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Governance in the Global Economy

HIDDEN LEVERAGE AND
A FALSE SENSE OF SECURITY

Paul Davies

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Danish Institute for International Studies, DIIS
Strandgade 56, DK-1401 Copenhagen, Denmark
Ph: +45 32 69 87 87
Fax: +45 32 69 87 00
E-mails: diis@diis.dk
Web: www.diis.dk
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Paul Davies is Deputy Capital Markets Director at *Financial Times*.

Contents

Abstract 5

Hidden leverage and a false sense of security 7
Historical context, or the super-bubble 9
The role of regulation 11
The false sense of security 14

Bibliography 17

Abstract

The story of the current financial crisis is a story of liquidity, leverage and security. Liquidity in the system was far less real than was assumed, leverage had become too high, often by being disguised or hidden off balance sheet and the value of security or collateral was too much presumed to be unlikely to ever decline.

The collapse of New Century Financial, a leading US subprime mortgage lender, can be seen as a micro-version of the sudden reversal of fortunes that befell the system as a whole. US subprime was not the cause of the collapse, but one of the most excessive and vulnerable parts of a system gripped by the same fever. This paper looks at the long-term economic and regulatory developments that laid the ground and created the motivations for the broad-based credit bubble witnessed in the past decade. It looks at the central role of the US economy, the effects of some previous crises, the deregulation of banking and the role of newer "controls" such as the focus on risk-based capital and the use of mark-to-market accounting. It also raises a question about the role of central banks as lender of last resort – and how that will continue to effect motivations in banking.

Hidden leverage and a false sense of security

> 'Stability is destabilising' as relative tranquillity encourages more risk taking and innovative behaviour that increases income even as it disrupts the conditions that generate 'coherency' and 'tranquillity'. That is, the market forces that operate when a system is stable will push it toward instability, so that even if anything like an equilibrium could be achieved, it would set off behavioural responses that would quickly move the economy away from equilibrium.
>
> Dimitri B Papadimitriou and L Randall Wray, Minsky's Stabilizing an unstable economy: two decades later.

When New Century Financial's shares were suspended from trading in New York in early March 2007, no one still doubted that the US subprime mortgage sector was in real trouble. Arrears had risen sharply in the last few months of 2006 and house prices were already off their peak. The company was one of the top-three subprime lenders and at the vanguard of the modern US mortgage industry. Within weeks it was declared bankrupt.

However, next to no-one in the world of finance and very few in economics or academia were predicting that the troubles of this somewhat obscure market would amount to much more than a storm in coffee cup. Even among those warning about the risks to economic growth and global markets from a US housing market decline and the subsequent knock on effects for consumer spending – the engine of the US, and so ultimately the world, economy – none that I have come across imagined in their worst fears that in October 2008, the entire global system of finance and banking would be pushed to the brink of complete and total failure. But with hindsight, all the clues were there.

New Century had seen its business model collapse in on itself. In the new mortgage industry, it came first in a chain of specialised and segregated operations that channelled cash from US and international capital markets to borrowers on the ground. The company used an army of brokers to find mortgagees whose low income compared to the value of the home they wished to buy, or poor credit scores meant they could not borrow through traditional, cheaper channels.

New Century borrowed money cheaply via short-term credit lines from large investment and commercial banks and used this to fund its mortgages. These mortgages were then sold to the

banks who packaged them up into bonds that could be sold all over the world – anywhere there were dollars to be invested.

It took time for the company to supply enough loans for the banks to create these saleable securities. The banks could end up holding pools of mortgages on their balance sheets for weeks or months before they could get the next bond deal out of the door. To protect themselves, the banks had contractual covenants that forced New Century to buy back any mortgages that went bad in the interim.

Unfortunately, once the US housing market peaked, all the forces that had been driving prices higher – the continual remortgaging, equity release, and pursuit of converts to the home-owning culture – were exposed as little better than a Ponzi scheme and the system switched sharply into reverse.

New Century faced demands to buy back increasing numbers of mortgages where borrowers were failing to repay even though they had only recently taken out the loans. The final mortgage made in the long housing boom was always going to be the mortgage too far. New Century's lenders, seeing that it was being hampered in making new loans by being forced to buy back existing, dysfunctional loans, used their own covenants to start withdrawing funding. This in turn further restricted New Century's ability to do either thing and those who had bought its bad mortgages had to try and sell them quickly to recover what money they could.

