

THE GLOBAL FINANCIAL CRISIS, 2007-08: ORIGINS, NATURE AND CONSEQUENCES

Paul Lewis

Birmingham Business School, University of Birmingham, UK

Keywords: credit, booms, financial crisis, global imbalances, banks, financial products

Contents

1. Introduction
 2. Should we blame the borrowers?
 3. A theory of recurrent financial crises
 4. One boom leads to another
 5. The expansion of credit/debt
 6. Global imbalances
 7. The process of liquidity recycling
 8. The central role of banks in credit expansion
 9. The incentive to increase leverage
 10. The paucity of regulatory capital requirements
 11. The move into residential mortgages
 12. Securitisation of loans
 13. Arbitrage opportunities, layers of products and increasing leverage
 14. Vulnerability through interconnection, leverage and maturity mismatch
 15. Consequences of the financial crisis
 16. Conclusion
- Glossary
Bibliography
Biographical Sketch

Summary

This chapter develops an account of the financial crisis of 2007-8 that relates the crash to the credit boom(s) that occurred prior it. Rather than blaming the failings of individuals within an otherwise sound international financial system, this chapter examines the features of the global economy, financial and non-financial, that were necessary for it to occur. This provides the context in which the beliefs and motivations of different actors were shaped and allows us to understand the interconnection and emerging vulnerabilities of the international financial system. Finally the consequences of the financial crisis are examined in terms of the 'real' economies which finance is supposed to serve.

1. Introduction

The most often repeated explanation of the financial crisis of 2007-8 (*The financial crisis is dated as occurring between 2007 and 2008 as this is when the major distress to financial institutions and the international financial system occurred. As this essay will demonstrate, the seeds of the crisis were sown well before this time and its*

consequences will be felt for many years afterwards.) is that reckless loans in the form of mortgages were made to people who had no possibility of paying them back in the United States. These loans were packaged up into exotic financial products, with certain tiers that were given high ratings by credit ratings agencies, and were sold to investors looking for high yields at low risk. The investors included many other banks and financial institutions in countries with completely unconnected housing markets. When defaults on the mortgages started to rise in large numbers across multiple regions of the USA, so-called 'correlation,' this led to unanticipated losses on the products. The complexity and opacity of the financial 'assets' made it extremely difficult to value them at all, leaving investors holding large quantities of 'toxic' assets that in the worst case scenario might be worthless. A chain of bankruptcies, balance sheet writedowns, capital raising from Asia, governments providing emergency credit lines, insurance and ultimately the nationalisation of numerous institutions followed.

This version of events is not untrue inasmuch as it describes some of the events that occurred. However, it is partial and in emphasising the choices of certain actors within one primary territory, leads to politically malleable but potentially misleading conclusions. The focus upon agency naturally leads to the attribution of blame wherein bankers and credit rating agencies are the main culprits. We can go further and say that regulators also failed, investors were at best negligent in their understanding of what they were purchasing, and sub-prime borrowers were potentially disingenuous in taking out loans that they should have known they could not ultimately meet the repayments on. Whilst it may be reassuring to suggest that purging the system of these specific failings will allow a return to 'normalcy', this account of human error and corruption misses the bigger story of structural causes behind the crisis.

To understand the origins of the crash it is necessary to unpack the boom in financial services and correspondingly in many 'real' economies that occurred prior to it. A brief examination of the theory of recurrent financial crises highlights the similarities and specificities of this crisis in relation to previous systemic crises. The current crash reflects a rapid drying up of liquidity following a massive expansion in credit issued to financial institutions and consumers in a number of countries. Explaining this expansion requires us to examine the macro-economic circumstances that led to it. This unearths a complex interplay of private and public actors within the structure of institutions that existed to manage finance, the ideas that they held and the strategies which they followed. It serves to highlight the interconnection of governments' social and economic objectives, central banks' policies, the generation and recycling of trade surpluses through the international financial system, and the concentration of investment wealth with corresponding demands for yield.

