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<CT>Interrogating the crisis

<CST>financial Instruments, public policy and corporate governance

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<A>**Introduction**

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> There is growing recognition that the dispersion of credit risk by banks to a broader and more diverse group of investors, rather that warehousing such risks on their balance sheets, has helped to make the banking and overall financial system more resilient.
>
> (IMF, 2006, p. 51 cited in MacKenzie, 2009a, p. 73)

What precipitated the global financial crisis of 2008 and why were structures of corporate governance unable to avoid or prevent it? The intention of this chapter is to offer some partial illumination of these questions by making corporate governance its focus. Its premise is that the way financial organizations, such as banks and insurance companies, do business, including their use of financial instruments, is contingent upon the conception and associated structures of corporate governance that are ostensibly designed to regulate – enable but also constrain – their activities.

When reflecting on the role and significance of governance in `the corporate failures of the first decade of the 2000s’, Deakin (2011) observes that a distinctive form of corporate governance – what he calls ‘*shareholder–value oriented corporate governance*’ – ‘provid(ed) an important part of the external context of financial instability, and exacerbate[ed] the misalignment of incentives within firms' (ibid: pp. 34–5). Shareholder-value oriented corporate governance currently defines the parameters of 'best practice' by giving emphasis to a number of elements: the separation of chair and CEO roles, external monitoring, the presence of non-executive directors, and so on (see Veldman and Willmott, 2016). These elements, it will be argued, affirm rather than restrain, and effectively obscure rather than challenge, a conception of the corporation as a nexus of contracts in which, as Deakin (2011, p. 40) puts it, the corporate form 'is seen as an object of financial arbitrage', rather than, say, a legal fiction that is potentially amenable to serving a plurality of stakeholders (Stout, 2012).

The chapter seeks to shed light on why the calculations relating to financial products – notably, the rapid growth in securities taking the form of collateralized debt obligations (CDOs) that preceded the financial crisis – proved to be so recklessly optimistic, abjectly cynical or stunningly naïve. To this end, its focus is upon the normalization of the sale of sub-prime mortgages and their securitization during the years running up to the crisis. On the 'demand' side, the chapter attends to deregulation and, more specifically, to the relaxation of restrictions – specifically, those associated in the US with the reform of the Community Re-investment Act (CRA) – that fuelled the sale of huge volumes of sub-prime mortgages. Without the participation of previously `redlined' communities in this market, far fewer sub-prime mortgages would have been packaged into CDOs. Turning to the 'supply' side of the normalization of the sub-prime mortgage market, I emphasize the limitations of the corporate governance of the financial institutions engaged in the securitization business. Other studies have highlighted failures of corporate governance in general terms (e.g. Loughrey, 2013; Vasudev and Watson, 2012; Sun, Stewart and Pollard, 2011). Here I take the example of American International Group (AIG), a company that had, in many respects, model governance structures, yet was found to be wholly incapable of monitoring and restraining its engagement in the writing of credit default swaps (CDSs) as hedges against the risks of defaulting CDOs, with catastrophic consequences.

The present analysis shares MacKenzie's (2009) assessment of the central role of CDSs and CDOs, including synthetic CDOs (see Roberts and Jones, 2009), in precipitating a financial crisis of such depth and duration. But it also qualifies and situates the explosive 'success' of these financial instruments in relation to other elements that comprised the 'perfect storm'. I focus upon securitization and corporate governance not least because, within organization studies, analysis of financial institutions, products and markets is disproportionate to their influence. Scholarly consideration of corporate governance has been marginalized by regarding it as a specialist domain reserved for or monopolized by other academics (e.g. accountants, lawyers and behaviourists) rather than as a field of study integral to the analysis of organization(s).

The chapter begins with an overview of the context of the global financial crisis (GFC). Its anatomy is then examined, focusing upon the centrality of securitization in the meltdown before addressing directly the conditions which permitted the huge expansion of the sub-prime mortgage market. Having sketched some distinguishing features and backdrop of the GFC, attention is directed to the corporate governance of AIG, the firm that received the largest bail-out. It concludes by reflecting upon the centrality of the shareholder value model in the run-up to the financial crisis as banks sought out new sources of such value in the sub-prime mortgage market and suggests that avoidance of a future crisis will require a radical change in the principles of corporate governance.

<A>The context

During the decades running up to the financial crisis, a belief in the efficiency of markets combined with a shareholder-value oriented conception of corporate governance facilitated financially driven growth fuelled by access to sources of cheap credit. The 'new growth model', which Crouch (2008) has characterized as 'privatized Keynesianism', provided income streams by generating credit from available assets. In the UK context, the model promoted a permissive, re-regulation of financial markets which was announced in the UK by Big Bang (1986). At the heart of the 'new growth model' is a faith in markets as efficient allocators of resources and an antipathy to interventions by the state, including its regulation of markets that must be light-touch and supportive. Concerns about 'society' and 'social justice' are marginalized as they are considered to be misconceived, given that the removal of restrictions and the operation of less fettered markets will 'lift all boats' as wealth 'trickles down' to benefit everyone. From the 1980s, successive administrations in the UK and the US seemed to assume that there was problem – such as making home ownership more widely available – for which the forces of the market, however convoluted and re-regulated, was not the solution. This philosophy is also evident in a conception of corporate governance that treats firms as bundles of assets to be analysed, restructured and traded using financial techniques; likewise, executives are incentivized with stock options and performance-related bonuses to pursue shareholder value maximization (Ezzamel, Veldman and Willmott, 2015; Davis, 2009).

The chief threat to the 'new growth model' was identified as inflation: economists, regulators and politicians deemed the rate of inflation to be the primary benchmark of economic stability.[1] Preoccupied with its control, much less attention was paid to other risks, such as those associated with the neo-liberalization of financial markets and the possibility, however apparently remote, of their meltdown. The seemingly limitless expansion of the financial sector was celebrated as key to the miraculous rejuvenation of an economy that only twenty years earlier had been dubbed the 'sick man of Europe'.

Inflation, rather than any thought of a meltdown, exercised the minds of macroeconomic policy experts in the months preceding the GFC. The preoccupation with inflation is apparent in a speech given by the Governor of the Bank of England in January 2007, just a few months before the collapse of Northern Rock which precipitated the first run on a UK bank in 150 years. Flattering his audience of Birmingham businessmen, the Governor proclaimed that 'It is indeed much harder to run a business than to run a central bank' – an ostensibly self-effacing claim that, ironically, was soon to be severely tested. The Governor then stressed that:

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it is our duty is to ensure that you do not experience the macroeconomic instabilities of the past *and that we keep inflation on* *track to meet our 2% target*. Stability is in your interest just as much as mine.

(King, 2007, emphasis added)

The policy of maintaining a low rate of inflation, combined with a comparatively low cost of credit, resonated with an expectation of continuing growth undisturbed by ‘macroeconomic instabilities’. There could be few clearer indications of how, amongst the guardians of financial institutions and markets, embodied in the figurehead of the Governor, the possibility of systemic risk and meltdown had seemingly been erased, or at least displaced, from their collective memory. It was, apparently, taken for granted that neo-liberal, market-centric policies and their associated, self-regulating practices would continue to deliver a combination of low inflation and steady growth that, in the words of UK Chancellor Gordon Brown, would result in ‘no return to boom and bust’.

Confidence that stability was assured so long as inflation was controlled encouraged ever-higher levels of gearing (debt-to-equity ratio) – not only by corporations, and especially the investment banks, but also by consumers of financial products – such as households that take on mortgages and other forms of credit (e.g. loans for car purchase). Ballooning debt fuelled the rapidly expanding financial sector where its institutions competed to survive and grow by making highly leveraged acquisitions, the most spectacular of which was that of *ABN Ambro* by *RBS* and its minor partners *Fortis* and *Banco Santander* (Martin, 2013). The examples of RBS, but also AIG which is considered in some detail in a later section, are illustrative of how, in the UK and the US, an unshakeable belief in continuing growth and financial stability followed from a subscription to the logic of neo-liberal economic policy.

Prior to 2008, there was, as the opening quotation from the International Monetary Fund (IMF) indicates, a massive expansion in the development and use of financial instruments (notably, derivatives) facilitated by what the IMF terms ‘the dispersion of credit risk’. Notably, there was an explosion of mortgage-backed securities (a form of CDO) as home loans were made more accessible to ‘sub-prime’ applicants, and applications were accepted which previously had been declined or redlined. Penetrating the home loans market more deeply, by making mortgages easier to obtain and cheaper to service through the alchemy of securitization, massively swelled both the revenues of the financial institutions and boosted the bonuses of traders dealing in those securities. Securitization was at the epicentre of a ‘loads of money’[2] *Zeitgeist* in which ‘maxing out’ credit/accumulating debt became an imperative for consumers and corporations alike. For corporations, the substitution of debt for equity capital, tacitly underwritten by an apparently remorseless rise in asset values (e.g. property), offered an irresistible means of increasing dividends and capital growth. For consumers, equity release and/or juggling credit cards presented an effortless way of compensating for a squeeze on wages and related benefits. As an article published in *Harpers Magazine* in May 2006, two years before the financial meltdown, presciently observed in relation to the aspirational as well as the avaricious appeal of mortgage borrowing:

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> the biggest incentive to home ownership has not been owning a home *per se* but rather the eternal hope of getting ahead. If the price of a $200,000 house shoots up 15 percent in a given year, the owner will realize a $30,000 capital gain.
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> (Hudson, 2006, p. 41)

As the article goes on to note, referring directly to the guru of modern macroeconomic policy, Alan Greenspan, the home equity loan bubble made a substantial contribution to the US economy:

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> In a study last year [2005], Alan Greenspan and James Kennedy found that new home-equity loans added $200 billion to the U.S. economy in 2004 alone…
>
> (ibid., p. 41)

During the years preceding the global financial crisis (GFC), private indebtedness supplemented, and progressively replaced, public borrowing as a significant generator of economic activity. Consumers but also executives, who failed, or declined, to avail themselves of cheap credit by leveraging their equity in order to invest in property (or go on acquisition sprees) were evidently financial dunces: they were ‘missing a trick’ and risked ‘being left behind’. Those in possession of a modicum of nous eagerly, or from material necessity, plunged their/our snouts deeper into the credit trough as, obviously enough, asset prices were ever-rising. For homeowners, equity could be released or debts increased on the basis of paper capital gains. With regard to US-based investment banks, their leverage had, until 2003, been limited by the Securities and Exchange Commission (SEC) to 12 times capital. In 2004, it was raised to 40 times capital and compliance was made voluntary. In effect, the determination of the appropriate (prudent) ratio became a matter of internal corporate governance. Bonuses would be correspondingly boosted by raising these ratios to their upper limits. Unsurprisingly, in the absence of external regulation, asset-to-equity ratios in investment banks reached the upper 30s prior to the crisis. It was these ratios that resulted in the force and acceleration of the deleveraging dynamic that, in 2008, was precipitated by the crash in asset prices.

