



Information Paper

Implementation of the Basel II Capital Framework

Supervisory Review Process

21 December 2007

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Introduction

The new Basel II capital adequacy regime, known as the Basel II Framework (the Framework), seeks to harness into the regulatory process best practices in risk management. By providing a spectrum of approaches to measuring capital adequacy of banks (and, in Australia's case, other authorised deposit-taking institutions (ADIs)), the Framework seeks to provide regulatory capital requirements that are both more comprehensive and more sensitive to risk and, as such, more closely aligned to the risk appetites of individual institutions.

The Basel II Framework will be implemented in Australia from 1 January 2008 through APRA's prudential standards.

The Framework is based on three mutually reinforcing pillars:

- new and considerably more sophisticated minimum capital requirements, including specific capital charges for operational risk (Pillar 1);
- institutions' own assessments of their capital adequacy and enhanced supervision of capital management (Pillar 2); and
- materially increased disclosure requirements (Pillar 3).

This information paper focuses on the application in Australia of Pillar 2 (the Supervisory Review Process), which is intended to ensure that ADIs have adequate capital to support all the risks in their business and to encourage ADIs to develop and use better risk management techniques in monitoring and managing their risks.

The key points are:

- APRA's existing supervision framework is largely consistent with the Pillar 2 requirements. APRA's *Prudential Standard APS 110 Capital Adequacy* (APS 110) brings APRA's approach to capital adequacy fully into line with the Framework. Pillar 2 and its relationship with APS 110 is detailed in this information paper; and
- APRA will adopt a proportional approach to Pillar 2 in order that an ADI's capital assessment process is appropriate to the nature, scope and complexity of its activities.

The Pillar 2 supervisory review process

The Framework identifies four key principles of supervisory review.

Principle 1: Banks should have a process for assessing their overall capital adequacy in relation to their risk profile and a strategy for maintaining their capital levels.

This process is referred to as the Internal Capital Adequacy Assessment Process (ICAAP). The requirements for an ADI's ICAAP are set out in APS 110.

Principle 2: Supervisors should review and evaluate banks' internal capital adequacy assessments and strategies, as well as their ability to monitor and ensure their compliance with regulatory capital ratios. Supervisors should take appropriate supervisory action if they are not satisfied with the result of this process.

This broadly aligns with APRA's existing processes for reviewing the capital adequacy of ADIs. Details of refinements to APRA's processes to strengthen the alignment are provided later in this information paper.

Principle 3: Supervisors should expect banks to operate above the minimum regulatory capital ratios and should have the ability to require banks to hold capital in excess of the minimum.

APS 110 requires ADIs to target and maintain capital ratios above the regulatory minimums and provides that APRA may require an ADI to maintain a minimum capital ratio above eight per cent of risk-weighted assets.

Principle 4: Supervisors should seek to intervene at an early stage to prevent capital from falling below the minimum levels required to support the risk characteristics of a particular bank and should require rapid remedial action if capital is not maintained or restored.

APRA's existing Probability and Impact Rating System (PAIRS) and Supervisory Oversight and Response System (SOARS) frameworks are designed to achieve early problem identification, and intervention where appropriate.

These Pillar 2 principles are directed at supervisory review and response, rather than on quantifying minimum regulatory capital requirements in excess of those arising from Pillar 1. The setting of higher minimum capital requirements is but one of the tools available to supervisors, along with requiring improvements in governance, risk management and control practices, and reductions in the level of inherent risk exposure. Nevertheless, the Framework expects supervisors to determine whether Pillar 1 capital is adequate given the level of non-Pillar 1 risk exposures and, if not, how much additional capital is required.

APS 110 is consistent with the aims of Pillar 2.

Pillar 2 risks

Pillar 1 of the Framework addresses credit risk (excluding the concentration risk component), market risk associated with financial market trading activities, and operational risk. A Pillar 2 risk is any risk factor to which an ADI might be exposed that is not included in Pillar 1. In the Framework, Pillar 2 risk factors are divided into three broad categories:

1. The first category covers components of the Pillar 1 inherent risks that are not fully captured by the Pillar 1 processes. Credit concentration risk is one example; other risks arising from various risk reduction and risk transfer techniques, such as securitisation, also fall into this category.
2. The second category covers inherent risk types that are not addressed by Pillar 1. The Framework specifically identifies some of these risks – such as interest rate risk in the banking book (IRRBB), liquidity risk, strategic risk and reputation risk but does not attempt to provide either a comprehensive list of these risk types or standardised definitions¹.

