Adrian Orr: Towards a framework for promoting financial stability in New Zealand

Speech by Mr Adrian Orr, Deputy Governor of the Reserve Bank of New Zealand, presented to the Institution of Professional Engineers New Zealand, Wellington, 22 March 2006.

This speech draws on an article by Hunter, Orr and White forthcoming in the Reserve Bank Bulletin March 2006.

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Thank you for the opportunity to participate in this conference on New Zealand infrastructure. The topic I have been assigned is "What infrastructure do we need to develop in order to keep New Zealand growing?"

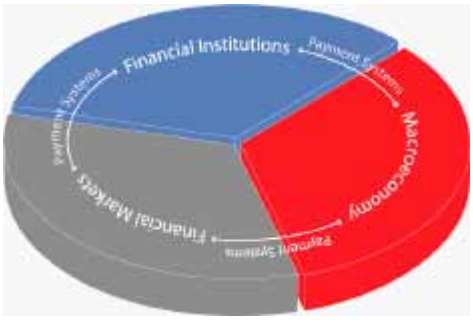
When people refer to infrastructure, they probably have in mind physical infrastructure, like transport, energy, water and communication networks. Those are all critical to growing the economy, and certainly in New Zealand they have been attracting a fair amount of attention. However, I will focus on an aspect of economic infrastructure that is at the core of the Reserve Bank's role, that is, New Zealand's financial infrastructure.

The financial system I will argue is at least as critical to the future growth of the New Zealand economy as the physical infrastructure, though probably is more taken for granted. In this speech I will outline the beginnings of a framework for assessing the promotion of financial stability, and outline why the Reserve Bank of New Zealand sees it as an important role. I will also highlight some of the areas the Bank is working on to promote financial stability.

The critical role of the financial system

The financial system is not infrastructure in perhaps the traditional sense of the word (e.g. wires, bricks and mortar, electricity, communication devices). The system is also made up of legal structures, agreed behaviours and practices, information and knowledge. Of course, if the power goes off or phones go down, the financial system will struggle to operate.

We think of the system as comprised of three interconnected components: financial markets, institutions, and payments systems. Financial *markets* are where financial contracts are entered into or traded directly between buyers and sellers (or borrowers and lenders). Financial *institutions* intermediate between borrowers and lenders (including the central bank) and provide financial services. While *payments systems* allow financial transactions within markets and with institutions to be made.



These components of the financial system act together to enable the vast majority of economic exchange, and play a pivotal role in the allocation of economic and financial resources. In markets this is done through the `price mechanism': buyers who most highly value a particular resource will bid a higher price, and under certain conditions markets can set prices so as to efficiently allocate resources to where they have the most value (at least as measured by ability to pay). In practice, financial institutions allocate resource depending on the level of risk that the institution wishes to be exposed to.

Achieving efficiency in allocating resources is mostly about ensuring that the conditions required for optimal economic exchange are satisfied. These conditions include the existence of markets that can allocate all forms of financial risk, clear ownership rights of both financial risk and reward, and investors having adequate information with which to make their financial decisions. The efficiency of

the financial system itself is mostly about satisfying the conditions required for competition, for example, low barriers to entry and an absence of monopoly powers.

It is important to note that at the same time as the system prices and allocates resource, it is pricing and allocating risk. The price of risk is the additional yield (or premium) an investor would expect to receive for holding a risky asset over and above the `risk-free' interest rate. Hence, in a market, investors who can best manage the risk associated with an asset will be prepared to receive a *lower* risk premium in compensation for the risk exposure (or conversely pay a higher asset price). Efficient pricing of risk therefore will tend to result in risk being allocated to those who best understand the nature of the risk, and are most willing and well-positioned to manage it. In this sense, an efficient financial system is also a stable one.

When is a financial system stable?

It may come as a surprise to many of you in the audience, but the last few decades have been recognised internationally as amongst the most financially unstable in modern history.[1] Many regions during this period have experienced periods of financial instability. This includes New Zealand, Australia, and Scandinavia, in the late 1980s and early 1990s, Japan throughout much of the 1990s, East Asia in 1997/98, and the United States, first in the early 1990s (the Savings and Loan crisis) and again early this decade (the 'tech wreck'). These experiences have resulted in financial stability issues coming to the fore of central banks' attention.

