



## **CAPITAL IN THE BANKING SYSTEM**

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***University of Western Sydney  
3<sup>rd</sup> Financial Markets Asia-Pacific Conference  
Sydney***

***26 May 2005***

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### Introduction

It is a pleasure, again, to accept an invitation from the University of Western Sydney and to address its third Financial Markets Asia-Pacific Conference, which offers a rich menu of topical and challenging financial issues.

I say “again”, because I also had the pleasure of speaking at the inaugural conference in this series two years ago. Then, I was a central banker, overseeing the Reserve Bank of Australia’s role in safeguarding the stability of the financial system. My address surveyed a range of ‘macro-prudential’ or financial soundness indicators for Australia, which painted a picture of a strong and well-capitalised banking system.

Now, as chairman of Australia’s integrated prudential regulator, my perspective on financial stability comes, so to speak, from the coalface – from APRA’s supervision of the financial health of individual financial institutions. The change in perspective, however, has not changed the positive assessment. After two more years of solid economic growth and profitable banking activities, particularly housing lending, the Australian banking system remains in sound condition.

In my address tonight, I want to turn the spotlight on what is meant by a well-capitalised banking system. As we know, capital is the financial bedrock on which the strength of a banking institution, and the banking system as a whole, is built. Capital provides flexibility, is a foundation for future growth and is a sign of strength to markets and customers. It is, as well, the vital shock absorber, enabling an institution to continue operating soundly through unanticipated losses and while problems are being resolved.

Over the past few years, issues about the quality and adequacy of capital in the banking system have been reasonably settled by prudential regulators. Their attention has turned to the identification and measurement of risks. Latterly, however, capital issues have returned to centre stage, here and globally. One reason is the adoption of International Financial Reporting Standards, which change the accounting definitions of equity and debt in published financial statements. The other, of course, is the new global capital adequacy regime for banks, known as the Basel II Framework.

Capital is a complex and wide-ranging subject, and I want to confine my comments to two matters which are currently “work in progress” for APRA. These are:

- how a prudential regulator should assess the *quality* of capital in the banking system; and
- how the *level* of capital should change through the economic cycle.

Though banking analysts would like me to, I will not be reaching any conclusions tonight. Rather, I would like to share with you the various considerations that are exercising our minds.

### The role of capital

A brief explanation of APRA’s approach will help set the scene for this discussion.

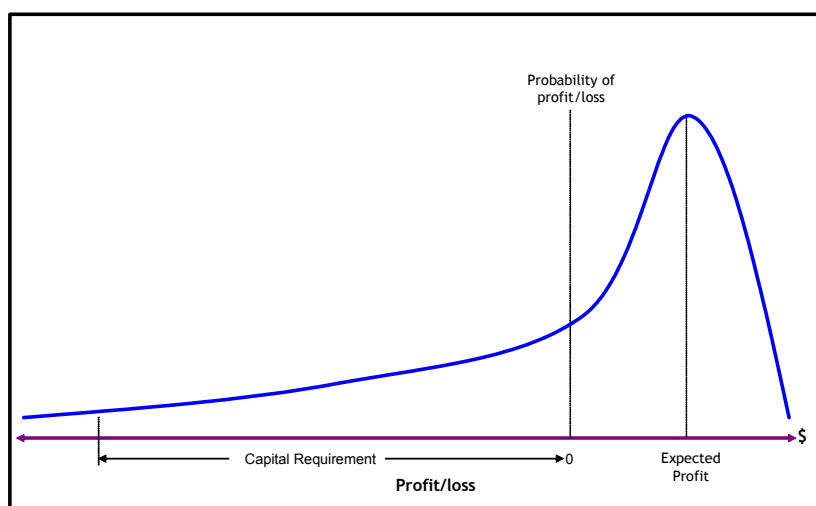
APRA was founded in 1998, combining the functions of 11 predecessor agencies. We supervise authorised deposit-taking institutions (banks, building societies and credit unions), life and general insurance companies, friendly societies and the bulk of money invested in the superannuation industry. In all, APRA oversees around two trillion dollars of assets, about three-quarters of total financial assets in Australia.