This second category also addresses the potential for a reduction in aggregate risk exposure from diversification of risks, due to the less-than-perfect correlations between the various risk types. While no cross-risk diversification benefit is allowed in the Pillar 1 calculation, the Framework does allow supervisors to recognise this benefit in the assessment of overall capital adequacy under Pillar 2.
3. The third category addresses risks arising from external factors such as business cycle effects and the macroeconomic environment.

¹ In the case of IRRBB, the Framework provides a discretion to supervisors to set mandatory minimum capital requirements against this risk. APRA has exercised that discretion and will apply such requirements to advanced ADIs. IRRBB for those ADIs will be treated by APRA as a Pillar 1 risk for the purpose of calculating capital adequacy and for disclosure requirements under Pillar 3.

In addition to the inherent risks described above, Pillar 2 also addresses the need to factor qualitative assessments of the ADI's risk management framework, covering areas such as corporate governance, senior management, risk management systems and controls, into the overall risk assessment equation. As reflected in APRA's PAIRS model, risk management and control processes that are assessed to be strong can reduce the overall level of risk.

Proportionality

An important concept in the Framework is proportionality. While the Framework is primarily directed at large, complex and internationally active banks, it recognises that in many jurisdictions supervisors may choose to apply it to smaller and less sophisticated institutions. Specifically, in respect of Pillar 2, the Framework acknowledges that a bank's capital assessment process should be appropriate to the nature, scope and complexity of its activities. APRA reflects that sentiment in its approach to Pillar 2.

In applying the Pillar 2 requirements, APRA distinguishes clearly between ADIs subject to the standardised approaches (standardised ADIs) and those approved by APRA to use the internal ratings-based (IRB) approach to credit risk and the advanced measurement approaches (AMA) to operational risk (advanced ADIs). At the detailed level, every ADI has unique characteristics and, as a risk-based supervisor, APRA will pursue some individual tailoring of its supervisory approach.

APRA's approach

Consistent with its existing processes for determining capital adequacy, APRA will set a prudential capital ratio (PCR) for each ADI that must be met at all times. Subject to the minimum capital ratio of eight per cent established in the Framework, PCRs will be set at a level proportional to each ADI's overall risk profile. The greater granularity and risk-sensitivity of the Framework's Pillar 1 capital calculations will assist APRA in this task.

As discussed above, however, there may also be considerable differences in both the absolute and relative riskiness of different ADIs due to their exposures to Pillar 2 risks and qualitative factors such as governance, management and control, that are not reflected in the Pillar 1 risk estimates. Since these exposures and qualitative factors are generally not capable of quantification, or at least robust quantification, a degree of judgment about capital adequacy is required, including by supervisors.

In making its judgments, APRA will draw upon all the relevant information sources and analytical tools at its disposal. One critical tool is APRA's PAIRS risk assessment model, which is applied to the whole ADI population. PAIRS is a structured framework for supervisory judgment built on three building blocks: the *inherent risks* facing the institution from the types of products and services it offers and its strategies and risk appetite; the effectiveness of *management and controls* in controlling and mitigating these risks; and the extent of *capital support* to meet unexpected losses. The elements that comprise each of the building blocks are individually weighted, according to their perceived importance, and then scored to produce an overall risk of failure score. The PAIRS model and APRA's SOARS framework are used to determine the nature and intensity of APRA's supervisory relationship with each ADI.

APRA will use the PAIRS risk assessment model to assist it in determining the PCR for each ADI. The PAIRS ratings on inherent risk, and management and control, provide a basis for determining the minimum amount of capital needed to ensure that each ADI is able to meet its obligations to depositors in all reasonable circumstances. The PAIRS rating on current capital support is, of course, not relevant to assessing the PCR.

APRA will also take into account each ADI's ICAAP, acknowledging that the level of development of an ICAAP may vary significantly among ADIs. In the case of advanced ADIs, APRA has set out nine general requirements that an ADI must satisfy in order to be eligible for consideration for IRB and AMA approval (refer Attachment C). Central to these general requirements is the ADI's use of internal economic risk capital estimates in its capital and risk management, and performance measurement. This should ensure that these ADIs have well-developed ICAAPs.

In keeping with the requirements of the Framework, the minimum PCR is eight per cent of risk-weighted assets, of which half must be held in the form of Tier 1 capital. However, under APS 110, APRA may require an ADI to hold more than half of its PCR in the form of Tier 1 capital.

APRA may require an ADI to hold a PCR above eight per cent where it believes that is warranted, based on its supervisory judgment. Under APRA's Pillar 2 approach, the use of the PAIRS risk assessment model assists it in setting PCRs above the eight per cent minimum, where appropriate, in a structured and consistent way.

