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What Really Happened?

Understanding the Credit Crunch

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Introduction

We face a credit crisis, not the demise of capitalism. Governments will intervene because they have to, but they have a choice about what form that intervention will take. To choose the right policy, they must be clear about what went wrong. Without this analysis, another crisis could be lurking around the corner.

The collapse of Lehman Brothers on 15th September 2008 marked the climax of the banking crisis. The world is still picking up the pieces, with policy-makers developing approaches to the freeze in bank lending, the effects on the wider economy and future arrangements for financial regulation. Many governments now have a very large – and potentially growing – stake in their nation's banks. Beyond the credit squeeze, we now face rising unemployment, the complete disappearance of some financial markets, and massively indebted consumers and countries.

How did it come to this? This Research Note analyses the major causes of the credit crunch and economic crises that we now find ourselves in. We argue that a combination of factors were at play: some global and international in nature, some created in the US and others UK focused.

The Global Backdrop

- Global imbalances led to cheap money and the need to chase returns
- The hunt for yield inspired frenetic innovation, complicating the task of regulators
- Low interest rates encouraged borrowing by both the corporate and the household sectors

The US Policy Errors

- The repeal of the Glass-Steagall Act allowed bank depositors' money to finance investment banking and capital markets activity
- The Community Reinvestment Act encouraged home ownership and increased the influence and remit of Fannie Mae and Freddie Mac
- The SEC loosened capital requirements to allow investment banks to lend more

The UK Policy Errors

- The tripartite arrangement confused regulator responsibilities
- Changing the inflation measure kept rates lower for longer, contributing to the NICE (non-inflation, consistent expansion) era
- The government failed to make any provision for an end to the NICE times

The Next Steps

We have identified issues that policy-makers must address in the medium-term: the formal recognition of warning signals, reinforcement of supra-national bodies, and a new structure for the banking system.
In the short-term, there is the more urgent requirement to recapitalise the banks via the formation of a "bad bank", and to establish an exit strategy for the government holdings.

Global Backdrop

The past decade has been described by Federal Reserve Chairman Ben Bernanke as "The Great Moderation". As we now know, the stability and growth of this period was to prove short-lived, as a number of macroeconomic factors combined to produce the current crisis.

Cheap money

Alan Greenspan promoted cheap money with such enthusiasm that his policy became known as "The Greenspan Put". Consistent with his approach, nothing was done to rein in the dot com boom of the late nineties. Once the bubble burst, interest rates began to fall. The 9/11 attacks added to the sense of urgency that America must not fall into a deep recession: interest rates duly fell to 40 year lows.

At the same time, the world was subject to the supply shock generated by the resurgence of China. This created a double whammy for Central Bank policy around the world. First, it kept consumer price inflation low — Gerard Lyons of Standard Chartered has commented that CPI should have been renamed "China Price Index" – which left short-term interest rates low. The second effect came in the longer end of the yield curve: China's rapidly growing surplus, generated by a vast increase in FX reserves from a pegged currency, was channelled into the US Treasury market. This "savings glut", as Ben Bernanke called it, meant that interest rates were low across the curve. This was a highly unusual situation – when Alan Greenspan first noticed it, he called it a "conundrum" – which had particular significance for the housing market, given the longer duration of mortgage debt.

Chasing returns

Low and stable interest rates seemed to imply that the existing state of affairs would persist. Risk seemed low, with little volatility in the markets. This made it difficult to make money. Market participants therefore became desperate to make returns – and the low interest rates provided them with the solution. If you borrow money, you can make more money, as long as asset prices keep going up.

This became a virtuous circle. Everyone could borrow money cheaply, and buy more, which drove asset prices higher, thus encouraging people to borrow more.

Such a credit boom would normally run out of steam as interest rates rise in response to higher inflation. But with China's supply streaming into the world, inflation – and therefore interest rates – remained low.