It transpired that the apparently relentless rise in asset prices depended upon a strong faith in the governance of the lenders about how the loans were financed, and how the pricing of risks attached to them were calculated (and hedged) using seemingly sophisticated models and opaque financial instruments, such as CDOs and CDSs. This faith turned out to be myopic – and possibly wilfully so – at least in the case of traders employed by the biggest of the financial institutions. They had not failed to notice that the rewards (e.g. performance related bonuses) were immediate and tangible, while sanctions were non-existent or distant and hypothetical. For others, as the *Harpers Magazine* article cited above anticipated, the 'real estate boom that began with the promise of "economic freedom" almost certainly will end with a growing number of workers locked in to a lifetime of debt service that absorbs every spare penny' (Hudson, 2006, p. 41).

When it appeared, two years before the meltdown, this assessment directly challenged the views of experts who advised that by raising interest rates to slow down activity in the housing market, the very worst that could happen would be a familiar and temporary bear market followed by a shallow and short recession seven years after the meltdown. With the benefit of hindsight, the horrific scenario of workers locked into a lifetime of debt service sketched in the *Harpers* article seems almost benign. Today (June 2015), there is a scarier scenario of extended 'debt serfdom' in many economies. This scenario does not presume that there will be a slow recovery involving a comparatively familiar experience of living standards rising less rapidly for a brief period following a normal, temporary slump. Instead, its dystopian vision foresees continuing 'debt serfdom'. In the UK context, the debt burden placed upon young people seeking a University education is illustrative of how such 'serfdom' is experienced. But the bigger picture is of wealth redistribution and the corrosion of savings through depressed interest rates and the use of quantitative easing. Sluggish growth, stagnant wages, deterioration in the terms and conditions of employment and deep cuts in public services are forecast as the price to be paid by the next generation. The foreseeable future is one of striving to deal simultaneously with huge, post-GFC social dislocations while seeking to reduce the massive debts piled up as a consequence of the taxpayer bailout of a financial sector modelled upon a shareholder-value conception of corporate governance. Because the US and especially the UK economies are so dependent upon the financial sector, the sector remains largely unreconstructed (e.g. with regard to scale, ownership and ethos). And, moreover, the sector has become entombed in an increasingly baroque regulatory structure. While some areas of the financial sector are vibrant, others are unstable and probably unviable. Not only are they vulnerable to future meltdown but insofar as they reproduce and increase inequalities of wealth, power and opportunity, they further undermine an already precarious social cohesion.

<A>**Anatomy of the Global Financial Crisis**

<B>Securitization

It is instructive to situate the global financial crisis in the context of the preceding, exceptionally long, debt-fuelled economic boom marked by rising asset values, especially in property, that lasted, with a few minor interruptions and corrections, from the early 1990s.[3] The boom in house purchase and the refinancing of mortgages provided a steady flow of payments that could be securitized in the financial markets of New York and London as CDOs (see Box 4.1). The attraction of securitization was that it:

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> *enabled much higher volumes of lending than would have been possible* if banks had been able to lend only the sums their customers had deposited: by the time of the credit crisis, *securitization funded more than half of all home mortgage lending in the US and a quarter of other consumer credit* (Securities Industry and Financial Markets Association 2008, exhibit 17, p. 37).
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> (MacKenzie, 2009a, p. 25, emphasis added)

<BOX>

<BOXH>**Box 4.1 Securitization: CDOs and CDSs in the run-up to the Global Financial Crisis**

In principle, securitization, which includes the creation of **CDO**s, creates a secondary market for loans, such as home mortgages: it attracts capital in order to provide additional loans for conversion into securities and, by improving market efficiency, decreases their cost. CDOs graded by the rating agencies as investment grade (lowest risk), offered significantly better returns than gilts or corporate and government bonds. This competitive advantage resulted in their rapid and sustained growth and escalating complexity. Securitization has enabled financial institutions around the world to invest in, and thereby `democratize credit'. It is these features and functions that the advocates of securitization, notably Alan Greenspan (Chairman of the US Federal Reserve, 1987–2006), prior to his epiphany, stridently celebrate.

For lenders, securitization provides the means of instantly realizing the value of any cash-producing asset. The payment stream is, in effect, received as a lump sum which can then be used to provide further loans, ad infinitum. The chief attraction of mortgage-based CDOs to insurance companies as well as pension funds and banks is their ability to offer a substantially better (up to 2–3 per cent) return than corporate bonds with an equivalent credit rating. Even when the rate of return was comparatively low, as in the case of the least risky, senior and super-senior tranches, banks bought the CDOs in volume as they could make a slender spread by borrowing at the marginally cheaper Libor rate (the rate at which banks borrow unsecured funds from other banks). The originators of CDOs often retain the very safest tranches because, although they offer the least attractive returns, they can be insured comparatively cheaply.

There is, however, another, often conveniently overlooked or downplayed, feature of securitization. The securitization and re-securitization of the loans is undertaken by investment banks in conjunction, or in cahoots,[4] with the credit rating agencies. Like the auditors of the financial institutions, the rating agencies have every reason not to ask challenging questions, even if they are supposed to possess the expertise required to ask them. Using historical data, the agencies did not contemplate or incorporate into their modelling the risk of a more systemic crisis, as contrasted with a temporary correction (Feirstein, 2009). The chance that defaults would cluster – referred to as the `correlation rate' – was calculated by the rating agencies as 0.3.[5] All parties had every incentive to trust in the expertise of the agencies or suspend any doubts that they may have had in the credibility of their ratings. In any event, the traders who earned very tidy bonuses from selling the CDOs had no responsibility for the risks passed on to their purchasers.

Credit Default Swaps (**CDS**s) are privately negotiated contracts which offer an insurance against defaulting CDOs. They provide a low-cost hedge but they may also be bought speculatively in anticipation that a CDO will default. In 2003, they had a global value of around US$ 3 trillion which grew to US$45 trillion by 2007. Insurance companies, such as the giant AIG, provided the CDSs for clients wishing to hedge against defaults, or exceptionally to those who anticipated that certain CDOs would default.

Responsibility for assessing the risks of CDOs is the bread-and-butter business of the rating agencies. Paid by packagers of CDOs – the investment banks – the rating agencies compete for this lucrative business for which they are richly rewarded. During the years preceding the financial crisis, the models used by the agencies did not factor in the chance that the mezzanine and even senior tranches of the CDOs (see Appendix A) to which they assigned an investment grade rating might sink to speculative (or 'junk') status. The logic of the exclusion of this risk from their calculations was that it had never happened before. That undeniable fact was not, however, counterbalanced by the inconvenient fact that packaging sub-prime mortgages on an industrial scale was also wholly unprecedented. Nor was any consideration given to how sight could be quickly lost of where the risk was held. Supporters of extensive securitization emphasise the virtue of its de-concentration of risk which contributes to reducing and thereby democratizes credit (see Appendix B). Its often wise-after-the-event critics, in contrast, have pointed to its obfuscation of risk and vulnerability to systemic contamination.[6]

<B>Home Loans, CDOs and CDSs

The massive expansion of credit associated with low interest rates was eventually curtailed by a series of US rate increases (2004) (see Appendix C) that progressively flattened property values and resulted in a rising number of loan defaults. Initially, these were interpreted as an indicator of a normal and expected cooling down of a slightly overheated market. However, by the summer of 2006, domestic property prices in the US started to *fall*; and by the end of November, the index of subprime mortgage bonds (ABX) indicated that borrowers were failing to make payments sufficient to pay off the very riskiest tranches of mortgage-backed securities. Despite this, where securities had received an AAA (investment grade) rating, the prices of the CDOs remained stable. It was six months later, in early 2007, that some misgivings were aired about the possible implications of falling US housing values for mortgage-backed CDOs. Yet, demand for the CDOs remained strong as a consequence of their delivery of comparatively high returns, and their ostensibly investment grade quality. Even as housing prices fell and foreclosures increased, few market players and commentators had sufficient cause to ask searching questions about the correspondence between the rating of CDOs and their contents. The profitability and associated bonuses delivered by the CDOs appeared to inhibit doubts about the solidity of AAA-rated CDOs and the prospect of them melting into air. Even when commentators presented explicit and detailed challenges to this assessment (e.g. Tomlinson and Evans, 2007), their siren voices were unheeded, or were dismissed as alarmist.

Wherever securities became widely traded, there was a demand for hedges – that is, protection against the risks attaching to possible, even if highly unlikely, falls in their value. For holders of CDOs, and also for a few traders and institutions (e.g. hedge funds) making speculative bets against CDOs in anticipation of their possible default, the hedges took the form of CDSs (see Box 4.1). On the other side of these trades, the sellers of CDSs – notably, American International Group (AIG) – were eager to do business as their models predicted negligible risk of default.

Regardless of whether staff in investment banks (e.g. Lehman Brothers and insurance companies such as AIG) were engaged in packaging together and selling CDOs, or seeking protection against CDO default, they had little reason to concern themselves with the reliability of the grading, or the dispersal and traceability, of the CDOs. For them, the more pressing, bonus-rewarded challenge was to obtain sufficient volumes of loans (e.g. mortgages) to package into CDOs. In turn, this mass production of CDOs fuelled demand for CDSs from which seemingly riskless revenues and guaranteed bonuses could be earned. The supply of CDOs was addressed by devising and stimulating innovative ways, legal and illegal, to expand an untapped segment of the housing market: sub-prime. In the US, this opportunity had been opened up by an earlier change in US legislation, to be considered below, that was intended to correct a rather different problem: the indiscriminate redlining of mortgage applications originating from certain disadvantaged neighbourhoods.