Internal Capital Adequacy Assessment Process (ICAAP) requirements

As already noted, the Framework requires an ADI to develop and maintain a rigorous and well-documented ICAAP proportional to its operations and consistent with prudential requirements.

The Framework establishes the five main features of a rigorous ICAAP as:

- Board of directors (Board) and senior management oversight;
- sound capital assessment;
- comprehensive assessment of risks;
- monitoring and reporting; and
- internal control review.

All of these features have been addressed in the relevant APRA prudential standards and are specifically addressed in APS 110. APRA does not propose to mandate any particular ICAAP format but APS 110 requires:

- the Board of an ADI to ensure that the ADI maintains an appropriate level and quality of capital commensurate with the level and extent of risks to which the ADI is exposed from its activities;
- an ADI to have adequate systems and procedures for identifying, measuring, monitoring and managing the risks arising from its activities on a continuous basis;
- an ADI to document how it determines its capital targets for supporting the degree of risks associated with its current activities and its overall business plans;
- an ADI to document its strategy for maintaining appropriate capital resources over time, including how the required level of capital is to be met, as well as the means available for sourcing additional capital where required; and
- an ADI to document its actions and procedures for monitoring compliance with APRA's minimum regulatory capital requirements.

An ADI must ensure its ICAAP is subject to effective and comprehensive review. The frequency and scope of the review must be appropriate to the ADI having regard to the size, business mix and complexity of the ADI's operations and the nature and extent of any change to its business profile and risk appetite.

APRA's supervisory review

The primary responsibility for ensuring that an ADI's ICAAP is appropriate for the range and scale of its activities and the particular markets in which it chooses to operate, rests with the ADI itself. Nevertheless, the information provided by the ADI in its ICAAP is essential input into APRA's supervisory review, from which APRA will determine the PCR for the ADI. As noted above, this supervisory review, reflecting the principle of proportionality, is based on the PAIRS risk assessment model. While APRA is not mandating any ICAAP format, clearly the more closely an ADI's ICAAP aligns with both PAIRS and the Basel II risk categorisation and capital measurement framework, the less additional information gathering, investigation and analysis APRA needs to undertake.

To this end, Attachments A and B provide an indication of the types of risk, and the capital measurement and management issues, that APRA will expect ADIs to address in their ICAAPs. The differences in APRA's supervisory review process between the standardised and advanced (IRB/AMA) approaches reflect the greater complexity of the measurement approaches for the Pillar 1 risks for advanced ADIs and APRA's requirement that advanced ADIs employ economic capital models addressing all material risks, including Pillar 2 risks, in their ICAAPs. Under the principle of proportionality, not all of the matters discussed in the Attachments are applicable to each ADI and APRA will be taking a pragmatic approach in its reviews of smaller ADIs. The broad inputs into APRA's overall risk assessments are common to both standardised and advanced ADIs. However, APRA's expectations with respect to the depth and breadth of supporting information and analysis are far higher in the case of the advanced ADIs. While many standardised ADIs will have limited ability to self-assess some of the relevant risk factors, it is desirable that they should give some thought to whether or not particular risk factors apply to them and, if so, come to some judgment as to their materiality.

The principle of proportionality will also influence the frequency of APRA's reviews of ICAAPs, whether they are conducted on-site or off-site and the supporting documentation APRA requires. The appropriate approach will be determined by the relevant APRA supervisors on a case-by-case basis and may well evolve over time.

APRA's primary focus is on the ADI on a Level 1 basis and the group of which the ADI is a member on a Level 2 basis. Nonetheless, APRA understands that for some of the larger and more complex institutions, the business entity encompassed by the ICAAP is broader than the Level 2 consolidated banking group, and may include non-banking financial activities such as funds management and insurance, as well as non-financial activities. Where this is the case, as part of its overall supervisory activities, APRA will want to review the ICAAP process as it relates to the entire conglomerate group, not just to those aspects which directly relate to the Level 1 and Level 2 entities to which the Basel II capital standards apply.

APRA's supervisory review process involves a quantitative review of an ADI's Pillar 1 inherent risk exposures. Pillar 2 inherent risk exposures are assessed quantitatively to the extent possible but, where risks are not readily quantifiable, supervisory judgment is necessary. Supervisory judgment is also necessary with respect to qualitative assessments of the ADI's ability to contain actual risk exposures within prudent, planned levels through effective risk governance, oversight, management and control practices. APRA's supervisory review process will also consider other important factors the ADI needs to take into account in arriving at its overall capital targets. These might include capital cover for plausible adverse stress scenario outcomes if these cast doubt on the sufficiency of statistically modelled risk estimates, additional capital to support planned business growth, either organic or through acquisitions, and additional capital to provide a general buffer for contingencies. APRA will assess both the adequacy of the ADI's capital targets and its strategy and capacity for achieving and maintaining these targets.