There was a further destabilising effect of China's presence in global markets: they provided a source of endless liquidity. A growing China had to buy more US Dollars to maintain its currency peg in the face of appreciation pressures. These dollars created deep and liquid markets: every buyer could find a seller and vice versa. The excess liquidity pushed volatility even lower, and investors had to search far and wide for returns, spreading more money around the system as they went.

Innovation in finance

The search for higher yields led to massive innovation in financial products. Advances in quantitative research enabled risk to be sliced and diced with the mathematician's assurance that something calamitous would happen only once in a lifetime. The ability to quantify risk in this fashion meant that new markets developed: the wall of money found a new outlet.

Unfortunately many of the risk models were based only upon market data accumulated during the recent period of low volatility. They failed to encompass the risks attaching to longer periods.

The new products largely focused on the part of the market that was most applicable to the mathematicians: debt. Loans, company debt, and mortgages all have fairly predictable cash flows – and with some probability modelling, it seemed easy to separate out which of these were more or less risky. Once products can be divided into risk categories, different yields can be charged for bearing particular risks.

In terms of the credit risk on debt investments, financial innovators had that one solved too: the creation of credit default swaps. These derivatives provided insurance contracts, in case of a counterparty default. It seemed as if every eventuality was covered. You could buy certain tranches of debt related investments, safe in the knowledge that most of it would never go bad, and even if there was an underlying default, you would be hedged.

There seemed no end to the ever increasing circles of lower volatility, higher liquidity, more innovation, and increasing leverage.

Corporate Governance

Bankers and hedge fund managers were operating rationally based on their incentive structure. The problem lay not in the money they made, but in the risks they took. Commercial bankers face a different risk profile than hedge fund managers, due to the way in which their personal decisions impact their potential wealth.

Hedge fund managers have so much of their personal wealth invested in a fund that they feel the pain of a poor decision. Investment bankers, trading in risky securities, also face immediate unemployment if they lose too much money. But banks that are systemically important – the ones that hold depositor money – have an implicit guarantee that they will be saved if the bank fails. This skews the incentive structure for bankers working at commercial banks. For them, there has been no downside to taking on more and more risk, as the government would ride to the rescue.

The only check and balance on these banks comes from their shareholders. Our present method of corporate governance calls for shareholders to hold management to account. This does not occur as it should. Private shareholders are in the main too small. Institutional shareholders are more interested in meeting their benchmarks (i.e. matching indexes of performance, as opposed to maximising absolute returns) than in exercising their responsibilities as owners.

The macroeconomic backdrop of the NICE decade meant that it was in no one's interest to take away the punch bowl at the credit boom party.

Since WW2, we have learnt much about banking crises.

- At the IMF, Luc Laeven and Fabian Valencia have examined 42 crises in 32 countries since 1970. Their report shows that the average cost of a crisis is 13.3% of GDP.
- A series of studies by Carmen Reinhart and Kenneth Rogoff of 138 post-WW2 crises shows an average GDP decline of 9.3% and an average peak to trough duration of just under two years.
- They also report that public debt balloons by an average of 86% over the three years following a banking crisis. This occurs not so much because of banking bail-outs (governments are apt to confuse guarantees with cash), but to make up for falls in revenue and increased expenditure on welfare and other fiscal stimuli.

US Policy Errors

Since the 1990s, a number of decisions taken by the US authorities to improve prosperity and growth had the unforeseen consequence of increasing risks within the system.

Glass-Steagall

The Glass-Steagall Act was passed in 1933 to separate commercial banking and investment banking activities, after the Great Depression was shown to have exposed the risks of combining the two.