<B>Risk, Meltdown and Bailout

The unexpected fall in property values that followed the rise in interest rates triggered a higher level of defaults than had been predicted by the risk models. Supposedly impregnable tranches of CDOs came under water. Those who had not purchased CDSs to hedge their positions struggled to sell their holdings. Falls in the value of CDOs were further accelerated by the use of mark-to-market accounting which tracked the highs and lows of market prices, irrespective of any reference to their book value or (presumed) underlying worth. Those who had hedged their positions called upon the issuers of CDSs, including AIG, to restore their collateral. Those calls induced panic selling. The markets froze as the solvency of all financial institutions was placed in doubt by the limited traceability of the toxic CDOs.

In the months preceding the GFC, analysts and traders had been content to trust the ratings provided by the agencies. Only in exceptional cases did they undertake the painstaking detailed forensic task of establishing how sub-prime mortgages had been packaged and graded. The few traders who closely investigated the dubious provenance of many CDOs were able to purchase CDSs cheaply because the ratings agencies had assigned them an investment grade status. Their nerdish diligence paid off handsomely when the markets went into free fall (Zuckerman, 2009). Aside from the taxpayers who were assigned by political elites to pick up the very sizeable tab, the biggest losers were the employees, clients and shareholders of the counterparties, such as AIG, especially in cases where no hedge had been made against default, despite the low cost of doing so (ibid., p. 156).

As the markets crashed, it was no longer home owners who found themselves, or were suspected to be, in negative equity territory, and could obtain credit only at unattractively high rates. When it was impossible to determine which parties were left holding the toxic CDOs and/or remained solvent, inter-bank lending locked up as every financial institution hoarded whatever liquidity it had, or could acquire. The market for securities became increasingly unstable before completely drying up as collateral was demanded by counterparties, resulting in the balance sheets of heavily geared financial institutions being further weakened. Investment banks teetered at the edge of the void of insolvency, with Lehman Brothers, the most leveraged and least liquid of them, at the head of the line.

That no other investment bank stepped in to acquire Lehman Brothers, even at a knock-down price, indicated the magnitude of its exposures, notably in the mortgage-backed CDO market. As other institutions – banks and IAG – lined up behind Lehmans' to go to the wall, respect could, at this point, have been shown for the 'laws' of neoclassical economics. That is to say, their fate could have been left to the Market: those that had lived and prospered by its sword would be cut down by it. Failing, lame duck institutions would have been allowed to collapse, thereby, in principle, celebrating and restoring Market discipline and efficiency. Instead, and in defiance of the Market mantra, intervention by the US government averted the prospect of a repetition of Lehman's fate across the financial sector, and variants of this bail-out scenario were repeated in the UK and elsewhere. Deemed to be 'too big to fail' (Sorking, 2009), numerous investment banks and also AIG were saved through a huge injection of public funds that minimally restored their balance sheets. Either their toxic assets were bought up (the US approach) or the failing banks were placed in 'temporary' public ownership by holding preference shares and offering loan guarantees (the UK approach).

Lehman's collapse and its immediate aftermath pointed unmistakably to the existence of a toxic barrel of mutually contaminated rotten apples whose immanent insolvency threatened a cataclysmic global meltdown of global capitalism. As will be shown shortly, AIG was one of the largest and rottenest of these apples, and it received the largest bail-out. It had sold huge volumes of CDSs without either investigating or hedging against the risk of CDOs proving to be inadequately graded or becoming toxic. Only a massive injection of liquidity forestalled the demise of the zombie financial firms, thereby saving the financial sector from the forces of destruction that it had unleashed upon itself.

<A>Home Ownership and Normalizing Subprime: A Political Economy of Mortgages

The economies of the UK and US are, as noted earlier, exceptional in the importance placed upon home ownership. It is reflected in the scale of the loans serviced by purchasers of domestic property that dwarfs other forms of personal borrowing (e.g. credit cards, overdrafts and finance for other assets, such as cars and white goods). Any fall, or even flat-lining, of property values is significant politically as well as economically as voters are generally more supportive of the party in power when the value of their assets, including their homes, is rising. It is this political sensitivity that leads governments to make interventions in the housing market that are intended to affirm, secure and/or enhance those values – for example, by opening up the market to new providers; by enabling access to capital markets for existing providers through demutualization (see Klimecki and Willmott, 2009). Such responsiveness extend to making legislative changes whose purpose is to improve the availability and affordability of loans to those previously unable to access them.

Such interventions are consistent with neo-liberal policy where the role of the state is to champion markets by enabling their more effective, unimpeded operation. The state may, for example, intervene to create conditions in which financial institutions are incentivized to demonstrate greater 'commitment to serving borrowers who may not meet traditional underwriting standards' (Schwartz, 2012, p. 332 citing Federal Reserve Bank of Boston, 1993). In the UK, 'Big Bang' incentivised building societies to demutualize and it enabled banks to penetrate, and thereby shake up, a mortgage market previously dominated by mutuals (Klimecki and Willmott, 2009). The outcome was intensified competition in which the big proprietary banks, many of which were later to be bailed out by taxpayers, were the winners. They gained market share from the mutuals while comparatively small and undiversified demutualized societies struggled to deliver the capital growth demanded by its shareholders. Northern Rock, for example, pursued a strategy of heavy reliance upon the wholesale markets. When these markets dried up, the resulting evaporation of liquidity contributed to its collapse which was followed by other demutualized building societies none of which survived the financial crisis.

Turning to the US, whose economy makes it much more significant globally, the most significant state intervention in the housing market can be traced to a well-intentioned but ill-fated move by the Carter administration. In 1977, the Community Reinvestment Act (CRA) was introduced to tackle the issue of discriminatory ‘redlining’ of entire (disadvantaged) neighbourhoods. Redlining made it either impossible to obtain a mortgage by lower income groups, or made obtaining such loans conditional upon making substantively higher down payments and/or accepting shorter repayment periods.[7] With the objective of making home loans more widely available, the CRA gave the banks some comparatively gentle ‘encouragement’ to lend to (potentially riskier) borrowers from neighbourhoods that had previously been indiscriminately redlined. This ‘encouragement’ involved sanctioning lenders who showed a reluctance to issue such loans – for example, by blocking lenders’ expansionist ambitions by providing unfavourable evaluations of their applications for new branches and mergers.

A subsequent and seemingly innocuous tweak to the 1977 CRA made in 1995 by the Clinton administration had the (unintended) consequence of normalizing as well as expanding, but never entirely legitimizing, the riskiest segment of the mortgage market. The tweak involved a substantial tightening of the supervision of banks which became subject to more exacting compliance measures. An unanticipated outcome was an expansion of sub-prime lending by ‘predatory lenders’. Crucially, the Clinton tweak also incorporated an invitation to community groups to complain when lenders were making loans below the amount calculated for each neighbourhood based on federal home-loan data. Community groups collected a fee from the lenders for marketing loans to target groups (Husock, 2000). In 2000, the Senate Banking Committee estimated that, in just three years, community groups had received $9.5 billion in services and salaries – which is an instructive indicator of the rate of expansion into the subprime segment of the mortgate market. So, a perverse effect of the Clinton tweak was greatly to increase, rather than to remove, the number and levels of activity of the shadowy businesses ('predatory lenders') that traditionally serviced the subprime market; and thereby to create a boom in this market segment.

Less shadowy lenders were willing to comply with CRA criteria because, following the introduction of the Riegle-Neal Interstate Branching and Efficiency Act (1994), passing a CRA review process was, as noted above, important when lenders wished to expand (e.g. through merger and acquisition). In 1999, the Gramm–Leach–Bliley Act repealed parts of the Glass–Steagall Act. This allowed local banks to offer a full range of investment services – a change explicitly welcomed by the Clinton administrtation as a way of expanding the reach of the CRA. As a consequence of these changes in legislation, growth in the sub-prime sector was rapid, propelled as it was by the simultaneous development of 'innovative' products – that is, 'interest only' but, more importantly, 'adjustable rate' mortgages – and payment methods tailored to lower income borrowers, including those with a patchy employment history.

The Clinton tweak to the CRA enabled many more loans to be made available to, and affordable by, lower and irregular income borrowers. It also legitimized and *normalized this practice* of lending to customers who previously had no prospect whatsoever of obtaining a home loan. By the early 2000s, the sub-prime segment was the most rapidly expanding part of the mortgage market; and this market was increasingly being serviced by shadowy, *non*-CRA lenders (e.g. independent mortgage companies such as *Ameriquest* and *New Century Financial*) as well as affiliates of banks or thrifts that were not subject to routine supervision or examination (Gordon, 2008). The numbers are dizzying. Between 1994 and 2003, sub-prime mortgage loans increased by *25 per cent every year* – that is, a ten-fold increase in nine years. Between 1997 and 2006, the price of the typical American house increased by 124 per cent. Brokers sold, or pushed, loans to almost anyone who could be persuaded to borrow, regardless of their immediate or projected ability to meet the monthly payments, should interest rates rise. When US interest rates began to rise by 2004, there was an initial flatenning of property values that was soon to become a fall. By the third quarter of 2007, sub-prime *adjustable rate* mortgages in the US comprised about 7 per cent of those in arrears; and these accounted for nearly 50 per cent of the foreclosures which began during that quarter. This was roughly triple the rate of arrears and foreclosures in 2005. By January 2008, the equivalent rate of arrears had risen to 21 per cent, and by May 2008 it was 25 per cent. By August 2008, over 9 per cent of *all* US mortgages outstanding were either in arrears or in foreclosure.