Second, it is necessary to dig down a level and examine the way that the banking system within the Anglo-Saxon and Anglo-Saxon-emulating countries operated. Banks were the central agents in channelling international funds, creating credit through their use of leverage and sponsorship of 'shadow banking' institutions including structured investment vehicles (SIVs), hedge funds and private equity funds. The second half of this essay examines the changes in their funding over recent years, their incentives to increase leverage and the regulatory restrictions that they faced. Linking with the first section, it explains why residential mortgages became the focus of credit, how this was

amplified many times using complex financial products and how this left the banks exposed to the subsequent crash.

Finally, the essay briefly considers the consequences of the crisis. It examines the relationship between the financial and non-financial sectors of economies and geographic linkages between developed and developing economies.

However, before beginning a comprehensive examination of the conditions of the supply of credit that it is argued led to the crash, it is first necessary to examine the argument that those who took the credit, the borrowers are equally to blame.

2. Should We Blame The Borrowers?

It is impossible to undertake a review of the nature and causes of a financial crisis without considering the consumers of credit. After all, you cannot force someone to take out a loan, therefore isn't irresponsible borrowing as much to blame as irresponsible lending? Clearly many borrowers have not acted as the lifetime income-smoothing optimisers of economic theory; however this is of little surprise to anyone, least of all the banks and other financial intermediaries that lent them the money. The evaluation of creditworthiness, restrictions on individual borrowing and the aggressive marketing of credit would be entirely unnecessary if individuals had access to perfect information on their future incomes and optimised their borrowing accordingly. Does this mean that 'reckless' borrowers should be considered a cause of this crisis? While they play a part, there are a number of reasons why the origins of this crisis lie in the structures and strategies that determined the supply of credit rather than its demand.

First, borrowers face national cultural pressures regarding what is socially acceptable and necessary debt within their communities. Comparative studies of national systems of housing provide a clear view of the different national perspectives and pressures to conform to patterns of home ownership and corresponding debt (Schwartz and Seabrooke, 2009). Such cultural and political norms shape longstanding and inter-generational aspirations, where people are willing to stretch themselves financially for the sake of social inclusion and 'normality'. This applies as much to the low income, much maligned group of people referred to as 'sub-prime' as it does to the higher income, lower risk socio-economic categories. There is a clear argument that sub-prime borrowers were mis-sold teaser loans by predatory lenders who were chasing short-term sales targets and did not care about the ability of the borrower to service the loan in the future. When mainstream financial institutions are actively trying to lend and governments encourage borrowing for home ownership (Crouch, 2008), it is disingenuous to describe the behaviour of borrowers who are essentially trying to live a vision that they are encouraged to pursue as reckless.

Second, the behaviour of borrowers is clearly altered by events in a way that suggests effect rather than cause. As asset prices, particularly the prices of houses boomed, and nominal interest rates remained historically low, the levels of debt that first time buyer households were willing to take on increased in line with this boom. This was driven by the norm of home ownership and the fear of exclusion generated by recent house price inflation substantially outstripping wage inflation. There were clearly some

beneficiaries, those who having bought at pre-boom prices were able to access the equity in their properties in order to spend it for consumption purposes. Whilst in some cases this behaviour may be categorised as reckless, it may be argued that it was shaped by a widely held belief, public, private and in policy circles, that the prices of houses could move only one way and if the debt from this additional borrowing became too onerous a burden that the house could always be sold. Although we might object to a system that produces unequal costs and benefits simply due to timing and age, borrowing was not reckless in the sense that there was never any intention on the part of the borrower to repay the loan.

Third, we might consider as reckless those borrowers who racked up large unsecured debts that they could not then manage to service. The image that comes to mind is of the frivolous spender with a lifestyle beyond their means, temporarily financed through debt. However, even for those borrowers for whom this stereotype may be partially accurate, it would be inaccurate to describe this as demand-led borrowing. Did the credit card companies raise credit limits without asking for consent? Did multiple providers regularly mailshot individuals offering new accounts? Were high interest repayment credit card cheques sent unsolicited through the post? We know that all of these practices and more occurred and have subsequently been criticised by regulators (Turner, 2009). There is also increasing research pointing to unsecured credit as a necessity for those on low incomes to simply live day to day (Montgomerie, 2009). Again, it seems hard to depict this as reckless borrowing.