Over the 1980s and 1990s, US investment banks started to dismantle the Act bit by bit, before it was officially repealed by Bill Clinton in 1999 following the takeover of Citicorp by Travelers (the parent company of Salomon Smith Barney) the year before. The Congressional Research Service had already put together a list of Pros and Cons over the repeal in 1987, which prove illuminating when considered in the light of the current crisis. The arguments against repeal include[1]:

1. Conflicts of interest characterize the granting of credit (lending) and the use of credit (investing) by the same entity, which led to abuses that originally produced the Act.
2. Depository institutions possess enormous financial power, by virtue of their control of other people's money; its extent must be limited to ensure soundness and competition in the market for funds, whether loans or investments.

[1] Congressional Research Service. "The Glass-Steagall Act: Commercial vs. Investment Banking", 29th June 1987 http://digital.library.unt.edu/govdocs/crs/permalink/meta-crs-9065:1

3. Securities activities can be risky, leading to enormous losses. Such losses could threaten the integrity of deposits. In turn, the Government insures deposits and could be required to pay large sums if depository institutions were to collapse as the result of securities losses.

4. Depository institutions are supposed to be managed to limit risk. Their managers thus may not be conditioned to operate prudently in more speculative securities businesses.

Housing Policy

Bill Clinton also presided over another policy that stored up problems for the future.

Qualifications for mortgages were relaxed following the 1993-5 reforms of the Community Reinvestment Act. At the time, this evoked almost universal acclaim, in part based on academic evidence that home ownership stabilises neighbourhoods and families. Nor were the insurers' political masters in any mood to touch the brakes: Democrats were delighted that their supporters were getting onto the housing ladder; Republicans assumed that in time new property-owners would come to see things their way. This bi-partisan support enabled the insurers to continue business as usual, despite blistering criticism from analysts of their management in 2004 and their roseate book-keeping in 2006.

The US Department for Housing and Urban Development supported Fannie Mae and Freddie Mac as they lobbied Congress for funding. Meanwhile, mortgage brokers got weak applications approved, some of them joking that they were offering "ninja" loans, that is to borrowers with no income, no job and no assets. Few wish to argue with the underlying objective of promoting family housing. Nonetheless, government social policy created incentives that ultimately destabilised the system.

The Leaking Money Supply

To go to the heart of the matter and simplify heroically, the US Federal Reserve failed in its obligation to control the supply of money. They supply money through the regulated banking sector, which passes it on to enterprises and households at a pace governed by internationally agreed capital adequacy rules. These are based on the banks' "tier one" and "tier two" capital, which are defined by international treaty (the "Basel Rules").

For many years there has been a leak in the controls upon US money supply: the effect of the mortgage insurance issued by Fannie Mae and Freddie Mac has been to circumvent them. Over the most recent economic cycle, this leak became acute, adding some 50% to US M2 (broad money supply) by the middle of 2008[2].

[2] Freddie Mac and Fannie Mae Annual Reports 2008. Federal Reserve Money Stock measures.

Looser Capital Requirements

In 2004 the SEC granted concessions on capital adequacy to the then Big-Five New York investment banks, enabling them to lend up to three times the former limit. In response to a European Union proposal to regulate the foreign subsidiaries of US banks, the SEC managed to negotiate a compromise whereby the SEC would add oversight of the US parent company to its responsibilities in order to avoid the European regulation. In exchange for allowing the SEC to access the parent company's books, the banks demanded looser capital requirements.

This enabled the US investment banks to lend up to three times the former limit. The SEC was to oversee any increase in borrowing, but in practice it rarely exercised this right. Furthermore, they let the banks use their own models to assess the riskiness of their assets, effectively outsourcing their oversight role. This is why banks ended up operating at 20-30 times leverage, undoubtedly contributing to the boom in borrowing.

Finally, the regulated banking sector became entangled. Some of the new financial products (the famous collateralised mortgage obligations and credit default swaps) were misunderstood by rating agencies and by banking supervisors, in particular in Europe. The new Basel II regulations made the calculations for risk weighted assets more complicated, and less transparent. This led regulated banks to make the mistake of believing that they were in a position to add to their lending capacity.

