I am very grateful to the Reserve Bank of New Zealand for this invitation to mark their 75th anniversary. There are two particular reasons why I was delighted to accept, and neither of them was the opportunity to visit New Zealand during your winter, and in the middle of a home Ashes series.

The first reason is that there is a close link between New Zealand and the London School of Economics. One of the most celebrated economists in the LSE’s history, Bill Phillips – he of the Curve – was a New Zealander. Some years back the School gave New Zealand one of the Phillips machines, illustrates in a vivid way the relationship between inflation and unemployment. We don’t now think of that relationship quite in the way Bill Phillips did, but many of his insights are still highly relevant today.

The second reason is that I have been, over the last year, working on a book about the future of central banking, and the Reserve Bank has a particular place in the history of central banking in the last 20 years, as the originator of inflation targeting, a monetary policy framework which has now been adopted by over 20 other countries, including the UK. In that book, I shall argue that inflation targeting now needs some further development, in the light of the lessons of the financial crisis, and I shall come on to that in a moment. But there is no doubt that the Reserve Bank has been a highly influential organisation internationally, under Don Brash and Alan Bollard. In central banking, as in rugby union, New Zealand punches above its weight. Only metaphorically in the first case, sometimes literally in the second.

The subject matter I have chosen for this evening is, however, the financial crisis itself, and particularly the big question which remains under debate – whodunnit? When she opened a new building at the LSE last November, the Queen asked another question – ‘why did nobody see it coming?’ That is altogether more difficult, and above my pay grade. Some may argue that now we are two years into the crisis, and attention is focused on finding routes out of it, such a retrospective approach is redundant. Why should we now engage in a useless blame game? Is this not an exercise in touring the battlefield after the action is over, bayoneting the wounded?

I do not think so. After all, this is no ordinary crisis. The financial and economic costs are enormous. The overt cost of the financial rescues is now estimated at around US$9 trillion in the US, Europe and Japan. In the UK alone, this is now the fourth most expensive fiscal event in British history, after the Napoleonic wars and the two World Wars of the twentieth century. As far as ordinary people are concerned, we have still not seen anything like the full implications. Unemployment is rising sharply across the developed world, and will almost certainly continue to do so for some time. In New Zealand, it is forecast to go above 7 percent next year, twice the rate before the crisis began. So this is not a situation in which we can say, ‘No worries, we all make mistakes’ and move on.

Also, a clear analysis of the causes of the crisis is needed in order to inform the solutions. My impression is that in some of the current international debates, politicians are proposing solutions in search of problems. I would put the Franco-German initiatives to rein in hedge funds and private equity firms in this category. The same is true of the G20 focus on off-shore centres. I recognise that there may be reasons to wish to tighten up in all these areas, and it is important not to waste a good crisis, but they are hardly at the centre of the problem.
So I believe it remains worthwhile to try to refine our analysis of the malfunctions in the global financial system, to avoid careering off down blind alleys.

But before I begin to throw stones, let me describe for you the glass house in which I live. In other words, let me take my own share of the blame before dishing out the rest. I was Deputy Governor of the Bank of England in the mid-1990s, and Chairman of the Financial Services Authority up until the summer of 2003. I would argue that it was too early at that stage to identify the inflating bubble, but I would certainly accept that when I was a regulator, I shared the view that the financial system could operate with relatively low levels of capital, and also the view that financial innovation was, by and large, a good thing. Those assumptions have now been challenged.

Since 2003, I have been the Director of the London School of Economics. And it is arguable that the economic profession, and economic teaching, has not been without fault. In a lecture at the LSE last month, Paul Krugman argued that for the last 30 years, macroeconomics has been passing through a Dark Age. One of our own professors – Willem Buiter – wrote a blog in the Financial Times recently entitled “The unfortunate uselessness of most ‘state of the art’ monetary economics”. His argument was that economists have become so preoccupied with growth theory, that they have lost interest in the financial sector and in the analysis of economic cycles. They have ignored asset prices, partly because they had too much faith in the efficiency of financial markets. It is a difficult charge to refute convincingly.

