is not yet known. In 2012 the IMF wrote that 'Looking ahead, a great deal will depend on whether the higher-risk activity—investment banking and trading—shrinks in size (contrary to current trends) and whether it remains in the banking sector or shifts to nonbank institutions. If activities move out of the banking sector, greater attention to regulation and supervision standards in the nonbank sector will be required to ensure that risks are properly addressed. If risks remain within the banking sector, the effects of increased concentration or the entrenchment of too-important-to-fail institutions will need to be considered' (IMF, 2012, p.18).

'Too big to fail' and 'too interconnected to fail'

These two problems remain despite the Basel III reforms (Chow and Surti, 2011). In a rational world, providing headquarters for major banks (famously described by Mervyn King as 'global in life' and 'national in death') would be recognized as a collective responsibility, and a limit placed on the maximum size for the banks headquartered in a particular country, individually and collectively. In the absence of such a measure, there is nothing to stop governments from attracting bank headquarters and encouraging the growth of 'global champions', such as RBS, or to stop banks optimizing their locational choice without regard for the effects on macrofinancial stability.

The question is whether the combination of ring-fencing, stronger regulation and small changes to capital ratios will change the business model used in banks. The lack of controls on liquidity and leverage, the incentivization of debt-based funding, the failure to touch the shadow banking sector, the continuing role of bonuses in encouraging growth and risk-taking, the too big/too interconnected to fail problem, and the choice of ring–fencing, as opposed to separation, which will leave banking groups vulnerable to decisions made in their investment banks, are so many reasons for concluding that the changes made or proposed are a long way from what is necessary.

Overall, the slow pace of reform of the banking system shows the continuing dominance of the finance sector over government, relative to households and business who have no answer to their question of why banks were bailed out when they were not. It would be satisfying to be able to describe the power structures and lobbying activity that have led to this outcome, but this is impossible to do. The U.S. practice of recruiting top economic and financial officials from banks, e.g. Henry Paulson, the Treasury secretary was a former Goldman Sachs chief executive, is well known. In the UK ties between the City and government officials are less direct but no less effective in ensuring that the government adopts City views as national interests. 124 members of the House of Lords are paid by financial firms or have financial clients and it is estimated the UK banking industry spent £92 mn on lobbying in 2011 (The Guardian, 10 and 11 July 2012.) One empirical study of US bank lobbying by Igan et al (2009) shows a strong correlation between the riskiness of the bank's activities and

the level of their lobbying contributions. Likewise, in the UK, 51% of donations to the Conservative Party in 2010 came from the City and six of the largest ten donors were from hedge funds, which were particularly vulnerable to tighter regulation (The Guardian, 9 February 2011). This suggests that while major financial institutions can rely on inside track lobbying, less well-established bodies have to rely on visible forms of lobbying.

The slow pace of reform also shows the incapacity of supranational organizations such as the G20, BIS, IMF and EU to take radical steps. As has been shown, some issues have barely been recognized (the shadow banking sector, apart from hedge funds), while those that have been addressed have been addressed in a feeble way. The IMF's October 2012 Global Financial Stability report is very pessimistic about the extent of reform.

This means that most of the drivers of the financial crisis remain unchanged. The transformation of the financial crisis into the economic crisis, has led European governments to give priority to the resolution of the Eurozone sovereign debt crisis and the implementation of austerity policies. The result is that the need for urgent action on financial reform has been lost. A future banking crisis remains entirely possible.

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¹ There is some unclarity about the terminology. Some writers use terms such as 'predatory loans' or 'high risk' loans. Writers who use the term 'predatory loan' (e.g. Newman, 2009) do not say whether all subprime loans are predatory or if not what

distinguishes those which are, or alternatively whether predatory simply indicates moral disapproval. Immergluck sees subprime loans as part of a wider group of 'high risk loans' (2009: 2) and does not use the term predatory. In the UK the term subprime is not in current use, but some common UK practices such as low initial interest rates rising after a fixed period are equivalent to the 'teaser rates' which some US writers identify as features of predatory loans.

2 See Hernandez (2009) for a summary of this work. In contrast, UK work has focused more on the house and neighbourhood than on ethnic minorities. For evidence on red-lining in the UK see Boddy (1980: 68-9).

³ In the UK in 2007 45% of mortgages were given without any income being stated, and for the period from 2007 to early 2010 the figure was 'nearly 50%' (Guardian, 13 May 2009, FSA press release, 13 July 2010) but the proposed response is to be more rigorous in judging borrowers' ability to pay rather than to abandon risk-based pricing (FSA, 2010).

⁴ To describe risk-based pricing as a theory rather than an economic practice seems odd but perhaps it is necessary to their claims about its wider significance.

