

Risk and resilience in a changing world

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1. Introduction

The motivation for this essay is my view that heightened levels of uncertainty and volatility in the global economy will be a key feature of the next decade, and that an important policy priority for governments will be to build resilience into their economies so that their countries can prosper in a more complex and turbulent world.

Over the past few decades, there has been a significant increase in national exposure to external sources of economic risk and a reduction in the resilience of domestic economies to these risks. Particularly if the global economy is entering a more volatile period, this status quo is unlikely to be sustainable in many countries. Many governments are therefore likely to begin to move to manage their national risk exposures and build resilience so that they can cope with a more volatile world. We will likely see a search for stability and a more managed global system.

This essay makes five claims:

- That national economic risk is increasing, and that for small and medium-sized countries these external risk exposures will be a material driver of national economic performance.
- Particularly for small and medium sized countries, resilience will be an increasingly important dimension of economic policy. Countries that efficiently build resilience into the system will derive a competitive advantage. Countries that do not manage risk efficiently will be disadvantaged. Governments will be much more focused on risk and resilience than has been the case over the past two decades.
- The two related priorities for government action are to determine which exposures they want the country to accept, and to determine how to most efficiently manage and allocate these risk exposures between

government, corporations, and households. Together, these actions will shape the resilience of the economy to volatility in the global economy.

- Specifically, many governments should consider acting to reduce their exposures to the effects of sharp movements in international capital flows and exchange rates, strengthen the resilience of their export base, and examine options for strengthening the security of supply of strategically important imports such as food and energy.
- To increase the risk bearing capacity of the economy, many governments need to strengthen their balance sheet positions and improve the risk management of their balance sheets. Governments should also consider how best to strengthen the risk bearing capacity of households, through the direct and indirect provision of various forms of income insurance.

Before we start, two introductory remarks. First, my focus is on economic risks. There are myriad other risks, such as pandemics, biosecurity, terrorism and so on, but this analysis restricts its attention to economic risks.

And second, I write primarily from the perspective of a small or medium-sized country that can exercise little influence over the evolution of volatility in the global economy. The objective here is to position the economy in such a way as to become more resilient, rather than to address the global volatility directly (as may be possible in the context of a country like the US). The discussion that follows is therefore likely to resonate most in a small country context, although aspects will also be relevant for larger countries.

2. A volatile and uncertain world

In developed countries, the years after 1990 were characterised by low inflation and relatively modest business cycles. There was a sense that boom and bust cycles had been tamed. This was sometimes called the Great Moderation. Of course, it was a little more complex than that. Asset prices remained volatile, with the dot com bust, real estate cycles and the like. And many emerging market economies were not characterised by stability. But compared to a volatile decade like the 1970s, the 1990s and much of the 2000s were less turbulent.

But even if the Great Moderation was a little exaggerated, there is a sense now that the global economic environment is moving into a markedly more volatile and uncertain period. Over the past few years, we have observed greater volatility in trade and capital flows, GDP, oil and commodity prices, and exchange rates.

And the incidence of significant financial crises has increased.¹ The recent global financial and economic crisis has had far-reaching effects. Countries, particularly those with relatively open economies, have been reminded that their economies – and fiscal positions - are significantly exposed to variation in global economic performance.

But the crisis should be seen as a marker of increased underlying uncertainty and volatility, rather than primarily as an independent cause of volatility. There are structural forces driving the increased uncertainty and volatility.

Globalisation, for example, has led to more significant uncertainty for countries, governments, corporations, and households. And there is

uncertainty associated with the pace of technological change, new sources of global competition, the price and availability of core commodities, and so on.

The 2010 World Economic Forum Risk report notes that these risks are increasingly interconnected, leading to significantly higher systemic risk.² Indeed, the correlation between asset classes, and between stock markets, has increased significantly. In developed markets, correlation between equity markets increased from 0.25 (1995-99) to 0.65 (2005-09) with an even bigger increase in emerging markets (0.13 to 0.61). Markets in a range of asset classes seem increasingly to be driven by changes in general investor risk sentiment (Keynes' animal spirits) in addition to the specific fundamentals.

Diversification is harder to achieve in such an environment. Similarly, there is recent evidence on increased global synchronicity of business cycle, when the experience of the last 20 years is viewed in a longer historical context.³

Further, there is significant, and perhaps unprecedented, uncertainty on many dimensions of global economic policy. For example, there are large global imbalances that need to be worked out, many governments need to undertake substantial amounts of fiscal consolidation, there is a need to deal with the concerns that exist simultaneously in terms of inflation and deflation, and the future role of the USD is unclear. There is significant uncertainty in terms of the way in which these issues will be resolved.

This increased background uncertainty and volatility is exacerbated by the significant structural changes that are occurring in the global

¹ Martin Wolf, *Fixing Global Finance*, 2008.

