



APRA

INFORMATION PAPER

Strengthening banking system resilience – establishing unquestionably strong capital ratios

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Executive summary

This Information Paper sets out the Australian Prudential Regulation Authority's (APRA's) conclusions with respect to the quantum of additional capital that might reasonably be expected to be required for the Australian banking sector to have capital ratios that are considered 'unquestionably strong'.

Reflecting the social and economic cost of the global financial crisis, strengthened bank capital requirements have been at the core of the post-financial crisis international reforms. APRA implemented the first wave of these international reforms ahead of, and to a higher standard than was feasible in, many other countries, and has continued to strengthen the prudential framework in a number of other areas. This approach has not hindered the Australian banking system's ability to support economic activity, and indeed Australia has benefitted from maintaining a robust and well-capitalised banking sector.

As a capital-importing nation, a significant component of Australia's domestic investment is funded by foreign savings channelled through the banking system. While generally positive for domestic investment and economic growth, the reliance on foreign borrowing also makes Australia's financial system vulnerable to a loss of foreign investor confidence. Recognising the risks associated with offshore funding, the need to ensure that Australia's financial system continues to provide its core economic functions even in times of stress, and the benefits that flow from reducing the perception of an implicit government guarantee and the associated economic inefficiency this creates, the 2014 Financial System Inquiry (FSI) endorsed the benefits of a strongly capitalised banking system. Although acknowledging that the Australian banking system was generally well-capitalised already, the FSI recommended that APRA set capital standards such that capital ratios of authorised deposit-taking institutions (ADIs) are 'unquestionably strong'. The Australian Government endorsed this recommendation.

At the time, APRA indicated that it would await the outcome of international work to finalise the Basel Committee on Banking Supervision's capital framework reforms (commonly known as Basel III). This would allow for the international reforms, and the FSI's recommendation, to be implemented as a single package. However, given the continued uncertainty as to the timetable for the finalisation of Basel III, APRA has concluded that it is now preferable to set out its assessment of the calibration necessary to achieve unquestionably strong capital ratios for Australian ADIs ahead of the international work concluding. APRA expects that any changes to the capital framework that may eventuate from the finalisation of international reforms will be able to be accommodated within the calibration set out in this paper, and will not necessitate further increases to requirements at a later date.

APRA's assessment has been guided by a range of quantitative factors, including international capital comparisons, ratings agency methodologies, and stress test results. However, the calibration of the appropriate amount of capital is ultimately a matter of judgement, taking into account the requirements of APRA's broader mandate, and considering a number of other aspects of resilience including liquidity and funding, governance and culture, risk management, and asset quality. It also takes account of the current and proposed legislative framework in which the banking system operates. It

assumes, as the FSI recommended, that additional loss-absorbing capacity will be established in addition to unquestionably strong capital ratios.

In its assessment, APRA has focussed on the appropriate calibration of Common Equity Tier 1 (CET1) capital requirements, recognising that CET1 is the highest quality capital and therefore most likely to engender confidence in an ADI's financial strength.

APRA fully supports the FSI's recommendation that the concept of 'unquestionably strong' should apply to all ADIs. However, given the heterogeneity of the Australian ADI population, and the different approaches to measuring capital adequacy within the existing capital standards, APRA has distinguished in its analysis between those ADIs using the more conservative standardised approach to capital adequacy, and those banks that are accredited to use internal models to determine their capital requirements. The end result will be a narrowing of any difference in capital requirements between the two methodologies.

Calibration

ADIs using the internal ratings-based approach to capital adequacy

For ADIs that use the internal ratings-based (IRB) approach to credit risk, APRA has concluded that it will be necessary to **raise minimum capital requirements by the equivalent of around 150 basis points** from current levels to achieve capital ratios that would be consistent with the goal of 'unquestionably strong'.

This calibration recognises that ADIs using the IRB approach are currently operating with a higher capital surplus above regulatory minimums, in anticipation of APRA's implementation of the FSI's recommendation. APRA therefore expects that some of the increase in minimum requirements might be met through reducing some of the surplus that these ADIs hold in excess of minimum regulatory requirements.

ADIs using the standardised approach to capital adequacy

For ADIs that use the standardised approach to credit risk, APRA has concluded that it will be necessary to **raise minimum capital requirements by the equivalent of approximately 50 basis points** from current levels to achieve capital ratios that would be consistent with the goal of 'unquestionably strong'.