The goal of APRA's supervisory review process is not just for APRA to achieve a sufficient level of confidence that each ADI is adequately capitalised against all the risks to which it is exposed. Equally important is for the ADI to gain a better understanding of how reductions in particular risk exposures or improvements in particular management processes might be recognised by APRA in the form of lower minimum regulatory capital requirements. This clearly places an onus on APRA to explain to ADIs how it arrives at its overall judgments on PCRs, taking quantitative Pillar 1 risk reviews, PAIRS assessments and other relevant considerations into account. It needs to be understood, however, that APRA's overall Pillar 2 risk assessment leads only to a single adjustment, if any, to the minimum capital ratio of eight per cent. There are no separate regulatory capital adjustments for particular Pillar 2 inherent risks or for individual risk management practices that may mitigate risks.

Relevant prudential standards

APRA does not intend to issue either a separate prudential standard or a prudential practice guide on its supervisory review process. The purpose of this information paper is to advise ADIs on how APRA intends to conduct this process and how ADIs may be able to assist APRA in conducting it efficiently. The obligations on ADIs to prepare and maintain the ICAAPs discussed in this paper derive from references to ICAAP in APS 110.

Home/host supervision

The consolidated supervision of international banking groups requires effective co-operation and information exchange between home and host supervisors. In practice, issues such as the significance of the overseas subsidiary within the total parent group's operations and the significance of the subsidiary in the total host jurisdiction's banking system will be relevant to determining the appropriate approach for each international banking group.

As a general statement, where APRA is the home supervisor, any host supervisory reviews of, or PCR equivalents determined for, offshore subsidiaries would be welcomed by APRA as valuable inputs to its overall parent risk assessments. However, the size of any Pillar 2 capital add-ons determined by host supervisors for offshore subsidiaries would not have a direct, one-for-one impact on the PCR that APRA determines for the parent in Australia. On request, APRA would be happy to provide host supervisors of offshore subsidiaries with its risk assessment of the parent.

Where APRA is the host supervisor of a foreign bank's Australian subsidiary, APRA will perform its own risk assessment and set a PCR for the subsidiary. APRA would be happy to make its assessment available to the home supervisor and would welcome input from the home supervisor in this assessment.

Attachment A

Supervisory review of ICAAPs – standardised ADIs

Risk factors

Pillar 1 risks

Credit risk – APRA will review the broad composition of the ADI's lending portfolio, including its business lines and credit assessment procedures. APRA will also verify the ADI's calculation of credit risk-weighted assets under the standardised approach. Credit concentration risk is addressed as a separate Pillar 2 component, discussed below.

Market risk – APRA will review the nature of the ADI's trading activities, and verify the ADI's calculation of trading book market risk capital under the standardised approach.

Operational risk – APRA will review the structure and complexity of the ADI's business model and operations, and verify the ADI's calculation of operational risk capital under the standardised approach.

Pillar 2 risks

Credit concentration risk – the Pillar 1 standardised credit risk measures assume that individual exposures within an ADI's overall credit portfolio are neither very large relative to the capital resources of the ADI nor highly correlated with one another. Large exposures and high correlation between exposures increase the amount of losses that could be sustained as a result of particular adverse circumstances. (The size of individual exposures is likely to be the greater concern.) The more concentrated the exposures in terms of industry sector, geography, customer demographics and product characteristics, the more likely they are to be all impacted by the same adverse external developments, and to default at the same time. Other things being equal, the narrower the market focus of the ADI, the more correlated its exposures and the greater the risk relative to the size of its portfolio.

APRA will review the ADI's policies and limits with respect to exposure sizes and concentrations, and the actual structure of its credit portfolio. APRA will need to make a judgment as to whether the Pillar 1 standardised credit risk capital figure is adequate.

Interest rate risk in the banking book (IRRBB) – the Framework calls for a simple stress test to provide a standardised measure of IRRBB, involving an across-the-board interest rate shock of 200 basis points up or down. ADIs for which this standard test results in a reduction in economic value of more than 20 per cent of Pillar 1 capital are identified as 'outliers', for which extra supervisory attention is indicated.

APRA will want to know if the ADI believes this standardised measure does not accurately reflect its true IRRBB exposure and, if not, what alternative measures it believes are more appropriate and what results they produce. APRA will take these considerations into account in its risk assessment.