The company entered a terminal spiral of decline that can be seen as a small scale version of the unstoppable switch into reverse gear that has since taken hold of ever-broader and more fundamental elements of the world-wide financial system. New Century's tale contains the main themes that slowly, but surely, have pulled apart banking and financial markets around the world. Those themes are: liquidity; leverage; and security.

The most important point about the US subprime mortgage crisis is not that it *caused* the financial meltdown that followed, but that it was one market that characterised - and perhaps took to the greatest extreme – a fever that gripped the entire system. It was the weak point that buckled first and it led to the first set of losses for an interconnected banking and financial system. As a whole, this system touched every other area in which the structure of leverage (through borrowing, or financial engineering) and the rules of the game led to a succession of traps being triggered. A similar reversal of processes as befell New Century rippled across the system.

Another myth about subprime is that it was all about lending to the poor and misfortunate, it wasn't. In California and some other states it was much more about the middle classes using so-called "affordability products" to stretch for the houses they thought they deserved.

HISTORICAL CONTEXT, OR THE SUPER-BUBBLE

To understand how we the reached the point where the conditions were in place for this to happen, we need to appreciate the particular historical path that markets and finance have followed since the second-world war. The US became increasingly the world's leading economy and the dollar its reserve currency. In the 1980s, the US also gained its reputation for a commitment to price stability, which has since allowed it to cut interest rates aggressively and stimulate its economy through private borrowing.

The rise of China and the disinflationary influences on Western economies and the huge accumulation of dollars among the Asian exporters and oil and gas exporters are all crucial factors in The Great Moderation - as the economic conditions of the past two decades came to be known.

These are key factors in how so much leverage was applied to the US housing market and other areas such as UK housing, private equity buy-outs and hedge funds. Low interest rates when sustained – and the long-term stability such a situation appears to reflect – encourages risk taking. It lowers borrowing costs and makes debt seem less risky for both borrower and lender.

Banks themselves also became big borrowers, raising funding from outside their own countries to boost balance sheet expansion. In the UK, for example, according to the most recent bank of England Financial Stability Report from this month, banks' domestic deposit bases and their lending and investment assets were roughly equivalent at the start of this decade. By the first half of this year, UK banks' lending and investments exceeded their domestic deposit bases by £700bn, more than 10 per cent of the near £6,500bn total assets of UK banks.

For investment markets it also had another important effect: sparking the hunt for yield. In a low rate, high liquidity environment, corporate and individual borrowing rates decline, reducing the rewards from investing in loans and bonds.

The hunt for yield was also given strong additional impetus at the start of this decade by the collapse of the dotcom stock market bubble. Pension and insurance funds were already being advised to rely less on stock investing and move more funds into fixed-income, or debt, products before the bubble burst.

At the same time, the internet-driven stock market mania of the 1990s had encouraged a huge flood of ordinary people – so-called retail investors – in Europe to put their savings into stock-based mutual funds and trusts. Such stock funds were already common in the UK and US, but inflows leapt sharply there too.

After the crash, the move towards bond investing and away from stocks accelerated, particularly among the more skittish retail investors. Even among pension funds the shift was significant. In the third quarter of 2003, the year that saw Western stock markets hit their post-dotcom nadir, British pension funds for example were investing record amounts in corporate bonds and other debt products. But the majority of companies were reducing their overall debt levels after a leap in borrowing in the 1990s. Financial and not corporate activity was driving economic activity.

When money chases assets of any kinds, prices rise and yields fall, leaving investors hungry for higher yielding products.

This was one side of the impetus to create a plethora of new financial products that through engineering and the addition of new kinds of leverage boosted returns for supposedly little extra risk. The credit rating agencies such Moody's and Standard & Poor's governed the alchemy of structured finance – the technology of mortgage backed securitised bonds and collateralised debt obligations at heart of the credit bubble. They were the arbiters of the processes that turned risky loans into "safe" and liquid bonds.

There is a final post-war development that gathered pace as the 20th century went on and particularly from the 1980s: the realisation that the baby-boomer generation would be incredibly expensive to support in retirement. This led capitalist economies to promote private pension provision, through company schemes and on an individual basis. Over time, this created a vast pool of money looking for investment that helped to change completely the role and size of global capital markets and how they interacted with banking.