² World Economic Forum, *Global Risks 2010*, 2010.

³ Michael Bordo & Thomas Helbling, 'International Business Cycle Synchronicity in Historical Perspective', *NBER Working Paper 16103*, June 2010.

economy. The world is coming to the end of three distinct economic eras at the same time:

- the end of 200 years of Western economic dominance: in 1820, the combined GDP of the Asian economies exceeded that of the US and Europe.⁴ The Western economies then began their economic ascent, starting with the Industrial Revolution. However, we are now observing the rapid economic return of Asia.
- the end of the Bretton Woods era: since WWII, the global economy has been governed by a set of multilateral institutions such as the IMF and the WTO. However, many countries now seem to prefer regional and bilateral solutions (for example FTAs rather than the Doha Round) and there is a lack of confidence in multilateral approaches to issues like climate change. The force of multilateral institutions is reducing.
- the end of the Washington Consensus: this shorthand was coined for a set of policies that placed free markets at their core. However, this Consensus has been weakening due to events like the financial crisis and the success of governments in Asia that have pursued a different policy approach.

Changes of this magnitude are likely to cause disruption and volatility – at a minimum, there will be heightened uncertainty. Indeed, periods of structural change are often coincident with periods of elevated risk and uncertainty. The US National Intelligence Council recently noted that “Historically, emerging multipolar systems have been more unstable than bipolar or unipolar ones...the next 20 years of transition to a new system are fraught with risks.”⁵

⁴ Angus Maddison, *The World Economy: A Millennial Perspective*, OECD, 2001

⁵ National Intelligence Council, *Global Trends 2025: A Transformed World*, November 2008

Indeed, several commentators have made an argument that change may be sudden and unpredictable. Consider recent contributions from Niall Ferguson in *Foreign Affairs* on the potential for rapid change in the position of the US, and Joshua Cooper Ramo on the global economy as a complex system.⁶

This is not to say that there are not also substantial growth opportunities, particularly in emerging markets. There are strong fundamental forces at work – demographics, urbanisation, technology, productivity catch-up – that provide some confidence that economic growth rates will be robust in these markets.

But the distribution of possible outcomes will likely be significantly higher, at global, regional, and individual country levels. There are any number of uncertainties that could lead to very different growth trajectories.

For small and medium-sized countries, say countries with populations of 20 million or less, this uncertainty and volatility in the global economy has the potential to have very substantial impacts on their economic performance and prospects. These relatively small countries tend to be more open and reliant on the global economy – and also tend to be less diversified than larger economies.

For example, external shocks (terms of trade, export demand, etc) have a larger effect on the New Zealand business cycle than domestic shocks.⁷ This is likely to also be the case for Singapore given the high export contribution to the Singapore economy. Other examples include the exposure of commodity exporters such as

⁶ Niall Ferguson, ‘Complexity and Collapse: Empires on the edge of chaos’, *Foreign Affairs*, March/April 2010; Joshua Cooper Ramo, *The Age of the Unthinkable*, 2009.

⁷ Bob Buckle et al., ‘A Structural VAR model of the NZ business cycle’, *New Zealand Treasury working paper 02/26*, 2002.

Australia to economic conditions in key global markets, as well as the sensitivity of many countries in Asia to changes in consumer demand in Europe and the US.

For countries that have good quality policy foundations, as most of the small, developed countries do, it is likely that a key driver of variation in economic performance will come from the external environment. This is both in terms of major events like the crisis of the past few years, but is also true as a general proposition. Clearly there are some domestically created risks, but the key risks relate to the nature and extent of engagement with the global economy.

In this regard, it is worth noting that there is only a very small correlation between the average growth rates within countries over decades, even though policy settings remain relatively constant.⁸ One interpretation of this finding is that the external environment in which countries are operating has a substantial influence on economic performance. To generate good performance, countries need to understand the external environment in which they are operating and position themselves accordingly.

3. Resilience as a source of competitive advantage

To the extent that volatility and uncertainty is one of the defining characteristics of the next decade, this will pose substantial challenges for many countries and governments.

Over the past 20 years, the exposure of most countries to these external risks has increased

⁸ Bill Easterly, Michael Kremer, Lant Pritchett, and Larry Summers, 'Good Policy or Good Luck? Country Growth Performance and Temporary Shocks', *Journal of Monetary Economics*, December 1993.

very substantially due to an intense process of global economic engagement. At the same time, there has been a general tendency to remove sources of protection against these shocks in the pursuit of greater flexibility and efficiency (e.g. capital controls have been reduced, social insurance has been reduced, etc).

But does this increasing risk exposure come at a real cost? One response is to say that as long as the growth trajectory is positive, a more volatile series is an acceptable price to pay. So are there meaningful costs from increased uncertainty and volatility?