Finally, since 2004 I have been a member of the Board and the Audit Committee of Morgan Stanley in the United States. Morgan Stanley has not been the worst-affected bank in this crisis, but certainly it was caught up in the enthusiasm of some of the markets that went pop. I shall have something to say about the responsibility of the boards of big financial institutions in a moment.

That is where I am coming from, as we now say. So my assessment comes from a hybrid insider/outsider perspective.

One rather depressing feature of many current analyses of the causes of the crisis is that people are now retreating into the positions they held before it started. For a time, there were signs of a very open debate, with financial firms and even politicians showing remarkable open mindedness and willingness to challenge received opinions. Now the initial shock is fading, so the Wall Street Journal editorial pages have concluded that they were right all along, and that the problem was excessive government interference in the markets. Politicians on the left have decided that they were right all along, in believing that unbridled capitalism carried within it the seeds of its own destruction. The French have decided that it’s the fault of the Anglo-Saxons in New York, and especially London. The English have decided, with some justification, that the real villains of the piece were Scottish bankers. The Tories think the only villain is a Scottish prime minister. No doubt, in New Zealand there are those who blame all your economic ills on your trans-Tasman cousins. The Australians themselves, as is their wont, blame the umpires.

What do ordinary people think? Well, they seem to have a fairly balanced view. A British financial website shows a good distribution of responsibility, with all the main suspects named. Bankers take pride of place, and I would not wish to deny them that accolade.

There are, however, some more wacky claims around. A recent Boston Globe survey showed that 25 percent of Americans and 32 percent of Democrats polled believed that the crisis was caused largely by the Jews. And one Oxford professor has advanced the theory that the roots of the crisis lie in violent video games. The inhabitants of trading rooms have been brought up in a kind of virtual reality mode, whereby you can play dangerous games on screen, causing death and destruction, without any risk of genuine harm to yourself. The same philosophy carries over into their trading strategies. Actually, that theory may not be as wacky as it first sounds, but I will not dwell on it this evening.

Instead, I will begin with an heroic attempt to produce a summary of the crisis in about 90 seconds. That should be time enough for a comprehensive analysis.

The crisis was triggered by a re-rating of risk in financial markets, first in the sub-prime mortgage market in the United States. That re-rating pushed down the prices of bonds and
other financial assets, and generated losses which were too large to be absorbed by the financial system, which had too little capital. The risk that many financial institutions would therefore go bankrupt generated panic, which triggered a collapse in credit, which spread the crisis beyond the markets where it started, and caused a general collapse in economic confidence and then in economic growth.

The collapse was all the more severe because it had been preceded by a massive expansion in credit and in asset prices, especially in the housing markets in the US and elsewhere. Why did those credit and housing bubbles inflate in the first place? Behind them, we can see the impact of what was called “the Great Moderation”, which caused policymakers to believe that productivity growth had jumped to a new trajectory. The emergence of huge global imbalances, especially between China and the oil exporters on the one hand, and the US, the UK and a few other countries on the other, produced huge accumulations of reserves. They had to be invested, which bid up the prices of risky assets and lowered real and nominal interest rates. The export of these huge capital surpluses, and the emergence of highly competitive imports from China, in particular, held down inflation. Monetary policy, which focused narrowly on consumer price inflation, was therefore weak and accommodating. One economist has quipped that CPI was really Chinese Price Inflation during this period.

In this environment of excess liquidity and very easy credit, borrowers went on a borrowing binge. Companies increased their leverage. Households borrowed more and more, so that household debt rose to unprecedented levels in relation to GDP, even higher in the UK than in the US. Banks and other financial firms were happy to accommodate this demand for credit, and were prepared to lend even to very risky and vulnerable borrowers. In the US especially, bank assets and leverage rose very sharply. Securitisations added another massive source of credit creation off basics balance sheets. The so-called parallel banking system went into overdrive.