The home loans had been arranged easily not only because interest rates prior to 2004 had been held low but also because investment banks were ready and eager to securitize the loans. It was the contents and rating of the CDOs that made those mortgages readily available. The ahistorical modelling of risk by the agencies combined with the self-serving reliance of financial firms upon their ratings, meant that it was not just the high risk, 'junior' tranches that were affected by defaults; it was also some of the other, ostensibly investment grade tranches. The securitization of sub-prime mortgages acted to accelerate the speed and depth of the financial meltdown as the value of CDOs plunged. As will be shown in a later section, the collapse is also attributable to the recklessness of counterparties, notably AIG, who were eager to provide a hedge, in the form of CDSs, against the risk of CDOs defaulting, without themselves hedging the risk of this business. The question of why a company like AIG was able to take this business without itself adopting measures to hedge against its risk is considered in the following section.

<A>Corporate Governance: The Case of AIG

'Corporate governance', Blair (1995) argues, extends to 'the whole set of legal, cultural and institutional arrangements that determine what publicly traded corporations can do, who controls them, how that control is exercised and how the risks and returns from the activities they undertake are allocated' (ibid., p. 3). In the analysis of AIG, the focus is principally upon the 'control exercised', and the allocation of risks and returns. Whether the 'set' of legal, cultural and institutional 'arrangements' actually 'determine(s)' what corporations 'can do', rather than condition actions that are taken by corporate actors, is debatable. Nonetheless, Blair's inclusive conception of corporate governance is broadly endorsed here, and it should be born in mind when considering the case of AIG. The following analysis does address the exercise of control and risk/reward allocations but it does so in relation what Blair plausibly characterizes as a comparatively narrow sense of corporate governance: one limited to *operations within companies* that include, for example, ‘questions about the structure and functioning of boards of directors and the rights and prerogatives of shareholders in boardroom decision making’ (ibid.). That said, Blair’s broader vision of corporate governance explicitly includes ‘aspects of corporate finance, securities law [and] laws governing the behaviour of financial institutions’ as well as ‘internal information and control systems’ (ibid., pp. 3–4) – all of which are pertinent to the AIG case.

<B>Strategic Risk Management

Led by the highly capable but autocratic Hank Greenberg, AIG expanded rapidly from the early 1970s when it comprised a modest collection of insurance businesses that had been created during the previous fifty years. The dramatic and unexpected collapse of AIG in 2008, which had been a highly regarded global player, begs questions about the responsibilities of its directors in monitoring and interrogating the source and exposures of its major revenue streams, notably the activities of AIGFP. In 1994, AIGFP generated a modest income of around $100m. In 2005, this ballooned to $2.7bn, amounting to 25 per cent of AIG’s net income. It was this operation within AIG that was entirely responsible for bankrupting the company. It casts doubt upon a model and structure of corporate governance at AIG that in very many respects was formally compliant with 'best practice', yet it failed spectacularly to challenge and forestall engagement in excessive, unhedged risk-taking.

Through a strategy of diversification as well as expansion of its established insurance business,[8] AIG under Greenberg's leadership had achieved consistently stellar returns of around 15 per cent that compared to an industry norm of around half that. All AIG executives were 'asked to attain three targets: 15% annual revenue growth, 15% profit increases per year, and 15% return of equity increases annually' (Shelp and Ehrbar, 2009; Pathak et al., 2013, p. 358). As a consequence of its outstanding financial performance, the company and its tireless CEO enjoyed an unparalleled reputation in the industry. AIG benefited considerably from a seemingly rock solid AAA credit rating that reduced the cost of the company's borrowing, thereby making it possible to undercut much of the competition and attract customers from whom concessions in price and risk could be 'negotiated'. Of particular relevance for the present analysis, the AAA rating enabled AIGFP to compete effectively against investment banks in the long-term swaps market.

In late 1993, the AIG stock price reached $88 as investors regarded AIG as a safe-as-houses insurance company that, unlike the banks, was not operating in comparatively riskier markets.[9] In 1996, AIG hired Charles M. Lucas from the Federal Reserve Bank of New York where he had directed its risk assessment and control systems. Lucas served as AIG's director of market risk management who oversaw the creation of a 'state-of-the-art risk enterprise system that addressed both credit risk and market risk' (Greenberg and Cunningham, 2013, p. 147; see also pp. 148, 229). Supported by this system, ‘FP [Financial Product] managers, other independent AIG units, the company’s outside auditors as well as the board of directors consistently monitored FP’s risk portfolio’ (ibid.), at least up until the time of the forced departure of its CEO from AIG in 2005.

In 1998, AIG had cautiously entered the CDS business when it accepted $194m from J.P. Morgan to insure the credit risk on $9.7bn AAA rated CDOs (see Boyd, 2011, p. 87 et seq; Tett, 2010, pp. 71–3). For AIG, this revenue seemed to be virtually risk-free revenue as, following painstaking analysis, the chances of the AAA defaulting was shown to be infinitesimal (see Boyd, 2011, pp. 88–9). For J.P. Morgan, the deal released cash to make further investments (e.g. in CDOs) that would otherwise have been held in reserve in case of default.

<B>‘Money for Nothing’, Reputational Damage and the AIG Indulgency Pattern

In post-mortems on AIG, considerable attention has been paid to the activities of AIGFP. Much less attention has been directed to how governance at AIG was entwined with its strategy for delivering its targets of 15 per cent annual revenue growth, 15 per cent profit increases per year, and 15 per cent return on equity. A sea change occurred at AIGFP when in 2001, two years after the repeal of the Glass–Steagall Act, its head, Tom Savage, was replaced his deputy, by Joe Cassano. It has been widely reported that Cassano greatly appreciated the bonuses that flowed from the CDS business: he earned more than US$280m in cash during his final eight years (2000–08). While eager to maximise his compensation,[10] Cassano was less inclined to insist upon undertaking the highly detailed, stress-testing, analysis demanded by his predecessor. Of more importance, the bonus system at AIG incentivized engagement in trades, but not the closeness of attention paid to the analysis of their risks.

For AIG, the repeal of the Glass–Steagall Act in 1999 was significant because it drew commercial banks, with their huge customer deposits, into the world of investment banking, to which the investment banks responded by borrowing huge amounts – between 30 and 40 times their equity capital by 2005–08. Much of this debt, borrowed cheaply when interest rates were held low, was used to purchase longer term, higher yield assets – notably, mortgages to be packaged as CDOs. When firms acted prudently, the CDOs were hedged by purchasing CDSs from companies such as AIG. For the AIG trades appeared to delivery ‘money for nothing’: Rajan (2010) reports that `Privately, AIGFP executives said the swaps contracts (CDSs) were like selling insurance for catastrophes that would never happen; they brought in money for nothing’ (ibid., p. 135).

Until the late 1990s, Greenberg’s 15/15/15 metric had been achieved through an expansion strategy of acquiring companies with profit potential. As the potential acquisition targets reduced in number and appeal, the strategy yielded diminishing returns. It was also difficult to expand the existing CDS business that was based upon providing capital relief (see above). So, the pressure was on to identify other revenue streams. These pressures coincided with the company’s involvement in a number of dubious deals, the most damaging of which was made with *Gen Re* in 2000, and which came to light five years later as a consequence of an SEC investigation of another insurer (Boyd, 2011). There are conflicting accounts of how this reputationally damaging deal occurred, with Greenberg insisting that his instruction had been misunderstood or miscommunicated (Greenberg and Cunningham, 2013).[11] Following the Gen Re scandal and some other damaging events (see note 9 for details), AIG's safe-as-houses reputation was placed in some doubt. Questions began to be asked about whether even the legendary Greenberg could 'control the far-flung businesses…the way that he once had…Where he was demonstrably losing his grasp was in the quest to bolster earnings via the use of ethically marginal financing techniques' (Boyd 2011, p. 117–18).

In the wake of the revelations about *Gen Re* and other lesser dents to AIG's reputation, it is remarkable that no AIG employee was reassigned within the company, let alone fired. It is probable that this forgiving, or indulgent, attitude sent a signal to all AIG staff, including Joe Cassano, the head of AIGFP. It conveyed, or invited, the understanding that questionable, and perhaps even illegal, dealings were viewed by senior executives, notably Greenberg, as minor infringements that were almost unavoidable in a company as dynamic, dispersed and complex as AIG. If that were so, then it said as much about the acceptability, and perhaps unavoidability, of sailing dangerously close to the wind by making potentially damaging deals in order to deliver the 15/15/15 targets as it did about senior executives' commitment to AIG staff.

AIG's dubious deals attracted the attentions of a politically ambitious New York Attorney General, Eliot Spitzer. In the aftermath of Enron (Willmott, 2011), Spitzer sought to make his reputation by ‘cleaning up’ AIG. That, for him, meant claiming the scalp of Greenberg, a headline grabbing result that could only boost his populist appeal. Faced with a vocal and aggressive Attorney General, the AIG board, supported by the company’s auditor, PwC, were disinclined to provoke the closer attentions of Spitzer. They fired Greenberg (in 2005) in order to avoid Spitzer’s threatened indictment of AIG over deals that, as Greenberg was keen to point out, amounted altogether to less than 1 per cent of its book value. As a consequence of the bad publicity associated with those deals, and compounded by Greenberg’s outraged and noisy departure, AIG’S treasured AAA rating was marked down to AA+. This triggered a series of collateral calls on the company amounting to $1.2bn, and turned out to be the beginning of the end of AIG.

<B>Bounty Hunt and Nemesis

The rapid and dramatic change in the reputation and fortunes of AIG, reflected in pressures on its stock price, prompted Greenberg’s successor, Martin Sullivan, to urge his staff to renew their search for other sources of good earnings. Sullivan’s call was answered by a massive expansion of the CDS business, most of which, it later became apparent, was not hedged against the potential risks of it being called in. As Sjostrum (2009) comments, AIG was content to pocket the premiums, seemingly certain that the CDSs would expire untriggered. In the years running up to the GFC, sellers of

CDSs, most notably AIG, were eager to take on vast liabilities as they seemed to be purely theoretical. In the event of loans defaulting, it was assumed that the investment grade CDOs covered by the CDSs would remain well above water: they would be the very last to default as the lower rated tranches would comfortably absorb any losses. Despite the reduction of the AAA rating to AA + AIG continued to enjoy a very high credit rating. As AIG was judged by the ratings agencies to be comfortably capable of covering any losses, its counterparties remained willing to pay a premium for protection against the remote possibility of investment grade CDOs defaulting.