Many central banks, including the Reserve Bank of New Zealand, now publish regular financial stability reports alongside their regular monetary policy and inflation reports. However, the framework for undertaking this surveillance and for linking financial system surveillance to its policy powers and purposes is less developed than for central banks' monetary policy function. Unlike inflation targeting, financial stability is not an easily quantified concept, and is also not clearly separable from other factors such as political stability, international financial stability, and wider economic and social stability.

In general terms, a financial system is stable when it has the resilience to continue to efficiently provide financial services under a plausible range of adverse circumstances. A plausible range of financial losses should also be able to be absorbed without financial system disruption. By contrast, the financial system can be considered impaired when a material number of users incur significant losses from exposures to financial system risks that they could not have been expected to be aware of, or manage.[2]

We thus define the preconditions for financial stability as existing when all financial system risks are adequately identified, allocated, priced and managed.

All four of these preconditions may not be strictly necessary or relevant in every instance. In some cases the preconditions could be adequately met through non-price approaches to risk management. Or one might argue that in a perfect market with full information, adequately 'priced' risk would also imply adequately identified, allocated and managed risk (in which case adequate pricing alone would be the only relevant precondition). For generality, and because the market fails for various reasons, we see an adequate combination of identification, pricing, allocation and management of financial system risk as necessary for financial stability.

This definition of financial stability is in terms of preconditions rather than outcomes, and hence it is not like the definition of price stability in the Reserve Bank's Policy Targets Agreement. Our definition of financial stability is also an ex ante (rather than ex post) definition. Its value thus lies in prompting questions for policymakers and financial system users in relation to whether an apparent imbalance or misalignment may be a source of financial instability.

However, even if the preconditions for financial stability are in place, volatility and sharp adjustments in financial prices (and/or quantities) can still occur. These are often an important part of the adjustment

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[1] See Aliber (2005) "The 35 most tumultuous years in monetary history: shocks, the transfer problem, and financial trauma" *IMF Staff Papers, Vol 52. Special Issue*

[2] From Draghi, Giavazzi, and Merton (2006): "To understand the breeding conditions for financial crises the prime source of concern is not risk per se, but the unintended, or unanticipated accumulation of risks..."

process in a sound and stable system. Short-term price volatility is often caused by the 'price discovery' or 'quantity adjustment' process that occurs as economic circumstances change. Such volatility is, however, less likely to lead to financial instability or necessitate some form of crisis intervention if the preconditions for financial stability are in place.

Furthermore, financial crises can and will still occur. Financial crises are caused by a combination of unlikely events where the correlations were not obvious ex ante. Hence financial crisis management capabilities are necessary.

Financial system risks, instability and market failures

Financial system risks exist in all components of the financial system. If any one component (markets, institutions, and payments systems) of the financial system is impaired, then it can become unstable and will not operate to allocate resources efficiently. The main types of financial system risk can be categorised as credit, market, liquidity, and operational risks.

Credit risk relates to the risk that contracts represented as payable as a fixed sum of money in the future will not be paid in full on maturity.

Market risk relates to the potential for the market value of an asset to fluctuate because of, for example, changed credit risk assessment, changed assessments of the future income flow from the asset, or a change in the rate of exchange between currencies.

Liquidity risk is the risk that a loss might be incurred as the result of a forced sale.

Operational risk relates to the risk of economic loss caused by a process breakdown, for example, computer failure, human error, or fraud.

Financial instability can be triggered by a variety of causes and shocks. These causes generally arise from combinations of structural and behavioural factors. Structural market failures are attributable to factors such as information asymmetries, externalities, and moral hazard. Behavioural market failures refer to issues such as herd behaviour in investment decisions, and investment fads and fashions, or myopia in decision making around various components of the financial system.

There is substantial overlap between these structural/behavioural categories; for example a structural problem such as information asymmetry will likely contribute to herd behaviour, by causing agents to rely more on observations of each other's trades for information regarding the appropriate market price.

Structural failures

An important determinant of structural failures in the financial system is information asymmetry. Sellers (or borrowers) typically know more about the risks embodied in the exchange than do buyers (lenders). Faced with such an asymmetry, buyers will be cautious, and will tend to over-estimate (price) risk. If risk is over-priced, this may drive out the less-risky activities, causing buyers (lenders) to become more cautious still. Such a process can result in less exchange than would otherwise be the case if the two sides to the exchange were more equally informed.

Hence, an important purpose of financial regulation is to address this information gap. The regulation may include insisting on a greater level of disclosure, or imposing certain standards on sellers (borrowers). Financial regulation, like many other forms of regulation, thus generally entails a combination of disclosure requirements and standard setting.

