The Great Moderation and the Great Confusion: thoughts on fiscal and monetary policy since the onset of the Global Financial Crisis

"The central problem of depression-prevention [has] been solved for all practical purposes"
Robert Lucas, incoming address to the American Economic Association, 2003

"I've looked at life from both sides now
From win and lose and still somehow
It's life's illusions I recall
I really don't know life at all"
Joni Mitchell *Clouds (1967)*

"The Great Moderation" is a term used in 2002 by James Stock and Mark Watson and given wider currency by Ben Bernanke, amongst others. It was presumably chosen to contrast with the Great Depression of the 1930s and, perhaps, the great stagflation of the 1970s. It began in the mid-1980s and lasted until the onset of the Global Financial Crisis in 2007.

Between 2002 and 2007 much was written about the Great Moderation in what became an orgy of self-congratulation, especially on the part of monetary economists. The Great Moderation was characterised by two related, and obviously beneficial, phenomena. The first was much reduced volatility in business cycles. The second was an initial downward trend in inflation, followed by a sustained period of relatively stable low inflation.

It is reasonable to argue that this occurred despite the fact that both the American and world economies suffered a number of shocks while the Great Moderation was occurring. The most notable of these were the sharemarket crash of 1987 and the Asian financial crisis of 1997.

Interestingly enough, Stock and Watson argue that luck did play a significant part, that in fact the shocks were weaker than in previous eras. Whatever the truth of that argument, it does seem that monetary policy was not the sole cause of the Great Moderation. A strong move from manufacturing to the services industries seemed to have played a role - probably because the latter are less prone to the build-up of excess stocks characteristic of the traditional business cycle.

Improved information technology also may have played a part in providing better information to enable businesses to judge likely future variations in demand. This meant they could react more quickly, thus again dampening the business cycle.

The third element, apart from monetary policy (and rather less mentioned in some commentaries), may have been the marked weakening of the trade union movement's power which meant that workers were in a poorer bargaining position. It was harder, therefore, to seek full or more than full compensation for inflation. This reduced the risk of that repeated characteristic of the 1960s and 1970s, the wage/price spiral. It also meant, however, that real wages for many showed little sign of increasing, particularly in the Unites States

Having said all that, it is undoubtedly true that monetary policy played a significant role in the development of the Great Moderation. After a brief, unsuccessful, flirtation with targeting monetary aggregates in the United Kingdom in the late 1970s and early 1980s (following what at first had appeared to be a successful experiment in West Germany and Switzerland in the early 1970s), attention switched to a different approach to monetary policy. The new approach is usually described as inflation targeting.

In New Zealand, there has been a strong tendency to emphasise the importance of the new approach, no doubt because we were among the world leaders in adopting it. The essence of the New Zealand version was the setting of a target band within which the Reserve Bank was expected to manage inflation. The primary tool available was a variable overnight cash rate, that is the interest rate charged by the Reserve Bank on overnight loans to commercial banks. The target band for annual inflation was initially set at between 0 and 2 per cent, a figure which owed more to politics than science. Other countries developed variations on a similar theme.

Accompanying this regime of strict inflation targeting was the development of a programme of managing forward inflation expectations. This was based on the justifiable grounds that inflation outcomes were likely, by and large, to track inflation expectations (because key actors would behave in accordance with those expectations).

For some economists the introduction of inflation targeting became something of a New Zealand foundation myth, almost akin to the Gallipoli landings, the conquest of Everest, or the anti-nuclear policy.

The truth, as so often, is more complex. Inflation targeting was by no means universal. The developed world's most important influence on inflation and inflation expectations - the United States of America - did not adopt an explicit inflation target until the 2000s. And, as in Australia, the Federal Reserve was by law tasked with a dual mandate (in Australia's case literally set in stone).

Moreover, the practice of clear forward advice, now seen as an integral part of central bank activity in many countries, lagged behind. In New Zealand, it is arguable that in the 1990s Reserve Bank action tended to validate decisions taken by financial institutions rather than determine them. Forward advice was often opaque. It is also interesting to note, in passing, that New Zealand, a leader in inflation targeting, was one of the slowest economies to recover fully from the sharemarket crash of 1987.

I would argue that, in practice, central banks were more united by the fact that they were not really targeting inflation directly. That may seem a bold assertion, yet it seems to me to be more consistent with the real basis of central bank action in many developed economies. That was based on application of the so-called Taylor rule, or at least can be explained in terms of that rule.

The academic literature and some of the public commentary from key players, emphasise that, in general, central banks were forecasting, not so much inflation directly as output gaps. These were assumed to lead to price increases which were above or below a prescribed level (this was so even when the prescribed level was not explicitly stated). Inflation would be kept reasonably stable by managing the economic cycle in order to keep growth as close as possible to the estimated sustainable rate of growth.

Thus the monetary policy lever was pulled in such a way as to bring the output gap back closer to zero: the indicator interest rate (or rates) were raised when there was a positive output gap and lowered when there was a negative one. At the same time there were vehement protestations from some central bank chairs or governors that they were not targeting growth or unemployment.

To this observer, the distinction seems to end up being a semantic one. In practice, central banks were trying to minimise output gaps, thus dampening business cycles which, in its turn, kept inflation less volatile. The much more justifiable claim was that monetary policy could not lift the sustainable rate of growth in the economy. But the converse – that monetary policy could not lower the long term rate of growth – is less clear (a point I will return to later).

Under the impact of a price shock the tightening of monetary policy dramatically reduced the second round effects in terms of inflation, aided either by more flexible labour markets (weaker collective bargaining power) or by effective coordinated wage bargaining. The former was characteristic of New Zealand, the latter of countries such as Germany and Ireland in the 1990s.

Underlying this approach was a concept which still arouses strong reactions in some political circles: the NAIRU (the non-accelerating inflation rate of unemployment). This concept was seen as crucial to the estimating of developing output gaps.

There continues to be something of a dialogue of the deaf between those who regard the NAIRU as an indispensable concept and others for whom it is the work of the devil because it seems to imply the sanctioned existence of what would once have been called the reserve army of the unemployed.

The crucial point which the former tend not to emphasise, and the latter do not recognise, is that the NAIRU is not an immutable number. In more recent times less emphasis seems to have been placed upon it, at least in the public commentary from central banks.

For a reasonably extended period from the mid-1980s through to 2007 the combination of Taylor rule based monetary policy and underlying changes in the economy appeared to lead to outstandingly successful results. At least in north-western Europe, North America and Australasia inflation rates converged towards reasonably stable low single figures. Business cycles became less volatile than in the years of so-called “boom and bust” (to use the phrase most popular in the United Kingdom).

Contrary to the fears that many held with respect to inflation targeting, unemployment rates by the mid-2000s had dropped to levels which had been thought to be a fading memory of the golden years of post-war reconstruction and the Bretton Woods system. This was especially so in the United States.

It was not unnatural that this would lead to what, in a different context, Alan Greenspan called “irrational exuberance”. The most often cited example of that was the claim by Robert Lucas in 2003 that I quoted at the start of this paper. To an historian, this is more than faintly redolent of Neville Chamberlain’s proclamation of “peace in our time” on returning from Munich in 1938. But at least the latter had an air of hope rather than certainty, since following it Chamberlain implemented a heavy rearmament programme. Economists and policymakers, by and large, undertook no such equivalent change of direction between 2003 and 2007.

Instead to take the analogy further, and to adopt the title of Winston Churchill’s book on the prewar period, little or no notice was taken of the signs of “The Gathering Storm”.