Where were the regulators while all this was happening? They were worrying away, of course, as regulators do, but regulation did not act as an effective brake on this set of bubbles and rapid expansion. Indeed, regulation operated in a pro-cyclical way, with banks allowed to hold less capital as booming asset prices shielded them from losses. And regulatory arbitrage drove the expansion in off-balance sheet credit.

This whole edifice came crashing down, beginning in the summer of 2007. One vivid measure of that was the total collapse of the securitisation market. Financial markets seized up. A number of very large banks folded entirely. Economic growth collapsed. Since then, governments have been trying to stave off the threat of depression, and have probably succeeded in doing so. Central banks have flooded the market with liquidity and pushed interest rates down. Governments have allowed fiscal deficits to balloon. But we are left with two big headaches. First, how to exit from the very expansionary monetary and fiscal policies which have been put in place, and particularly how to restore some health to the public finances. And, second, what should be done to improve robustness of the financial system in the future?

If this analysis is even partly correct, then it points to a number of the problems we need to resolve.

In the first place, it suggests that there was a problem with the construction of both monetary and fiscal policies in the run-up to the crisis, and maybe in some cases with exchange rates too. It looks, for example, as though the renminbi-dollar rate should ideally have been rather different; in other words, the renminbi should have been higher. That is something which successive US Treasury secretaries did argue, but to little effect. And, in a sense, the Americans and Chinese both enjoyed this unbalanced relationship, for different reasons. The Chinese could build up reserves, which make them feel more secure, while the Americans could continue to live beyond their means.

But starting at the exchange rate end of the story may not be appropriate. The key was that the US, and indeed the UK, were saving too little and spending too much. They were able to do so because monetary policy was loose. After the dot com boom and bust, the Fed acted decisively to prevent that crisis turning into a full-blown recession. So interest rates were sharply reduced, and held low for some years. One conventional measure of the appropriateness of monetary policy is something called the Taylor Rule, which relates the
level of interest rates to inflation and capacity utilisation in the economy, which in turn is a good indicator of price pressures. John Taylor himself, the inventor of the rule, has calculated that US interest rates were remarkably divergent from the rule from about 2002 to 2005. He sees that as by a long way the most important cause of the crisis.

He may overstate the case a little, but I believe he is broadly correct. So central bankers must take their place in our rogues gallery. That is a statement which guarantees that I will not be invited back to speak at the Reserve Bank’s 150th anniversary, which otherwise I was hoping to do.

But just because credit is available at an attractive price, does not mean that banks have to lend to all the customers who ask for loans, or that customers are obliged to borrow. Individual economic actors, whether households or firms, are not just pawns in a central bankers’ chess game. So households and others must also take their share of responsibility. Certainly in the UK, we were living above our means, with a savings rate falling close to zero, a large balance of payments deficit and rapidly growing public spending, with tax cuts implemented by the government in early 2007 worsening the fiscal position and fuelling the biggest consumer boom we had ever seen. In the US, similarly, the Bush Administration’s tax cuts gave a spending boost to high-income households, which worsened the financial imbalances further. Both individuals and governments enjoyed this period of expansion and the feel-good factor which it promoted. But there was a very heavy price to pay. That is always the way with excess consumption, whether of cheap Chinese imported manufactures, or of expensive Hawkes Bay Pinot Noir.

It was perhaps natural for borrowers to wish to take advantage of these booming markets. But why were lenders so willing to lend with such gay abandon, and especially to people with very poor credit ratings? That was the big story in the sub-prime market, which was where we came in.

Political pressure was certainly a part of the answer. Politicians saw great advantage in the expansion of home ownership, and encourage it. The two big government loan insurers, Fannie Mae and Freddie Mac, played their part. But they cannot be held responsible for lax lending practices and, indeed, for the almost total absence of discipline in that market. One important contributory factor was financial innovation. In the sub-prime sector, mortgage brokers, unregulated in the United States, would arrange 100 percent (or even larger) mortgages to borrowers with no credit records and often with no regular jobs. Indeed, they would often lend enough to allow the borrowers to pay interest for a few months, long enough to allow the loan to be securitised by the local bank, sold on to an investment bank who packaged it up and sliced and diced it, and sold it on once again, perhaps to a public sector bank in Germany. The securitisations were given fancy names like super-senior triple A, helpfully provided by obliging ratings agencies, with the assistance of debt insurance provided by monoline insurance companies who themselves were blown away in the first gales.