The amounts involved were huge. According to Lewis (2010, p. 71), during 2005, '[i]n a matter of months, AIGFP, in effect, bought $50bn in triple-B-rated sub-prime mortgage bonds by insuring them against default' (see also Greenberg and Cunningham, 2013, pp. 231–2). And yet, as Lewis goes on to observe:

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> no one said anything about issuing these CDSs – not AIG CEO Martin Sullivan, not the head of AIGFP Joe Cassano, not the guy in AIGFPs Connecticut office in charge of selling his firm's credit default swaps to the big Wall Street firms…The deals by all accounts, were simply rubber-stamped – stamped inside AIG, and then again by AIG brass.

(Lewis, 2010, p. 71)

Moreover, many of the CDSs written by AIG incorporated credit support annexes (CSAs). These mandated that the CDS is marked to the market price of the CDO on a nightly basis. In what was, according to the risk models, the highly unlikely event of the market price of a CDO dropping by four percentage points or more, AIG would become liable to the counterparty for the equivalent sum.

In just six months, from December 2004 to mid-2005, AIGFP's CDS portfolio of $17.9bn had increased three-fold to $54.3bn. It was eventually shut down in the autumn of 2005 when there was about $73bn exposure to CDOs, many of them containing mortgages issued to economically marginal borrowers. This amounted to 75 per cent of AIG's equity base. *Yet, apart from Joe Cassano and his immediate colleagues no one at AIG, not even the chief risk officer, knew about the CSAs or thought to investigate the provenance of the CDOs despite, or maybe because of, their massive contribution to AIG's income*. Subsequent investigations of AIG did not identify 'a single instance of a senior manager sending so much as an inquisitive email about the swaps portfolio, despite it accounting for 75 per cent of AIG's equity base' (Boyd, 2011, p. 207). Nor is there any evidence of board members raising questions about what was a crucially important, rapidly growing source of AIG's revenues, its declared profits and its executives' balooning bonuses. It seemed that the company's outstanding results in 2006 – it generated $113bn in revenues with profit margins of 19.1 per cent pre-tax – effectively silenced, or at least impeded, any potentially unsettling curiosity about the nature of the goose laying AIGs golden eggs, and so strongly disincentivized any potential inclination to raise challenging questions or engaged in difficult conversations.

In other words, corporate governance considerations were eclipsed so long as AIG was delivering bottom line results, and as long as members of the board, or the risk management committees, declined to voice any concerns about how these outstanding results were produced or what risks were attached to them.

In the summer of 2007, almost a year after borrower delinquencies were widely known to be growing, the ratings agencies finally began to downgrade residential mortgage-backed securities. The securities then traded well below par, resulting in collateral calls upon AIG where the CDSs carried a credit support annexe (CSA, see above) – notably, by Goldman Sachs who had been hedging their exposure to CDOs. As AIG responded to these calls, the company became progressively drained of liquidity. Even so, when the AIG compensation committee met in March 2008 to review the bonus allocation, CEO Martin Sullivan successfully lobbied the committee to exclude the losses when calculating the bonus pool. Again, it is relevant to ask: where was the corporate governance? Removing the losses from their calculations, produced an overstated bonus of US$5.6m for the CEO and corresponding overstatements for other executives.

Robert Willumstad, who had been chairman of the AIG board since November 2006, succeeded Martin Sullivan to became CEO in June 2008. He is reported to have remarked that if no one on the AIG board had been told that so much CDS business had been written, its scale and exposure should at least have prompted some consideration in risk management (Boyd, 2011, p. 245), thereby passing the buck from the board to an internal function. Here it may be asked: why were board members not actively asking this major source of revenue rather than expecting to be informed about it? Greater vigilance from internal functions might have been reasonably expected but only if it is actively encouraged, or even demanded, by senior executives who, it appeared, were content to be wilfully blind to the activities of AIGFP, or were grossly incompetent with regard to their fiduciary duties. Where was the corporate governance: why didn't members of the AIG board, which Willumstad chaired from late 2006 to June 2008, actively demand more information about where and AIG's performance and profits were being generated, especially when the answer to this question pointed directly to the very rapidly expanding and known-to-be-risky area of AIG's activity? It was only after the event – when AIG was clearly in trouble in November 2007 – that its auditor eventually raised concerns about the source of AIGs revenues. In a report delivered to the board in early December, PwC emerged from a deep, seemingly self-induced sleep to declare that the amount of collateral being called in on its CDSs might constitute a 'control deficiency' which was a violation of the Sarbanes-Oxley Act. Further investigation led PwC to file an 8-K statement that referred to a 'material weakness' with regard to the 'fair valuation of the AIGFP super-senior credit-default swap portfolio' (see Greenberg and Cunningham, 2013, p. 235 et seq). PwC's late but stinging intervention begs the question of how, and why, the auditor had failed to identify and/or register the risks associated with the ballooning of the CDS business much earlier. Only when there was a clear threat to the reputation of PwC, it seems, did the auditor sound the alarm.

The multiple failures of corporate governance occurred, Boyd (2011) suggests, because 'AIG worked where it mattered: the earnings release' (ibid., p. 177). Members of the board contrived to ignore the Elephant in the room because, as one supervisor put it, ‘No one said anything at the board level because AIG worked where it mattered: the earnings release… “We knew it was crazy, but our job wasn’t to worry about that; it was to ensure that good numbers came out”’ (ibid.). When the 8-K statement demanded by PwC was released, it resulted in a $11.47bn write-down that reduced AIG’s earnings to $6bn from $14bn. This led to AIG stock dropping a further 11 per cent in addition to the previous month’s fall of 14 per cent. In May 2008, AIG suffered yet another $9.1bn charge on its swaps book and announced a $7.81bn loss. The company simply could not keep up with demands for collateral because it could not sell its assets quickly enough to restore its liquidity. It then faced bankruptcy or bail out.

<A>Reflection

Before AIG collapsed, the Federal Reserve stepped in with an initial huge taxpayer loan of $85bn that allowed the company to meet its immediate obligations to clients. The loan lubricated AIG’s global insurance business as it provided $500bn of credit protection to its corporate clients. It also averted the threat of chaos and dislocation in equity and bond markets, with potential knock-on effects in product markets as well as annuities on a scale that that would have dwarfed the fall-out from the failure of Lehman Brothers. As AIG was one of the ten most widely held stocks in 401(k) retirement plans, its collapse also risked a run on mutual funds.

The initial loan to AIG was subsequently supplemented by a further $100bn in exchange for 80 per cent equity ownership. The bail-outs which threw a lifeline to AIG and other zombie financial firms were provided without any *quid pro quo* in the form of a rejection of, or even any substantial change in, the 'new growth model' spawned by neo-liberal thinking. While the global financial system has been resuscitated by the bail outs and quantitative easing, the global economy remains, in 2015, plagued by counterproductive efforts to address structural instabilities that have spread from problems of corporate solvency to sovereign indebtedness. At the time of the bail-out and since, attention to the structural basis of instability – notably, the 'too big' concentration in the sector compounded by competitive, short-term pressures to deliver shareholder value and the retention of associated incentives to do so – has tended to become displaced. The focus has shifted to compensatory elaborations of the regulatory apparatus, some undemanding restructuring, and some rather vacuous calls to change the culture of the financial sector. With regard to AIG, it is notable that the Warren Report's detailed examination of the company's operation prior to the government rescue makes almost no reference to the role of AIG's corporate governance (Congressional Oversight Panel, 2010, pp. 18–57), preferring to focus instead upon the shortcomings of the regulatory regime, especially the role of the Federal Reserve Bank of New York, and the credit rating agencies.

The limited attention directed at AIG's corporate governance is lamentable precisely because, in formal terms, many of its features were exemplary. For example, its board membership comprised an overwhelming majority of outside, ostensibly independent directors - the ratio ranged from not less than 10:6 (2003) to as many as 14:2 (2007). Direct reference is made by AIG to the 'value of diversity of experience and views amongst Board members' and the company proclaimed that its size 'facilitate[s] substantive discussion by the whole board in which each director can participate meaningfully' (cited by Vududev, 2009, p. 27). So, where were these independent experts during 2000–07, and what 'substantive' was their well rewarded expertise initiating or illuminating? A detailed examination of AIG disclosures and statements on its credit deriviatives (CDS) business from 2002 to 2007 highlights a number of issues that could, and arguably, should have been picked up and examined by AIG's ostensibly high-powered board members (Vasudev, 2009). These include: the lack of explanation in the 2002 filings of why the default swaps business was handled by AIGFP rather than the insurance arm of AIG, and also a Derivatives Review Committee that was not a committee of AIG directors and which did not examine the credit derivatives business at AIGFP as this was treated as an independent operation.

How was it possible that members of the AIG board failed to question the basis for the claimed independence of AIGFP and the absence of any of its board members from the committee that reviewed its derivatives business? As early as 2002, AIG's filing acknowledged that the company was exposed to the credit risk associated with CDSs sold by the AIGFP: 'AIG guarantees AIGFP's debt and, as a result, is responsible for all AIGFP's obligations' (Vasudev, 2009 citing AIG Form 10-K, p. 50) This statement noted an 'upside', namely that AIG would be liable for payment only after default in the first 11 per cent of the portfolio; but absent from the statement was any equivalent recognition of the possibility of simultaneous defaults in different tranches, and there is no reference to any obligation to provide collateral in the event of a fall in the market value of the underlying securities. The latter obligation was disclosed only in the 2007 filing after such obligations were called in. In its filings for 2002–06, AIG quantified the ‘fair value’ of its *non-credit* derivatives portfolio and identified them as ‘the maximum potential loss’ that could be suffered by the company. But no equivalent figures were provided for its credit derivatives. No reference is made to procedures such as the monitoring of risk by the Derivatives Review Committee or seeking approval from the Credit Risk Committee. In the 2007 filing, AIGFP, which had been described the previous year as ‘a specialized business, distinguishing itself as a provider of super senior investment grade credit protection’ (Vasudev, 2009 citing AIG Annual Report for 2006, p. 34), declared a staggering loss of $11. 5bn but with no further comment. A more sombre note is struck in the statutory filing for 2007 where there is an acknowledgment of that ‘AIG’s risk management processes and controls may not be fully effective in mitigating AIG’s risk exposures’ (Vasudev, 2009, p. 18). This admission rather casts doubt on whether those formal controls had been even minimally effective in the preceding years when no reference was made to them in AIG’s filings. These doubts are further fuelled by the apparent boilerplate of the 2007 filings’ reference to ‘review and oversight committees to monitor risks [and] set limits’ (ibid.) as the expression of this commitment is ‘not materially different from the perfunctory discussion of the management structure of the Financial Services division in the filing for 2002’ (ibid.).