In retrospect, the most important of these signs should have been obvious and were commented on by some at the time, directly and indirectly. At IMF, World Bank and APEC conferences increasing concerns were expressed before 2007 at the ever-widening gap between current account surplus and current account deficit countries, that is between net saver and net borrower nations.

The tendency was to put the blame on, amongst other things, Chinese manipulation of their currency in the pursuit of export led growth. A more relevant factor was that the governments of net borrowing countries gained too much political benefit from the fact that consumption and credit-led domestic growth fueled a substantially false sense of sustainably increasing wealth and prosperity.

The financial sector - which in many countries (including New Zealand) had come to dominate public discourse on economic as well as financial trends - had no reason to look too closely at the goose that was laying their golden eggs. And the dominant neo-classical economic model (in which most of the financial sector had by now been trained) simply saw all of this as a result of market forces operating naturally, forces which would provide any necessary mild correction. If people wanted to lend money to borrowing countries then they were thereby allowing those countries to sustain a higher standard of living than would otherwise have been the case (with an almost sotto voce comment from the borrowers of more fool they).

In any case, three key elements of the neo-classical model gave theoretical underpinning to this Panglossian interpretation of financial and economic trends and variabilities.

The first of these is the Efficient Markets Hypothesis. This can briefly be summarized by the notion that "prices fully and rationally reflect all available information" to quote Adair Turner's *Between Debt and the Devil* (2015). Its stablemate, the Rational Expectations Hypothesis, to quote Adair again, assumes that "individual agents … operate on the basis of rational assessments of how the future economy will develop".

The third hypothesis is the Permanent Income Hypothesis. This states that "individuals optimally chose how much to consume by allocating their resources across their lifetimes" (Wendy Carlin and Daniel Soskice, *Macroeconomics,* 2015). The insertion of the word "optimally" in this sentence largely vitiates any meaning it might have in practice and it is not surprising the empirical evidence to support the hypothesis is very weak. Amongst the obvious limitations to it is the fact most people in most places at most times scarcely have the luxury of making such choices.

The first two of these hypotheses may nevertheless be useful in model building and, as ought to be expected, some insights can be obtained. But as with a good deal of model-based analysis, the big question remains how far such models reflect the behavior of real people in the actual world of uncertainty, emotion, information asymmetry and other imperfections, especially at times of either Greenspan's irrational exuberance or of significant negative shocks.

My answer to that will not be surprising: not very much. Particularly when the models, translated into mathematical forms from which second or third order deductions are made, are littered with somewhat mysterious constants embedded in them.

In that respect the situation is a little like Dani Rodrik's description of the analysis of the advantages of free trade in *The Globalization Paradox* (2011). Economists fully understand the often complex conditions required for free trade to be a good thing yet the "public arguments by economists are, in effect, zealotry despite their knowing the complexity."

The emerging trend during the Great Moderation as it approached its own nemesis in 2007 was for rationality to become less and less a factor. This happened alongside developments in the financial sector which were not well understood even by many in that sector. What eventuated were essentially castles in the air laid one on top of the other.

The early path of the Great Moderation, up to about the end of the 1990s, followed the reasonably familiar one of rising household debt as people borrowed in anticipation of either future income increases or capital gains. This led to growing bank leverage and rising house prices. Thus credit and liquidity risks built up over time. But a new phase of financial market inventiveness greatly increased the risks.

The hidden irony in the story of the Great Moderation is that financial devices justified on the basis that they would reduce (or at least spread) credit and liquidity risks actually substantially increased it. The result was a situation where the underlying (as opposed to reported) capital reserve ratios of many major banks fell to alarmingly low levels.

This reflected a situation where the actual "irrational exuberance" that Greenspan referred to (the rapid growth of the value of sharemarkets in the US and elsewhere), the confidence generated by the Great Moderation, and the evermore arcane inventions of financial market leaders created a massive expansion of total credit.

The special characteristic of this phase was these arcane inventions - notably elaborate financial derivatives. The simplest of these were mortgage-backed securities. Bundles of mortgages were packaged together and securitised, then subsequently resliced until the original basis for assessing their riskiness became obscured to all but the most knowledgeable (which did not include the major rating agencies).

These however, were simple compared with CDOs (collateralized debt obligations) and CDSs (credit default swaps). This all encouraged the mushrooming of what came to be called the shadow banking system where bank liabilities and assets were held off-balance sheet. The crucial point is that the resulting mountain of debt and credit did not rest on any expanded real asset base. Thus, far from spreading risk, as often claimed at the time, it multiplied it.

Following the precedents established over many centuries, it was inevitable the rapid growth in credit would end in a financial crisis as soon as there was any widespread perception of the risk that this would happen.

Much has been written (and even filmed) about this. Its characteristics have been modelled and repeated so many times that they, and the behaviour of the over-excited individuals key to them, truly meet Einstein's definition of insanity.

This paper is not the place to wallow in outrage at the greed, venality, deceit, and willful blindness of those involved. It is also fair to argue that, in New Zealand, there was much less involvement in the mass creation of dubious derivative instruments. That is one of the major reasons why the level of impaired assets in New Zealand was low by international standards. No government money was required to rescue the banking system here, a fact which was probably more due to the actions of the banks themselves than the superior quality of banking regulation compared with the United States or the United Kingdom.

The relevance of all this to the operation of fiscal and monetary policy is two-fold. The first and, in some ways, more important is that what might be called equilibriating monetary and fiscal policy can be stretched to breaking point by large-scale financial crises.

This is even more so if the content and results of those policies end up being inconsistent with the overall desired framework of policy as reflected across the entire range of government objectives.

The second aspect, and rather less focused on than it should have been since the onset of the Global Financial Crisis, is that the regulation of the financial sector, especially banks, may be too important to be left to central banks, at least on their own.

To take this second aspect first, what I am trying to argue here is that, while there have been many regulatory responses to the GFC, there has been remarkably little first principles thinking, at least within government circles, about what a fit for purpose regulatory regime would entail.

The main regulatory responses have been two-fold. The first has been a stress on higher levels of capital reserves to underpin so-called "fractional banking".

These have either originated at international level ("Basle 3") or at national level (for example, RBNZ buffer zones). In addition, there have been calls for a very much higher levels of capital reserves (up to 20% or 25%), which would obviously have to be phased in over time.

While some level of higher reserves may be justified it does seem a little like putting more fingers in the dykes while ignoring the volume of water behind. It does not really deal, for example, with the large scale growth of shadow banking; the renewed development of complex financial instruments creating interlocking networks of debt and credit which render meaningless conventional reserve ratios; or the emergence of new disrupter players in the financial sector whose long term implications for financial market stability are unknown.

The second reaction by banking regulators has been the development of a lot more boxes to tick, an approach which is often a substitute for effective regulation based on coherent principles. The banking sector, contrary to some publicly-expressed views, is much more heavily regulated than ten years ago. But how much that regulation will contribute to avoiding or mitigating another Global Financial Crisis is a very moot point.

The signs so far are not good. Already, in many developed countries, we are seeing a rapid growth in total credit and debt, with pre-GFC levels fast being approached. Against a starting point now of generally higher levels of government debt, heavily loaded central bank balance sheets, and very little remaining room for the operation of orthodox loosening of monetary policy this should cause concern.