Many of these ADIs already hold a capital surplus substantially in excess of current minimum regulatory requirements, and will likely absorb this increase within their existing capital resources without any need to raise additional capital.

Implementation

APRA considers that ADIs should, where necessary, initiate strategies to increase their capital strength to be able to meet these capital benchmarks by 1 January 2020 at the latest. This timetable is expected to allow for an orderly accumulation of capital by ADIs that need to do so, and facilitate a smooth implementation of new prudential standards that will institute these requirements.

Later this year, APRA intends to release a discussion paper on proposed revisions to the capital framework, designed to establish capital requirements that will underpin ADIs having unquestionably strong capital ratios. Subject to finalisation of the international reforms, this

will outline the direction of APRA's implementation of the forthcoming Basel III changes to risk-weights as well as measures to address Australian ADIs' structural concentration of exposures to residential mortgages. It will also outline options APRA is considering to improve transparency and international comparability of ADI capital ratios.

Following the discussion paper, APRA expects to consult on draft prudential standards giving effect to the new capital adequacy framework in late 2018, leading to the release of final prudential standards in 2019. It is anticipated that these would take effect at the beginning of 2021.

APRA's expectation that ADIs meet the capital benchmarks outlined in this paper by 2020, a year ahead of the expected effective date of the new prudential standards, reflects the importance to Australia of ADIs having unquestionably strong capital ratios, and that this should be achieved in a timely manner. By 2020, five years would have elapsed since the release of the final FSI report, and four years since the Government's response. Against that background, APRA encourages ADIs to consider whether they can achieve the capital benchmarks more quickly.

Impact on the four major Australian banks

In the case of the four major banks, APRA expects that the increased capital requirements will translate into the need for an increase in CET1 capital ratios, on average, of around 100 basis points above their December 2016 levels. In broad terms, that equates to a benchmark for CET1 capital ratios, under the current capital adequacy framework, of at least 10.5 per cent. APRA expects the four major banks to meet this benchmark by 1 January 2020.

Figure 1: Illustrative example – major bank increase in CET1 capital requirements



It should be noted that this estimate of an additional 100 basis points of reported CET1 capital relative to the December 2016 position represents an average increase for the four major banks. The actual increases in CET1 capital ratios will vary from bank to bank.

This impact is discussed in more detail in Section 3.6.

Outcome

In combination, the increased capital requirements foreshadowed in this paper will complete a significant strengthening of risk-based capital ratios within the Australian banking system in recent years. In meeting this new requirement, for example, the four major banks will have, on average, increased their CET1 capital ratios by the equivalent of more than 250 basis points since the release of the FSI report.

Stronger capital ratios will undoubtedly equip the Australian banking sector to better handle periods of adversity in the future. APRA will also continue to have regulatory and supervisory tools – both at the level of the system as a whole, and for individual ADIs – to respond to emerging risks as and when they arise. Stronger capital ratios cannot, however, provide a guarantee that one or more ADIs will not encounter periods of financial stress. In delivering a banking sector in which the Australian community can have confidence, it will always be necessary to complement a strong capital position with sound governance, risk management and internal controls within ADIs themselves, and active supervision by APRA.

Glossary

Additional Tier 1 (AT1) capital	Capital instruments that provide loss-absorption while the ADI remains a going concern, but do not satisfy all of the criteria for inclusion in Common Equity Tier 1 capital
ADI	Authorised deposit-taking institution
APRA	Australian Prudential Regulation Authority
Basel III	A series of reforms that commenced with the Basel Committee on Banking Supervision's <i>Basel III: A global regulatory framework for more resilient banks and banking systems</i> , December 2010 (revised June 2011)
Basel Committee	Basel Committee on Banking Supervision
CCB	Capital conservation buffer
Common Equity Tier 1 (CET1) capital	The highest quality component of capital. It is subordinated to all other elements of funding, absorbs losses as and when they occur, has full flexibility of dividend payments and has no maturity date.
D-SIB	Domestic systemically important bank
FSI	Financial System Inquiry
IRB	Internal ratings-based approach to credit risk
IRB ADI	An ADI that has been granted approval from APRA to adopt the internal ratings-based approach for determining its capital adequacy requirements for credit risk
Loss absorption trigger point (LATP)	The point at which an ADI's Additional Tier 1 capital instruments are either written off, or converted into Common Equity Tier 1 capital. The LATP is reached when an ADI's Common Equity Tier 1 capital ratio falls to 5.125 per cent.
Major banks	Australia and New Zealand Banking Group Limited (ANZ), Commonwealth Bank of Australia (CBA), National Australia Bank Limited (NAB) and Westpac Banking Corporation (WBC)
PCR	Prudential capital requirement
QIS	Quantitative Impact Study