<A>Conclusion

With hindsight and the benefit of many post-mortems, it is becoming apparent that the financial meltdown of 2008 was the product of a ‘perfect storm’ of mutually reinforcing elements that, somehow and perhaps conveniently, went long undetected by those – economists (see Lawson, 2015, Chapter 6) but also investors and regulators – who profess expertise in the field of finance. In addition to sanctioning incautiously low interest rates, there was injudicious de-regulation, the transformation of investment banks from partnerships into proprietary companies,[12] the creation of highly complex financial instruments (e.g. CDOs) based upon ahistorical models, a reduction of the regulatory minimum capital required under Basel Accords, complicit rating agencies and auditors, flat real wages for many low and middle earners who sought to boost their income by borrowing against rising paper asset values, excessive leveraging by financial institutions, the use of mark to market accounting, avaricious executives and supine directors and, last but not least, accommodating models and practices of corporate governance.

When reflecting upon the preconditions and on-going unfoldings of the global financial crisis, attention was focused earlier on a rather obscure, if consequential, policy intervention, in the form of the Community Reinvestment Act (CRA). When tweaked by the Clinton administration, it unintentionally fuelled a rapid expansion and normalization of the subprime mortgage market as lenders were strongly incentivised to become responsive to previously ‘redlined’ applications. Combined with the partial repeal of Glass–Steagall, the Clinton tweak proved to be a thin end of a very large and unsteady wedge that contributed to the unprecedented destabilization of the US housing market and inadvertently prized open the flood-gates through which flowed a liquid wall of money accelerated by the growing use of securitization.

It was not just the Clinton tweak that inflated the sub-prime mortgage bubble but, rather, the mutually amplifying interconnectedness of a boom in this market and the securitization of sub-prime mortgages. The exponential growth of CDOs was a condition as well as a consequence of a seemingly limitless supply of credit. Operating within a neo-liberal regime fuelled by interest rates held artificially low, AIG embraced a conception of corporate governance geared to the maximization of shareholder value. The company complied formally with many vaunted features of corporate governance while it undertook ‘a multi-billion dollar CDS business free from regulatory filings, mandated capital requirements, and government intervention’ (Sjostrum, 2009, p. 989).

The ‘new growth model’ created business opportunities that offered quick wins, big bonuses and minimal personal risk. These were seized upon by the investment banks and AIG to expand the scale, complexity and reach of their operations. The beneficiaries were the smarter investors, and most of the bankers and traders who collected their capital gains and dividends, salaries and bonuses prior to the meltdown. Traders and executives, like Joe Cassano and Martin Sullivan, made hundreds of millions of dollars in bonuses and pay-offs by piling up debts that taxpayers bailed out. Who were the major losers? Some of them were employees of financial institutions and their shareholders. But the majority were, and continue to be, 'ordinary' citizens and taxpayers – present and future. For years to come, the '99 per cent' will, in a variety of ways, be paying off the loans used to recapitalise financial institutions – institutions that had, in response to market-based incentives promoted by 'the new growth model' and its favoured, agency-theoretic conception of corporate governance, become too complex to manage, too powerful to regulate or break up, as well as 'too big to fail'.

Compounded by further debts incurred to counter the worst effects of the economic slump in economic activity following the meltdown, the prospect for most of the losers is a continuing deterioration in the provision of public services, increases in regressive taxes (VAT), cuts in social benefits and further degradation in the terms and conditions of employment (zero-hours contracts, erosion of employment security, reduced pensions, and so on), especially for those employed in the public sector. To justify such austerity, which is of greatest benefit to elites who are in a position to capitalize on others' distress (e.g. by acquiring public assets at knock-down prices), the debt is ascribed to excesses in public spending prior to the GFC when, arguably, it is a consequence of the unsustainability of the debt-fuelled 'new growth model' that elites now seek to rekindle (see Knights and McCabe, 2015). In the absence of concerted and determined efforts to discredit the model and replace it with a less socially divisive alternative, efforts to restructure and reform the governance of the financial sector are unlikely to result in more than cosmetic, weak and piecemeal reform.

As the impact of the meltdown becomes more widely felt, the losers may be prompted by their plight to reflect upon the role and credibility of the key financial institutions that remain in place, and now assume responsibility for the restoration of the financial system. Amongst them is the International Monetary Fund which in 2006, a year before the credit crunch occurred, confidently trumpeted the benefits of securitization (see opening quotation). Now, in 2015, the mandarins in the IMF are at least calling for a shake-up in banks' bonus-heavy pay structures and incentives that 'encourage excessive short-term risk-taking' (Donnan and Fleming, 2015; see also Johnson, 2015). The IMF is also warning that the financial sector in the US and other advanced economies is still too big and continues to allow banking systems and financial systems to grow faster than its regulation can monitor (see Donnan and Fleming, 2015). But the IMF lacks the capacity and the mandate to do more than make calls that political and financial elites are at liberty to note but ignore, or simply disregard.

At the heart of a broken system is a shareholder-value model of corporate governance (Deakin, 2011) that since the crises, as Bainbridge (2012) shows, has been shored up, rather than challenged or substantially reformed. Reforms have generally 'empowered shareholders', rather than strengthened the governance role of other stakeholders, which 'make(s) the next crisis more likely and potentially more severe' (ibid, p. 13). It is improbable that shareholder-centricism will be remedied without radical and sweeping regulatory interventions by national and global governments. It is a view shared by Greenberg, the deposed CEO of AIG, who attributes much responsibility for the company's collapse to a shareholder-centric model of corporate governance that was unchecked after his departure. As he puts it, and with specific reference to the post-Enron era, the collapse of AIG followed a disasterous reconstitution of the AIG board which occurred in response to a 'national campaign for "shareholder democracy"' (Greenberg and Cunningham, 2013, p. 158). The avowed intent of the campaign was to curb the abusive exercise of power by executives. But, in Greenberg's eyes, the empowerment of shareholders was incapable of holding his successor properly to account (ibid., p. 158; see also p. 159). Indeed, Greenberg's successor, Martin Sullivan, and his fellow board members eagerly pursued the short-term shareholder value by recklessly permitting the expansion of revenues from AIGFP, thereby enabing the company to reach, and even exceed, its 15/15/15 targets. This hugely enriched AIG executives who were subsequently 'let go' with impunity. That said, it was Greenberg who had set up the 15/15/15 metric that shareholders assumed could be indefinitely delivered.

Meaningful reform of the system requires, as Howson (2009, p. 50) notes, radical change that encompasses 'prudential regulation by public authorities' but this is feasible only if the banks and insurance companies are broken up so that they are small enough to fail as well as simple enough to audit and regulate. In the case of AIG – as Willumstad, who chaired the board before becoming its CEO, acknowledges but apparently lacked the time, capacity or will to address – the size of the company and its labyrinthine complexity made it very difficult to monitor and control (see Boyd, 2011, pp. 174–6). Identifying much more wide-ranging reforms of corporate governance is one way to rebalance the distribution of benefits and costs arising from the financial sector. In the absence of such reform, established political and financial elites can be expected to 'push back' at any minor tightening of control (e.g. over mortgage lending), as is evident in the US where the efforts by a coalition of banks and republicans have repeatedly been directed at loosening the criteria for qualified mortgages through the proposed introduction of an alternative, market-based standard (see Jopson and McLannahan, 2015). The GFC has highlighted the 'limits of private law' (Howson, 2009, p. 50) that is at the centre of neoliberalism, yet it remains in place because powerful vested interests are presently well served by it. Paradoxically, resistance to closer, more effective and publicly accountable global, as well as national, regulation of corporations and markets makes it more likely that profit-seeking activities will result in systemic collapse.

<A>References

Bainbridge, S.M. (2012) *Corporate Governance after the Financial Crisis*, Oxford: Oxford University Press.

Blair, M. (1995) *Ownership and Control: Rethinking Corporate Governance for the Twenty-First Century*, Washington, DC: Brookings Institute.

Boyd, R. (2011) *Fatal Risk: A Cautionary Tale of AIG's Corporate Suicide*, New Jersey: John Wiley.

Braithwaite, T. (2015) 'Hank Greenberg Scores Pyrrhic Victory in AIG Lawsuit', *Financial Times*, 15 June.

Congressional Oversight Panel (2010) *The AIG Rescue, Its Impact on Markets, and the Government's Exit Strategy*. Retrieved on 24 July 2015 from www.gpo.gov/fdsys/pkg/CPRT-111JPRT56698/pdf/CPRT-111JPRT56698.pdf.

Crouch, C. (2008) 'After Privatized Keynesianism', Compass Think Pieces, Number 41. Retrieved on 14 June 2010 from http://clients.squareeye.com/uploads/compass/documents/CTP41KeynesianisamCrouch.pdf.

Davis, G.F. (2009) *Managed by the Markets: How Finance Re-Shaped America*, Oxford: Oxford University Press.

Deakin, S. (2011) 'Corporate Governance and the Financial Crisis in the Long Run' in Williams, C. and Zumbansen, P. (eds) *The Embedded Firm: Corporate Governance, Labor and Finance Capitalism*, Cambridge: Cambridge University Press.