A prudential regulator such as APRA is primarily concerned with minimising the failure rate of the financial institutions it regulates. When failures occur, as they inevitably will, we strive to minimise the loss to beneficiaries (depositors, policyholders and superannuation fund members) and any spill-over to the broader financial system. Some regulatory agencies focus on preventing violations of the law; we focus on preventing or modifying unduly risky behaviour. To achieve our mission, APRA concentrates its activities in two areas. The first is risk analysis – assessing the risk profile of an institution and identifying the early warning signals of financial distress. The second is supervisory response – calibrating our intervention (and in our world intervention is not uncommon) to the level of risk being carried by institutions.

As I have already noted, capital adequacy is a critical measure of the soundness of a regulated institution. The accepted regulatory practice for measuring capital adequacy is to benchmark the capital of an institution against a measure of its risk profile. This risk-based approach obviously depends on what constitutes risk – on which I comment later – and capital.

Let me illustrate, in a highly stylised way, how a prudential regulator determines capital adequacy for a banking institution. The probability distribution shown in Figure 1 depicts the likelihood of profit outcomes typical for a bank. There is a high probability of profit; in Australia's case, for example, the return on equity for major banks averages between 15 and 20 per cent. Returns beyond that are less likely, since borrowers cannot do more than repay 100 per cent of the amounts they owe and there are practical limits to the growth of other revenue sources and to efficiency gains. The downside for a bank includes a long adverse tail, with the possibility of losses a small but genuine worry. Furthermore, the maximum reasonably possible loss is much greater than the expected profit, although this adverse outcome is much less likely to occur.

**Figure 1: Capital in banking institutions**



A prudential regulator cannot require banking institutions to cover every conceivable adverse outcome. That would tie up a substantial volume of capital and would not be an efficient use of an economy's investible resources. Instead, we set minimum capital requirements to cover all but the most adverse possible outcomes and, in this way, try to strike an appropriate balance between safety and efficiency in the banking system.

### **The desired qualities of capital**

This approach to capital adequacy is not just about the quantum of capital. It is also about the *quality* of capital supporting the operations of a banking institution. Capital has a reasonably well-established hierarchy of quality, an acknowledgment that not all capital is created equal, and prudential regulators take this into account.

Naturally, we would prefer to have the highest quality of capital on balance sheets. The desired features of capital, as we see them, are that it:

- provides a permanent and unrestricted commitment of funds. It is no good if capital can disappear when it might be needed most;
- is freely available to absorb losses. That is, it must be capable of shielding creditors from losses;
- does not impose any unavoidable servicing charge against earnings. That is, it must not act as a drain on cash flows when funds are needed to meet obligations to creditors; and
- ranks behind the claims of depositors and other creditors in the event the institution must wind-up.

On these criteria, ordinary shares, retained earnings and general reserves – what we might call “fundamental capital” – are the highest quality form of capital from a prudential perspective. Fundamental capital is perpetual and places no fixed servicing charges on issuers. It can absorb losses without triggering the institution's default and, if necessary, dividends can be suspended for a period of time while the institution continues to operate. In economic terms and all else equal, the higher the level of fundamental capital, the lower the probability that an institution will fail.

For this reason, prudential regulators normally require that fundamental capital makes up the most significant tranche of capital in a banking institution.

From the perspective of an investor, however, providing share capital is the most risky form of funding and it must offer the highest return to compensate. Hence, it is the most expensive source of capital for a financial institution. Not surprisingly, institutions have been active in developing other capital instruments that offer access to potentially lower cost capital and a wider investor market and prudential regulators have acknowledged that these instruments, still ranking behind the claims of depositors, can be a source of strength to institutions. In the process, however, the distinction between equity and debt has become increasingly blurred, forcing prudential regulators to look beyond the legal form of an instrument to its practical substance.

Like prudential regulators around the world, APRA divides regulatory capital into Tier 1 and Tier 2 components. The basic idea is that Tier 1 capital is permanent and all payments on it are non-obligatory; Tier 2 capital is non-permanent and payments are generally obligatory. Although they have different characteristics, at the end of the day, if a bank fails, every dollar of Tier 1 or Tier 2 capital is one less dollar of losses that will need to be absorbed by depositors and other senior creditors such as employees.