⁵ As suggested above, UK mortgage lending frequently departed from the risk-based pricing norm, but while this may have aggravated the financial crisis in the UK noone has claimed that it was a central factor as is claimed for subprime lending in the US.

⁶ More information is provided on these below.

7 In the UK, figures for actual repossession on *all* mortgages were 0.3% in 2008, indicating the very different scale of mortgage problems.

⁸ In 2011, as fines levied by the FSA on banks rose, the Chancellor of the Exchequer announced that in future they would go to the Treasury rather than stay with the FSA and reduce the size of City firms contributions to it.

9 The source of this figure is a personal communication from the Association of Alternative Investment Managers in 2010. Following the period of declining equity returns, pension funds and insurance companies were keen to invest in 'alternative asset classes' which gave greater scope for profit (and were more risky). In 2006 3% of UK pension fund assets were held in hedge funds, and in that year Paul Myners (at that time a hedge fund manager, later to join the Labour government as City Minister) stated that pension funds should be able to hold up to 20% of their assets in 'alternative asset classes'.

¹⁰ The UK is generally seen as more weakly regulated than the US and this has facilitated the growth of the Eurobond market, of offshore activity, and of banking secrecy (Shaxson, 80-102, 247-250). See also the comment that 'London became a satellite for transactions by large US banks: "the place where you could do what you couldn't do back home: a place of financial arbitrage" ' (Farhi and Macedo Cintra, 2009: 4.)

¹¹ Strictly speaking what was new was more complex types of securitized credit (Turner, 2010).

12 For a description of its rise, see Tett (2009: 48-192) and Wainwright (2009).

¹³ For a more detailed analysis of securitization see Turner (2010).

¹⁴ In the US 97% of the value of derivatives held by commercial banks in 2010 was held by the top five such banks (Engelen et al, 2011: 61).

15 According to an academic specialist, '90% of the innovation there [in the derivatives market] was pure regulatory arbitrage'...I do not see a lot of merit into most of the derivative work created. Second, I am convinced that however they are described as very complex, part of the reason they are complex is that they were exactly designed to go around regulation.' (Prof Enrico Peretti in House of Lords Economic Affairs Committee, 2009: Q222)

¹⁶ And even when the bank is 84% state—owned as in the case of RBS which paid 100 bankers £1m or more and paid £1bn in bonuses despite making losses of £1.1bn for 2010 (The Guardian, 28 February 2011).

¹⁷ Between 2002 and 2007 it is estimated that the government subsidy to the world's largest banks was \$70bn/year (50% of average pre-tax profits), and that this rose to \$700bn in 2009 (Haldane, 2012.).

¹⁸ It has also emerged that after responsibility for bank supervision passed to the FSA, auditors were no longer contacted by the FSA as they were when the BoE was in charge (House of Lords Economic Affairs Committee, 2009: Q305).

¹⁹ See Dymski (2012b) for a similar argument.

²⁰ In this chapter the emphasis has been on the 'normal' running of banking systems. However, over time the role of tolerated abuses and criminality have become increasingly apparent. Individual traders have been taken to court for bringing multibillion pound losses to their banks (Societe Generale, UBS, JP Morgan), their defence being that breaching risk limits was an accepted practice. UK banks have had to compensate customers for mis-selling financial products (about £10bn in 2011 and

2012 for mis-selling payment protection polices). In Summer 2012 Standard Chartered was fined £220mn for transactions with Iran, HSBC £445mn for laundering drugs money - the FSA had published a 2011 report suggesting there was a lax attitude to such transactions – and Barclays was fined £290mn for its role in setting LIBOR, an internationally-used yardstick, with up to 10 other banks still to be fined. US prosecutors have taken a lead in this and have suggested London was a 'wild west' where anything went. This has led to a demand for criminal sanctions against individuals, and the Serious Fraud Office is investigating the LIBOR setting process.

²¹ The largest five banks accounted for 80% of residential mortgages in 2009 and 85% of current accounts in 2010 (IBC, 2010).

The US Dodd-Frank Act 2010 which was passed more rapidly than UK legislation is potentially stronger in its controls on banks. It re-introduces the separation of retail and investment banks (the 'Volcker rule') and prevents institutions receiving federal deposit guarantees from engaging in proprietory trading or investing in hedge funds or private equity. However, its implementation remains open to negotiation. The latter is an example of the general point that although the UK and US have contrasting styles of regulation in many areas (less and more law-based; more and less based on negotiation) in practice there is a great deal of convergence due to discretion in the application of US laws.

²³ In March 2012 the FSA was already demonstrating its new powers by challenging the capacity of the Co-operative group to absorb 632 Lloyds branches, trebling its branch network.

²⁴ The Eurozone crisis has led to increasing coordination among Eurozone central banks which could eventually lead to higher regulatory standards than those in the UK being imposed by the European Central Bank. However, this remains some way off.