This lengthy chain broke the crucial link between the lender and the borrower. The ultimate provider of finance had little or no knowledge of the ultimate user, and believed that he was protected from default, through a variety of essentially artificial constructs, which were soon revealed to be flimsy. And when the borrowers began to default, because house prices stopped rising, the whole pack of cards collapsed. The best description of practices in that market comes in a play Glengarry Glen Ross, by David Mamet, which was revived in London last year.

The consequences were felt by institutions which had previously been regarded, and certainly regarded themselves, as highly sophisticated. Bear Stearns, Merrill Lynch, UBS and Lehman Brothers all suffered near-death experiences, or expired altogether. Evidently, the techniques of risk management in those institutions went badly wrong. Boards did not exercise appropriate oversight, incentive structures gave extravagant payments to individuals who structured these deals, while the deals themselves exposed their employers to huge losses in subsequent years. So boards of directors might say that their risk appetite was modest and under control, but they put in place, or allowed to be put in place, incentive systems which pushed the firm into riskier strategies than they wanted. That may be a kind way of putting it in the case of some institutions. The G-word, greed, entered the picture too.
Finally, the regulators did not effectively offset this highly risky behaviour. I do not ascribe as much power to regulators as some commentators and politicians do. Having been one for some years, I am uncomfortably conscious of the difficulty a regulator has in fighting against a tide of market sentiment. When regulators seek to step in when the party is going strong, they are accused of being box-ticking, red-tape-spinning, wet blankets who are constraining the animal spirits of the wealth-creating sector. Also, their tools are quite weak. They are nothing like as powerful as monetary policy in affecting credit conditions. A touch on the tiller, in the form of a modestly higher capital requirement, may have some impact, but it is not front-page news like a hike in interest rates.

All that said, there is powerful evidence to suggest that the capital ratios which regulators imposed were, in retrospect, too low. In particular, there was too little capital to back the trading books of banks. And the methodology used to assess capital requirements tended to be unhealthily backward looking. Regulators typically approach setting capital requirements by taking a bank’s book of assets and asking what the losses on that book would have been had it been held in that form over the previous decade or so. Since we had had a decade or more of rising property and asset prices, in benign economic conditions, this analysis typically told banks that capital requirements could be quite low. That did not turn out to be the right answer.

Finance ministries and central banks set the speed limits, run the petrol stations and determine the octane of the petrol available. Regulators can, nonetheless, try to ensure that high-performance vehicles do not skid off the road. They were clearly ineffective in that task.

I hope it is clear from this analysis that we have a complex failure on our hands. That makes designing the solutions rather complex, too. I do not think we can take refuge in the certainties offered by finding a single scapegoat – the greedy banker, the feeble borrower, the regulator asleep at the switch, the insouciant governor, or whoever. Far be it from me to wish to take anything away from our valiant prime minister, but even he could not create this Horlicks single-handed.

I suggest that there are six areas in which system improvements are needed. In some of them, progress is already under way. In others, there is much more work still to do.

The first area concerns monetary policy, the core business of our hosts. We need to find a way of putting financial markets, credit and asset prices back at the centre of monetary policy. Analysts at the Bank for International Settlements, for example, have argued for some time that central banks should take more account of asset prices, and seek to lean against the wind of credit and asset price growth. In recent years, central banks in Australia and Sweden have justified increases in interest rates that way. But the prevailing orthodoxy in the Federal Reserve and in the Bank of England has meant that monetary policy should focus on retail price inflation, and that it is idle to pretend that central bankers can identify asset price bubbles in advance. The best they can do, according to Alan Greenspan, is to mop up afterwards. My own view is that this is not adequate, and that we cannot simply accept that crises on the scale we have seen in the last two years are part of the price we pay for doing business. Quite how one integrates asset and credit analysis into an inflation target framework is not wholly straightforward, but I believe it can be done. There may, from time to time, be a growth trade-off, I acknowledge.