For these reasons the remainder of this chapter focuses on the structures and strategies that led to a boom in credit prior to the crash.

3. A Theory of Recurrent Financial Crises

The theory that has attracted most adherents in explaining the current crisis is one that suggests financial crises are an inherent feature of capitalism, are recurrent, and may be explained using a general framework known as the 'financial-instability hypothesis'. Elements of this theory have a long history that may be traced back to the classical political economists. But it is the work of Hyman Minsky (1982), elaborated by Charles Kindleberger (2000), that has attracted recent attention (Barrell and Davies, 2008; Authers, 2009).

This theory suggests that initially a 'displacement' occurs, an exogenous shock to the macroeconomic system. This creates new profit opportunities in at least one important sector of the economy, which creates investment opportunities for companies and individuals with either savings or access to credit. If the new opportunities are large enough to dwarf the redirection of investment out of other sectors that now have a negative outlook, then a boom gets underway. The boom is fed by an expansion of bank credit, which feeds the money supply. Credit can be expanded through banks increasing their own leverage, through the development of new funding or credit instruments, for example derivatives and securitised debt (explored later). It may also be expanded through the creation of credit from outside of banks, for example via hedge funds, off-balance sheet vehicles, private equity companies etc. 'Crucial questions of policy turn on how to control all of these avenues of monetary expansion' (Kindleberger, 2000: 15).

A positive feedback loop may develop, whereby increasing demand for certain assets drives price increases, creating further speculative opportunities and increasing use of credit, further investment and income increases. Minsky referred to this as 'euphoria,' Adam Smith and contemporaries as 'overtrading'. The result is a 'bubble' or 'mania' in one or more asset classes. At some point the bubble reaches its plateau as some speculators begin to liquidate their positions but for a while these are balanced by new entrants. Finally, a signal occurs, which changes market sentiment triggering a rush for the exits and a vicious circle of sales reinforcing price declines. At this point the vast majority of investors have a preference for liquid assets – the most liquid of which is cash, rather than less liquid, riskier financial assets.

The downward spiral is halted by one or more of three possible events: 1) prices may fall so low that people are again tempted to move back into less liquid assets; 2) trading is artificially limited, for example by setting limits on price falls or closing exchanges; or 3) a lender of last resort emerges providing confidence amongst market participants that sufficient cash is available to meet demands for liquidity (Kindleberger, 2000: 13-18 outlines the model).

What distinguishes one crisis from another is the form of the initial displacement and hence the area where the bubble develops, the way in which credit expands, the trigger for the crash and the extent to which booms and busts are transmitted internationally. Many different historical financial crises may be explained in terms of this general framework.

Through detailed historical analysis of banking crises in developed and developing economies since 1800, Reinhart and Rogoff draw conclusions that support the financial-instability hypothesis. They find that, 'systemic banking crises are typically preceded by asset price bubbles, large capital inflows and credit booms in rich and poor countries alike' (Reinhart and Rogoff, 2008: abstract). They note that banking crises are not specific to either developed or developing economies, serial banking crises are observed in both, particularly historical financial centres including the UK, US and France.

The role of a real estate bubble is not unique to this crisis. In terms of post-World War II banking crises, Spain in 1977, Norway in 1987, Finland and Sweden in 1991, Japan in 1992 and the crisis across East Asian countries in 1997 all featured housing bubbles that peaked in the year of the crisis followed by long downturns (Reinhart and Rogoff, 2008: table 8).

The international spread of crises is also not new. The Barings crisis of 1890, the failure of a Trust company in New York in 1907, and the Great Depression from 1929, all triggered crises that enveloped multiple countries (Reinhart and Rogoff, 2008: table 6). Reinhart and Rogoff note the relationship between the share of countries experiencing banking crises and the degree of liberalisation of international capital flows, with 1900-1940 and post-1970 showing much higher shares of countries than the calm of the Bretton Woods era (2008: figure 1). There is also a higher probability of a banking crisis if preceded by a sustained surge in capital inflows.