It is time to take a much broader look than we have done for a long time at what a fit for purpose financial system for New Zealand would look like. As I noted above, following many others, the financial sector has had far too great an influence over policy affecting them over the last thirty or so years. (Indeed, it can be argued, over economic policy debate in general).

Any such debate is immediately attacked as threatening market confidence and stability, economically illiterate and not living in the real world.
These seem, to put it mildly, unconvincing arguments in the light of yet another financial crisis created largely by the actions of those within that sector. At an international level we can do little beyond adding our small voice to those calling for significant changes.

At a national level we are not so constrained. The argument is sometimes expressed that to be an open, connected economy we have to accept whatever the key international players demand. But even if there is some small element of truth about this it is only very small. We have no need to accept practices and consequences we do not wish to have if, in reality, they do not contribute to our economic wellbeing. Even in an era of globalisation national governments have the capacity to make choices (even, to state the obvious, to choose not to make any).

There is little point, and much danger, in our choosing to mimic in some small way the complex activities of financial centres like New York and London. The world is already overloaded with wannabe financial centres, some of which came to a reckoning of almost biblical proportions during the GFC. Others can be said to have always failed the sniff test.

New Zealand would do well to address the challenge so well laid down in John Kay's *Other People's Money* (2015). Anyone who has not already done so should at least read the opening section of that book, "The Parable of the Ox".

As Kay succinctly puts it, "We need a finance sector to manage our payments, finance our housing stock, restore our infrastructure, fund our retirement and support new business". As he goes on to say, "very little of the expertise that exists in the financial sector industry today" relates to these needs. While, as I said above, the New Zealand financial sector is somewhat more focused in that regard than many of its overseas counterparts the question that Kay poses remains: what need have we for a finance sector than does more than his short list (allowing for such obvious consequential activities as foreign exchange swaps and the like).

These are not matters for the Reserve Bank, alone or even primarily. They are matters for government, for a broader national conversation about our needs and imperatives as a small, open distant economy. That kind of conversation has been missing while the financial sector has largely kept its head down (hoping, probably correctly, that by so doing little will change). At the same time, too many of the sector's critics have fired off broadsides in random directions.

Starting to think about these issues matters in the broader context of fiscal and monetary policy. To the extent that we are able to create a sounder, better fit for purpose financial sector for New Zealand, then to that extent fiscal and monetary policy will have lesser burdens to carry in the future. It also matters in the context of Treasury's Living Standards Framework, of which more later.

In the United States, the United Kingdom, and the remainder of the European Union the scale of the disaster wrought by the financial sector led to a series of interrelated challenges for fiscal and monetary policy. The responses have varied considerably both in nature and timing and in their effectiveness. In the process many fundamental aspects of the implementation of fiscal and monetary policy have come under scrutiny and, in some instances, altered beyond recognition.

The response to the GFC has followed three main trends, but with considerable variation in the timing and details.

The first, most immediate response, was to intervene to try to prevent systemic failure in the financial system. In almost every country where this happened this was controversial. It ran both against the grain of not interfering with market mechanisms and conversely seemed, in effect, to reward those who had behaved badly. Moral hazard was alive and well and front of mind of many policymakers from 2007 onwards.

There was inevitably a good deal of making it up on the hoof about all of this. The signs of crisis began emerging clearly in August 2007 with two near-simultaneous events. In the first the biggest French bank, BNP Paribank stopped withdrawals from three investment funds holding mortgages backed by US sub-prime mortgages. In retrospect, this can be seen as the dawn of the derivatives generated crisis.

Earlier signals from March 2007 had indicated a "housing correction" was occurring but Federal Reserve Chairman Ben Bernanke, was confident the impact "seems likely to be contained". By August he began to realise this was not so. Trouble emerged at New York investment bank Bear Stearns in June. Nevertheless, while the action by BNP Paribank still came as major shock the Federal Reserve response was a limited injection of liquidity, smaller than the simultaneous move by the European Central Bank. This did not calm the market, as it had been expected to do.

At the same time, the second trigger for a wider crisis was emerging into the public arena: the potential failure of Countrywide, a very large mortgage provider in America, which was also deeply involved in the subprime mortgage market.

While there were intense discussions within the Federal Reserve and the U.S. Treasury about the wider risks, both to the financial sector and the economy at large, little was envisaged beyond a traditional easing of monetary policy as the outlook for economic growth and employment began to look gloomier.

It was the rescue of Bear Stearns in March 2008, assisted by a loan of US$30bn from the Federal Reserve, which led to a slowly emerging realisation amongst many observers that things were starting to go seriously awry.

In New Zealand this period through the latter part of 2007 and into the middle of 2008 was marked by a series of relatively modest financial failures, though collectively adding up to a significant total impact.

New Zealand had developed something of a love affair with what were called "finance companies". These were relatively simple constructs, borrowing from depositors (normally older New Zealanders) at higher interest rates than the banks and on-lending for mortgages and personal loans. Many were paying too much in order to obtain deposits and had little by way of reserves. But for Kiwis on modest fixed incomes they seemed to offer both security and good returns.

The model was always prone to failure as the finance companies were exposed to higher risk investments than retail banking normally would allow for and were more vulnerable to runs by depositors. From around the middle of 2007 there was a steady run of finance company failures.

They were sufficiently spaced out and small enough that the government, despite some internal debate, was not moved to intervene and the issue of creating moral hazard was avoided. None of the failures was large enough to create any kind of systemic risk, or perception of systemic risk, in the New Zealand financial system.

This remained the case until the Australian Prime Minister, Kevin Rudd, in a unilateral and ill-planned move in September 2008, announced a comprehensive guarantee for the Australian financial system. Though the New Zealand government had been working for some time on a partial guarantee proposal in the light of unfolding international events, it was now faced with no option but to announce immediately a similar guarantee. When the new National Government later renewed the guarantee it ended up with a substantial bill for the collapse of the largest finance company, South Canterbury Finance.

Meanwhile, in the wider and much more important world, things had gone from bad to worse. In early September 2008 the U.S. Government rescued Fannie Mae and Freddie Mac (between them providing half of American mortgages). This was quickly followed by the (unrescued) collapse of Lehman Brothers and the US$85bn rescue of American International Group (AIG), the world's largest insurer. It was now clear that America and the developed world were facing a financial crisis induced recession on a scale not seen since the 1930s.

It is a characteristic of such recessions that they last longer and leave more permanent scars than business cycle related recessions. This was as true of the Global Financial Crisis as it was of the Great Depression of the 1930s.

But it is also true that the path to recovery out of the GFC has varied significantly across the developed world. A number of factors seem to have influenced the depth of recession and the pace of recovery. These include either the speed of reaction to the original events, the state of the government's finances at the time of the serious onset of the GFC, the level of exposure of the financial sector to collapse, the extent to which fiscal and monetary policy complemented or contradicted each other, and the extent to which it was possible to coordinate fiscal and monetary policy in any case.

As I have said, the immediate focus, particularly in the United States and the United Kingdom, was on stabilising the financial system. This was understandable in the light of past experience. There are essentially two versions of the causes of the Great Depression of the 1930s. The first - as exemplified John Kenneth Galbraith's *The Great Crash 1929* (1955) - is that the depression was caused by a financial collapse or crisis exacerbated by counterproductive contractionary fiscal and monetary policies.

The second - the key proponent of which was Milton Friedman (in many works) – was that the Great Depression was the result of the failures of government (primarily the Federal Reserve) to provide the necessary increase in money supply to maintain liquidity in the financial system in order to offset what he called a "garden variety recession".