Donnan, S. and Fleming, S. (2015) 'Christine Lagarde Calls for Shake-Up of Bankers' Pay', *Financial Times*, 6 May.

Epstein, G.A. (2005) 'Introduction: Financialization and the World Economy' in Epstein, G.A. (ed.) *Financialization and the World Economy*, Cheltenham: Edward Elgar.

Ezzamel, M., Willmott, H.C. and Worthington, F. (2009) 'Manufacturing Shareholder Value: The Role of Accounting in Organizational Transformation', *Accounting, Organizations and Society*, 33, 2–3: 107–40.

Feirstein, B. (2009) *100 to Blame: The Community Reinvestment Act*, Corporate Skyboxes, and More, Vanity Fair, 10 September 2009. Retrieved on 12 May 2010 from www.vanityfair.com/online/daily/2009/09/100-to-blame-the-community-reinvestment-act-corporate-skyboxes-and-more.html.

Financial Services Authority (2009) *Mortgage Market Review*. Retrieved on 14 June 2010 from www.fsa.gov.uk/pubs/discussion/dp09_03.pdf.

Gordon, R. (2008) *Did Liberals Cause the Sub-prime Crisis?*, The American Prospect, 7 April. Retrieved on 12 May 2010 from www.prospect.org/cs/articles?article=did_liberals_cause_the_subprime_crisis.

Greenberg, M.R. and Cunningham, L.A. (2013) *The AIG Story*, New Jersey: John Wiley.

Howson, N.C. (2009) 'When "Good" Corporate Governance Makes "Bad" (Financial) Firms: The Global Crisis and the Limits of Private Law', *Michigan Law Review*, 108: 44–50.

Hudson, M. (2006) 'The New Road to Serfdom: An Illustrated Guide to the

Coming Real Estate Collapse', *Harpers Magazine*, May: 39–46.

Husock, B. (2000), 'The Trillion Dollar Bank Showdown that Bodes Ill for Cities' *City Journal*, Winter. Retrieved on 12 May 2010 from www.city-journal.org/html/10_1_the_trillion_dollar.html Accessed 12 May 2010.

International Monetary Fund (2006) *Global Financial Stability Report: Market Development and Issues*, Washington, DC: International Monetary Fund.

Johnson, M. (2015) 'Hedge Fund Pay Down as Top 25 Managers Bank Total of $11.6bn', *Financial Times*, 5 May.

Jopson, B. and McLannahan, B. (2015) 'Democrats Raise Roof Over Mortgages', *Financial Times*, 14 May.

Kindleberger, C.P. and Aliber, R. (2005) *Manias, Panics and Crashes: A History of Financial Crises*, 5th edition, New York: John Wiley and Sons.

King, M. (2007) Speech made at the Birmingham Chamber of Commerce Annual Banquet. Retrieved on 18 June 2010 from www.bankofengland.co.uk/publications/speeches/2007/speech300.pdf.

Klimecki, R. and Willmott, H.C. (2009) 'From Demutualization to Meltdown: A Tale of Two Wannabe Banks', *Critical Perspectives on International Business*, 5, 1–2: 12–140.

Klimecki, R., Glynos, J. and Willmott, H.C. (2012) ‘Cooling out the Marks: The Ideology and Politics of the Financial Crisis', *Journal of Cultural Economy*, 5, 3: 297–320.

Knights, D. and McCabe, D. (2015) ‘Masters of the Universe’: Demystifying Leadership in the Context of the 2008 Global Financial Crisis’, *British Journal of Management*, 26: 197–210.

Langley, P. (2009) *The Everyday Life of Global Finance: Saving and Borrowing in Anglo-America*, Oxford: Oxford University Press.

Lawson, T. (2015) ‘Contemporary Economics and the Crisis’ in T. Lawson, *The Nature and State of Modern Economics*, London: Routledge.

Lewis, M. (2010) *The Big Short: Inside the Doomsday Machine*, London: Allen Lane.

Loughrey, J. (2013) (ed.) *Directors’ Duties and Shareholder Litigation in the Wake of the Financial Crisis*, Cheltenham: Edward Elgar.

MacKenzie, D. (2008) ‘End-of-the-World Trade’, London Review of Books, 30, 9: 24–26. Retrieved on 14 May 2010 from www.lrb.co.uk/v30/n09/donald-mackenzie/end-of-the-world-trade.

MacKenzie, D. (2009) ‘All Those Arrows’, Review of G. Tett, *Fool’s Gold: How Unrestrained Greed Corrupted a Dream, Shattered Global Markets and Unleashed a Catastrophe, London Review of Books*, 31,12: 20–22. Retreived on 14 May 2010 from www.lrb.co.uk/v31/n12/donald-mackenzie/all-those-arrows.

Mackenzie, D. (2009a) ‘The Credit Crisis and a Problem in the Sociology of Knowledge’, Working Paper, School of Social and Political Science, University of Edinburgh.

Martin, R. (2002) *The Financialization of Daily Life*, Philadelphia: Temple University Press.

Morgan, G. (2010a) ‘Legitimacy in Financial Markets: Credit Default Swaps in the Current Crisis’, *Socio-Economic Review*, 8, 1: 17–45.

Morgan, G. (2010b) ‘Constructing Financial Markets: Reforming Over-the-Counter Derivatives Markets in the Aftermath of the Financial Crisis’, Working Paper available from the author, Cardiff Business School, UK.

Parker, M., Fournier, V. and Reedy, P. (2007) *The Dictionary of Alternatives*, London: Zed Books.

Pathak, J., Karim, K.E., Carter, C. and Xie, Y. (2013) 'Why Do Enterprise Risk Management Systems Fail? Evidence from a Case of AIG', *International Journal of Applied Decision Sciences*, 6, 4: 345–371.

Rajan, R.G. (2010), *Fault Lines: How Hidden Fractures Still Threaten the World Economy*, Princeton, NJ: Princeton University Press.

Reed, M. (2011) 'The Politics of Crisis and the Dynamics of Organizational Rule' Extended Review of A. Gamble, *The Spectre at the Feast: Capitalist Crisis and the Politics of Recession*, *Organization*, 18: 261–9.

Roberts, J. and Jones, M. (2009) 'Accounting for Self Interest in the Credit Crisis', *Accounting, Organizations and Society*, 34: 856–867.

Schiller, R.J. (2008) *The Subprime Solution: How Today's Global Financial Crisis Happened, and What to Do about It*, Princeton, NJ: Princeton University Press.

Schwartz, H.S. (2012) 'Anti-oedipal dynamics in the sub-prime loan debacle: The Case of a Study by the Boston Federal Reserve Bank' in Long, S. and Sievers, B. (eds) *Towards a Socioanalysis of Money, Finance and Capitalism: Beneath the Surface of the Financial Industry*, London: Routledge.

Securities Industry and Financial Markets Association (2008) ‘Restoring Confidence in the Securitization Markets’. Retreived on 29 August 2009 from http://sifma.org.

Shelp, R.K. and Ehrbar, A. (2009) *Fallen Giant: The Amazing Story of Hank Greenberg and the History of AIG*, New Jersey: John Wiley.

Sorkin, A.R. (2009) *Too Big to Fail: Inside the Battle to Save Wall Street*, Harmondsworth: Penguin.

Sjostrum, W.K. (2009) ‘The AIG Bailout’, *Washington and Lee Law Review*, 66, 3: 943–91.

Stout, L. (2012) *The Shareholder Value Myth: How Putting Sharheholders First Harms Investors, Corporations and the Public*, San Francisco: Berrett-Koehler.

Sun, W., Stewart, J. and Pollard, D. (2011), (eds.) *Corporate Governance and the Global Financial Crisis: International Perspectives*, Cambridge: Cambridge University Press.

Tett, G. (2009), *Fool’s Gold*, London: Abacus.

Tomlinson, R. and Evans, D. (2007), ‘CDO Boom Masks Subprime Losses, Abetted by S&P, Moody’s, Fitch’, 31 May, Bloomberg.com. Retrieved on 10

June 2010 from www.bloomberg.com/apps/news?pid=newsarchive&sid=ajs7BqG4_X8I.

Vasudev, P.M. (2009) ‘Default Swaps and Director Oversight: Lessons from AIG’, paper presented at the Risk Management and Corporate Governance Conference, Loyola University, Chicago, 1–2 October 2009. Subsequently published in *Journal of Corporation Law*, 35: 758–97.

Vasudev, P.M. and Watson, S. (eds) (2012) *Corporate Governance After the Financial Crisis*, Cheltenham: Edward Elgar.

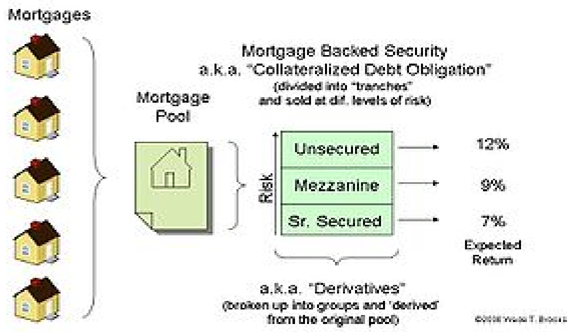
Veldman, J. and Willmott, H.C. (2016) ‘The Cultural Grammar of Governance: The UK Code of Corporate Governance, Reflexivity, and the Limits of “Soft” Regulation’, *Human Relations*, 69, 3: 581–603.

Willmott, H.C. (2011) ‘Enron Narrative’ in M. Painter-Morland and T. Ten Bos (eds) *Continental Philosophy and Business Ethics,* Cambridge: Cambridge University Press.

Zuckerman, G. (2009) *The Greatest Trade Ever: How John Paulson Bet Against the Markets and Made $20 Billion*, London: Penguin/Viking.

<A>Appendix A Collateralized Debt Obligations (CDOs)

CDOs are a form of bond whose complex structure was developed in the world of corporate debt. The first CDO was issued in 1987 but it was the late-1990s before they became established. By 2004, the global issuance of CDOs had reached $154bn and this increased rapidly to $520bn in 2006. In 2009, the global issuance of CDOs fell to $4bn. Mortgage-based CDOs have different risk classes comprising a number of tranches (junior, mezzanine, senior and super-senior) that offer different rates of return that, in the case of the most junior, high risk tranches can be at least 12 per cent and as high as 15–20 per cent (see figure below).