International capital flows provide both a mechanism for credit to become concentrated

in particular asset classes and territories and for the effects of a crash to be rapidly transmitted beyond the location of speculation. This crisis contains features that facilitated the flow of capital into the US housing market and the rapid international transmission and amplification of the subsequent real estate crash through the ownership of debt securities and related derivative products. However, it also features a number of developed countries that share many of the same aspects of the US in terms of current account deficits, capital in-flows, increasing debt and real estate bubbles (see Reinhart and Rogoff, 2008: figure 3, for house price increases 2002-6). This made them vulnerable to a change in market sentiment irrespective of their banks' holdings of US debt securities.

Perhaps the most problematic aspect of the financial instability hypothesis is to separate an expansion in the availability of credit from a displacement that provides an avenue for speculation and credit to flow into. J.K. Galbraith in his account of the Great Crash of 1929 is careful to dismiss the claim that cheaply available credit from 1927, as a consequence of loose monetary policy in the US requested by Britain and Germany, *caused* the speculative boom. He suggests that we do not really know what caused a 'speculative orgy' in 1928 and 1929, but that speculation on a large scale requires a pervasive sense of optimism and historically a long period of prosperity and surplus savings (Galbraith, 1975: 37-9, 187-8).

Kindleberger allows more latitude, suggesting that 'Speculative manias gather speed through expansion of money and credit or perhaps, in some cases, *get started* because of an initial expansion of money and credit' (Kindleberger, 2000: 49). While recognising that it is difficult to describe monetary and financial displacements as external to the system (2000: 40), he views the third world debt crisis of the 1980s as a consequence of just that. Loose monetary policy in the US to combat the 1970 stock market crash and Richard Nixon's re-election campaign, fed the Eurodollar market, driving down interest rates and leaving the banks looking for outlets for this liquidity (2000: 19, 34-5). With stagflation and recession in developed economies the outlet was developing economies, almost irrespective of the viability of the project being invested in.

What we do seem able to say is that for a boom to take place requires not only the supply conditions of cheap money, but also the financial tools to be able to create credit, a sector of the economy which has some initially plausible reason for rising prices, and the capacity for the expectation of further rises to create an increasing, temporarily self-sustaining volume of speculation. Whether this crisis is unique in some way is a debatable point. Its distinguishing feature may turn out to be the extent to which the financial instruments being used made the degree of leverage and the extent of interconnection amongst financial actors opaque to governments, regulators and the internal management of the banks themselves. However, as will be seen, the story of this crisis is a complex one where the benefits of the boom likely made those governing the countries directly benefiting from it blind to the risks of a crash.

4. One Boom Leads to Another

There is a degree of consensus that to understand the conditions for the boom that led to the current financial crisis requires an appreciation of the previous boom that ended in

the dot-com crash. In the early 1990s, the US was coming out of recession and Alan Greenspan, Federal Reserve Chairman, signalled a shift in policy at the Fed to lower short-term interest rates than suggested by formal models of inflation. He combined this with a policy of small incremental changes to rates rather than the previous large adjustments. This new regime increasingly provided financial actors with confidence that the value of financial assets would not rapidly decrease due to large and unforeseen rises in interest rates (Morgan, 2009: 55) (*The capital value of a financial product theoretically depends on its future cashflows, discounted by an interest rate. If long-term interest rates are lower and less volatile then the value of financial assets today will rise.*). At the same time the revaluation of the dollar against the yen and the Deutsche Mark following the Plaza Accord of 1985 had improved the competitiveness and profitability of US manufacturing, which was providing a motor for growth (Brenner, 2004: 59).