The important conclusion is that Galbraith and Friedman, in their different ways, emphasised the need for expansionary monetary policy to respond to a sharp downturn – particularly one arising from a financial crisis.
This was of great significance in 2008 because not only was that the generally received wisdom (and still is) but also the relatively new head of the Federal Reserve, Ben Bernanke, had himself studied closely the lessons to be learnt from the Great Depression. He leant towards the neo-classical/ Friedmanite view overlaid with Keynesianism, known as neo-Keynesianism, which now tends to dominate the thinking of treasuries in many democracies (including New Zealand).

Bernanke's actions in the crisis are thoroughly explored in his somewhat immodestly entitled *The Courage to Act* (2015). Inevitably, the rescue of Bear Stearns and others, the effective nationalization (if temporary) of financial institutions , and the pumping of both taxpayer money and central bank credit into institutions faced severe criticism from both ends of the political spectrum and from much of the public.

For the libertarian right, it was an unwise intrusion into the market. The weak should be allowed to fail in order that the strong should succeed. Intervention also created long-term moral hazard risks. For many on the left, intervention was the rescue of the greedy and irresponsible super-rich at the expense of the working and middle classes.

These reactions were not helped by the fact that not only were practically no individuals held criminally accountable (just one in America), but many walked away with massive gains from the wreckage they left behind.

While much of this is true it confuses the imperative to act quickly at the time with the later failure to hold people accountable and reform the system. The truth is that the crisis and its aftermath effectively laid bare what, up to that point, had been seen as the necessary falsehood that all ministers of finance or their equivalents were expected to express in public: they would not rescue the banks and the financial system from their own folly.

Bernanke, Hank Paulsen, Tim Geithner, Alistair Darling and the rest were fully justified in acting swiftly to stabilise the financial system, otherwise another Great Depression could well have been triggered. It is also fair to argue that where action did not occur as quickly as in the United States and the United

Kingdom the eventual costs were much higher. It was less the courage to act in the case of the first two countries than the necessity to act, a necessity learnt from bitter historical experience.

The failure has been what has or has not followed since. Now we are forced to admit the reality that the state and the central bank stand behind the financial system. That is clear to everyone, though it would be a brave minister of finance who said so in public. Hence the need for far more fundamental reform to minimise the inherent risks thus recognised, while ensuring the financial system can deliver what the nation needs.

This, to repeat what I said earlier, is not something that can be left to the central bank or other regulators. Their independence should be in relation to the implementation of policy, not its formulation.

Following the immediate phase of stabilisation of the financial systems in the two most important nations in the world it quickly became apparent that this was not going, by itself, to result in a rapid recovery, either in their own economies or in those of the rest of the world.

The rapid build-up of credit and complex financial instruments was by no means confined to the two big financial powers. The collapse of confidence had rapidly led to a widespread recessionary shock whose cause and characteristics varied somewhat from country to country, though with many common threads.

In Ireland and Spain, for example, massive expansion of the construction sectors (over 12 per cent of the workforce at peak in Ireland) led to an equally massive collapse and a rapid increase in unemployment. Many countries saw the housing market itself contract significantly. Ireland and others experienced long drawn out banking sector crises which eventually required extreme assistance to address.

The overall response to the continued economic contractions showed how for Robert Lucas's proud assertion in 2003 had been destroyed by the Global Financial Crisis.

The second stage of the response (which began at the same time as stabilising the banks) was marked by a sharp easing of monetary policy, especially in the United States. Indicator interest rates moved rapidly towards zero, with the

ECB eventually catching up with the trend, against the pressure from the Bundesbank to maintain a tighter stance,

The aggressive easing had far less impact that many expected. The transformation from the Great Moderation to the Great Confusion was well under way. Despite the increasing evidence that, beyond a certain point (which may vary a little from country to country) easing monetary policy through the traditional interest rate mechanism ceases to be effective the policy continued to be implemented.

In an analogy which has been used most frequently this traditional prescription became like pushing on the end of a piece of string. While some of those doing the pushing may continue to behave as though there is some point to their actions, a rational observer will likely come to the opposite conclusion. In New Zealand one may hazard a guess that that lower band of effectiveness is somewhere around the two percent OCR mark, which we are close to at present.

It may be suggested that there are two related reasons for this. The first is that if confidence has fallen too significantly and growth has become sufficiently low then the key targets for monetary policy easing in psychological terms - investors and businesses - will not be influenced by cuts in interest rates from a very low to extremely low levels. The tendency to play safe and sit on cash becomes stronger than the desire to take a risk in order to grow. This cash hoarding was a significant feature of the American economy in particular during the slow recovery phase.

The second reason is that, as interest rates fall to such low levels, they start to approach the zero lower band. That is, they approach the point where central banks begin to contemplate negative rates where trading banks (and others) have to pay to have their money on deposit.

This truly is an economic and psychological barrier which, until recently, was thought to be near impossible to cross. Such has been the flow-on effects of the GFC and subsequent associated crises it has now been crossed in a number of countries. Still there is very little evidence that adopting negative rates is doing much to lift countries which have seen it as a way out of the economic doldrums.

This seems to reinforce the traditional arguments in favour of the hard nature of the zero lower bound. The major problem is an obvious one. Negative interest rates are normally associated with deflation – or its likelihood - not just very low inflation. In this situation, where people expect prices to fall, it is rational to postpone consumption where possible. The resulting collapse in demand intensifies the original problem - a large negative output gap creating deflation. The fundamental premise of modern inflation targeting (or output targeting, whichever you think is really being done) is the virtuous nature of low stable inflation: providing some room for relative wage and price movements without triggering either accelerating inflation or deflation.

But, along with that premise, has gone another one - that monetary policy, not fiscal policy, has proven to be the best antidote to excessive price volatility. Indeed, the current neo-Keynesian consensus firmly holds that fiscal policy may well, in practice, exacerbate volatility. Meanwhile, monetary policy's contribution to stable economic growth is to deliver stable low inflation rates; but it is not capable of affecting long-term growth rates.

The latter was (and is) an almost religious belief of the first generation of inflation targeters. But it can, at least, be questioned on the grounds that, like most models, it requires an initial simplification which is not necessarily reflective of the complexities of the real world. In particular, if those making policy continually react too quickly and strongly to growth in a small, open country, such as New Zealand, that can have a chilling effect on investment in export industries because of its contribution to a volatile (and generally overvalued) exchange rate.

In other words, monetary policy cannot increase the sustainable rate of growth but it may lower the average rate of growth over time. This suggests some level of flexibility on the part of the central bank in carrying out its remit is sensible. Trying to aim too close to a point target has not proved a very successful strategy in a number of jurisdictions. Perhaps it is time, therefore, to reexamine our reliance on the judgment of a single individual for the key decisions as flexibility is not always been the hallmark of central bank governors.

In this context it is useful to remind ourselves of Dani Rodrik's statement: "Models are never true: but there is truth in models." (*Economics Rule,* 2005). Though in his later writings Rodrik seems a little less convinced about the second half of that statement!

Many governments and central banks have continued to eschew the use of negative interest rates. But the depth of the challenges faced post-GFC did lead many down a road which too many would have seemed almost as much a breach of the previous orthodoxy: quantitative easing (QE). It is arguable that at a theoretical level QE was not as large a breach as some have said. If the assumption was that inflation (and, therefore, deflation) was essentially a monetary policy issue and if, as Bernanke and others rightly argue, the failure to provide sufficient liquidity was a key factor in the Great Depression of the 1930s then QE could legitimately be seen as an extension of cutting interest rates. It was in other words the weapon you had to use when cutting interest rates was not sufficient, especially if the central bank wished to avoid breaching the zero lower bound.