Some have argued that these developments taken together form the foundations of a much bigger historical process that has been building up to this crisis. George Soros, the hedge fund manager and writer on financial markets, describes the current crisis as the bursting of a "super-bubble". The past 20 years in particular spurred the rapid development of securitisation and credit derivatives, which dramatically increased liquidity – or the availability of money.

THE ROLE OF REGULATION

> [T]he positive impacts of such financial engineering (risk absorption capacity) can also encourage excessive risk taking, lending and borrowing based on 'flat-world' faith. Flat-world faith is a sense of false confidence that the superlative financial engineering of New Monetarism has ended economic and financial cycles.
>
> David Roche and Bob McKee, *New Monetarism*

The 1990s saw the ultimate triumph of liberal democracy and Anglo-Saxon economics as proclaimed by, among others, Francis Fukuyama's *The end of history*. In the UK, Gordon Brown, the economic mastermind of New Labour, claimed to have conquered boom and bust. This great victory and the confidence it engendered created the perfect conditions for the consequent failures. A growing appetite for risk, leverage and complexity during this time was maintained even after the implosion of the US hedge fund Long-Term Capital Management and the energy company Enron.

LTCM was making bets worth up to 100 times the actual amount of money it had in order to exploit tiny pricing differences between related assets – it had to be rescued because its problems were so large they became everybody's problems. Enron was a highly complex fraud based around the use of string of off-balance-sheet (ie. unrecorded) vehicles to churn finance around the company. Amazingly, the huge growth of bank lending activities, especially in the last two-three years of this decade's credit bubble, were driven by a dramatic increase in leverage levels and widespread use of less than transparent off-balance sheet vehicles.

Regulatory changes in the 80s and 90s had a big influence on the developments that fostered the credit bubble of the past decade. However, it is not only the push for deregulation broadly that was important, but also the design of new regulations in response to previous crises and the way in which they affected both the mechanics and incentives in banking.

The biggest impact of deregulation - through "Big bang" in the UK in the mid-80s and through the repeal of the Glass-Steagal act in the US in the late 90s - was to create the playing field on which the modern financial games could be played. These allowed the combination of investment, or merchant, banks with commercial banks and retail banks. This connected the dots between the design, sale and trading of securities, huge deposit-based funding pools and the granting of loans and mortgages. Without this, mortgages, credit card debt and corporate loans among other assets could never have been packaged up into bonds and sold on such a vast scale. But

this deregulation, while providing necessary conditions, does not of itself create the motivations – for that the industry needed mark-to-market accounting and the idea of risk-based capital.

Both of these ideas were responses to previous banking crises in the 1980s and earlier. The 1988 Basel Accord - signed at the Bank of International Settlements - aimed to ensure banks held enough capital to cover the risk of losses from lending activities. Capital is the last line of defence against insolvency after provisions for expected losses have been used up. The Basel Accord sought to encourage cautious behaviour by making banks hold more capital against riskier loans. More capital as a proportion of the size of a bank makes the bank safer, but it means lower balance sheet leverage and so lower returns on equity – and smaller dividends for shareholders. The major unintended consequence of this focus on risk was to create the opportunity for banks to boost profits by shunting loans off the balance sheet.

Securitisation – or the practice of turning mortgages and other loans into bonds that can be sold – and credit derivatives were both invented as a way to distribute lending risk among a broader group investors. The argument goes that the financial system as a whole is safer if many different investors and banks suffer small losses when a particular market area such as subprime mortgages turns bad. The alternative being that localised problems with a particular housing market or industry had in the past led to disproportionate harmful impacts on the local banks exposed to those problems.

However, the main reason securitisation and credit derivatives became so wildly popular was because they allowed banks to extend far greater volumes of loans for a given amount of capital held – and hence generate far greater returns on that capital. For the system as a whole, this meant greater overall leverage, or more lending compared to the amount of capital held in the system. Securitisation volumes began accelerating in about 1995, but really took off this decade, rising from annual global issuance of about $500bn in 2000 to more than $2,000bn by 2006. Credit derivatives saw a similar path though the numbers are more dramatic. The volume of derivatives outstanding grew from about $630bn in 2001, to a peak of $62,000bn in 2007. Furthermore, precisely because banks were shifting their exposures off their balance sheets and also using privately negotiated derivative contracts, this increase in leverage was increasingly hard for regulators to track.