The existence of externalities and 'free-rider' opportunities in some instances also means that risks may not be borne by the owner of the asset, and hence not priced or managed adequately. A result can be that under-investment in some risk management tasks may occur, such as, for example, ensuring the ongoing operational capacity of critical payment systems in a systemically important financial institution.

Structural factors can mean that identifying, pricing, allocating, and managing financial risks can be very difficult at times, if not impossible, thus necessitating various forms of prudential regulation, financial crisis management capabilities, and/or the public provision of certain financial services. For example, it is difficult to be able to *identify* all threats to financial stability ex ante. Hence, some forms of risk are best managed by ensuring adequate capital buffers are in place to absorb losses without

disruption to the system. The Basel II process of allocating capital buffers to various forms of financial risks in banks is an example of such an intervention.

Some forms of risk are also not adequately *priced* due to the lack of a market for the price discovery process to occur. Likewise, both free-rider and externality aspects of certain payment system networks may mean that risks are not *allocated* accordingly and may be *mismanaged*. This may necessitate the public provision of certain services (e.g. utility networks) or prepositioned loss allocation mechanisms in the case of a bank failure.

Behavioural stresses

The financial system can also be exposed to destabilising behaviours. These influences can be exacerbated by some of the structural weaknesses discussed already, especially for example, the phenomenon of contagious bank runs.

Recent developments in the field of behavioural finance have extended our understanding of the potential sources of financial instability. Concepts such as myopic decision-making, cognitive dissonance (repression of contradictory evidence), and fallacy of composition, some of which come from psychology, are receiving wider recognition in relation to the study of financial stability.

It is becoming increasingly recognised that individually "rational" people all making the same choices can lead to herd behaviour and momentum that can drive a market price far away from that consistent with underlying returns and risks. For example, Kindleberger (1996)[3] describes how `euphoria' can turn into mania, as speculation "leads from normal rational behaviour to what has been described as `mania' or a `bubble'."

History gives us many examples of ‘mania', bank runs, asset bubbles and other financial crises, from as early as the Dutch tulip bulb bubble in 1636 to the present day. Aliber (2005) describes the effect of financial deregulation in enabling Japanese banks to rapidly increase their real estate loans - resulting in both property price increases, and real estate company increases, boosting the Tokyo stock exchange. At the same time, Aliber notes that when Nordic controls on foreign borrowing were lifted, there was an inflow of foreign (notably Japanese) funds which led to real estate and stock price bubbles in Finland, Sweden and Norway. The Mexican crisis of the 1990's had its roots in over-optimism regarding the success of macroeconomic reform. Excessive lending driven by high expectations of growth helped to create both the Asian crisis and the US stock market bubble in the latter years of the 1990s and early this decade.

New Zealand had a similar experience in the second half of the 1980s, when economic reform and financial liberalisation resulted in a surge in credit expansion and correspondingly leveraged bubbles in commercial real estate and listed equity prices. When it became apparent that the market's assessment of risk had become substantially misaligned from the returns, a reassessment triggered by the sharemarket correction in the US in October 1987, caused the bubble to burst and widespread defaults occurred. This correction of previous misalignments caused material damage to the financial system, including the failure and hence closure of a number of financial institutions and a significant fall in equity market participation for several years following.

A common element in most of these mentioned financial crises has been the rapid expansion in the supply of bank credit which, at least with the benefit of hindsight, was priced too cheaply (i.e., the risks were under-priced). Borio (2005)[4] emphasises credit supply by highlighting the role of `financial imbalances' in causing crises. That is, where lenders over-extend themselves by financing highly leveraged assets that turn out to be incapable of generating the cash flows required to service the debt.

However, credit growth measures and asset market valuations alone are not *necessarily* good financial stability indicators. Rather, it is assessing "why" the indicators have moved that matters most, and hence the need for a framework to assess these developments.

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[3] Kindleberger (1996) "Manias, Panics and Crashes: A history of financial crises" *John Wiley and Sons, Inc. Third Edition.*

[4] Borio (2005) "Monetary and financial stability: so close and yet so far?" *National Institute Economic Review No 192 (April).*

Financial system assessment and regulatory balance

Making assessments of financial stability risks, such as the sustainability of credit expansions and large asset price movements, is difficult. The extent to which central banks should attempt such assessments is also an area of considerable debate. Much of the debate concerns rather polar positions, that is, whether or not central banks should 'target' asset prices. The financial stability assessment framework outlined in this speech does not approach this question as an "either-or" issue, but instead aims to assist an assessment-based approach by providing a framework of questions.