We have at least 18 separate criteria to determine whether capital instruments qualify as Tier 1. These criteria are aimed at excluding instruments if they have features that would undermine the permanence or unrestricted nature of the funds raised, the issuer's prerogative to choose not to redeem or make regular payments on the instruments, or the subordinated nature of the instrument.

The specifics of how these criteria are applied in practice are very complicated and take a fair amount of regulators' time and attention. More significantly, we always run the risk of approving instruments that meet our requirements on paper but which, in substance or operation, compromise the basic elements required of Tier 1 capital instruments in some manner.

### **The growth of hybrid capital instruments**

This point is particularly relevant to our assessment of so-called innovative or "hybrid" capital instruments, which have been issued by banking institutions in Australia and overseas with the aim of meeting Tier 1 capital requirements. These instruments fall in a grey area between debt and equity and, moreover, between Tier 1 and Tier 2. They have no stated maturity and generally include regular coupon (sometimes called "interest") payments linked to a standard index such as LIBOR or the bank bill rate, plus a margin. They also may be highly structured and include a range of features that are considered to be appealing to investors. In this sense, they can be seen as completing markets by filling in gaps in the range of vehicles available for investing in financial institutions.

In Australia, the market for hybrids has expanded significantly, for a number of reasons:

- **Favourable cost of capital.** Hybrids are a lower cost means of meeting Tier 1 capital requirements. Given that the return on equity for major banks is around 15 to 20 per cent, and hybrids on average yield 20 to 100 basis points above the bank bill rate (and additionally may be tax deductible), the cost advantages to the issuing institution are obvious. Hybrids are also cheaper to issue in terms of administrative costs (such as the cost of floats and administration of small shareholders).
- **Taxation.** Tax benefits appear to be one of the rationales for issuing some hybrid instruments. At least until recently, banking institutions in Australia could achieve tax deductibility on capital costs despite regulatory treatment of these instruments as Tier 1 capital.
- **Market demand.** There is a healthy market demand for bank-issued securities paying a regular, predictable return relative to a benchmark index, though with risk attached. Hybrids tend to be viewed by investors as a type of fixed-income security. They can be issued in a variety of currencies and in

global markets, particularly if the issuer is a household-name financial institution.

- **Risk features.** Hybrids typically offer specific features designed to signal to investors that the instrument carries lower risk compared with other forms of equity. The most common of these are features that give a “synthetic” maturity to the security, such as dates at which the security can be redeemed by the issuer. The option is accompanied by “step-up clauses” whereby at a certain date the coupon rate increases significantly, giving the issuer a strong incentive to redeem the securities.
- **Maintain existing shareholder value.** Hybrids do not dilute ordinary shareholdings.

We are sometimes told that certain features are added to a hybrid instrument because that is “what the ratings agencies are looking for”. Of course, the risk characteristics to the investor are critical to the incentives for banking institutions to issue and hold various types of capital. According to the “no free lunch” theory, however, it is not possible to reduce risk to investors while keeping risks elsewhere unchanged. As a result, we look at these features carefully to ensure that they do not have adverse prudential impacts.

Because hybrid instruments push the limits of some of the desired features of Tier 1 capital, some jurisdictions do not permit some or any types of hybrids in Tier 1. In 1998, the Basel Committee on Banking Supervision introduced a specific limit on hybrid instruments in Tier 1 capital and, the following year, Australia introduced a limit that covers both preference shares and hybrid instruments. Since then, some Australian banks have taken full advantage of the limit to issue hybrid instruments in lieu of preference shares and other forms of capital.

### **IFRS and regulatory capital**

The issue of capital quality is now under renewed focus because of the introduction of International Financial Reporting Standards (IFRS). IFRS is heading towards a more robust and internationally comparable financial reporting regime. Broadly speaking, IFRS changes are promoting market or fair valuations over historical cost valuations and are tightening up some of the more accommodating accounting approaches. From APRA’s perspective, IFRS is of prudential interest because many previously settled accounting treatments have been reconsidered and this, in turn, has caused us to reconsider the appropriate regulatory treatment for the items concerned.