After 1995, the US agreed to a managed strengthening of the dollar against its trading partners, reversing export competitiveness. The strengthening of the dollar was supported by inflows of foreign capital from East Asia that treated the US as a reserve currency with large and liquid markets for investment. The combination of low and predictable interest rates and foreign investment capital led to a boom in the US stock market. Some authors have emphasised the role of technological innovation as the 'displacement' that prompted the flow of capital (Perez, 2009). Whether innovation led capital or capital was looking for an outlet, there was a stock market and venture capital boom centred on new technology companies and supporting infrastructure (Morgan, 2009: 56-61).

While the stock market boom was not deliberately initiated by Greenspan, he realised the depressive effects of dollar appreciation and the Clinton administration's desire to balance the public sector budget, and was quick to harness the countervailing 'wealth effect' of a rising stock market as a powerful growth stimulus (Greenspan 1998 cited in Brenner, 2004: 61). Despite warnings of 'irrational exuberance' in December 1996, interest rates remained historically low during this period. The consumption stimulus from rising asset prices was later to be harnessed by Anglo-American politicians and their emulators in the post dot-com boom (Crouch, 2008: 481).

The difference between the two booms is the recipients of credit. In the dot-com boom, although richer households consumed more, reducing their saving rate as asset appreciation provided paper wealth, the major borrowers were non-financial corporations. Firms connected to technology were able to tap equity and debt markets, producing an annual growth in investment of around 10% between 1995 and 2000. When the bubble burst due to the inability of corporate profits to meet expectations (*Brenner attributes this to global overcapacity, specifically in manufacturing, and insufficient demand from consumers. US consumers had experienced real wage squeezes, despite rising productivity, in an attempt to improve profitability and other economies were too export oriented, relying on US demand (Brenner, 2004).*), this debt overhang had to be managed by the borrowing companies and the pension and other funds which had provided capital (Gjerstad and Smith, 2009: 284). Repairing balance sheets overloaded with debt and excess productive capacity became the focus of corporate America post-2000 (Brenner, 2004). This meant that any future surge in

liquidity could not be absorbed by non-financial corporation borrowing.

In the post-2003 boom, lower long-term US interest rates, again facilitated by capital inflows and Fed policy, provided cheap credit to be managed by financial intermediaries. The only sectors which could absorb this were households, government and financial services itself – feeding off the others. Between 2000 and 2003 household borrowing accounted for 70% of the growth of all non financial debt outstanding in the US. The vast majority, 85%, was accessed through home mortgages, where rising house prices provided a source of equity that could be withdrawn by borrowers as extra debt (Brenner, 2004: 70). This was truly a consumer boom, with housing and related financial products as the instrument to channel credit into consumption.

5. The Expansion of Credit/Debt

The expansion of loans to sub-prime borrowers in the US is only one part of a broader trend of an expansion in debt that was occurring in a number of countries over a sustained period. Looking at the US, for which there exists most detailed data, total debt expansion as a proportion of GDP really took off from the early 1980s, rising from just over 150% of GDP in the early 1970s to over 330% by 2005 (Bellamy Foster and Magdoff, 2009: 47-8). Household debt increased broadly in line with the general expansion, with a particular jump following the dot com crash to over 100% of GDP by 2008 (Crotty, 2009: 576). However, the major structural shift in the holding of debt was towards financial services. Its share of total debt grew from 10% to almost 30% between 1975 and 2005, at the expense of the share of non-financial business and local, state and federal government (Bellamy Foster and Magdoff, 2009: 48). This is not to say that there were no periods during which non-financial corporate debt increased, the run up to the dot-com crash being a prime example, but rather to emphasise the dramatic increase in the indebtedness of financial services. This growth in the ‘leverage’ of financial services also corresponds with a huge increase in its profitability, with its share of corporate profits rising from 10% in the early 1980s to 40% by 2006 (Crotty, 2009: 576). The US is not the only country to have increased its indebtedness, using household debt-fuelled consumption to drive demand and an expanding financial services sector acting as intermediary and generating corporate profits and tax revenues. The US, UK, Spain and Ireland had the highest ratios of household debt to gross disposable income of developed countries in 2005 (IMF 2008b: 18). Between 2000 and 2007 the number of countries with financial assets of more than 350% of GDP increased from 11 to 25 (Blankenburg and Palma, 2009: 531), indicating the growing size of the financial sector. The flipside of these assets are liabilities, the majority of which will be funded by debt rather than domestic customer deposits or shareholder equity.