Furthermore, crafting the regulatory infrastructure to support the process of economic exchange is far from straightforward. For example, regulation that excessively constrains sellers, whether directly or through imposition of compliance costs, can cause them to withdraw from the market and lead to economic inefficiencies. Significant 'moral hazard' problems can also arise, where over-regulation can remove the actual financial risk from the owner of the asset, institution, market, or payment system. The public provision of certain financial services may also crowd out competition and innovation.

It is also very important to recognise that markets can and do generate their own solutions to what otherwise would be information asymmetry market failures. Financial intermediaries themselves are a market response to this underlying economic problem. The role of a bank is to monitor and manage the risks embedded in risky loans that depositors would be unable to monitor themselves. Banks in effect facilitate the economic exchange between depositors and borrowers by playing a role that balances up the information asymmetry.

However, there is always the question: who monitors the monitors? In the financial system, a number of mechanisms perform this role: shareholders, and those appointed by them (boards of directors and auditors), creditors, rating agencies, and regulators.

Experience suggests that market-based solutions - sometimes with regulatory prompting and encouragement - can often result in a better performing financial system than over-relying on regulatory interventions. The Reserve Bank thus balances self and market discipline practices and requirements, with additional regulatory requirements. We are acutely aware of the importance of getting this balance right, and the risks of over-regulation.

The general principles we aspire to in all that we do with our prudential regulation role thus include:

- Keeping efficiency issues at the centre of our attention;
- Utilising the synergies amongst our monetary policy, macro prudential, supervision and market operation roles;
- Maintaining a system overview as well as knowing individual institutions well;
- Seeking to utilise market forces as far as possible rather than oppose them;
- Recognising that we have many common interests with supervised institutions;
- Using incentive-based techniques as much as possible; and
- Making sure that we maintain high analytical standards in our regulatory design.

In summary, we approach financial system regulation from the stand point of its role in *enabling* economic activity - by supporting the processes by which people and firms can engage in welfare improving specialisation and trade. To regulate to enable might seem something of a contradiction. However, for any system to work there needs to be some rules, referees, and general confidence. Users of the system need to have a basis for being confident about their financial contracts, institutions, markets, and payments networks. Absent a basis for confidence, the scope for welfare enhancing economic and financial exchange is diminished.

The Reserve Bank's activities in promoting financial stability

The Reserve Bank promotes the stability of New Zealand's monetary and financial system - comprising the monetary unit of account, and the markets, institutions, and systems that make monetary exchange possible - through various activities. These activities include: maintaining low and stable inflation (i.e., maintaining the purchasing power of our money liabilities); acting as banker to the banks (and the government); prudentially supervising registered banks and being prepared to manage

a bank failure; overseeing the payments and settlement system; and maintaining a reserve of foreign currency for financial crisis management.

The Bank's activities in promoting financial stability generally fall into the prevention, correction, and crisis management categories. These are outlined in Tables 1 and 2 below.

Table 1. Framework overview

Financial System	**Risks**	**Identify**	**Allocate**	**Price and/or Manage**	**Powers & Purposes**	**Actions**
		Financial stability exists when risks are adequately identified, allocated, priced and managed				
Markets Institutions Payment systems	Liquidity Credit Operational Market	Identify market failure / source of financial risk.	Ensure risks are allocated to those who are willing, aware, and best able to manage them.	Form view of how well risk is priced; and/or how well risks are being managed.	RB Act (1989) RB capital and balance sheet	Prevention Correction Crisis Management

Table 2. Reserve Bank activities and the Reserve Bank Act

Relevant sections and parts of the Reserve Bank of New Zealand Act (1989) are in brackets (see also sections 5, 7 and 39).

Prevention	Information and monitoring: *Financial Stability Report*; *Monetary Policy Statement* (s 15); Provide advice to the Minister of Finance (s 23, s 33); information and disclosure relating to payment systems (Part 5B)
	Banks: Prudential regulation (bank registration, capital requirements, connected lending limits, disclosure, outsourcing policy) (Part 5)
	Liquidity: Provide liquidity to the banking sector through the payment system, open market operations, Bond Lending Facility, issue of currency (s 8, s 25, s 39)
	Payment and settlement systems: provision of critical infrastructure eg NZ operator of ESAS/Austraclear (s 32, s 39); support for the CLS' adoption of NZD, designated payment systems (Part 5C).
	Holding portfolio of foreign reserves for intervention purposes (s 24)
Correction	Intervening in the foreign exchange market for monetary policy purposes (s 16, s 17, s 18)
	Primary function is maintaining price stability (s 8)
	Impose prudential requirements upon banks (Part 5); ability to alter conditions of registration on banks (s 74); powers to give bank directions (s 113)
Crisis Management	Acting as lender of last resort (s 31)
	Statutory management (s 117) powers to give bank directions (s 113)
	Foreign exchange intervention (s 16, s 17, s 18)