Source: http://en.wikipedia.org/wiki/File:Mortgage_backed_security.jpgSS (retrieved on 3 May 2016).

<QM>

> If you took a million subprime mortgages, sliced ’em up, and shuffled the pieces around into smaller, seemingly random groups, you’d get CDOs – collateralized debt obligations. The idea was that they lowered the risk involved, which allowed for AAA ratings. It was all modeled on a mathematical formula called the Gaussian copula function, which looked something like this: $\Pr[T_A< 1, T_B< 1] = F_2(F^{-1} (F_A(1)), F^{-1} (F_B(1),) g)$. By 2006 some $4.7 *trillion* in CDOs had been sold. But there was just one small, tiny, little problem with the formula: it was based on “correlation,” meaning you could predict the future by looking at the past. And in this case, the gamma function – g – was deduced from projections that house prices would continue to rise indefinitely, at the same rate as they had in the recent past. Obviously, they didn’t. Which is why, when the first subprime mortgages began to default, the whole crazy apparatus that held up our financial high-wire act came tumbling down.
>
> (Feirstein, 2009)

<A>Appendix B The Wonders of Securitization

In November 2003, when speaking on behalf of the American Securitization Forum to the ‘Hearing on Protecting Homeowners: Preventing Abusive Lending While Preserving Access to Credit’ at the House of Representatives, Cameron L. Cowan, a Partner of Orrick, Herrington, and Sutcliffe, LLP, declared that:

<QM>

> The success of the securitization industry has helped many individuals with subprime credit histories obtain credit. Securitization allows more subprime loans to be made because it provides lenders an efficient way to manage credit risk…Regulation that seeks to place disproportionate responsibilities on the secondary market will only succeed in driving away the capital loan purchasers provide in the subprime market.

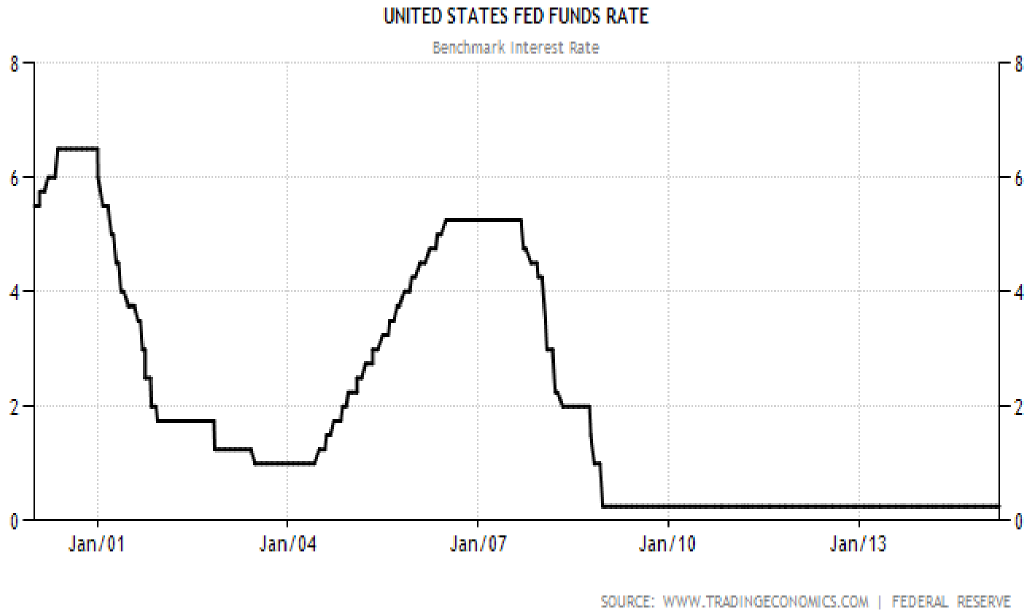
He continued:

<QM>

> I urge Congress to move with great care as it addresses the problem of predatory lending. The secondary markets are a tremendous success story that has helped democratize credit in this country. Well intended, but overly restrictive, regulation in this area could easily do more harm than good.

Source: http://financialservices.house.gov/media/pdf/110503cc.pdf (retrieved 3 May 2016).

<A>Appendix C



<A>Notes

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[1] This was reflected in the dramatic removal, within days of the election of a New Labour administration in 1997, of control of the base rate from the direct influence of politicians. A monetary policy committee, comprising five senior Bank of England executives and four experts selected by the Chancellor of the Exchequer, took responsibility with the objective of keeping inflation under 2.5%, principally by adjusting the base rate. This focus upon inflation is perhaps understandable in the UK context where it is so strongly associated with the traumas of stagflation and industrial conflict attributed to the diluted Keynesian policies of the 1970s.

[2] The reference here is to a character created by Harry Enfield, a comedian, in 1986, the year of Big Bang. See http://knowyourmeme.com/memes/loadsamoney (retrieved 3 May 2016).

[3] The boom was punctuated by occasional 'blips' and `bumps', such as the financial crisis in South East Asia in 1997 and the slowdown when the dot.com bubble burst in 2000. But it was the collapse of *Long Term Capital Management* (LTCM) and the scandal of *Enron* that most clearly foreshadowed, and signalled warnings of the risks of securitization, including the use of financial models, at the heard of the global financial crisis.

[4] It has been alleged that rating agencies routinely awarded investment grade status to tranches of CDOs constructed out of mezzanine or junior tranches from other CDOs. That is to say, the investment banks (e.g. Goldman Sachs but they were quickly imitated) are said to have gathered together the junior and mezzanine tranches of CDOs, and then 'persuaded the rating agencies that these weren't, as they might appear, all exactly the same things. They were another diversified portfolio of assets!…The rating agencies, who were paid fat fees by the firms for each deal they rated, pronounced 80% of the new tower of debt (i.e. new CDO) triple-A [top investment grade' (see Lewis, 2010, p. 73). To illustrate the point, it has been reported that Moody's, one of the rating agencies, downgraded a top, super-senior tranche of a mortgage backed CDO given an AAA rating in April 2008 to a rating of B2 in November of the same year (MacKenzie, 2009).

[5] An increase to 0.5 would have made CDOs significantly less attractive in comparison to gilts and corporate or government bonds receiving an equivalent investment grade rating.

[6] An Alt-A grade, for example, means the claimed income or other key information of the borrower might not have been verified.

[7] As an aside, Republicans rattled by the meltdown have identified the CRA as *the* (Democratic) source of the 'sub-prime crisis'.

[8] AIG's labyrinthine complexities and opacity – paralleled by Enron (Willmott, 2011) – resulted, in part, from an acquisitions spree that included International Lease Finance Corporation, the market leader in aircraft leasing and also SunAmerica leading provider of life assurance, savings products, annuities and mutual funds in addition to its biggest US insurance competitor (American General Insurance).

[9] This point was not lost on David Schiff in his 1993 article 'Swaps and Derivatives: AIG Hits Hyperspace'. Schiff subsequently highlighted a number of other dubious AIG dealings, including a reinsurance deal called Coral Re involving the giant Canadian Brewer Molson Companies whose CEO coincidentally joined the AIG board shortly afterwards, as well as Brightpoint that paid AIG about $15m in monthly premiums to retroactively cover an imaginary loss. AIG then made a payment of $11.9m that enabled Brightpoint to overstate its earnings by 61 per cent and so conceal the scale of its unanticipated losses. As Boyd (2011, p. 109) notes, this deal was remarkable since AIG allowed a longstanding subsidiary to risk the reputation of the company for a few million dollars in premium. It turned out to be even more remarkable when Schiff discovered that the 'Loss Mitigation Unit' of the subsidiary was openly advertising its services on AIG's website. For this, AIG was penalized $10m by the Securities and Exchange Commission. According to Boyd (2011, p. 110), Greenberg, the CEO of AIG, 'seethed at what he saw was the lack of proportion shown by the SEC and to an extent his board, who expressed displeasure to him in no uncertain terms'. This was to become a recurrent theme of Greenberg's attitude to regulators (see Braithwaite, 2015) and 'disloyal' members of the AIG board.

A similar scam was undertaken in 2001 to provide banks with balance sheet relief. This was available though a product termed Contributed Guaranteed Alternative Investment Trusts (C-GAITS). Although Ernst & Young were initially content to suggest that these instruments were congruent with accounting standards, they withdrew this advice but AIG continued to market this product without drawing clients' attention to the potential accounting risk. By offloading $762m in three separate C-GAITS deals, PNC Financial Services Group was able to report a 52 per cent higher net income, for which AIG received $39.21m in fees (see www.sec.gov/litigation/complaints/comp18985.pdf retrieved 26 March 2015). The SEC settled for payment by AIG of $126m, and this was a 'deferred prosecution' to indicate that no one would be indicted so long at AIG complied until January 2006. This had a depressing effect upon the share price and further spooked the board. As even a pro-Greenberg board members is reported to have said of this period: "No one thought that Brightpoint and PNC were the only deals that were [problematic]. The company was making money but we weren't sure where the next headache might come from' (Boyd, 2011, p. 117).

[10] When Cassano's contract was terminated in 2008, no attempt was made by AIG to recover any of his compensation. Indeed, he was allowed to retain up to US$34m in uninvested bonuses and negotiated a US$1m per month retainer (see www.propublica.org/article/former-aig-exec-at-center-of-meltdown-got-paid-millions-for-little-work-101. Retrieved 24 July 2015).

[11] The deal involved obtaining a loan of $500m from *Gen Re*, which looked as if it was a payment to reinsure an equal amount of risk but was deployed to improve a decline of $59 m in AIG's general reserves that had sliced off $6 from its $99 share price.

[12] The transformation of investment banks from partnerships into proprietary companies is important as it transfers risk, as well as reward, to shareholders. With this change, executives (no longer partners) have less direct personal interest in understanding and supervising risk; and they also find themselves under greater external pressures to maximise profitability.