Liquidity risk – from a capital adequacy perspective, liquidity risk can be viewed as the risk that an ADI will incur unexpected costs or losses in meeting its financial obligations when they fall due, because of the mismatch between the contractual maturities of its actual (or contingent) financial assets and liabilities. Assumptions as to the renewal or replacement of maturing liabilities, the drawdowns of outstanding commitments, or the ease of realising particular types of assets, may prove unsustainable. Unexpected costs or losses can therefore result from the forced replacement of maturing liabilities on disadvantageous terms, or the forced realisation of assets at lower than fair market values, or some combination of both.

Some amount of liquidity mismatching – i.e. borrowing short to lend long – is fundamental to the business of banking. Even for very conservatively managed ADIs, there will be some residual liquidity risk that can result in unexpected losses, which require capital support. The greater the mismatch, the greater the potential cost of having to generate alternative funding to cover that mismatch, should the need arise.

APRA will review the ADI's liquidity risk management policies, procedures and limits, and its actual liquidity risk profile. APRA will need to make a judgment as to whether the total Pillar 1 capital figure provides sufficient coverage of liquidity risk.

Strategic risk – strategic risk can be defined as external risks to the viability of the ADI from unexpected adverse changes in, or erroneous assumptions concerning, the business environment with respect to the economy, the political landscape, regulation, technology, social mores and the actions of competitors. These risks can manifest themselves in the form of lower revenues (reduced demand for products and services), higher costs, or cost inflexibility (inability to reduce fixed costs quickly in line with lower-than-anticipated business volumes). The vulnerability of an ADI to strategic risk depends on the scale and diversification of its business activities as well its demonstrated capacity to respond to a changing environment.

Capital is needed to enable the ADI to ride out temporary adverse changes in market conditions and to allow it sufficient time to adapt its business model to more permanent changes in the competitive environment.

Strategic risk is very difficult to quantify but is nonetheless real, and potentially very large. At the least, APRA will need to satisfy itself that the ADI has tested its key planning assumptions under some pessimistic but nonetheless plausible business scenarios in order to demonstrate that it has sufficient capital to withstand adversity.

Contagion and reputation risks – contagion risk exists where the ADI is part of a larger business group and is vulnerable to financial or reputational damage by virtue of its association with other members of the group that may suffer some form of risk event. The damage may be financial if the potential exists for financial resources to be withdrawn from the ADI to support another group member. On the other hand, if the ADI itself is in difficulty, it may benefit from financial support available by virtue of its membership of a larger and financially stronger business group. Contagion risk is very difficult to quantify, but where an ADI is part of a broader business group, APRA will need to make a judgment as to how this risk affects overall capital adequacy, taking both the potentially positive and negative effects of that group association into account.

Reputation risk may be by way of group contagion or the result of the ADI's own actions. In the latter case, the risk is more in the nature of reputational consequences of other risk events than a risk event in its own right. Either way, its potential impact needs to be taken into account in assessing overall capital adequacy. In quantifying the impact of a damaging operational failure, for example, the cost of the resulting damage to the ADI's franchise may far exceed the direct cost of the operational risk event itself. APRA will need to make a judgment as to whether the capital allocated to the Pillar 1 risks is adequate to cover the reputational consequences of credit, market and operational risk events.

Other material risks – APRA will want to know if the ADI believes there are any other risks to which it is materially exposed and the impact they may have on overall capital adequacy.

Adjustments

Stress/scenario test adjustments, including cyclical downturn – adjustments related to potential adverse changes in the competitive market environment may have already been addressed satisfactorily under strategic risk above. However, APRA will want to know if any stress or scenario tests conducted by the ADI with respect to credit, market or operational risk, or any of the other risks discussed above, suggest that the aggregate Pillar 1 capital number may be inadequate. APRA is not prescribing any particular additional Pillar 2 scenario simulations or stress tests over and above those required by its Basel II prudential standards.

Planned business growth and acquisition adjustments – capital planning must be an integral part of the ADI's overall strategic and operational business planning. Capital needs to grow in line with the planned growth in the business, at least over the normal business planning horizon, but additional capital cannot always be generated as required. In the normal course, expected retained earnings will provide a major source of additional capital but it may not be sufficient.

APRA will be looking for reassurance that the ADI's capital targets, and the policies and strategies by which they will be achieved and maintained, are directly linked to the growth and types of activity contemplated in the ADI's strategic and operational business plans.

Risk diversification benefit – the simple addition of the capital required to support each risk type individually implies a very conservative assumption that the calculated worst-case losses for all risk types occur simultaneously – i.e. that the risks are perfectly correlated. In times of serious economic stress or market disruption, correlations among credit, market, operational and other material risk types may be very high but they are unlikely to be perfect. APRA will want to know if the ADI believes some allowance should be made for the risk-reducing effect of risk diversification and the nature of the empirical evidence that supports its case.