-
-
-

TO ACCESS ALL THE 30 PAGES OF THIS CHAPTER,
Visit: <http://www.eolss.net/Eolss-sampleAllChapter.aspx>

Bibliography

Adrian, T. & Shin, H. S. (2008) Liquidity and Leverage. *Federal Reserve Bank of New York Staff Papers*, Staff Report no. 328. [Theoretical and empirical analysis of the behaviour of banks during economic booms]

Authers, J. (2009) On the competing ideologies behind the regulatory debate, *The Financial Times - Future of Finance supplement, Part two: regulation and governance*, October 26. [Overview of different theoretical rationales for the financial crisis and responses to it]

Balin, B. J. (2008) Basel I, Basel II, and Emerging Markets: A Nontechnical Analysis, unpublished paper available at <https://jscholarship.library.jhu.edu/bitstream/handle/1774.2/32826/Basel%20I,%20Basel%20II,%20and%20Emerging%20Markets%20a%20Nontechnical%20Analysis052008.pdf>. [Overview of the substantive content of the two Basel Accords]

Bank of England (2008) Financial Stability Report, October, London. [Biannual report on international and UK financial stability]

Barrell, R. & Davies, P. E. (2008) The Evolution of the Financial Crisis 2007-8. *National Institute Economic Review*, 206, pp 5-14. [Early analysis of the financial crisis outlining potential theoretical frameworks]

Basle Capital Accord (1998 [1988]) International Convergence of Capital Measurement and Capital Standards. [Formal statement of the first Basel Accord]

Bellamy Foster, J. & Magdoff, F. (2009) The Explosion of Debt and Speculation *The Great Financial Crisis*. New York, Monthly Review Press. [Historical review of the rise of debt prior to the Financial Crisis]

Blankenburg, S. & Palma, J. G. (2009) Introduction: the global financial crisis. *Cambridge Journal of Economics*, 22, 4, pp 531-8. [Introduction to a special edition of the journal reviewing the Financial Crisis]

Blundell-Wignall, A., Atkinson, P. & Hoon Lee, S. (2008) The Current Financial Crisis: Causes and Policy Issues. *Financial Market Trends*, 95. [Article that attempts to answer why mortgage securitisation took off after 2004]

Bomfim, A. N. (2005) *Understanding Credit Derivatives and Related Instruments*, London, Elsevier. [Textbook introducing complex financial products]

Bradley, C. M. & Shibut, L. (2006) The Liability Structure of FDIC-Insured Institutions: Changes and Implications. *FDIC Banking Review*, 18, 2, pp 1-37. [A review of the changing funding structure of banks in the US]

Brenner, R. (2004) New Boom or New Bubble? The Trajectory of the US Economy. *New Left Review*, 25, Jan/Feb, pp 57-100. [A long-run analysis of the US economy relating credit booms to international trade and manufacturing over-capacity]

Christoffersen, P. F. (2003) *Elements of financial risk management*, Amsterdam; Oxford, Academic. [Textbook introducing the principles of risk management in financial institutions]

Corden, M. W. (2009) China's exchange rate policy, its current account surplus and the global imbalances. *The Economic Journal*, 119, November, pp 430-441. [Analysis of the strategy and policies followed by China resulting in its trade surplus]

Crotty, J. (2009) Structural Causes of the Global Financial Crisis: a critical assessment of the 'new financial architecture'. *Cambridge Journal of Economics*, 33, 4, pp 563-80. [Analysis of the growth in financial services as a structural cause of the crisis]

Crouch, C. (2008) What Will Follow the Demise of Privatised Keynesianism? *The Political Quarterly*, 79, 4, pp 476-487. [Suggests that private credit provided a role previously fulfilled by public sector Keynesianism in the US and UK]