For individuals, there are clear welfare and financial costs to increased volatility. Economic volatility is likely to translate into increased volatility in employment and wage outcomes for individuals over time. That is, it is more likely that you will lose a job and/or that your wages will reduce.⁹ And unemployment has effects that can last. Long-term unemployed have much weaker prospects, and graduates who enter the labour market in a recession year have persistently lower earnings than those who graduate in better years.

In addition to labour income, volatility will impact on the values of financial asset and real estate portfolios, which people depend on for retirement income. There are financial losses here, but also welfare losses. People tend to be risk averse, and prefer more stable environments.

This has social and political implications. This risk exposure leads to reduced support for continued engagement with the global economy. For example, as off-shoring reaches further into the middle class into the US, surveys report declining

⁹ Farber, Henry, 'Job Loss in the United States, 1981-2001', *NBER Working Paper 9707*, May 2003; Neumark, David, 'Changes in Job Stability and Job Security: A Collective Effort to Untangle, Reconcile and Interpret the Evidence' *NBER Working Paper 7472*, January 2000.

support for free trade. And we know from history that income volatility, particularly in extreme cases, can lead to social and political turmoil.¹⁰

Similarly, uncertainty can have significant negative effects on corporations. For example, an elevated level of risk has real effects; for example, it leads to delayed investment and expansion, which in turn has negative effects on employees and shareholders. In one recent survey of global executives, 21% of respondents said that recent high levels of exchange rate uncertainty had led to a significant reduction in planned investment.¹¹ In addition, there is significant evidence that volatility causes hysteresis – particularly for small and medium sized firms, who are less well positioned to absorb risks on their balance sheets.

Governments are also impacted. To the extent that the effects of these shocks persist, they will likely have a significant impact on the fiscal positions of governments. We have seen significant changes in fiscal positions occur very rapidly, moving from structural surplus to structural deficit. And with increasing international mobility of people and firms, the consequences of a negative shock can be magnified; if taxes are raised, firms and talent may leave. And given that there is an asymmetric response function to fiscal shocks – spending in good times, and not tightening in bad times – there is likely to be a negative relationship between volatility and fiscal discipline.¹²

The benefits of resilience

The reason that resilience is likely to become a much more significant concern for governments is

that the increased risk comes at an economic and social cost. Overall, more stable environments are more attractive to individuals and corporations.

An important claim is that countries/governments that build resilience well will generate a competitive advantage. There are two sources of this advantage. First, external shocks will have less of a negative effect on individuals, corporations, and governments. And second, there will be greater potential for these more resilient economies to take on additional risks, where these are growth enhancing, at lower cost. In other words, resilience pushes out the economy's 'efficient frontier' that maps the trade-off between growth and volatility.

In a more volatile world, superior risk management becomes a source of real competitive advantage. Countries that do not do this well will likely experience greater turbulence and bear greater costs.

Indeed, there does appear to be an increasingly widely held view that a change in direction and thinking is required with respect to risk and resilience. Over the past 20 years or so, the overall level of resilience has reduced. Governments, corporations, financial institutions, and individuals have taken on more risk in the belief that financial innovation allowed for increased risk exposure to be borne efficiently.

There is now broader acceptance that this trade-off was not struck perfectly, and many are prepared to pay some cost for greater resilience. For example, it is now much more acceptable to say that the world would be better off with a more stable financial system even if this led to reduced rates of growth and innovation (and it is not obvious that this trade off exists, as discussed below).

¹⁰ Niall Ferguson, *The War of the World*, 2008.

¹¹ *An Exorbitant Privilege?: Implications of reserve currencies for competitiveness*, McKinsey Global Institute, December 2009.

¹² David Skilling, *The Political Economy of Public Debt Accumulation in OECD Countries*, Harvard University, 2001.

The benefits from strengthened resilience mean that, although many governments are focused on returning to growth, there is also an imperative to think about the resilience of this growth – and how sensitive the growth and productivity trajectory is to shocks. Governments need to ensure that their economies are resilient and can continue to perform in a more uncertain world. Unsurprisingly, given this context, a growing number of governments are taking steps to build national economic resilience to the global economy. For example, several governments have introduced capital controls and begun to intervene in exchange rate markets to curb excessive movements; long term contracts for energy and food supply are increasingly common; and there are attempts to rebalance the economic structures of economies that have been unduly reliant on either consumption or exporting to Western markets.

And of course, many economies in the Asian region have been going down this path for the past decade or so, accumulating substantial foreign exchange reserves, in order to protect themselves against foreign capital movements. In general, governments seem less inclined to accept existing exposures to global markets and more inclined to take deliberate action.

However, there are better and worse ways to manage risks. One way to reduce risk exposure, for example, might be to disengage from the global economy. And there is a concern that the ways in which governments are managing the risks associated with the current crisis (deficit financed spending), will reduce the resilience of the economy and make a future crisis more likely and more costly.