Capital factors

Contingency buffer – all ADIs are required to maintain their capital levels above the PCR determined by APRA at all times. Failure to do so for whatever reason will trigger an immediate supervisory response. ADIs need to consider that actual earnings may be lower and business growth, along with the associated risk exposure, may be higher than planned. Stress testing will be helpful in identifying the capital implications of potential adverse developments but is unlikely to be able to address all contingencies. APRA will want to understand the considerations taken into account in determining the contingency buffer over the PCR.

Earnings – APRA will need to form a judgment as to the achievability of the ADI's forecast earnings and to be aware of any potential changes in dividend policy or other capital management initiatives that may offset the addition to capital from retained earnings.

Access to additional capital – APRA will need to form a judgment as to the availability and price of additional capital that the ADI can access to sustain business growth or to replenish capital in the event of unexpected losses. This would cover both possible support from other members of a business group and access to capital markets in the ADI's own name.

Attachment B

Supervisory review of ICAAPs – advanced ADIs

Risk factors

Pillar 1 risks

Credit risk – APRA will need to understand the workings and outputs of the ADI's internal credit risk economic capital model. Where the internal model or its outputs differ from the APRA-approved Pillar 1 regulatory model, APRA will need to understand the nature of and the rationale for these differences. The differences may relate to assumed confidence levels, time horizons, probabilities of default (PDs), losses given default (LGDs), exposures at default (EADs), maturities, portfolio correlations, the treatment of expected loss or other factors.

Traded market risk – APRA will need to understand the workings and outputs of the ADI's internal traded market risk economic capital model. Where the internal model or its outputs differ from the APRA-approved Pillar 1 regulatory model, APRA will need to understand the nature of and the rationale for these differences. The differences may relate to assumed confidence levels, time horizons and management responses within the time horizons, the categorisation of exposures between the trading and banking books or other factors.

Operational risk – APRA will need to understand the workings and outputs of the ADI's internal operational risk economic capital model. Where the internal model or its outputs differ from the APRA-approved Pillar 1 regulatory model, APRA will need to understand the nature of and the rationale for these differences. The differences may relate to assumed confidence levels, time horizons, the treatment of expected loss or other factors.

Interest rate risk in the banking book (IRRBB) – APRA will need to understand the workings and outputs of the ADI's internal IRRBB economic capital model. Where the internal model or its outputs differ from the APRA-approved regulatory model, APRA will need to understand the nature of and the rationale for these differences. The differences may relate to assumed confidence levels, time horizons and management responses within the time horizons, the categorisation of exposures between the trading and banking books or other factors.

Pillar 2 Risks

Credit concentration risk – where the ADI's internal credit risk economic capital model already reflects actual exposure sizes and default correlations to the relevant industry, geographic and other systematic risk factors, there is no need for any specific adjustment for such risk.

However, if the exposure size and correlation assumptions employed in the model do not closely approximate those of the ADI's own unique credit portfolio, a concentration risk adjustment may be required. Large exposure size and high correlations increase the amount of losses that could be sustained as a result of particular adverse circumstances. The IRB credit risk models make two key assumptions in relation to portfolio correlation: that all exposures are infinitely small; and that there is a single systematic risk factor with which all exposures are correlated. Clearly, actual exposures are not infinitely small nor are they uniform in size. This assumption by itself would underestimate the true risk in the portfolio. On the other hand, by assuming only a single common systematic risk factor and a common degree of dependence on that risk factor, the potential portfolio risk reduction achievable through diversification across industry sectors, geographic regions and product markets is constrained. It is not possible to generalise across institutions as to the net impact of these two offsetting factors. For ADIs using the IRB credit risk model for internal economic capital modelling purposes, the issue needs to be addressed, however. The number and size of large individual exposures provide the starting point for a more realistic risk assessment. As well, the narrower the ADI's market focus, the lower the potential offset from greater portfolio diversification than the IRB formulae allow.

Where an ADI chooses to follow the IRB exposure size and correlation assumptions in its credit risk economic capital model, APRA will need to be assured that, given the ADI's actual portfolio composition in terms of exposure sizes and correlations, the model's outputs are unlikely to materially misstate the true position.

Liquidity risk – from a capital adequacy perspective, liquidity risk can be viewed as the risk that an ADI will incur unexpected costs or losses in meeting its financial obligations when they fall due, because of the mismatch between the contractual maturities of its actual (or contingent) financial assets and liabilities. Assumptions as to the renewal or replacement of maturing liabilities, the drawdowns of outstanding commitments, or the ease of realising particular types of assets, may prove unsustainable. Unexpected costs or losses can therefore result from the forced replacement of maturing liabilities on disadvantageous terms, or the forced realisation of assets at lower than fair market values, or some combination of both.