One of the pinnacles of this project was the creation of an entire linked industry of lending machines called conduits and structured investment vehicles. These allowed banks to make loans, invest in bonds and mortgage backed debt, and earn fees without holding any extra capital at all – even though they ultimately remained responsible for supporting these vehicles and, as it turned

out, bearing their losses. Such vehicles were used increasingly towards the peak of the credit bubble to fund and churn new lending. They were funded in a market for very short term debt known as the asset-backed commercial paper market, where companies and individuals park their spare cash that they expect to have to access quickly – much like a bank account. Between early 2005 and mid-2007, the US ABCP market, grew from a size of less than $700bn to more than $1,200bn. In the previous three years, it had expanded by less than $100bn.

The other big change in response to previous crises was the widespread introduction of fair value accounting, often called mark-to-market accounting because the price of an asset in the open market is usually deemed to be the most transparent and fair price. Fair value accounting for banks was promoted in direct response to the US Savings & Loans crisis, where losses on bad loans made by a whole section of the financial industry had been hidden by the traditional "historic cost" accounting, which allowed assets to be held at their original value for much longer periods.

The problem with mark-to-market accounting is that it has a strong pro-cyclical effect on banks – they are driven to lend more when times are good and to cut back lending rapidly when times are bad. Tobias Adrian, an economist at the New York Fed, and Hyun Song Shin of Princeton University, have produced a string of work about this effect on finance and the economy.

They examined the links between asset prices and the value of banks' capital bases when mark-to-market accounting is used and found that as asset values rose, lending and investment would expand dramatically. They concluded in a September 2007 paper that it was inevitable that an industry buoyed by rising asset prices would pursue increasingly aggressive and risky lending growth, which then fed into further asset price growth as the money borrowed was invested. This added fuel to the fire – or created "positive feedback loops", a term from engineering widely used in finance to describe how changes within a system can be enhanced or amplified by that system.

The important corollary here is that such a system behaves the same way in reverse, destroying asset values – from debt investments to houses – as lending and investment is cut from the economy. In a way this is nothing new - the old adage about a banker is that he gives you an umbrella when it is sunny and asks for it back when it starts to rain. But Adrian and Hyun concluded that fair-value accounting speeds up the process and that it was the speed of banks' balance sheet expansion this decade that caused the most blatant excesses of US mortgage lending.

Ultimately, these developments led to a step-change in liquidity, or the availability of money. In New Monetarism, David Roche and Bob McKee conclude that central banks could no longer

control the quantity and price of money as they had in earlier decades through the reserve ratios they set at banks, or continued to attempt to do through the use of interest rates.

THE FALSE SENSE OF SECURITY

> [P]erhaps after a quarter century of a bull market in credit asset values – brought on by the persistent decline in nominal interest rates caused, in sequence, by disinflation, productivity gains, and an extended period of abnormally low real rates – we should not be surprised that our financial system has been re-engineered into an asset-based process that presumes rather than inquires into the cash flows of borrowers.
>
> Peter Fisher, co-head of fixed income at Blackrock, in remarks to the Jackson Hole Symposium, August 2008.
> http://www.kc.frb.org/publicat/sympos/2008/fisher.09.01.08.pdf

There is still a final question to be answered: why were banks and other investors prepared to buy and fund an increasingly complex array of financial products and to channel cheap money to ever riskier borrowers? A deceptively simple answer to that question is that the financial system came to rely too heavily on the supremacy of secured, or asset-based, lending - so much so that people forgot to question borrowers' ability to repay. This is an idea that was presented by Peter Fisher at the annual central bankers' talking shop in Jackson Hole, Kansas, in August this year.

In such a culture, the value of pledged collateral – be it a house for a mortgage or a portfolio of investments for hedge fund leverage – becomes the main determinant of whether or not to extend finance. When economic conditions have been so fine for so long that collateral values are only expected to rise, a borrower's ability to repay matters less and less – for both the borrower and the lender.