The Federal Reserve adopted a powerful programme of QE by massive buying of financial assets, notably government bonds. The Bank of England, under Mervyn King, acted in a similar fashion. It is reasonable to conclude that their aggressive programmes had the desired effect: both the American and British economies eventually began to claw their way out of recession as QE created the confidence necessary for recovery.

In both cases, however, the activities of the central banks took longer to achieve their desired impacts because fiscal policy leant in the opposite direction. The Republican majority in the House of Representatives forced President Obama to accept a more contractionary fiscal policy than he and his advisors wished to see. In Britain, the new Chancellor of the Exchequer, George Osborne, was determined to try to cut spending in order to close the yawning deficits which the GFC had largely created.

In both cases the result was slower recovery than might otherwise have been possible and more unemployment for longer. It is doubtful whether the result was, in the end, a faster rate of fiscal recovery than might have occurred under different scenarios.

Europe outside of the United Kingdom, especially the Eurozone proved to be a much bigger mess. The clash between German fear of inflation allied to German fiscal prudence and the long (and very different) German economic tradition ran headlong into the force of the southern European love affair with fiscal profligacy. A common currency zone without a common fiscal policy proved to be a political and economic house of cards.

Aptly enough, the worst tragedy was played out in Greece, lacking only Sophocles to put it on the stage. A revolt against austerity (which in much of Europe and elsewhere became more of a slogan than a word) led to a radical, anti-austerity, left wing government being elected. The new government promptly organised a referendum to reject the proposed austerity package that had been the price of huge financial assistance. Having won the referendum it then had to agree to a greater level of austerity; its only real achievement had been to alienate the Germans further. Given enough time it may seem more of a comedy, but the wounds are still too fresh.

Again, it may be argued the austerity programme was too severe and, therefore, probably counterproductive. But the Greeks had no one to blame except themselves for both their short-term and their long-term predicaments.

Meanwhile, the bulk of Europe continues to stagger on, continually teetering on the edge, or just over it, of continued recessions and deflation. The situation would be much worse had not the head of the European Central Bank, Mario Draghi, almost singlehandedly faced down the Bundesbank and introduced a European quantitative easing programme. The ECB also became the largest user of negative interest rates; effectively, a confession of failure.

It has to be said, however, that QE is not some unalloyed gift from the economic gods. Central banks in the US, Europe and elsewhere have built up enormous balance sheets while government debt levels have risen substantially. Only very low interest rates are keeping the cost of servicing those debts within tolerable levels. Much of Europe is beginning to look like Japan for the last nearly thirty years: trapped in a cycle of near zero growth, low interest rates and potential deflation. Ironically, a flood of unwanted immigrants could yet prove to be the factor that will get Europe out of this trap.

It needs to be emphasised that what we are discussing is overwhelmingly a North American and European problem. China is facing its own challenges, some of which are beginning to resemble the pre-GFC credit explosion. But, in general, it has marched to a different drum over the last decade. So has much of the rest of Asia and Africa.

In the case of Australia and New Zealand, there has been some divergence between the two. Australia initially weathered the GFC reasonably well, but then has been affected by China's (partly engineered) slow down. This has served to underline Australia's excessive reliance on the minerals boom resulting from China's rapid earlier expansion.

The New Zealand economy has been buoyed by very high levels of net immigration which, though, is exacerbating housing and infrastructure problems in Auckland. Real per capita growth is not high compared with long term averages, but still sufficient to make New Zealand's performance compared with other developed economies look good.

Comparison between the experiences of different countries gives us some assistance in drawing conclusions about various aspects of fiscal and monetary policies, both in terms of effectiveness and in terms of what may help or hinder them working well. This will lead on to a discussion of what else could be done to moderate the effects of recessions, even those caused by financial crises.

The first, and perhaps most obvious, point I have already touched on: the crucial importance of rapid reaction. The longer actions are delayed, the worse things become, and the more entrenched the economic downturn.

Delay seems to occur for three reasons. The first is the failure to recognize the seriousness of the situation. The second is understandable disagreement and doubt over the wisdom of the course of action to be followed. The third are deeper ideological or national differences over policy responses - Germany versus many of the others in the Eurozone during the GFC was the prime example.

There is no rule or legislation that can provide for or encourage the ability to recognize the need for decisive action. It comes down to little more than two things: the ability to take a flexible and pragmatic approach, knowing the circumstances may challenge the most deeply cherished beliefs; and the ability to recognise when such a time has arrived.

The second lesson that can be drawn is an easier one in some respects in that it leads to a clear set of factors which can guide us through a variety of changing economic environments. That is the fact that, *in general,* countries which started off with lower government debt were able to react more flexibly.

By that I mean they had greater room for fiscal manoeuvre and less reason to panic themselves into contractionary fiscal stances which weakened the effectiveness of aggressive monetary policy easing. This was not always so – Ireland was in a very strong fiscal position in 2008 but its combination of a massive construction boom, high level levels of private credit, and a large financial sector, much of which collapsed dramatically, led to a very rapid increase in government debt. The resultant inability of the Irish government to stabilise its financial sector meant that the doctors from the IMF and the European Financial Capital Facility had to be called in. As usual, their prescriptions included large applications of leeches to bleed the patient better.

But in other countries, such as New Zealand and Australia, the impacts of the GFC were much more muted than elsewhere as governments were able to allow the full effects of automatic stabilisers to work with limited interference. Some fiscal tightening at the margins occurred in both countries, but that was arguably a matter of choice rather than necessity.

The underlying issue here is how to achieve that happy state where, in good times, surpluses are able to be used to reduce debt ratios. This then gives greater room to allow fiscal policy to work to support monetary policy in the event of a longer or deeper downturn, such as durIng the post-GFC era.

Governments have frequently faced this challenge in recent decades but less frequently met it successfully. In countries such as New Zealand, using standard international accounting rules to describe the government's fiscal position, the challenge is made more acute by trying to explain what an operating surplus is (try this on someone intelligent you know who is not familiar with the concept).

Even in current political discourse we are hearing that total operating surpluses of $14bn over the next four years means that next year or the year after we will be able to afford tax cuts of $3bn a year. This before we have paid down any debt, made any contributions to the New Zealand Superannuation Fund, refilled the coffers of the Earthquake Commission, addressed major areas of need such as housing construction and further investment in infrastructure, let alone addressed social issues such as poverty and other priorities.

The fact is that the public is easily seduced into a belief in what I have called "one-sided Keynesianism", or deficit preference to use its more neutral name. Deficits are seen as good over the downturn. But since there is nearly infinite demand for either more spending or tax cuts on the upside there is less enthusiasm to sustain surpluses sufficient to reduce debt ratios during the good years.

Various not very convincing ideas have been suggested to try to lock in consistent countercyclical fiscal policy. The most common is some kind of fiscal stability council which will do for fiscal policy what independent central banks have done for monetary policy. The constitutional and political barriers in the case of fiscal policy are, rightly in my view, seen as insuperable. It is an idea which will never be carried out in the form usually proposed in a country such as ours.

An alternative is something like the Congressional Budget Office in the United States. There is an important constitutional difference here: the executive and the legislature are separated in the US. So the role of the CBO is to give advice to the legislature separate from that of the Treasury, which is answerable to the executive. Since the budget that emerges out of Congress often bears little resemblance to that submitted by the Administration this is important. Obviously that is not the case in New Zealand's parliamentary system.