Some amount of liquidity mismatching – i.e. borrowing short to lend long – is fundamental to the business of banking. Even for very conservatively managed ADIs, there will be some residual liquidity risk that can result in unexpected losses, which require capital support. The greater the mismatch, the greater the potential cost of having to generate alternative funding to cover that mismatch, should the need arise.

If the ADI includes liquidity risk in its economic capital modelling framework, APRA will need to understand the workings and outputs of the model. If the ADI does not include liquidity risk in its economic capital model, APRA would need to satisfy itself that the potential unexpected loss resulting from its liquidity mismatch is immaterial or that sufficient unallocated capital is available to support the risk.

Strategic risk – strategic risk can be defined as external risks to the viability of the ADI from unexpected adverse changes in, or erroneous assumptions concerning, the business environment with respect to the economy, the political landscape, regulation, technology, social mores and the actions of competitors. These risks can manifest themselves in the form of lower revenues (reduced demand for products and services), higher costs, or cost inflexibility (inability to reduce fixed costs quickly in line with lower-than-anticipated business volumes). The vulnerability of an ADI to strategic risk depends on the scale and diversification of its business activities as well its demonstrated capacity to respond to a changing environment.

Capital is needed to enable the ADI to ride out temporary adverse changes in market conditions and to allow it sufficient time to adapt its business model to more permanent changes in the competitive environment.

Where an ADI includes strategic risk in its economic capital modelling framework, APRA will need to understand the workings and outputs of the model.

Strategic risk is very difficult to quantify but is nonetheless real, and potentially very large. At the least, APRA will need to satisfy itself that the ADI has tested its key planning assumptions under some pessimistic but nonetheless plausible business scenarios in order to demonstrate that it has sufficient capital to withstand adversity.

Contagion and reputation risks – contagion risk exists where the ADI is part of a larger business group and is vulnerable to financial or reputational damage by virtue of its association with other members of the group that may suffer some form of risk event. The damage may be financial if the potential exists for financial resources to be withdrawn from the ADI to support another group member. On the other hand, if the ADI itself is in difficulty, it may benefit from financial support available by virtue of its membership of a larger and financially stronger business group. Contagion risk is very difficult to quantify, but where an ADI is part of a broader business group, APRA will need to make a judgment as to how this risk affects overall capital adequacy, taking both the potentially positive and negative effects of that group association into account.

Reputation risk may be by way of group contagion or the result of the ADI's own actions. In the latter case, the risk is more in the nature of reputational consequences of other risk events than a risk event in its own right. Either way, its potential impact needs to be taken into account in assessing overall capital adequacy. In quantifying the impact of a damaging operational failure, for example, the cost of the resulting damage to the ADI's franchise may far exceed the direct cost of the operational risk event itself. APRA will need to make a judgment as to the whether the capital allocated to the Pillar 1 risks is adequate to cover the reputational consequences of credit, market and operational risk events.

Other material risks – APRA will want to know if the ADI believes there are any other risks to which it is materially exposed and the impact they may have on overall capital adequacy.

Adjustments

Stress/scenario test adjustments, including cyclical downturn – adjustments related to potential adverse changes in the competitive market environment may have already been addressed satisfactorily under strategic risk above. However, APRA will want to know if any stress or scenario tests conducted by the ADI with respect to credit, market or operational risk, or any of the other risks discussed above, suggest that the aggregate Pillar 1 capital number may be inadequate. APRA is not prescribing any particular additional Pillar 2 scenario simulations or stress tests over and above those required by its Basel II prudential standards. Nonetheless, reasonably frequent simulations of a range of unlikely but plausible adverse event scenarios would be expected to form an essential part of a comprehensive risk management process.

Planned business growth and acquisition adjustments – capital planning must be an integral part of the ADI's overall strategic and operational business planning. Capital needs to grow in line with the planned growth in the business, at least over the normal business planning horizon, but additional capital cannot always be generated as required. In the normal course, expected retained earnings will provide a major source of additional capital but it may not be sufficient.

APRA will be looking for reassurance that the ADI's capital targets, and the policies and strategies by which they will be achieved and maintained, are directly linked to the growth and types of activity contemplated in the ADI's strategic and operational business plans.

Risk diversification benefit – the simple addition of the capital required to support each risk type individually implies a very conservative assumption that the calculated worst-case losses for all risk types occur simultaneously – i.e. that the risks are perfectly correlated. In times of serious economic stress or market disruption, correlations among credit, market, operational and other material risk types may be very high but they are unlikely to be perfect. APRA will want to know if the ADI believes some allowance should be made for the risk-reducing effect of risk diversification and the nature of the empirical evidence that supports its case.