To make progress, we need to understand the nature of the trade-off between risk and growth. It may be that increasing the degree of resilience

and lowering the risk exposure may lower growth. On the other hand, building resilience may allow an economy to take on additional growth enhancing opportunities.

Not all protection against risk necessarily depresses economic performance. Arguing that bearing risk is important for sharpening incentives and that nothing ought to be done to manage this exposure is like arguing that investors should select the highest return portfolio irrespective of risk considerations, a strategy that few would follow. The challenge is to manage risk, resilience, and growth in an integrated way.

Indeed, there can be a complementary relationship between the provision of insurance and innovation and risk-taking. The notion that protection against risk is necessary for risk-taking behaviour is standard in many contexts.

Consider, for example, two fundamental institutional underpinnings of modern capitalist economies; limited liability companies and bankruptcy law. The Economist notes that “The modern world is built on two centuries of industrialisation. Much of that was built by equity finance. Which is built on limited liability.”¹³ The security provided to shareholders by limited liability – that they would not be exposed to claims beyond their investment if their company foundered – unlocked enormous sums of capital and put it to productive use.

Similarly generous bankruptcy provisions are often regarded as a factor in the success of the US because they encourage entrepreneurs to engage in risk-taking behaviour as it shields them from the cost of failure. The moral hazard generated by these institutions is generally regarded as second

¹³ Economist, ‘The key to industrial capitalism: limited liability’, December 23, 1999.

order relative to the substantial gains attributed to them.

This notion is also common in the context of finance. Diversification allows investors to pool risks and reduce the overall risk of the investment. Indeed, a key function of capital markets is to allow investors to better engage in risk-sharing, by offering liquidity and diversification opportunities. The effect of this is to increase the attractiveness of risky projects to investors and accelerate investment and growth. The historical record shows that greater risk sharing opportunities provided by financial development sparked economic take-off.¹⁴

And similarly, institutions that manage risk exposure are an important element in promoting risk-taking behaviour in labour markets. For example, social insurance can induce people to invest in specific skills and so support a productive economy.¹⁵ And unemployment insurance can both improve risk sharing in the labour market and raise output.¹⁶

In sum, managing risk and building resilience need not require the insulation of the economy from the forces of change. Indeed, it can create a more efficient economy with higher levels of growth, innovation, and risk-taking. In Joseph

Schumpeter's famous metaphor, cars can go faster because they have brakes.

So we need a structured way to guide decision-making. How should governments think about this task of responding to the increased risk environment and building resilience into the economy?

4. A structured approach to building resilience

Given this context, it is important that governments think about how to most efficiently assume, manage, and allocate risk within an economy. There are two interdependent sets of priorities.

First, to understand the set of risk exposures that are faced by the country and to form a judgement as to which risks to take on, and which to seek to avoid or manage. Do the risks that are absorbed generate an appropriate return; is the economy on the efficient frontier in terms of the relationship between the level and resilience of its growth?

Second, to strengthen the risk bearing capacity of the system by increasing the ability of the government and households to bear risk, and ensuring that risk is allocated to the parts of the economy who can bear and manage that risk most efficiently (individuals, corporations, government). Risk should be borne by the agents that can bear the risk at lowest overall risk.

These priorities are inter-related: the amount of risk that it is efficient for a country to absorb depends in part on the risk-bearing capacity of the system.

And the investments that are made in strengthening the risk bearing capacity of the

¹⁴ Acemoglu, Daron, and Fabrizio Zilibotti, 'Was Prometheus Unbound By Chance? Risk, Diversification and Growth', *Journal of Political Economy*, August 1997; Rousseau, Peter L., and Paul Wachtel, 'Financial Intermediation and Economic Performance: Historical Evidence from Five Industrialized Countries', *Journal of Money, Credit & Banking*, 1998; Bernstein, Peter, *Against The Gods: The Remarkable Story of Risk*, John Wiley & Sons, 1996.

¹⁵ Hall, Peter, and David Soskice, *Varieties of Capitalism: The Institutional Foundations of Comparative Advantage*, Oxford University Press, 2001

¹⁶ Acemoglu, Daron, and Robert Shimer, 'Productivity Gains from Unemployment Insurance', *European Economic Review*, 2000, pp. 1195-1224; Acemoglu, Daron, and Robert Shimer, 'Efficient Unemployment Insurance', *Journal of Political Economy*, 1999, pp. 893-928

system make more sense to the extent that it allows the country to take on additional risks that generate an appropriate return (or reduce the costs of existing risk). This is an iterative process as the amount of risk that can be taken depends on the efficiency with which those risks can be managed.

How do corporations think about risk?