There may be a case for considering whether Treasury, or a dedicated part thereof, could become a source of advice (including costing proposals) for non-government parties as has been proposed by the Greens. It would need to be thought through carefully.

Of itself, it will not solve the problem of creating the kind of rough consensus which has largely existed over monetary policy. But it may help to steer gradually in that direction.

An alternative would be some kind of independent fiscal commissioner – a sort of fiscal commentator who would be in the position to cost and utter critical judgments on the policies of all parties, but without the power to interfere or override their judgments. But since that would rest on the shoulders of just one or two people, choosing them would be much more fraught for any government than that of other similar bodies. There would also be a near-certainty that the those chosen would be accused of political bias.

The brutal fact is that the battle to try and maintain the kind of fiscal stance which will lead to successful countercyclical fiscal policy, and thus the capacity to develop strong resilience in the face of major shocks, is one which has to be fought in the fickle arena of public opinion. No one ever said democracy was the easiest form of government.

Returning to the lessons that can be learnt from the GFC and its aftermath, there is one that leads to a very controversial conclusion in the light of deeply embedded New Zealand attitudes. That is the argument that one of the reasons that Germany was less affected than many other developed countries is because home ownership levels are very low there.

This means that Germany is far less prone to housing booms. Even more, since most families do not have equity in housing, they are unable to borrow against house prices, as is common in the US, UK, Australia and New Zealand. Hence household debt levels show a smaller tendency to increase rapidly in times of sustained economic growth and confidence. The financial sector is consequently far less volatile. It is also the case that inflation-adjusted house prices in Germany have shown great stability over the long term.

This may all be true but I would reject the notion that therefore we should be not just unconcerned, but supportive, of the continuing fall in the level of home ownership in New Zealand. This is a classic case where Treasury's Living Standards Framework becomes relevant (even though there is also evidence that lower levels of home ownership are associated with greater ease of labour mobility).

Issues of personal and family security, attachment to community, a feeling of holding a stake in the nation all come into play. These are part of a wider view of wellbeing which the Framework properly encompasses.

In any case, falling levels of home ownership raise very real issues for the future costs of adequate income provision for retirement. New Zealand Superannuation has always been based on the implicit assumption that most retired people will live in a mortgage free home. If, instead, the great majority will be paying rent then higher levels of income support will be required.

What should not continue is a suite of policies where we are likely to end up with the worst of both worlds We need to address urgently issues of housing supply, better control of variable immigration numbers, tax advantages accruing to investment in property and many other matters. No one policy will suffice.

In a number of the possible areas for consideration of changes to fiscal and monetary policy we need to distinguish between two broad scenarios. The first scenario is where there is a moderate shock to the economy, usually what might be seen as a “normal” business cycle slow down. The second scenario is when there is a major shock, such as a financial sector crisis, which potentially has significant and long-lasting effects, both social and economic.

Putting aside the issue of how to tell quickly which of the two may be being experienced (remembering the first tends to occur about every five to seven years), there seems to me to be a significant difference in the levels of responses which are appropriate.

With respect to the first kind of scenario, without wanting to sound like Dr Pangloss, sensible, orthodox countercyclical monetary and fiscal policies usually suffice to take the edges off. We can continue to argue about whether the income support system should be more or less generous in response to the increasing need that a modest downturn creates.

For example, ww could look at some form of time-limited social insurance which would see a level of income replacement in the event of unemployment. This makes the automatic stabilisers stronger. It means less stress on many middle income families. It may reduce the risk of default on mortgage payments, thereby exposing banks and others to less risk. On the other hand, poorer families gain less advantage than middle class ones and, in the case of the latter it may make the labour market less flexible as people decline to move into lower paying jobs. There is no one right answer, but at least the questions should be asked.

Even in a modest downturn there is usually one kind of result which requires better responses than we are accustomed to. The fact that change is a constant is a cliché of our times. What downturns tend to do is shake out more of the weaker and less well adapted businesses. This adds to the tendency for people to find that their current skills (and jobs) are not merely not required for a period but, even when a recovery occurs, may be less in demand than previously.

The long run development of the economy, stronger social cohesion and dealing better with the human effects of technological change mean we need far more private and public investment in well-targeted training and re-training. This will enable people to move from the past to the future in terms of employment. We talk glibly of a flexible labour market, but all too often that concept of flexibility is applied to the employers' needs, not to those of the employed (or, for that matter, small owner-operators).

My comments in that regard also apply, all else being equal, to the effects of trade deals. By focusing always on the overall impact we ignore the distributional consequences, which can still be severe for some. Their needs in that regard deserve to be better recognised.

The above discussion about the best means of dealing with minor downtowns in the economy should not be taken as indicating some sense of complacency. It is rather that more drastic responses, as discussed below in relation to serious shocks, have significant risks and potential costs which suggest that they should not be undertaken lightly.

One other point follows from my earlier argument. Like many others I was a strong opponent of multiple targets for monetary policy. But given that it now seems not unreasonable to conclude that central banks end up targeting output gaps in meeting their inflation remit then it seems unlikely that having to take into account explicitly a *sustainable* growth rate will make any difference in practice. Where things will go awry is if an attempt is made to use monetary policy to achieve a higher growth rate than that which is sustainable unless one is prepared to accept the emergence of upward inflationary pressures (a trade-off which under some circumstances may be acceptable).

The most likely circumstance is where a long period of countercyclical action has resulted in an unacceptably high level of government debt which may then lock in a very low growth path (as in Japan). A sustained period of modestly higher inflation (say 5% rather than 2%) may help to reduce the debt burden while also helping to break out of the low growth trap. Let me emphasise again that New Zealand is nowhere near this position.

It is important for me to do that because I do not wish to be seen to be giving any comfort to those critics of the current monetary policy consensus who almost seem obsessed by the idea that that destroying it can lead to stronger long term growth. Yet not one of them is able to give any coherent explanation as to how sustained looser monetary policy will lead to higher growth without the probability of rising rates of inflation.

What this leaves unresolved is how to minimise the exchange rate effects of monetary policy changes (that is, how to minimize the enormous short-term capital flows that result from either the expectation or the actuality of loosening or tightening monetary policy in New Zealand). To achieve that desirable outcome needs more and different policy instruments than those currently available. For example, consideration might be given to the ability to impose a short-term Tobin tax on inward money flows at the same time as a tightening of monetary conditions. Such methods might moderate the perverse outcome whereby tightening tends to lead to a higher exchange rate, an encouragement of consumption, and a discouragement of export growth.

I hope I may also be forgiven for adding in one further, but important idea, to assist monetary policy in smoothing economic cycles. I have previously floated the idea of using a compulsory Kiwisaver scheme as a fairly simple way of increasing or reducing disposable incomes across a wider band than occurs with interest rates. Small variations in the employees' or self-employed contribution rates could possibly be very helpful and would not have the same distributional and exchange rate consequences which are significant downsides to interest rate movements. More work needs to be done on this.

When we turn to my second scenario, a major downturn, usually the result of a large international financial crisis, a quite different picture emerges. It is hard to avoid the conclusion from the events of the last eight to nine years that the normal operation of countercyclical monetary and fiscal policy seldom proves to be an effective response by itself.

The fear, expressed by many observers over recent months, is that even many of the less orthodox means used in the latest crisis, such as quantitative easing, may be difficult to repeat, because so much ammunition has been used already. It will take years to restock the armouries.