Central banks everywhere are gearing up their financial stability arms. But many talk as though financial stability analysis is designed only to feed into decisions taken by regulators in relation to capital requirements. That is the case whether those regulators are part of the central bank, as here, or outside it, as in the UK or Australia. In my view, this financial stability analysis must look two ways, and that it might point to monetary policy action, as well as to changes in bank capital.

That links to the second area, which has been intensely discussed in international fora in recent months. The conventional wisdom now has it that within financial regulation, we should distinguish between macro-prudential and micro-prudential actions. For the uninitiated, the distinction is that micro-prudential supervision relates to the balance sheets of individual institutions and the risks they run. Macro-prudential oversight looks at the state of...
financial markets overall. So, if you think that the housing market is overvalued generally, you might apply a market supplement to the reserves mortgage banks must hold. Indeed, if you think that credit overall is too loose, you might apply a market supplement even more generally.

But the point of macro-prudential supplements is to constrain credit growth, and they will in practice largely do so through increasing the price. The more unremunerated reserves a bank must hold for a given amount of lending, the higher the cost of that lending will turn out to be. So if that is the point of macro-prudential requirements, then we need to weigh an increase in capital against an overall rise in interest rates, which would have a similar effect.

The point of both measures would be to inject some counter-cyclical element to financial regulation. In other words, we should be trying to get banks to salt away larger reserves in the good times, so that they are more robust when the cycle turns down – and no-one thinks that we can abolish the economic cycle. Gordon Brown famously talked of putting an end to boom and bust. But that trope has disappeared from his political vocabulary in the last two years.

This complex relationship between monetary policy and regulation points to the need for greater coordination between central banks, regulators (where they are separate) and finance ministries. We might add other reasons to justify stronger collaborative mechanisms. The global imbalances story I told earlier, which was one of the major long-term causes of the crisis, clearly had fiscal and exchange rate dimensions to it, which are well beyond the normal concerns of regulators. So globally, we need stronger collaborative structures, and they need to be buttressed by regional and domestic arrangements which feed into them. Before the crisis, the global regulatory system was hopefully complex, with no central authority.

On that front, some progress has been made. No bodies have yet been abolished, but there is now a global Financial Stability Board, which includes the central banks, regulators and finance ministries of all the major countries, and indeed some minor ones too since it has been extended to the G20. That is probably too large a grouping to be effective, but the G7 tried to cling on to a monopoly of power for too long, which meant that when they brought in others, they had to bring in more countries than they really wanted. In Europe, there will be a European Systemic Risk Board, chaired by the President of the ECB. Beneath that, in the UK, there will be a domestic Financial Stability Committee. Labour says it will be chaired by the Chancellor of the Exchequer: the Conservatives want the Governor in the chair. Financial stability, along with violent video games, is one of the few growth industries left.

The fourth area, where it is harder to discern concrete change yet, concerns our overall attitude to financial innovation. Hitherto, in the major financial centres, governments and their regulators have generally taken a permissive approach to financial innovation. If new instruments are created, which allow more sophisticated trading of financial claims, then in principle they should be allowed to go ahead, unless they are obviously dangerous. That principle does not apply so rigorously in retail markets, where we believe a greater degree of consumer protection is needed. But if consenting adults – and until the crisis we used to regard the big banks as adults – wish to operate complex trading strategies between themselves, who are regulators to argue that they should not be allowed to do so? The economic justification for this approach was that the more flexible our financial markets become, the better that is for economic growth and for the long-term welfare of the population.