UK Policy Errors

The IMF – amongst others - has predicted that the crisis will hit the UK economy the hardest. This is not simply due to the perception that our economy is fuelled by the now deteriorating financial services and housing sectors. It is because of a number of policy errors made over the last decade.

The Tripartite Arrangement

The decision to make the Bank of England independent in 1997 has been widely lauded, although in retrospect the Bank's job was made easier by the NICE conditions generated by China. The problem in the new institutional arrangement came from the three-way split of responsibilities between the Bank, the FSA, and the Treasury.

Events have shown that it was a mistake to take banking supervision away from the Bank of England, and put it under the remit of the FSA. Although the FSA performs an exemplary and well respected role as supervisor of the individual and of the individual market, it requires a different skill set to supervise the banking sector as a whole. The FSA can write the rule book to protect retail investors, or reduce money laundering, but it does not interact with the whole market on a daily basis. Conversely, the Bank of England is in constant interaction with the market – via its daily open market operations, its currency reserve

management, and banks' daily deposits of reserve requirements. It is therefore the most suitable body to watch for tensions within the aggregated banking system.

The Bank did spot many of the issues that led to the credit crunch, but the tripartite arrangement left it as a powerless observer. It was not given the tools, or the responsibility, to act. The problem with splitting a responsibility is that no one knows who must catch the ball when it is dropped. And so it was that the UK experienced its first bank run in over a century, when Northern Rock slipped through the cracks.

Changing the Inflation Target

At exactly the same time that China was providing a disinflationary force, Gordon Brown decided to change the measure of inflation that the Bank of England should target. The Retail Price Index excluding mortgage interest payments (RPIX) had been followed for many years, but in 2003 the Bank's target was changed to the EU-Harmonised Consumer Price index (HICP). This choice was made at the time of the decision not to join the single currency and was supposed to bring about convergence with the eurozone. However, because the HICP took no account of house prices the Bank of England was effectively mandated to ignore the house price boom.

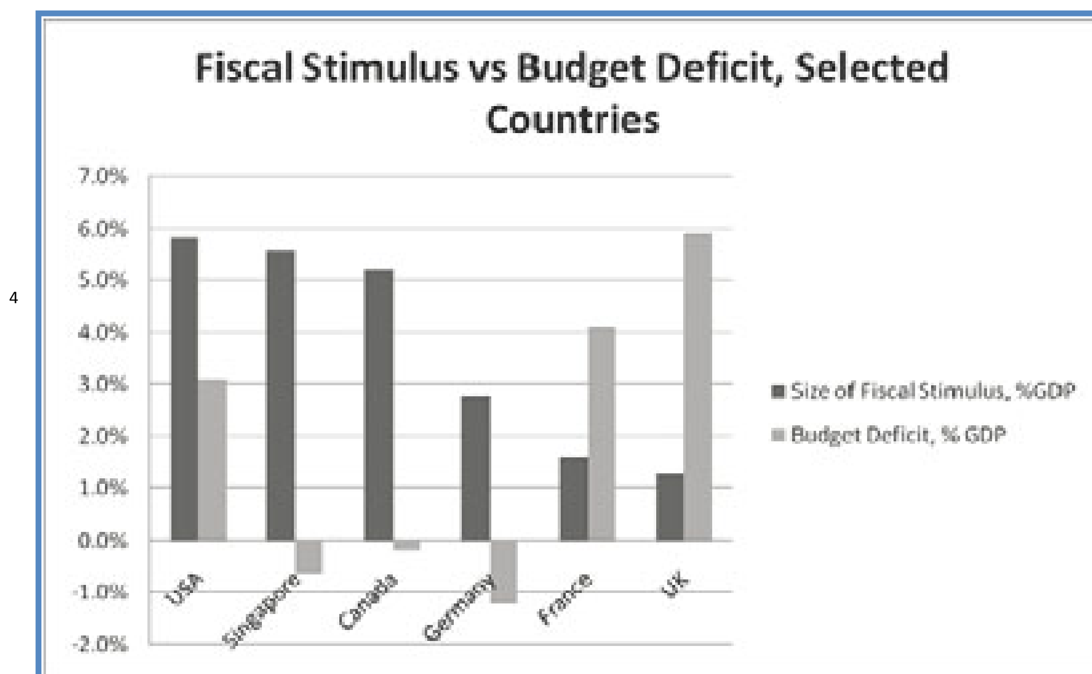
The target was lowered from 2.5% for RPIX to 2% under HICP. This hides a significant difference between the actual measures: when it was introduced, RPIX was running over twice as high as HICP, at 2.9% versus 1.4%. Notice, that by changing the target at this time, the bank would be below target on the new measure, but above it on the old one. *Ceteris paribus* this meant that the Bank could keep interest rates lower than it otherwise would have done, as then-MPC member Stephen Nickell commented at the time: "[the switch] will involve slightly looser monetary policy for a limited period than would otherwise be the case"[3].