The proposed approach is very similar in principle to the way in which many corporations think about risk management. There are a few options that firms generally consider:

Reduce the risk exposure

Transfer the risk to other parties (e.g. through hedging, warranty contracts)

Absorb the risk (self-insure)

Although there is significant variation in the private sector in terms of the quality of the approach, in general corporations have a more systematic approach than is the case for governments. It is worth considering the relevance of these practices for the public sector. The specific answers may be different, but the structured approach to considering the questions is of relevance.

The discussion that follows will look at these two priorities, and identify the issues that will require deeper analysis and consideration in future work.

5. Assessing national level risk exposure

The first step is to understand the primary economic exposures that a country bears. There are two primary channels through which countries are exposed to global economic risk; through trade flows (both exports and imports) and

through capital flows. The following discussion outlines these exposures and gives a sense of the possible responses.

Trade flows

Small countries that have a high proportion of exports to GDP tend to have more volatile output as they have a greater sensitivity to external shocks – and also tend to be less diversified than larger economies. As Singapore and other countries experienced during the global economic crisis, the performance of small, open economies is closely linked to the state of the global economy. To the extent that there is greater volatility in the global economy, there is also potential for greater volatility in export earnings and in topline GDP volatility (which then impacts on the risk exposure of agents throughout the economy).

This has motivated a conversation about the extent to which some economies are overly dependent on external growth, and the extent to which they should develop their domestic consumption engine. The (persuasive) counterargument is that small economies have fewer choices in that they have to engage globally, and their ability to rely on domestic demand is relatively limited compared to markets like the US.

However, there are choices as to the shape and risk properties of the export structure. In particular, the degree of diversification in the export sectors and the export markets, and the extent of participation in preferential trading arrangements, can all be influenced.

For example, there is evidence that countries that have a comparative advantage in risky exports tend to have a slightly more diversified export base, whereas countries that export goods and

services for which there is more stable demand tend to have a greater degree of specialisation.¹⁷

Similarly, countries have an ability to ensure that growth is generated from a variety of sectors from a range of sources (eg domestic firms or multinationals, different industry sectors) so as to benefit from diversification. This means that the economy is not heavily exposed to one sector, which may be subject to volatility.

One of the trade-offs for small countries is that a degree of focus is required to build critical mass; countries like Singapore and New Zealand cannot develop a world-class position without a degree of focus. However, the extent of focus, and the areas on which the focus occurs, should be determined in a thoughtful manner.

The other risk to be managed is in terms of the portfolio of export markets. Reliance on a small number of markets may be a source of risk in that countries become dependent on demand from a few markets. As an example, New

Zealand sold about 80% of its exports to the UK market until the 1960s. The preferential access to this market was lost when the UK entered the EU, and the strategic challenge for New Zealand was then to diversify across markets. Similarly, Asia discovered that it was heavily exposed to final demand in the US and Europe, and there is pressure to ensure that there is a more balanced portfolio of markets.

This now extends to ensuring that the country is part of the network of FTAs that are being negotiated (in part to manage the risk that other countries do not obtain preferential access to key trading partners). Understanding the potential

regional architecture arrangements is an important part of managing this risk exposure.

In addition, the risk profile of the import structure can also have material implications. Most countries are not close to being self sufficient in energy, food supply, and in other basic commodities, and have to import significant amounts. Variation in price (the terms of trade) is a clear source of risk exposure. And there are also concerns about security of supply – the risk that countries may not be able to access physical supplies of key commodities when they are needed.

Partly in response, there has been a marked increase in the number of governments seeking to develop ownership interests or sign long-term contracts with respect to inputs such as energy and food. That is, countries want to ensure security of supply without relying on markets. There is also a price dimension; there has been significant volatility in the price of oil and other commodities. Again, the challenge is to strengthen resilience in an efficient manner.

Exchange rates/capital flows

Capital flows are perhaps an even greater source of risk exposure than trade flows. With the latest phase of financial globalisation, there has been an increased incidence of financial crises; for example, due to sudden reversals of capital flows. This can have substantial effects on the real economy.

In response, some countries, notably in Asia, have followed a self insurance approach by building up foreign exchange reserves. Large current account surpluses were run in order to provide a precautionary buffer, to reduce exposure to foreign creditors.

¹⁷ Julian de Giovanni & Andrei Levchenko, The Risk Content of Exports: A Portfolio View of International Trade, [NBER Working Paper 16005](#), June 2010.

There is increasing recognition that cross-border capital flows can have some downsides and that governments should think about how to address some of these issues. The IMF has recently noted, for example that capital controls have merit in some circumstances; and certainly a range of countries (e.g. Brazil, Russia) have put in place these controls.¹⁸

Floating exchange rates are, in theory at least, a buffer or absorber of shocks. In practice, it is not straightforward and in some cases it is likely that a floating exchange rate is an additional source of risk (as may be the case in New Zealand, for example). Many countries, such as Singapore, deliberately manage their exchange rate.