The crisis has challenged that comfortable assumption. Financial innovation now appears to have brought with it much greater systemic vulnerability. We cannot definitively prove this, but it would seem that we have created a system where, even if it has generated greater economic growth, the price is much greater volatility. We should not forget that the period up to the crisis was one of unparalleled prosperity, with an extended spurt in economic growth which made some people very wealthy indeed, which bolstered the living standards of the middling sort of people, like most of the population in New Zealand, and also pulled millions of people out of grinding poverty in China, India and elsewhere.

So there is a baby and bathwater point here. We must be careful not to constrain finance markets in a way which prevents them performing their essential economic function.
But it seems at least arguable that we must question the value of some forms of financial innovation more sharply than we have done in the past.

I might make a brief excursion into happiness economics, which is now studied at the LSE. If you have no money at all, then earning something is likely to improve your view of the world. But beyond a certain level of income, the correlation between wealth and well-being is quite loose. New Zealanders are not as wealthy as Japanese, but are happier. Also, most people prefer a more stable economic environment to one with high peaks and very low troughs. The economic, social and personal costs of bouts of high unemployment are very large. If one could reliably offer the population a choice between, say, growth of two and a half percent a year with modest ups and downs, or growth of two and three quarter percent a year with occasional chronic booms and busts, they might well choose the former. Furthermore, we know that people do not like very wide income inequalities, which the financial boom also generated. So, against that background, we must adopt a more questioning approach to financial innovation in the future. At the moment, the major banks, investment banks and hedge funds are themselves shying away from innovation. But that phase will pass, and in the longer term we will have to depend on regulators to question the benefits of innovation where they do not seem very closely related to customer needs, as was true of some of the instruments created recently have. There is, however, no international consensus on this point yet.

Fifth, we have to find ways of strengthening the governance of financial institutions themselves. Regulation will always be a backstop. Firms themselves have a responsibility to safeguard their shareholders, and arguably boards have done rather badly against that yardstick, whether it is at Citigroup, the Royal Bank of Scotland, Fortis or whoever. There are some interesting ideas emerging, notably from David Walker's review of corporate governance in banks in the UK, which should be taken forward. Overall, there will be a need for greater independence, greater expertise and greater scepticism on financial firms' boards in the future. Non-executive directors will have to spend more time on the job.

Lastly, to bring things back to earth with a bump, there is a need for better understanding of finance on the part of the population as a whole. It is striking just how extended many households had allowed themselves to become in the boom. The stories that have emerged of people with mortgages of five and six times their annual income, with negative net worth, or people buying doubtful properties in Spain, and hoping to live there on a tiny British pension, without paying attention to exchange rate risk, are quite alarming. Financial capability has been neglected for a long time. When I was a regulator, I used to often say that I was married to Prudence, which happens to be true. Gordon Brown had an affair with her in his early years as Chancellor of the Exchequer, but she was unceremoniously dumped in 2001. In the boom, few people invited her out. In the aftermath of the crisis, many more people are eyeing her up, but will it be a one night stand or a long relationship?

The crisis has been, for anyone in financial markets or in the financial authorities, no end of a lesson. Some regulators, some firms, some countries have done better than others. But no one has been spared the consequences entirely. We know from the 1920s and 1930s that an inadequate response to crisis can generate very dangerous political consequences. That was the best justification for the dramatic measures taken by governments in the last two years. But one can still see signs of political discontent, of a rather dangerous kind. The recent European elections saw a burst of interest in fringe parties, some of them with highly unpleasant nationalistic and racist views, views which always find more fertile soil at times of economic disruption. So there is a political as well as a financial stability argument for a major effort to learn the lessons and rebuild the frameworks of capitalism and the fundamentals of finance. The risks of failure are very high indeed.

I am sorry that, in trying to answer my whodunnit question, I have not produced one explanation, like Professor Plum with the candlestick in the library, or one name, like Alan Greenspan, Chuck Prince, Hank Paulson, Fred Goodwin, Rudi Koertzen or Mathieu Bastareaud. But life is not so simple. Fortunately, there is plenty of red ink to share around. But I do apologise if I have inadvertently splattered my hosts.