Under IFRS, the definitions of equity will be tightened. On initial adoption, some instruments currently qualifying for treatment as equity will be reclassified as debt. Under APRA’s prudential standards, a Tier 1 capital instrument must be treated as equity under accounting standards (unless APRA agrees otherwise); hence, IFRS reclassifications of equity would automatically reduce an institution’s Tier 1 capital position. At the stroke of a pen, so to speak, up to \$11 billion of hybrid instruments (equivalent to over 10 per cent of fundamental capital) might disappear from Tier 1 capital, and this would have a significant impact on regulatory capital and other requirements.

For this reason, APRA is considering whether to accept the narrower IFRS definitions of equity or to “de-couple” the prudential framework from accounting standards. While APRA generally strives to maintain consistency with accounting

standards, this may not be sustainable in the case of capital definitions. Accounting standards tend to take the perspective of the economic owners of an institution while our prudential requirements are aimed at protecting the interests of beneficiaries.

APRA's review of the treatment of hybrid capital instruments, now nearing its conclusion, is reflecting on certain concerns we have about the evolution of these instruments.

At their heart, the concerns are about regulatory arbitrage. On one hand, issuers are keen to persuade regulators to recognise hybrids as Tier 1 capital; on the other hand, the instruments are viewed and priced as if they are term-dated debt securities. This inherent tension may manifest itself at the worst possible time – when a financial institution comes under stress. Experience has shown that markets often expect (and price instruments accordingly) that step-ups will not be exercised and that the instruments will be routinely redeemed by the issuer. With such expectations, failure to redeem may have an adverse impact on market confidence in the institution. Markets may well ask why an institution should pay a stepped-up cost of capital when cheaper sources of capital are available in the market, unless something is amiss. We reserve the right to prohibit redemption, such as at times of financial distress, but this would not necessarily leave the institution better off. It is not difficult to imagine the tensions these instruments could create for APRA and the issuing institution during these times.

Further, market pressures could effectively see a hybrid issuer deemed to be in default if it missed an expected coupon payment, even if there were no legal requirement to pay. The pressure on APRA and the issuing institution to ensure payments are made could be substantial. Hence, the desired quality of a Tier 1 instrument that it be able to absorb losses (that is, payments can be missed without penalty) may be found wanting under duress.

We also note the growing complexity in the structure of hybrid instruments, as a result of more and more elaborate financial engineering. Complexity can take the form of an increasing number of special purpose vehicles, in multiple domiciles that can sit between the issuer and the ultimate investors. It can also take the form of quite complicated mathematical margin calculations for step-ups, including embedded derivative-like features, which require careful analysis to determine whether the ultimate step-ups meet Tier 1 criteria.

Related to this concern is the increasing complexity and opaqueness of hybrid instruments for investors. A recent offering memorandum was 164 pages long and the term sheets, setting out the basic terms and features of the instrument, a further 36 pages long. Even with material of this sort of volume, we often find a number of details lacking and further documentation and clarification must be requested. APRA prefers to see plain and clear clauses free of legalese and potential for misinterpretation, but our experience is probably more often the opposite. In more complex cases, it is hard to see how investors, and even some less sophisticated financial institutions, can fully understand the characteristics of the instruments. Even the names of hybrids, with their clever acronyms, are opaque.

All this seems a far cry from the requirements of the Basel Committee that the main features of hybrid instruments must be easily understood!

In short, while our prudential requirements explicitly allow hybrids to have a number of complex features, in practice these features are often drafted in such a complicated manner that their true nature and impact are difficult to discern. And, to our knowledge, none of these instruments has been tested in Australia under conditions in which the issuer's financial condition was deteriorating. Neither APRA nor the market has a hard-nosed understanding, born of experience, of how these instruments would perform in times of financial stress and, in particular, whether their various complex features would help or hinder the process of rehabilitation of an institution.

### **Capital through the economic cycle**

I will now leave the question of capital quality and turn to the other theme of my address: how should the *level* of capital change through the economic cycle. In a robust risk-based approach to capital adequacy, we would expect the riskiness of assets to be assessed not just at a point of time, but over time and through changes in the macro-economy. This leads into a highly technical subject with which prudential supervisors and central banks have been grappling for some time, and tonight I can only give you a sense of our thinking in approaching this key policy issue.