The number of independent currencies has reduced over the past couple of decades. And despite the recent troubles of the Euro, small countries on the periphery of the Eurozone, like Estonia, still want to join the Euro – partly driven by risk management motivations.

Policy implications

Together, this analysis shows that there are a range of actions that governments can take to moderate the risk exposure that it has to the global economy. Different countries will make different choices in terms of how much risk to take on, and from which sources. For example, choices about the exchange rate regime, whether to manage capital flows, the extent to which to seek to diversify export markets and sectors of the economy, decisions as to the desirability of running large current account deficits, and so on.

At one level, an increased risk profile is part and parcel of a global economy. But it does not need to be treated as purely exogenous. And, at a

minimum, governments should understand the nature and extent of these exposures.

This should be a formal, analytical process – not simply issue identification or scenarios analysis. This should be approached in terms of whether the country is on the efficient frontier in terms of the risk that they are facing. It is not a matter of prediction, which cannot be done in an enormously complex world, but progress can be made in developing an understanding of the key exposures.

One way of doing this is to prepare a ‘Risk Exposure Assessment’ on a regular basis. This Assessment would capture the key risk exposures, and provide a sense of the type of impact that they may have. This could sit alongside a structured program of scenarios. It would highlight the extent of the risk exposures, and provide a clear guide for government action.

This perspective also has organisational implications. It suggests that governments need to be much more focused on investing in understanding the specific issues associated with the external risk exposure. Perhaps we need to re-imagine the roles of foreign ministries, to make them more focused on risk assessment. This external perspective should be a core part of domestic economic policy-making.

More specifically, the World Economic Forum has recently proposed the establishment of a ‘Country Risk Officer’ role, as an analogy to the Risk Officer function seen in some corporations.

6. Strengthening the risk bearing capacity of the economy

The second feature that will impact on the resilience of countries is the extent to which they

¹⁸ Capital Inflows: The Role of Controls, [IMF Staff Position Note](#), February 2010.

can bear this external risk efficiently. This ‘risk bearing capacity’ is a function of whether the risk exposure is allocated to the parts of the economy that can bear it at the lowest cost (i.e. between the government, corporations, and households), and the extent to which these different parties are acting to efficiently manage their risk exposure. So to what extent can governments act to ensure that countries can efficiently bear this risk by increasing the economy’s risk bearing capacity?

The discussion will begin by describing some of the broad dimensions of the current risk allocation within many economies, and how this has changed over time. Then, it considers some of the levers that the government can use to allocate and absorb risk. Lastly, some priorities for action in terms of better managing and allocating risk are identified.

Current risk allocation

Overall, there has been a pronounced shift in the allocation of risk within societies over the past few decades.¹⁹ Specifically, there has been a significant risk transfer to households from governments and corporations over the past few decades. For example, the reduced generosity of social insurance, the move to defined contribution pension schemes rather than defined benefit schemes, and increased job insecurity that has increased the standard deviation of household income. From the perspective of households there was no Great Moderation but rather a Big Risk Shift.

Individuals

There is significant evidence that household financial risk has been steadily increasing over the past few decades in the US and other developed

¹⁹ Jacob Hacker, *The Great Risk Shift*, 2006; Michael Mandel, *The High Risk Society: Peril & Promise in the New Economy*, Random House, 1996

markets. Various measures of household income volatility show a steady increase in the US over the past four decades.²⁰ Jacob Hacker notes that the volatility of US family incomes is now five times as high as it was 30 years ago, due to some of the changes such as increased employment insecurity mentioned above.

As an example of these risk exposures, individuals on the verge of retirement when the stock market crashed – or when unemployment spiked – have suffered very substantial losses. In the US, for example, 401k schemes lost hundreds of billions of dollars in value during 2008 and 2009 – contributing to a 24% decline in household net worth as a proportion of income.

A substantial proportion of households have used debt to buffer against these income shocks, but household balance sheets are now such that this will be difficult to rely on in the future. Households have accumulated debt, partly as a response to these risks, but that clearly reduces their resilience to future shocks.²¹

Some of the risks that households bear are very difficult to manage directly. There is little insurance for many material risks faced by households; for example, home owners cannot readily insure against house price movements.²² And many households have no financial assets, making self insurance through creating a buffer more difficult. Because of this, an income shock can create very significant hardship. It is far from clear that households are best placed to efficiently absorb increased risk exposures, or that the

²⁰ Karen Dynan, Doug Elmendorf, & Daniel Sichel, ‘The Evolution of Household Income Volatility’, mimeo, February 2008.

²¹ Karen Dynan, ‘Changing Household Financial Opportunities and Economic Security’, *Journal of Economic Perspectives*, Fall 2009.

²² Robert Shiller, *The New Financial Order: Risk in the 21st Century*, Princeton University Press, 2003.

transfer in risk to individuals has been welfare enhancing.