Prevention

Most of the Reserve Bank's activities are aimed at preventing financial crises and thus promoting financial stability. For example, in the prudential supervision of banks an important element is the registration process. This process is directed to ensuring that banks are established with appropriate governance arrangements and capability, as well as having adequate capital for the business to be undertaken soundly and so that plausible losses are able to be absorbed without disruption. The disclosures that registered banks in New Zealand make also have an important preventative role, by bringing to bear the scrutiny of the market place on how banks are identifying, allocating, pricing and managing their financial risks.

The Reserve Bank also plays a direct role in the surveillance of the financial system, through its direct supervisory and banking relationships, participation in the financial markets (particularly in foreign exchange and government securities), and wider financial system and macroeconomic surveillance and analysis. Much of this work is reported on in the Bank's *Financial Stability Report* and *Monetary Policy Statement.* The Bank thus contributes generally to the provision of information and analysis to the market place.

At the macroeconomic level, imbalances such as inflation pressures and large surpluses or deficits on the current account of the balance of payments, can make the financial system more susceptible to shocks that test the resilience of the financial system. To assess how risky these imbalances are requires a good understanding of the causes of the imbalance, and of the underlying financial drivers. Again, understanding the "why" matters more than knowing the "what". This assessment combines judgement, research, forecasting and economic models.

However, no system of policies and procedures can ensure that the conditions for financial stability are met all of the time. From time to time there will be developments where the Bank will become less

confident that risks are being adequately identified, priced, allocated, or managed, and where interventions to lessen the potential for emerging financial instability will be called for.

Correction and crisis management

The Reserve Bank's interventions aimed at correcting potential preconditions for financial instability may take a number of different forms, depending on the analysis (including taking account of any unintended consequences of our intervention). Such Bank interventions may range from Governors' speeches that draw attention to the issue, through to the Bank exercising powers (with the consent of the Minister of Finance) by which it can give directions to a registered bank or banks.

The Bank may also use its own capital or balance sheet to intervene in financial markets, such as for example, intervening in the foreign exchange market or providing the markets access to the Bank's bond portfolio in order to bolster liquidity.

There is also overlap between the Bank's monetary policy and financial stability roles. For example, asset price bubbles have the potential to overwhelm monetary policy responses and threaten financial stability. The Reserve Bank Governor recently acknowledged that in rare situations an (asset class) price misalignment may be sufficiently obvious that a monetary policy response in excess of that required for the usual price stability objective could be required; in these cases in particular, a longer term view of the risks to price stability would be appropriate.[5]

The Bank also has a *crisis management* role. Some categories of extreme and very low probability risk are also inherently difficult for the financial system to price and manage - the so-called "uninsurable" risks. Most insurance policies, for example, excluded compensation for loss arising from the Y2K problem (a once in a millennium event!). Another example of the Reserve Bank's contingency planning for a low probability, but potentially very damaging event, is its preparation for a potential influenza pandemic.[6]

While `lender of last resort', foreign exchange intervention, and bank statutory management are the crisis management activities that are usually associated with a central bank, a recent additional example is the Reserve Bank's outsourcing policy.[7] A primary motivation for that policy is to better ensure that should a (large) bank become insolvent, or should an important provider of outsourced services no longer be able to deliver, that bank could continue to be operated. Again, while such an event may be in the low probability category, it would have significant consequences for the financial system as a whole.

In order to implement any policy action, the Bank must be satisfied that the action is necessary and beneficial. Figure 2 steps through, in a stylised manner, the typical stages and questions involved in the policy decision process.