The reason ordinary people were comfortable taking out such large mortgages compared to their incomes, especially when they calculated their cost on introductory teaser rates, was because they expected the value of their homes to rise. It was worth taking the risks for the gain. And in the presumed unlikely event that their situation changed or that they could not find another cheap mortgage deal when the teaser rate on the first ran out, they still could sell up and walk away with the profit.

Lenders who took liquidity for granted were attracted by the fees available in a high-churn business of extending new loans, selling them on and lending again. They also presumed continually rising asset values would protect them against any borrower difficulties.

The credit rating agencies have suffered a barrage of criticism for the role that their poor judgment and falling standards played in aiding the creation of the structured credit products and asset-backed bonds that made all this possible. But the question is: why were their ratings accepted so uncritically? Looked at through the prism of Mr Fisher's idea, the answer is that if a fetishisation of collateral became such an unquestioned article of faith, then a credit rating is the bare minimum that can be taken in lieu of any real inquiry into a borrower's cash flows. Outrageously complex products whose ultimate supporting cash flows were sometimes almost impossible to analyse could only become so popular if investors disregarded due diligence.

But it is not just in mortgage lending or in the realm of complex "collateralised" debt obligations or "asset-backed" securities (the clue is in the names) that this culture dominated. It also – perhaps most importantly - dominated standards in lending to hedge funds, structured investment vehicles and, crucially, in the repo markets that were the main funding source for standalone investment banks.

If collateral values begin to decline, a lender has two options: demand more collateral, or ask to be repaid. If the borrower cannot provide either, the lender will seize and sell the collateral pledged. This happened at New Century. It also happened in June 2007 to two large hedge funds run by the US investment bank Bear Stearns that were invested in subprime bonds.

In a system that simply trusts in the fact of collateral without regard to its particulars, the rapid draining of liquidity from markets can materialise very quickly. If the value of your collateral is potentially tainted and you are not entirely sure of its true nature – how risky it is, or whether it is supported by underlying cash flows – the only thing to do is simply to bail out as quickly as possible.

As fear spread about first subprime, then structured credit products broadly and finally banks themselves, this same process went on to happen to hedge funds and banks across the financial system. Wave after wave of forced selling drove down the prices of all manner of collateral, hurting not only those who were selling, but also those who still held similar assets. At the same time, unsecured lenders saw that money was being lost by secured lenders and began to withdraw their often short-term funding too.

When Northern Rock collapsed, a large number of bank-owned conduits and structured investment vehicles were also experiencing "runs", where lenders were pulling out their money as quickly as they could. Two German banks, Sachsen and IKB, were also early victims. What linked these early victims was not so much the riskiness of the loans or investment they had made – though that played a part – it was more to do with how easily lenders could withdraw, or how short-term was their funding.

In late 2007, the financial system had already begun a process of "deleveraging" – a contraction or withdrawing funding from lending and investment - that was set to be long and painful for the financial system and the wider economy. Then in September 2008 the ground beneath one of the most important assumptions in finance cracked. That assumption was the idea that banking and the financial system would always ultimately be bailed out and that most investors – except shareholders – would never really lose. It was an idea that had been built up and reinforced over decades of bank rescues. The stress testing that banks use for their management of risks do not really test outcomes that are among the worst that are plausible. Why? Because when the worst risks are realised, the problems created are no longer the bank's problems, but their country's. I have been told by a very senior markets specialist within a central bank that institutions were uniform and unabashed in this view.

This assumption was so strong that Moody's tried in 2006-2007 to incorporate it in their credit ratings for banks. The attempt was unsuccessful not because lenders and investors didn't believe the premise but because it meant almost all banks carried an identical, top-notch credit rating, offering no distinction between them.

The day the US authorities finally decided to let a major bank, Lehman Brothers, collapse and so wipe out not only shareholders, but creditors of all kinds, was the day that idea came unstuck. It precipitated a run on the entire financial system so severe that by the time of the G7 meeting in mid-October some of those attending were convinced that the whole edifice was about to collapse and cause a tidal wave of bank failures.

The worst outcome was avoided with a series of huge rescue packages around the world involving many countries taking stakes in their largest banks. This has averted Armageddon, but not ended the financial crisis. The biggest problem for the future will be how to manage a world that will have fewer, larger banks that because of their size pose potentially greater risks to the system – and which will be almost certainly reinforced in the belief that they do not need to account for the worst plausible outcomes because a bail-out ultimately will always have to be attempted.

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