Corporations

The level of competitive intensity facing companies has increased – and the level of background risk has also increased – over the past few decades, due to an increasingly global economy. There is some evidence of an increase in the rate of creative destruction over the past few decades, which is the corollary of a flexible, efficient market.²³ And there is significant churn at SME level, in terms of the birth and death of firms (although there is less time series evidence in terms of whether this has increased significantly).

Corporations have tried to reduce their risk exposure where possible. In Japan, for example, companies are moving away from being an employer for life to more of a transactional relationship.

Government

Governments have realised that they have a significant exposure to the economy. Over the past couple of years, for example, fiscal positions deteriorated very substantially in a short period of time. The extent of risk exposure is also in large measure a policy choice, in terms of fiscal policy decision-making. In general, governments have tried to reduce their risk exposure and encourage greater self sufficiency. However, governments are advantaged in terms of being able to pool risk and spread risk across time. They also have advantaged access to credit markets because of the sovereign power to tax.

Options for government

The government can strengthen the risk bearing capacity of the economy in three ways. First,

absorbing national output volatility using its balance sheet. Second, strengthening the risk bearing capacity of households. And third, strengthening the ability of the government to bear risk. Taken together these actions can strengthen the ability of different parts of the economy to bear risk and allocate exposure to those parts of the economy that can bear the risk at lowest cost.

Use the government balance sheet to absorb national output volatility

The government can act to reduce national output volatility by absorbing the effects of an external shock onto its balance sheet, dampening the observed effect of the shock on the economy. There are two main mechanisms to achieve this.

Automatic stabilisers

Governments absorb macroeconomic risk through ‘automatic stabilisers’. That is, there is a tendency for fiscal policy to be automatically tightened when the economy is growing strongly, due to higher tax revenues and lower government spending, and to be automatically loosened when the economy is growing weakly. In this way the government uses its balance sheet to take on risk from the broader economy.

Aggregate demand management

Particularly in times of crisis, governments can provide additional fiscal stimulus measures to reduce economic downside. In particular, governments often implement temporary programmes of tax cuts or spending programs, or accelerate planned investment (e.g. infrastructure spending). To the extent that the government is in a position to act aggressively in this manner, the economy will have a higher risk bearing capacity – and so will be much more resilient in the face of external shocks.

²³ Dick Foster and Sarah Kaplan, [Creative Destruction](#), 2001.

Strengthen the risk bearing capacity of households

There are a few measures that can be taken here:

Social insurance

Most directly, the government provides social insurance (public pensions, unemployment and sickness benefits, etc), bearing a portion of the risk that would otherwise be borne by individuals. These are often thought of as pure transfer payments, but they should be seen as an insurance provision.²⁴

Other policy measures

There are also other policy choices that the government can make that will impact on how well placed individuals are to bear economic risk. For example, the design of the public health and education system (in the US, for example, job loss often leads to the loss of health insurance), the provision of public housing, and the design of the broader retirement income system (for example, whether savings are encouraged or incentivised, policy choices that influence whether retirement schemes are defined benefit or defined contribution, the ability of individuals to purchase annuity type schemes on retirement).²⁵ Some governments also encourage home ownership, at least partly as a buffer to allow people to absorb risk.

Governments also have an interest in ensuring that household balance sheets do not get too extended, so that households are better able to manage risks. And in some European economies, the government has worked with employers to

²⁴ Diamond, Peter, 'The Economics of Social Security Reform', [NBER Working Paper 6719](#), September 1998

²⁵ Kletzer, Lori G., and Robert E. Litan, 'A Prescription to Relieve Worker Anxiety', [Policy Brief # 73](#), The Brookings Institution, March 2001; Feldstein, Martin, and Daniel Altman, 'Unemployment Insurance Savings Accounts', [NBER Working Paper 6860](#), December 1998.

encourage them to hold onto labour through the downturn rather than lay people off. This was a deliberate exercise in risk sharing between the government, employers, and workers.

Strengthen the risk bearing capacity of the government

The government can also make choices that will determine its ability to absorb shocks without causing difficulties – as well as being in a position to provide stimulus and social insurance as appropriate. In particular, the government needs to have a sound fiscal position, and ensure that the government balance sheet is itself resilient to shocks, in order to strengthen the risk bearing capacity of other parts of the economy.

Strong fiscal position

A strong structural fiscal position, and low levels of government debt, provide space for the government to efficiently absorb risk from the economy. A focus on a strong fiscal position will become even more important given the emerging fiscal costs associated with an aging population.

Design of the revenue base

Governments are exposed to a variety of economic risks, which leads to variation in the government's revenue base. However, some tax systems are broader and more diversified than others. For example, a diversified revenue base with a mix of consumption taxes, income taxes etc, is likely to be less volatile than being reliant on one type of revenue stream or income source.