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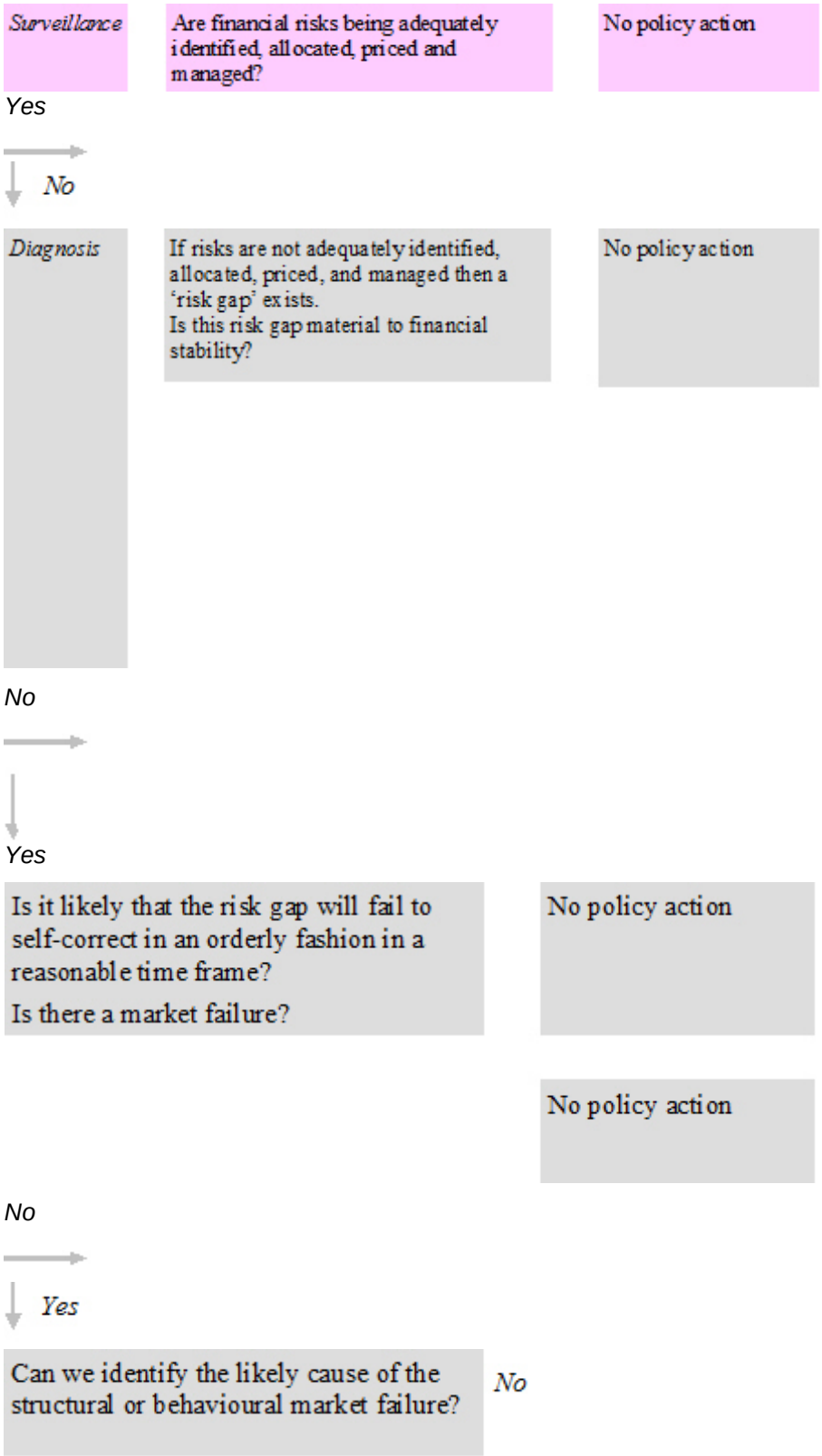
[5] Bollard, A (2004) "Asset prices and monetary policy" An address to Canterbury Employers Chamber of Commerce, Christchurch, 30 January 2004 http://www.rbnz.govt.nz/speeches/0145812.html