Poor Fiscal Management

During the boom time, the UK Government failed to put aside enough money to deal with a potential downturn. The higher tax receipts were put straight into public spending. Conversely other countries saved their income, and now enter the current crisis with a budget surplus. This has allowed them to unleash their savings in the form of a large fiscal stimulus. Apart from the US, a bigger budget deficit has led to a reduced fiscal stimulus. The US is the exceptional case: US deficits can be more reliably financed due to the dollar's status as the world's main reserve currency.

[3] Speech by Stephen Nickell "Two Current Monetary Policy Issues", 16th September 2003, p.1. http://www.bankofengland.co.uk/publications/speeches/2003/speech202.pdf

[4]



The UK has no room to make such a giveaway. November's pre-budget report, calculated using very optimistic growth forecasts, showed that the VAT cut and automatic stabilisers will increase our debt to GDP ratio by 40%, reaching 57% after 5 years[5]. The IFS Green Budget shows the extent of the deterioration under different scenarios: under Morgan Stanley's "pessimistic" situation of a 2.5% decline in GDP in 2009 (the current consensus forecast is 2.25%), the debt to GDP ratio would rise to 90% over 5 years[6].

The poor fiscal balance does not just have the effect of reducing the ability of the government to stimulate demand: it also hampers UK PLC's ability to finance itself in the international capital markets. The massive issuance of Gilts is likely to see the UK's cost of funding increase, as the markets will demand a higher interest rate to encourage them to buy UK debt. It could also undermine the pound: this has already started to happen with sterling losing a third of its value since the credit crunch began, as the markets anticipate that the UK is poorly placed to deal with the recession.

This leaves the UK in a bind. The government's decision to spend the proceeds of the boom leaves it unable to offer much to minimise the effects of the recession. This has the negative feedback loop of dissuading foreign investors from purchasing UK assets due to our relatively weaker GDP growth, undermining sterling and potentially raising interest rates, which could harm any future recovery.

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[4] USA: http://www.nytimes.com/2009/01/29/us/politics/29obama.html?ref=us; Singapore: http://www.forbes.com/feeds/ap/2009/01/22/ap5950750.html; Canada:http://www.dailyfx.com/story/market_alerts/fundamental_alert/Canada_Announces_Fiscal_Stimulus_Package__1233097786189.html; France, Germany, UK: http://www.economist.com/world/europe/displaystory.cfm?story_id=12947570; Revenue minus expenditure: https://www.cia.gov/library/publications/the-world-factbook/fields/2056.html; GDP figures: https://www.cia.gov/library/publications/the-world-factbook/rankorder/2001rank.html

[5] HM Treasury estimates, p.190, Pre-Budget Report 2008

[6] IFS Green Budget 2009, p.125

Conclusions

Once the banking crisis has stabilised and the world economy is in prospect of a return to growth, the authorities are going to face three medium-term policy issues plus one immediate problem.