Balance sheet risk management

Although the annual budget (the annual statement of government revenues and expenses) receives most of the attention, the overall government balance sheet is the appropriate unit

of analysis for assessing the government's financial risk position.

Many governments have substantial portfolios of assets and liabilities. In New Zealand, one of the only governments in the world to prepare a fully comprehensive balance sheet, government assets represent about 120% of GDP. In Singapore, the size of the government balance sheet is likely to be substantially larger due to the large holdings of financial assets in Temasek and GIC, as well as holdings of land, and physical infrastructure.

These government assets and liabilities are exposed to a range of risks, such as economic performance, market movements, commercial performance, and exchange rate fluctuations. These can be very material changes, and have the potential to require tax increases or spending cuts.

One approach that governments could take in response is to ensure that the balance sheet is not highly correlated with the other economic shocks that you expect; e.g. that the returns on financial assets are not exposed to the same set of economic exposures that the government faces.²⁶

Sovereign balance sheet risk management is currently not as sophisticated as in many corporations. Indeed, only a handful of governments prepare comprehensive balance sheets, which makes financial risk management difficult. Significant improvements do seem to be possible.

Priorities for action

Progress can be made in all of the above areas. But there are two particular priorities for action across multiple governments:

²⁶ Timothy Irwin and Oscar Parkyn, 'Improving the management of the Crown's exposure to risk', [New Zealand Treasury working paper 2009/06](#), 2009.

Provide insurance to households

It seems likely that individuals are bearing too much risk, and that there is a case for the greater provision of social insurance – and measures to strengthen household balance sheets. Indeed, there is evidence that countries that are more globally exposed have higher levels of social insurance.²⁷

The challenge is to do this in a way that does not compromise the growth potential of the economy. There are several ways in which this can be achieved; for example, encouraging self insurance (e.g. unemployment insurance accounts)²⁸, promoting household saving, and ensuring that private insurance markets are working well. Singapore's emphasis on using asset-based methods of providing household assistance is instructive in this regard.

Improve the fiscal positions of governments

The ability of the government to absorb risk – both through demand management and the provision of social insurance – has been compromised by the structural fiscal worsening in many countries. Improving the fiscal position of these governments, and improving the risk management of the sovereign balance sheet, is very important from a resilience point of view. If the world is entering a period of greater volatility, combined with the fiscal challenge of an aging population, improving fiscal positions should be a strategic priority in order to strengthen resilience.

The concern is that the response of many developed countries to this crisis will act to increase global risks, and reduce the resilience of

²⁷ Dani Rodrik, 'Why Do More Open Economies Have Bigger Governments?', [Journal of Political Economy](#), October 1998

²⁸ Feldstein, Martin, and Daniel Altman, 'Unemployment Insurance Savings Accounts', [NBER Working Paper 6860](#), December 1998.

many economies, such that it is more difficult to deal with future shocks. This is particularly the case for relatively small countries, where fiscal positions can deteriorate quickly and who are more likely to encounter difficulties accessing credit markets.

7. Concluding remarks

Issues of risk and resilience will become increasingly significant, particularly for small countries who are both more exposed to the global economy and who also tend to be less diversified as economies. Risk is increasing, and many governments and individuals have low levels of economic resilience.

Strengthening resilience will require a significant change in approach for many governments. Over the past 50 years, multiple controls and restrictions on economic activity have been removed; for example, the removal of capital restrictions and exchange rate controls. However, my sense is that there will be a trend towards governments taking a more deliberate stance with respect to managing risk exposures that they face.

Specifically, it seems likely that governments will respond to the increased volatility by attempting

to shed risk and manage their exposure to the forces of global market. For example, it is likely that we will see an increased incidence of capital controls, fixed exchange rates, vertical integration of supply chains, regional groupings, and the like.

An increasing share of economic transactions will likely be mediated through contracting and organisations, rather than through markets.

As a consequence of the economic volatility in the 1930s, there was significant innovation in social insurance, macro demand management, and so on. Similarly, I expect that there will be innovation in approaches to risk management in response to heightened volatility over the next few years, as governments begin to engage with this more seriously.

The challenge for governments will be to manage risks and build resilience without doing damage to the economy. Governments need to think in a structured way about risk and resilience. Which risks should countries take on, and which risks should be reduced or avoided because the returns are insufficient to justify the exposure? And how and where should governments seek to build resilience into their economies? The success with which governments respond to these challenges will have a fundamental bearing on their economic and national performance.

About Landfall Strategy Group

Landfall Strategy Group is a Singapore-based advisory firm that provides advice on strategic issues to governments. We provide distinctive perspectives on emerging global trends, working with government decision-makers to understand key global changes and how governments should respond and position themselves in the emerging global economy. And we help governments to build strong strategic capacity.

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