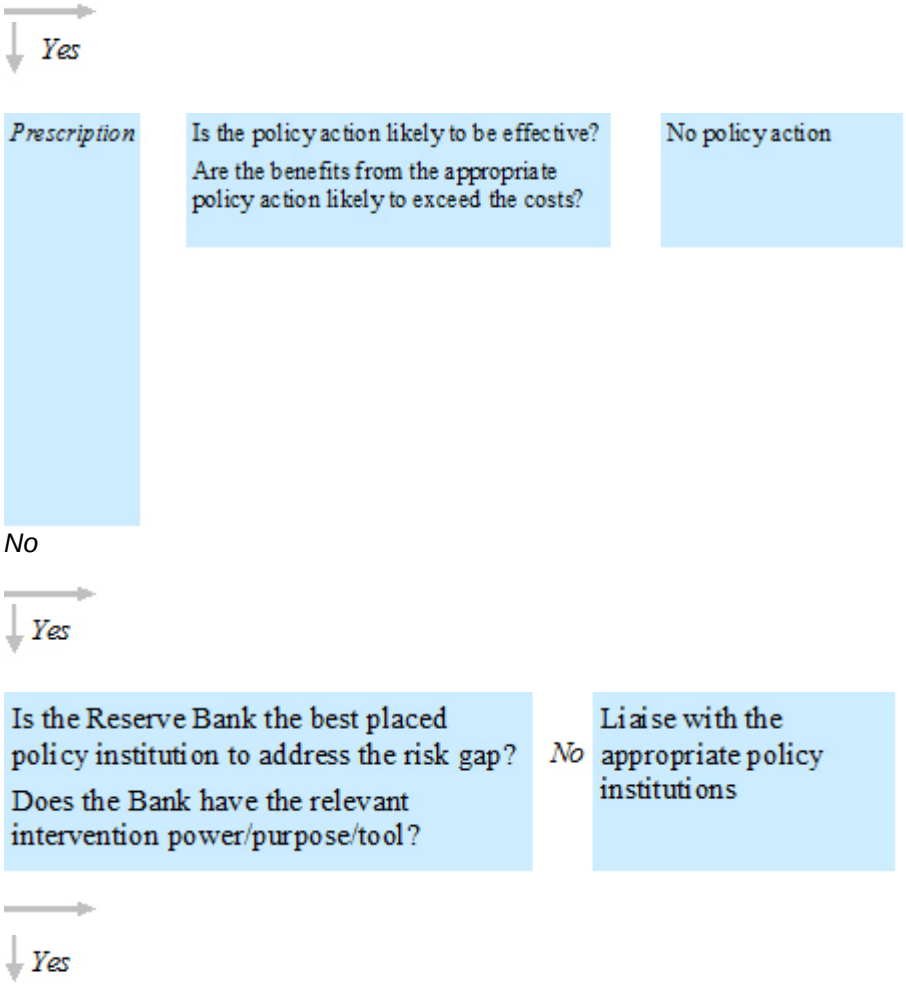
[6] See http://www.rbnz.govt.nz/crisismgmt for details on the contingency planning that is being undertaken for this risk.

[7] See http://www.rbnz.govt.nz/finstab/banking/outsourcing/index.html.

Figure 2. Stylised overview of the Bank's policy decision process[8]



[8] This flow chart is intended as a broad overview - it is not a precise statement of how policy decisions will necessarily be made.



Recent policy developments

Over the past few years we have “re-invigorated” the Bank's own financial stability role. This has been reflected in a number of ways. In November 2004, we commenced publishing a twice-yearly *Financial Stability Report,* as a complement to our quarterly *Monetary Policy Statements.* We have also introduced a local incorporation and an out-sourcing policy for registered banks. The former requires large banks to be incorporated in New Zealand, rather than operate as a branch of a foreign bank (as has been the case with Westpac). The latter requires banks to manage out-sourcing of core banking functions in a way that does not compromise their ability to maintain a core operational capability should a service provider become unable or unwilling to provide those functions.

The local incorporation and outsourcing policies have been introduced mainly to improve the resilience of the New Zealand banking system in a bank failure situation. That is a situation that we all hope falls into the "rare event" category, though we know from experience that bank failures can and do happen. And we know that there is a tendency for rare events to slip into the background, and in the case of those that could be very damaging, perhaps more than they should. One of the jobs of the Reserve Bank is to act as a counter to such tendencies.

In parallel with progressing these issues, which affect mainly the large Australian-owned banks, steps have been taken to strengthen the harmonisation and co-ordination of trans-Tasman banking supervision. Last year, the Trans-Tasman Council on Banking Supervision was established, with a terms of reference which cover supervisory co-operation, preparedness for responding to crises that involve banks that are common to both countries, and whether legislative changes may be required to ensure APRA and the RBNZ support each other in their regulatory responsibilities, at least regulatory cost. The Council recommended some legislative changes, for enactment in both Australia and New

Zealand. Dr Cullen and the Australian Treasurer announced following their annual meeting that both Governments will be promoting those legislative amendments.