Medium-term policy issues

• **The need to develop warning signals to guard against future crises.** There is reason to give more credence to the Bank for International Settlements (BIS) – or more informally, the Central Bank for the world's Central Banks – which seemed to get things right. In 2007 they provided the early warning, commenting "it could also be suggested, consistent with the inherent difficulty of making longer-term valuations, that the market reaction to good news might have become irrationally exuberant. There seems to be a natural tendency in markets for past successes to lead to more risk-taking, more leverage, more funding, higher prices, more collateral and, in turn, more risk-taking. The danger with such endogenous market processes is that they can, indeed must, eventually go into reverse if the fundamentals have been overpriced. Moreover, should liquidity dry up and correlations among asset prices rise, the concern would be that prices might also overshoot on the downside."[7]

• **The international structures of economic government need to take account of the fresh balance between the world's economies.** This means rebalancing the IMF, World Bank and BIS to grant greater prominence to the economic powers which have emerged since the post WW2 settlement, in particular Brazil, China, India and Russia.

• **Financial regulation needs to be reviewed and where appropriate revised**, with a view to making sure that we don't throw the baby out with the bathwater. Lessons can be learnt from Glass-Steagall when setting out the new structure of banks

Immediate issues

These medium-term policy issues are trumped, however, by the urgency of the fiscal and political imperative to create an exit strategy to get the banks off government books. Otherwise investors, consumers, and regulators will have no idea how to treat them.

It is the nature of crises that the political response will be piecemeal and ad hoc. In restoring stability, it is important that a plan emerges once the initial fires have been fought. It needs to be clear how the part-nationalised banks will compete with the privately owned ones, or the recovery might be choked off by lack of competition and poor management. As the BIS noted in their 2004 Annual Report, with reference to the

[7] BIS Annual Report 2007, p. 144 http://www.bis.org/publ/arpdf/ar2007e8.pdf

failed banks of China and Japan, “An even greater challenge than recapitalising commercial banks, difficult as that may be, will be to ensure they can operate profitably over time. In this latter regard, one of the most pernicious forces is continued political influence.”[8]

Taking the banks out of their self-imposed lock-down was necessary for the economy – and society – to function. Since the nadir of the crisis in October 2008, the question has become whether public funding should go to recapitalise existing banks or to sequester and repurchase bad debt to be consolidated into a new “bad bank”? It is impossible to see how reconstruction can do without both measures. This would enable the formation of a “bad bank” and subsequent work-out, which often proves profitable in the medium to long run.

The problem faced by the authorities is to identify the extent of the toxic debt. The exercises in bank recapitalisation have recognised billions of dollars of losses world-wide. To refrain from chalking such large numbers up front, politicians have recently preferred to issue guarantees over further losses. This means that the total cost is uncertain and progress towards the full recognition of bad debts will be slower. Although this method is politically expedient, it is very destabilising for the markets to introduce more uncertainty into the system. This compromises the goal of underpinning the banking system.

Furthermore the guarantees present moral hazard writ large, not to say creeping nationalisation of the banking system. If confidence continues to fall, particularly as bad debts rise as a result of the recession, there is more and more chance that the part-nationalised banks will become fully nationalised. Potential shareholders will be discouraged from holding banking shares – why be part of a smaller and smaller group of minority shareholders, when the bank looks technically insolvent and no-one else wants to buy in? It is this sort of collapsing sentiment that can become self-fulfilling, as was almost the case in the first two weeks of this year.

All of this leaves government with an equity position in banking, nominally temporary, but with no clear exit. It is empty to speak of “arms-length management”; unless this is sorted out promptly, governments with banking interests will face conflicts of interest which will shackle them for years to come.

[8] BIS Annual Report 2004, p. 152. http://www.bis.org/publ/arpdf/ar2004e8.pdf

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The work of the Economics unit at Policy Exchange

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