Capital factors

Contingency buffer – all ADIs are required to maintain their capital levels above the PCR determined by APRA at all times. Failure to do so for whatever reason will trigger an immediate supervisory response. ADIs need to consider that actual earnings may be lower and business growth, along with the associated risk exposure, may be higher than planned. Stress testing will be helpful in identifying the capital implications of potential adverse developments but is unlikely to be able to address all contingencies. APRA will want to understand the considerations taken into account in determining the contingency buffer over the PCR.

Earnings – APRA will need to form a judgment as to the achievability of the ADI's forecast earnings and to be aware of any potential changes in dividend policy or other capital management initiatives that may offset the addition to capital from retained earnings.

Access to additional capital – APRA will need to form a judgment as to the availability and price of additional capital that the ADI can access to sustain business growth or to replenish capital in the event of unexpected losses. This would cover both possible support from other members of a business group and access to capital markets in the ADI's own name.

Attachment C

Requirements for ADIs seeking approval for advanced approaches

Overview

Beyond the specific requirements for approval for use of each of the foundation IRB (FIRB), advanced IRB (AIRB) and advanced measurement approaches (AMA), APRA has more general expectations of any ADI applying for approval for these approaches. These expectations relate to the extent to which the use of risk-based capital and associated risk-adjusted performance measurement permeates the management of the ADI's business. A clear demonstration that an ADI's Board and management are both willing and able to incorporate the quantification of risk into their management processes and decision making is essential to the credibility of minimum regulatory capital figures determined by the ADI using FIRB, AIRB and AMA approaches.

Requirements

The required elements of a qualifying risk-adjusted, performance-based management system are as follows:

1. the ADI should have in place a Board-approved, well articulated statement of overall risk appetite, broken down by major risk types. This statement should relate the risk appetite to minimum capital requirements and to the minimum returns expected by shareholders. Often the risk appetite statement will identify a target external debt rating;
2. the ADI should have in place Board-approved standardised definitions and risk measurement methodologies for all significant risk types, which should be applied consistently across all business lines. Where they overlap, the definitions and methodologies employed internally should be broadly consistent with those embodied in the Basel II Framework;
3. credit, market and other risk limits and delegated authorities should be expressed in terms of the approved standardised definitions and risk measurement methodologies and be set with reference to the approved risk appetite and the capital available to support the risk;
4. the ADI should be well advanced in the development of a Board-approved comprehensive and credible (to APRA) internal economic capital model, drawing from the same rating systems and data sources and employing methodologies that are broadly consistent with the Pillar 1 regulatory models and captures all significant risk types. These should include credit, market and operational risks specifically modelled for regulatory purposes under Pillar 1 and all other material risks to which the ADI may be exposed.

Quantification of the various individual risk exposures and their method of aggregation should be based on the ADI's Board-approved standardised risk measurement methodologies. For those risk types specifically included in Pillar 1, these should in turn be broadly consistent with applicable Basel II definitions and methodologies. It is not expected that the assumptions and parameter inputs underlying the economic capital models will necessarily be identical to those required for the Pillar 1 capital calculation. Where there are differences, however, the ADI will be expected to be able to explain to APRA's satisfaction why these different assumptions and/or parameter inputs are appropriate in the circumstances. Finally, where actual capital held differs from the total requirement determined by the model, the ADI's management should be able to explain to the Board's and to APRA's satisfaction the reasons for the difference;
5. the ADI should have in place a Board-approved methodology for determining the ADI's cost of capital and a Board-approved process for determining the required hurdle rate(s) of return to be used for evaluating new investments and product pricing. These hurdle rates should be applied consistently across the ADI;
6. significant corporate acquisitions, new business lines, new product initiatives and capacity expansions should be evaluated on the basis of the projected returns relative to the capital required to support the associated risks, as per the internal economic capital model;

7. while market supply and demand ultimately determine achievable product pricing, the ADI should be aware of what its actual pricing implies in terms of returns relative to the breakeven cost of allocated capital;
8. business line and significant product line performance across the ADI should be evaluated in terms of the returns achieved relative to the underlying risks reflected in the capital allocated by the economic capital model; and
9. the performance assessment of, and incentive compensation for, all executive managers with profit centre accountability should be materially influenced by the amount of risk assumed, and the management of that risk, in the generation of that performance. This should be reflected in the allocation of an appropriate amount of risk capital to the profit centre in accordance with the economic capital model.



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