Currently we are also involved in the Government contingency planning for a possible influenza pandemic. Besides making contingency plans to maintain our own operations, we have been working with the banks to ensure that business continuity planning is in place, and that key payments systems and cash distribution arrangements could be adequately maintained in the unlikely event that an influenza pandemic would impact on staff availability. We have been consulting with banks on how they envisage handling disruptions in household and business ability to service debt during a pandemic period, and to ensure that they are adequately positioned to cope with potential disruptions to the wholesale international funding markets our banks rely on.

We are also liaising with other infrastructure providers, in particular, telecommunications services. Banks will need to isolate staff, and would expect an upsurge in the use of internet services; and the ability to operate 'remotely' will be a key requirement for our own preparedness. Steps are also being taken to ensure continuation of core services such as the operation of monetary policy, and the provision of currency and liquidity. Even if no pandemic hits us in the next few years, such planning will stand us in good stead for the future.

The payments system is a component of financial system infrastructure that has been reconfigured substantially during the past decade or so to strengthen its financial resilience. Without going into technical details, we are now in a position where the great bulk of "high value" payments - mostly those connected with wholesale financial market and inter-bank foreign exchange dealing, and which amount to more than $35 billion on an average day - are fully certain (in Reserve Bank funds) for the recipient at the point they are made. This has been achieved by the introduction of "real-time gross settlement" arrangements. In the case of most foreign exchange transactions, these arrangements have been taken a step further, with the payments across the accounts of the two separate central banks whose currencies are involved also now being synchronized. This has removed the time difference between, for example paying NZD's in New Zealand and receiving USD in New York, and the risk of loss arising from a default occurring during that time gap.

And we are not overlooking the retail payments system. Work is in progress with the New Zealand banking industry on two major issues. First, to improve the legal and financial clarity and resilience of the arrangements for processing the several million retail payments made every day in New Zealand. Second, to review the access and governance arrangements in the retail payment system to ensure the system remains durable in the face of changes in the technical and commercial landscape.

A key part of our regulatory strategy for promoting the resilience of the financial system is our capital adequacy framework for banks. Banks need to hold sufficient capital in order to be able financially to withstand major loss and be positioned for future growth, so that the financial system can continue to circulate liquidity and provide funding for economic activity in New Zealand in the face of stress.

It is important to be clear here that we are not talking about banks dealing with the "expected" losses that occur as a normal part of banking business - that is the role of provisioning. Rather, the focus of capital adequacy is on unexpected loss, or the rare but potentially debilitating losses associated with, for example, severe downturns in the economy's performance or gyrations in the prices of key collateral assets such as housing. Under such abnormal circumstances, the diversification strategies rightfully adopted by banks to manage risk in normal times may fail, as borrowers' risks more closely correlate, leaving capital as the only remaining defence.

A major priority for our policy work this year is to implement the updated international benchmark for bank capital adequacy, known as Basel II, with these objectives in mind. Two of the driving principles behind Basel II are to improve regulatory capital requirements to make them more sensitive to the risks of unexpected loss, and to sharpen the focus of engagements between supervisors and banks on ensuring that banks have adequately accounted for the risks of unexpected loss in their capital management.

Finally, we are currently engaged in important work in progress on the regulation of the non-bank financial sector - covering finance companies, building societies, credit unions, insurance companies and managed funds. This work has progressed to the point that the Government has decided that non-bank deposit takers, insurers and superannuation funds should be subject to a higher level of prudential supervision than currently and that, in principle, the Reserve Bank should be that supervisor. The next step will be a discussion paper that puts some more details on these proposals,

presently envisaged for release in mid-2006. These developments signify the important role seen for these categories of financial institution in New Zealand's financial infrastructure.

Conclusion

This speech presents a step towards a broad conceptual framework for promoting financial system stability and guiding the Bank's policy actions. We argue that the preconditions for financial stability exist when all financial system risks are being adequately identified, allocated, priced and managed. The financial system is made up of markets, institutions, and payments and settlement systems. Financial system risks broadly include credit, liquidity, market and operational risks.

All of the preconditions are important to best ensuring that the financial system is resilient to a wide range of economic and financial shocks, and able to absorb financial crisis losses with least disruption. The preconditions for financial stability also best ensure that the financial system is efficient in its delivery of financial services, as well as allocating resources efficiently.

In making assessments of financial stability, the Reserve Bank does not have a single, well-defined quantitative measure. Instead we draw on a variety of information, practices, and on-going research. The Bank conducts regular surveillance of financial risks and reports on its assessments in the twice-yearly *Financial Stability Report*.