Dooley, M. & Hutchison, M. (2009) Transmission of the U.S. subprime crisis to emerging markets:

Evidence on the decoupling-recoupling hypothesis. *Journal of International Money and Finance*, 28, 8, pp 1331-1349. [Empirical review of the transmission of financial shocks from developed to developing economies]

Fidora, M. (2009) Sovereign wealth funds before and since the crisis. *Law and Economics of Money and Finance in Times of Financial Crisis*. Goethe-Universität, Frankfurt am Main. [Analysis of the size and strategies of sovereign wealth funds]

Fracasso, A. & Schiavo, S. (2009) Global imbalances, exchange rates adjustment and the crisis: Implications from network analysis. *Journal of Policy Modelling*, 31, pp 601-19. [Macroeconomic analysis of the interconnections that allowed the crisis to occur]

Galbraith, J. K. (1975) *The Great Crash 1929*, London, Penguin. [Classic history of the events that led to the Great Depression]

Giles, C. (2009) Recession to leave permanent scars, *The Financial Times*, November 23, London. [Newspaper article assessing the likely long-term implications of the financial crisis]

Gjerstad, S. & Smith, V. L. (2009) Monetary policy, credit extension, and housing bubbles: 2008 and 1929. *Critical Review*, 21, 2-3, pp 269-300. [Comparison of the current financial crisis with the Great Crash]

Hattori, M. & Shin, H. S. (2009) Yen Carry Trade and the Subprime Crisis. *IMF Staff Papers*, 56, 2, pp 384-409. [Evidence for the recycling of liquidity from Japan to the US via the Yen carry trade]

IMF (2008a) Global Financial Stability Report - Financial Stress and Deleveraging, Macrofinancial Implications and Policy, October, Washington DC. [Biannual analysis of the state of the international financial system]

IMF (2008b) World Economic Outlook, October, Washington DC. [Biannual forward looking assessment of the prospects for economies individually and collectively]

IMF (2009) World Economic Outlook, October, Washington DC. [Biannual forward looking assessment of the prospects for economies individually and collectively]

Jones, S. (2008) When Junk was Gold, *FT Weekend*, October 18/19, London. [Investigative article reviewing the role of credit ratings agencies in the crisis]

Kindleberger, C. P. (2000) *Manias, Panics and Crashes: A History of Financial Crises*, Basingstoke, Palgrave. [Fourth edition of a classic theoretical overview and history of systemic financial crises]

Mackenzie, M. & Scholtes, S. (2007) Left in the dark on debt obligations, *The Financial Times*, March 27, London. [Newspaper article examining CDOs before the crisis had really broken]

Mendales, R. E. (2009) Collateralized Explosive Devices: Why Securities Regulation Failed to Prevent the CDO Meltdown, and How to Fix it. *University of Illinois Law Review*, 5, pp 1359-1415. [Overview of the role of CDOs in the crisis]

Minsky, H. P. (1982) The financial-instability hypothesis: capitalist processes and the behaviour of the economy in Kindleberger, C. P. & Laffargue, J.-P. (Eds.) *Financial Crises: Theory, History and Policy*. Cambridge, Cambridge University Press. [Theoretical and technical exposition of the theory of recurrent financial instability under capitalism]

Montgomerie, J. (2009) The pursuit of (past) happiness? Middle-class indebtedness and American financialisation. *New Political Economy*, 14, 1, pp 1-24. [Analysis of the role of debt and credit within US society]

Morgan, J. (2009) *Private equity finance: rise and repercussions*, Basingstoke, Palgrave Macmillan. [Detailed history and analysis of the development of the private equity industry and its relationship to wider credit conditions]

Nocera, J. (2009) Risk Mismanagement - What Led to the Financial Meltdown. *New York Times*. [Investigative article examining the process of risk management and why it appeared to fail]

Partnoy, F. & Skeel, D. A. J. (2007) The Promise and Perils of Credit Derivatives. *University of Cincinnati Law Review*, 75, pp 1119-1051. [Legally oriented analysis of the role of credit derivatives in CDOs and the motivations of banks and investors]