RAC ratio	S&P Global Ratings' risk-adjusted capital ratio
RWA	Risk-weighted assets
S&P	S&P Global Ratings
Standardised ADI	Any ADI that has not been granted approval from APRA to adopt the internal ratings-based approach, and uses the standardised approach to credit risk for determining its capital adequacy requirements

Chapter 1 – Introduction

In December 2014, the Financial System Inquiry (FSI) presented its final report on the Australian financial system to the Australian Government. The first recommendation of the report was that the Australian Prudential Regulation Authority (APRA) should '**set capital standards such that Australian authorised deposit-taking institution capital ratios are unquestionably strong.**'¹ The Government subsequently endorsed this recommendation in its response to the FSI's report.²

In responding to the FSI's recommendation that authorised deposit-taking institution (ADI) capital ratios should be 'unquestionably strong', APRA has sought – consistent with its statutory mandate – to balance the objective of improved financial safety and stability, with considerations of efficiency, competition, contestability and competitive neutrality.

1.1 Background

As a capital-importing nation, a significant component of Australia's domestic investment is funded by foreign savings channelled through the banking system. While generally positive for domestic investment and economic growth, the reliance on foreign borrowing also makes Australia's financial system vulnerable to a loss of foreign investor confidence.

Capital plays a fundamental role in any assessment of the financial strength of an ADI. High levels of capital increase the resilience of ADIs and so assist in maintaining market confidence during periods of financial stress. The FSI's recommendation recognised that, to mitigate the risk of foreign investors withdrawing or reducing access to funding in times of stress, Australian ADIs should be, and be perceived to be, more resilient than international peer banks. While the FSI advocated that the aspiration of unquestionably strong capital ratios should apply to all ADIs, it was highlighted as being of particular importance for those that pose systemic risks or access international capital markets.

Although acknowledging that Australian ADIs were generally well capitalised, the FSI noted that, in its judgement, the Common Equity Tier 1 (CET1) capital ratios of the four major banks³ were not within the top quartile of international peer banks. A further strengthening of capital to increase the resilience of the banking system was therefore viewed as necessary and appropriate.

¹ Financial System Inquiry, *Final Report* (November 2014) p41.

² Australian Government, *Improving Australia's financial system, Government response to the Financial System Inquiry* (October 2015) p9.

³ Refers to Australia and New Zealand Banking Group Limited, Commonwealth Bank of Australia, National Australia Bank Limited and Westpac Banking Corporation.

1.2 Objectives

APRA's objective in implementing a framework for unquestionably strong capital ratios is to increase the financial strength of ADIs so that they are able to continue lending and providing other critical economic functions during periods of financial stress.

Achieving this objective requires that *prior to a period of financial stress*:

- ADIs have a high level of resilience relative to their international peers and are perceived as such by capital markets; and
- global capital markets are confident that the higher relative resilience will be maintained.

This pre-positioning seeks to ensure that *during periods of financial stress*:

- ADIs will act as shock absorbers, rather than shock transmitters or amplifiers, by being able to continue to lend and provide other critical functions (such as credit and payment services) necessary for economic activity;
- ADIs will be well placed to continue to access capital markets; and
- there will be a materially reduced likelihood of ADIs needing support from the public sector.

Achieving these objectives will also create a financial system that is more resilient to shocks and thus less prone to crises, which the FSI noted can have devastating and long-lasting effects on the economy and society. It will also reduce the perception of an implicit government guarantee for ADIs, and the associated economic inefficiency that this creates.⁴

1.3 Implementation

This paper sets out APRA's conclusions, from a top-down perspective, of the quantum of additional capital that might reasonably be expected to be required for the Australian banking sector to have capital ratios that are considered 'unquestionably strong'.

To give effect to this overall level of capital, later this year APRA intends to issue a discussion paper on proposed revisions to the capital framework, designed to establish prudential standards that will underpin ADIs having unquestionably strong capital ratios. This discussion paper will likely propose a range of changes to the capital framework including:

- Basel III changes in respect of credit risk, operational risk and the capital floor; and
- other changes to address mortgage concentration risk and to improve transparency, comparability and flexibility.