Whether or not this is true is hard to judge. Readers will gather that I am pessimistic simply because the underlying issues and causes remain largely unaddressed. Moreover, as New Zealand is effectively an economic cork bobbing in the Pacific Ocean more accurate economic tsunami warnings would not provide a lot of comfort.

While it may be true that some other countries have exhausted their armouries,the same is not the case for New Zealand. Government debt as a proportion of GDP has certainly risen rapidly, partly because of the large costs of the Christchurch earthquakes. But it is still modest compared with many countries. This does, however, yet again underscore the importance of returning to surpluses sufficient to reduce government debt as a proportion of GDP as well as building up the cushions in what are our sovereign wealth funds.

If that is achieved then there are circumstances in which some of the recent innovations could be applied in the event that serious shocks occur. It is worth noting that for us this very much includes major seismological events. The costs arising from the Christchurch ones far exceeded earlier expectations relating to a major event, even one in Wellington. A major rupture along the fault line that runs close to Treasury, the Reserve Bank, the Beehive and Parliament would be likely to cost many tens of billions of dollars and cause major disruption. In the most extreme scenarios there may be almost no-one left to defend orthodox monetary and fiscal policy!

There would certainly be a powerful argument for adoption of some form or another of quantitative easing, with the government issuing massive amounts of long-dated bonds at very low interest rates to be bought by the Reserve Bank. This would assist in spreading the costs efficiently over a long time span. There would be little reason to adopt what might be called a hairshirt approach since this would impose much larger short and medium term burdens than is either sane or necessary.

The question is whether in such circumstances (including, say, a very large central North Island volcanic eruption) it would be permissible to go further and proceed to issue what has been called "helicopter money" (by Milton Friedman), "fiat money", or was once more bluntly referred to as "debasement of the coinage". The last was common in late medieval and early modern times and consisted of melting down coins, adding base metal to the mixture, and then issuing more coins of the same face value.

Since coins were supposed to reflect the actual value of the precious metals in them (as opposed to being merely durable tokens as they are today) sooner or later the actual value ascribed to the coins reflected their debased value.

Today's version of debasement, fiat money, is rather different in form, though not in its underlying purpose. The central bank simply creates credit to provide, say, the capital a government needs for investment purposes (the difference from QE is that the government does not issue bonds, thus avoids incurring debt).

The idea of fiat money sends shivers down the spines of many who immediately recall the hyperinflation of Weimar Germany or a modern day Zimbabwe. And with good reason. If simply printing more money is seen as a natural activity of central bank/government activity in order to fund large deficits or to try to force growth above a sustainable rate by encouraging consumption, then there is little doubt that an out of control inflationary cycle will emerge.

Yet I would argue that the use of fiat money should not be precluded under all circumstances. Perhaps it is a little like devaluation used to be under the Bretton Woods fixed exchange rate system: ministers of finance will always deny it is being thought about. Nevertheless, in some circumstances, somehow or another the idea suddenly came upon them! Floating exchange rates put an end to that moral dilemma.

It might well be that some level of fiat money issuance could have been contemplated in the circumstances of the Christchurch earthquakes. It certainly could in the event of an even more disruptive seismological event or a catastrophic biosecurity event. But it should not be more than that – a distant prospect for use only in the most extreme circumstances.

There are other feasible and probably more contemplatable possibilities to revive the economy in the event of the large-scale shocks. These involve fiscal policy reactions rather than monetary policy ones.

Before moving on to discuss the possibilities it is worth noting why it seems appropriate to reserve fiscal policy options for serious downturns. The primary reason is that many forms have reasonably long lead or lag times, even more so than in the case of monetary policy. They are also less easy to reverse quickly than interest rates if it is perceived that a wrong call has been made.

In other words, fiscal policy responses are more appropriate where the judgment is that the downturn will be relatively deep and long.

The most obvious fiscal policy intervention to stimulate growth is to pump up demand by either increased spending or tax reductions, inevitably funded by borrowing.

There are three immediate problems. The first is that either spending increases or taxation reductions tend to become permanent and therefore delay the return to surpluses which (as I have argued above) is the necessary twin of deficit spending and growing government debt in the downturn. Reversing either the spending increases or the tax cuts is politically difficult. It may also be done prematurely in a state of panic, or as a result of a swing of the political/ideological pendulum, thus delaying the desired recovery.

Judging the right time to reverse course in the scenario of pump-priming fiscal policy is just as hard as doing it at the right time and we do not have to look far to find examples of both occurring.

This tends to suggest that any use of a fiscal weapon should be a one-off event, repeatable if necessary, so that there is some kind of automatic sunset clause, so to speak. At the very least, it should be a response which can be accelerated or decelerated according to circumstances.

The second problem with either tax cuts or spending increases, particularly the former, is related to their distributional consequences. Serious economic downturns by and large impact most severely on the incomes of the less well-off. They have less room to adapt, are more likely to suffer unemployment, and have lower savings to fall back on. (It is, of course one of the ironies of recessions that the wealth effects can temporarily narrow the wealth gap itself as overinflated asset values take a hammering. These effects usually reverse out.)

Yet almost any programme of tax cuts will tend to worsen existing inequalities rather than ameliorate them. It is well nigh impossible to increase substantially the incomes of the unemployed or the low paid by tax cuts. The one major exception would be a temporary boost to family tax credits which would thereby probably target those most likely to spend the extra income in a way that would boost the economy. The corresponding problem would be ensuring that people understood their income lift was temporary and should not be factored into long term family budgets.

The third problem with the fiscal policy options is the extent to which they actually work. Individuals and families are likely to react to a severe economic downturn in exactly the opposite way to what governments should be trying to achieve. The latter, focused on countercyclical action, want to increase household and private spending so as to boost the economy. Households and individuals, however, have a well-established and natural tendency to respond to the prospect or actuality of falling incomes by retrenchment.

The opposite, of course, occurs on the upturn. Governments should be trying to save more, whereas households and individuals are more likely to feel confident about increasing spending. On both downturn and upturn this may look like some form of Ricardian equivalence operating but it is really just the difference between the natural reaction of the individuals and the macro-driven policy reaction of governments. (Though before Keynes, governments tended to react in exactly the same way as individuals, and many ended up doing so post-GFC.)

This all suggests the hunt for effective policy options for the use of fiscal policy tools in response to a severe shock should focus elsewhere.

I would suggest two possibilities. The first is in the infrastructure and housing sectors, often pointed to in this context. The second, more speculative and almost whimsically unorthodox in the New Zealand context, is the labour market.

A number of writers have pointed to the possibility of stimulating economic activity by means of infrastructure spending which, given New Zealand's needs, would include housing construction.

There are a number of prerequisites to making this a viable option. The most obvious is that there would need to be an infrastructure plan in place which had identified the projects, obtained the necessary planning consents and, if necessary, prepared to obtain a reasonably quick and ready supply of materials. In other words, it would necessitate longer term planning than we are often accustomed to in New Zealand, which would be no bad thing in itself with respect to these matters.

These would not be, and should not be, projects undertaken just for the sake of making work. They would be projects which are justified in and of themselves, arranged into a coherent schedule, but able to be accelerated to the construction stage reasonably quickly. It is interesting to imagine what Auckland's infrastructure might now be like if we had been doing something like this for the last forty to fifty years or more.