Perez, C. (2009) The double bubble at the turn of the century: technological roots and structural implications. *Cambridge Journal of Economics*, 33, pp 779-805. [Relates credit booms and their consequences to significant technological innovations]

Reinhart, C. M. & Rogoff, K. S. (2008) Banking Crises: An Equal Opportunity Menace. *NBER Working Paper Series*, Working Paper 14587, pp 1-82. [Comprehensive analysis of systemic banking crises since 1800, supports a Minskyian interpretation]

Robinson, S. & Willenbockel, D. (2009) The Impact on Developing Countries of an OECD Recession. *IDS In Focus Policy Briefing - Policy Responses to the Global Financial Crisis*, 7. [Short review of the consequences of developed countries' recession upon developing countries]

Rouyer, S. (2003) Financial Guarantor CDO Exposure: An Overview. *Moody's Special Comment*. [Industry overview of the functioning of CDOs, partly technical]

Schwartz, H. M. & Seabrooke, L. (2009) *The politics of housing booms and busts*, Basingstoke, Palgrave Macmillan. [Review of the role of housing in different countries in relation to other national institutions such as the welfare state]

Seabrooke, L. (2006) *The social sources of financial power: domestic legitimacy and international financial orders*, Ithaca, N.Y.; London, Cornell University Press. [Examines the relationship between national financial policies and their effects upon different social groups]

Shin, H. S. (2009) Securitisation and Financial Stability. *The Economic Journal*, 119, March, pp 309-332. [Argues that securitisation was not a cynical activity by banks but part of the systemic incentive for them to increase leverage]

Siebert, H. (2007) China: Coming to Grips with the New Global Player. *The World Economy*, 30, 6, pp 893-922. [Review of the development, performance, structures and challenges facing China]

Soros, G. (2008) *The new paradigm for financial markets: the credit crisis of 2008 and what it means*, New York, PublicAffairs. [Critique of dominant economic theories of financial markets due to the 'reflexivity' of human actors]

Taleb, N. (2007) *The black swan: the impact of the highly improbable*, New York, Random House. [Critique of the standard methods of risk management due to uncertainty]

Tett, G. (2009) *Fool's Gold - How Unrestrained Greed Corrupted a Dream, Shattered Global Markets and Unleashed a Catastrophe*, London, Little, Brown. [Detailed narrative intertwining the development of credit derivatives with the financial crisis]

Tregenna, F. (2009) The fat years: the structure and profitability of the US banking sector in the pre-crisis period. *Cambridge Journal of Economics*, 33, 4, pp 609-32. [Review of the development of the US banking sector during the boom]

Turner, A. (2009) The Turner Review - A regulatory response to the global banking crisis, Financial Services Authority. [Detailed review of the causes of the financial crisis and how regulators should respond]

US Treasury, Federal Reserve Bank of New York & Board of Governors of the Federal Reserve System (2008) Report on Foreign Portfolio Holdings of US Securities as of June 30, 2007. [Statistical analysis of the holders of US financial securities]

van Duyn, A. (2009) Drag of structured debt is impossible to ignore, *FT Weekend*, 28/29 November, London. [Recent newspaper article reminding us of the existence of substantial 'toxic assets' within the banking system]

Wagstyl, S. (2009) Eastern Europe to test the market system, *The Financial Times*, November 26, London. [Newspaper article examining the state of the crisis upon Eastern Europe]

Biographical Sketch

Paul Lewis BSc (Dunelm), MA, PhD (Birmingham) is a Lecturer at Birmingham Business School, UK. He was previously a management consultant and manager in an internet start-up company. He was recently a Research Associate on the Warwick Commission on International Financial Reform and an

Economic and Social Research Council Postdoctoral Fellow in the Department of Politics and International Studies at the University of Warwick. His research focuses on the role of institutions, including the financial sector, in shaping patterns of income distribution in national economies. His work has been published in the *Cambridge Journal of Economics* and he has several working papers and a monograph forthcoming.

UNESCO – EOLSS
SAMPLE CHAPTERS