The general view is that the banking system itself is inherently pro-cyclical. During economic expansions, banks become more optimistic in their assessments of risk and more willing to assume them. Competition for the many willing borrowers intensifies and credit standards come under pressure. Credit growth gathers pace and fuels the expansion. During economic downturns, in contrast, pessimism sets in and banks become reluctant to lend. The level of loan defaults rises, impacting on bank profitability and available capital in two ways – from the increase in actual credit losses and from increased provisioning against higher expected losses in loan portfolios. Rating agencies, for their part, may react to the economic downturn by requiring banks to increase their capital ratios in order to maintain their ratings, further restricting the ability of banks to lend. Credit growth stagnates. This is the so-called “financial accelerator” at work, and breaking the cycle may be very difficult, as the experience of Japan has proven.

The issue is whether capital adequacy regimes imposed by prudential regulators exacerbate procyclicality in the banking system. This was not a significant issue for the 1988 Basel Capital Accord. That Accord requires banks to divide their exposures into very broad classes of borrowers, with no discrimination between the quality of borrowers in each class. For capital adequacy purposes, risk-weights for each class are set by prudential regulators and are fixed through time.

All this will change under the new Basel II Framework. Basel II aims, among other things, to be more reflective of the underlying risks facing banks and to provide approaches to risk measurement that are appropriate to the sophistication of a bank's activities and risk management systems. In calculating regulatory capital to be held against credit risk, the simplest approach will use external credit ratings of borrowers where available, while the more sophisticated approaches will allow banks with approval to do so to assign their own ratings to borrowers using their own estimates of the probability that the borrowers will default. Ratings assigned to borrowers, whether by the ratings agencies or by banks themselves, will change or “migrate” through time, and here is the rub. During economic expansions, when underlying risks are likely to be building up, ratings will be upgraded and regulatory capital requirements will fall, providing banks with scope for further lending.

During economic downturns, when risks have begun to materialise, ratings will be downgraded and regulatory capital requirements will rise. This would run counter to a basic tenet of prudence that capital be built up in good times to provide a buffer against losses in the bad times. On this view, Basel II may add its own procyclical effect.

This issue is both a challenge and an opportunity for prudential regulators. The Basel II Framework does contain safeguards against excessive swings in regulatory capital. Banks using their own risk estimates, for example, must use longer-term time horizons that take account of the economic cycle; they must also carry out stress tests that reflect a cyclical downturn. The challenge is to ensure that these safeguards are introduced in a robust and conservative way.

The opportunity for prudential regulators is that Basel II also requires banks to have a capital strategy that takes into consideration the fluctuations of capital through the cycle and that builds up additional buffers of capital, through the good part of the cycle, against those fluctuations. This is capital as the shock absorber. If it is to play this role, prudential regulators must allow banks to run down their capital buffers during an economic downturn. In effect, supervisors would have to agree to a bank reducing its capital at the very time the supervisor's instincts were telling him or her that the bank should be holding more capital, not less.

APRA is determined to grasp this opportunity and we are working closely with the Reserve Bank of Australia, with its financial stability responsibilities, in the search for an appropriate approach. The many issues to be resolved include how running down the capital buffers can be aligned with the speed and extent of any economic downturn; whether adjustments to the buffers should be rules-based or discretionary; and how banking institutions, rating agencies and markets generally would react if prudential regulators were to intervene in a counter-cyclical fashion. Ultimately, we need to develop an approach which balances appropriately the need for prudential conservatism against the need to minimise any pro-cyclical influences, on the banking system, of risk-sensitive prudential capital requirements. We do not underestimate the task.

### **Closing comments**

I hope my address tonight has given you some insight into the different factors which prudential regulators must weigh up when considering capital issues. Capital adequacy requirements are in transition from simple, arithmetic "rules of thumb" under the original Basel Capital Accord to more complicated and, we believe, more effective settings based upon more sophisticated analysis and better data. This is an evolutionary process and it will engage APRA's interest for many years ahead.

Looking at the list of participants and the topics for discussion, it is clear that a considerable volume of intellectual horse-power has been brought together for this conference. Can I leave you with the invitation that whenever any of you wish to channel some of that horse-power into issues of prudential policy, we would be delighted to welcome you on board.