There are two major difficulties apart from the ones inherent in what I have said so far. The first is that, once a long term plan is prepared, there will be inevitable political pressure (and promises) to speed it all up in any case. Additional infrastructure could easily become procyclical in nature, a danger attached to most countercyclical measures.

The second is that building infrastructure can become a kind of drug where the user demands more and more to achieve any satisfaction. Japan is a case in point of a nation which, for nearly thirty years, has been trying to use infrastructure spending to stimulate the economy. Not only has it not worked but Japan now has a level of infrastructure greater than required by its declining population.

New Zealand is nowhere near either an excess of infrastructure or a declining population. It, therefore, remains a sensible option to prepare for. We have countless possibilities in terms of roading: upgrading one lane bridges, hard-shouldering quite busy roads, and building passing lanes before consideration of major projects. The development of a much more ambitious long term programme for the upgrading of the rail network is another option along with supporting public transport infrastructure development. These are developments with the capacity to increase our long term growth potential, save lives, and give us much more of the sense of a being a true first world country.

Housing construction though, in my view, is an even better one. For a start it is more employment intensive and has far greater potential for leveraging growth across the economy in the shorter term. The state needs to be engaged in providing more social housing as well as working with the private sector to build more affordable houses for first home buyers, especially in the Auckland area.

But it is not just about new or renovated housing in Auckland. The state of far too much housing on the East Coast and in the far North, for example, is a blot on our sense of social cohesion. Overall, it does not seem to me an exaggeration to say that the current combination of regulatory, policy and market failure is a disgrace. We need to do address this without waiting for a major downturn. But one would be a chance to give a positive meaning to the old phrase “never let a crisis go to waste”.

My second possibility relates to the labour market. New Zealand has travelled far down the road of a flexible labour market and it is probably no more than an ageing social democrat’s dream that there is some permanent road back from that. Nor would I wish us to in many respects.

But it is interesting to note that some work has suggested that there are two kinds of labour markets which assist in exiting faster from downturns: flexible ones and ones where there is a high level of wage coordination. It is certainly my own view that one reason Australia was able to carry through major economic reforms in the 1980s at far less economic and social cost than New Zealand was because it was able to engage in far greater wage coordination, including effective policy trade-offs, than was possible here.

The facts of growth and living standards are undeniable: it was during the period from 1984 to 1993 that the gap between the two countries in terms of per capita GDP and average wages grew most substantially and it has never been closed since. This was despite the fact that for the great bulk of the reform period both countries had high levels of trade union penetration of the workforce. Policy changes since in both countries have led to a big decline in that respect.

But wages coordination does not necessarily depend on a high level of union penetration (though it can facilitate it provided the union leadership has the strength to deliver it). There is little doubt in my mind that under the scenario of a severe downturn a coordinated approach will deliver fairer outcomes than a very flexible labour market. It is another option that should be thought about. Perhaps if we did we might find it is a less scary prospect in any case.

Beneath that issue lies a more profoundly challenging one. Despite some arguments to the contrary, there seems little doubt that the last thirty years have seen widening income disparities in many developed economies, not least New Zealand.

This has meant a growing proportion of income has moved to the owners of capital and away from returns to labour. The consequence of this is weaker aggregate demand than would occur with less inequality. This is not the place to discuss such an outcome and how to reverse it but there is a need to recognise that the trend of growing inequality shows no signs of abating and has serious implications for economic growth as well as social justice.

Having raised that matter it does seem, however, to finish by placing my comments in the context of Treasury's Living Standards Framework.

Girol Karacaoglu reminds us the Framework is designed to recognise that "the ultimate purpose of public policy is to help people live better lives, now and into the future" (in *Aligning Policy with the Way People Want to Live*, March 2016). One could not more succinctly or aptly express what public policy should be about.

Girol goes on to outline how this involves acknowledging that there are "key complementarities and trade-offs that need to be taken into account in formulating such policies".

The Living Standards Framework provides a comprehensive approach to the entire range of government policies. In this paper I have not tried to traverse that whole range but only those matters central to trying to maintain economic growth on as steady a path as possible. That is, trying to moderate the effects of business and financial cycles and shocks as these do great harm to that "ultimate purpose of public policy" outlined by Girol.

There is much that public policy can do, or try to do, to facilitate long-term sustainable growth and development which contributes to the "social cohesion and environmental sustainability" that Girol refers to elsewhere in his paper.

Stronger development guided by these principles is highly to be desired. But that can occur even if there is a tendency to high levels of economic volatility. Effectively moderating that volatility nonetheless can contribute in a major way to improving social cohesion since the impact of volatility, and some of the countermeasures to deal with it, fall very unevenly on the population.

For example, higher interest rates make some people better off. They are primarily the older and the wealthier. On the other hand, they make those with mortgages (especially younger families) and small businesses worse off. Looking at other measures to moderate economic cycles which reduce the reliance on volatility in interest rates to achieve that moderation can therefore be seen as meeting what might be called the Karacaoglu test.

That is why I have laid some stress on matters which lie some little way outside the normal reference points for discussing monetary policy responses, in particular in downturns.

The first of those is an open-minded root and branch analysis of what kind of financial system best serves the interests of New Zealand and New Zealanders. The question should not be how best to regulate what we have, but what should we have and then how do we regulate it. This dominance of public debate on financial and economic policy over the last thirty years by the financial sector has been a classic case of professional capture.

This also fits in with Girol's assertion that the answer to the "radical uncertainty" which is the reality of the modern world is more resilience. That is why I also lay great stress upon the need to win the public (and internal government) debate over long-term countercyclical fiscal policy which (i) allows the automatic stabilisers to operate effectively and (ii) gives more room for fiscal responses in the case of a serious downturn.

The third part of my suggestions are less orthodox; though not unprecedented: a variable contribution rate to a compulsory Kiwisaver scheme to take the pressure off the interest rate tool; the possible use of coordinated income policies to respond to the most serious shocks; and keeping in reserve the possible use of fiat or helicopter money. Quantitative easing is also envisaged as a possibility but it does seem to me the effectiveness of its use seems primarily in response to rescuing an overstretched and irresponsible financial sector. That is why I again emphasise preventing that situation arising in the first place.

The nature of the origins of the Global Financial Crisis and much of the response to it has done further significant damage to the idea of social cohesion. The political consequences of that are now playing out in a number of countries and in a variety of ways around the world. Very few, if any, of them can be regarded as positive developments.

The fourth part is where I have supported proposals for bringing forward or accelerating various forms of infrastructure development and, especially, housing. If the main aim of the Living Standards Framework is helping "people to live better lives" then there are few better places to start than where they actually live. If countercyclical policy can help in that regard it will be a major achievement.

Underlying all these suggestions is a common thread: the need for longer term but flexible thinking. This is not about putting off action until tomorrow. It is about ensuring that monetary and fiscal policy work in a way which recognises that what we think today helps determine what will happen tomorrow. That is one of the reasons it is so hard to predict the future: but it is also why we should prepare for it and thus help shape it, for better or for worse.

I began with two contrasting quotes: one which shows the dangers of hubris, the other the uncertainty, the contingency of life, which should never be forgotten as we consider various courses of action.

Let me finish on another quote from Dani Rodrik which sums up pithily my own views on economic policy in general:
"Markets work best not when states are weakest but when they are strong" (*The Globalization Paradox,* 2013).
It is using that strength well and wisely which is the real rest of effective leadership. With the conditions already being created for another financial crisis hard thinking needs to occur. It is our good fortune in New Zealand to have more freedom and capacity to do so than many others.