Consultation on draft prudential standards would be expected to follow in 2018, with final standards to be determined in 2019 to take effect from early 2021.

Although on the above timetable the new prudential standards would not be effective until the beginning of 2021, APRA considers that ADIs should, where necessary, initiate strategies to

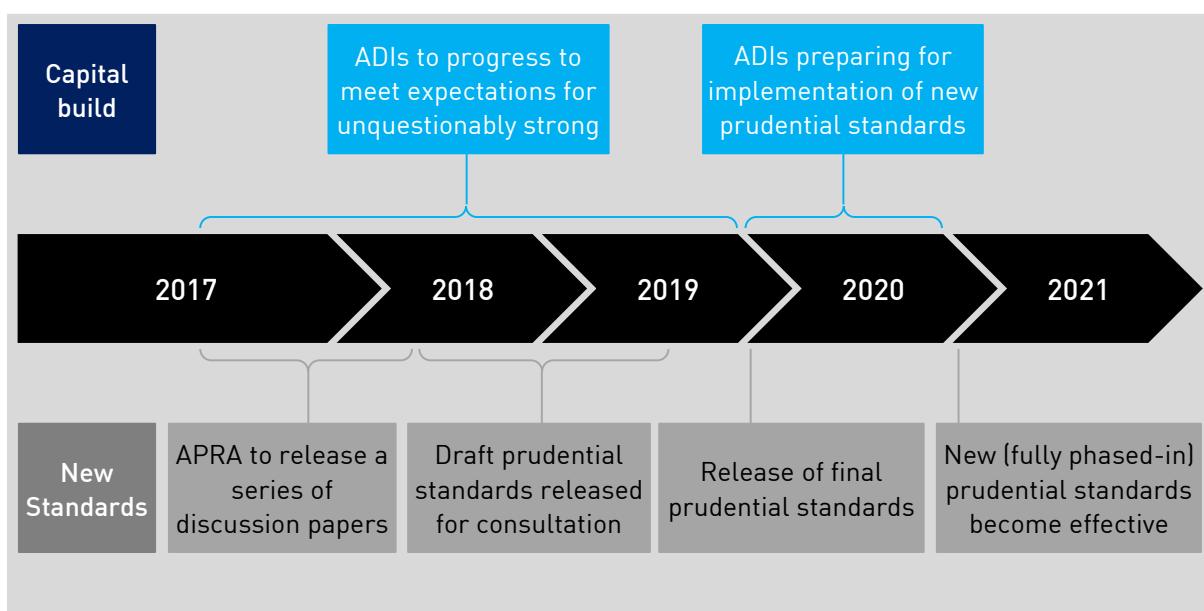
⁴ Financial System Inquiry, *Final Report* (November 2014) p41.

increase their capital strength to be able to meet the capital benchmarks outlined in this paper by 1 January 2020 at the latest. This timetable is expected to allow for an orderly accumulation of capital by ADIs that need to do so, and facilitate a smooth implementation of the new prudential standards when they come into effect.

APRA's expectation that ADIs meet the capital benchmarks by 2020, a year ahead of the expected effective date of the new prudential standards, reflects a balance between achieving unquestionably strong capital ratios in a timely fashion, and allowing ADIs to build capital in an orderly manner. By 2020 five years would have elapsed since the release of the final FSI report, and four years since the Government's response. Against that background, APRA encourages ADIs to consider whether they can achieve the capital benchmarks more quickly.

APRA may support this expectation by phasing in minimum capital buffer requirements and other changes prior to 2020, on a case by case basis, if an individual ADI does not appear to be moving towards the benchmarks.

Figure 2: Implementation timeline



Chapter 2 – Calibration principles

In establishing standards that produce unquestionably strong capital ratios, APRA intends to strengthen the resilience of the system by ensuring that additional capital is of the highest quality, that the amount of additional capital is appropriately balanced with other measures of financial strength, and that the overall calibration reflects a medium-to-long term/through-the-cycle position that does not require regular recalibration.

The overall calibration should also recognise that APRA does not seek to operate a zero failure regime, and that while higher levels of capital can helpfully reduce the probability of ADI failure, it cannot and should not seek to guarantee against it.

2.1 Quality of capital

The calibration of standards for unquestionably strong capital ratios should focus on CET1 capital.

As the highest quality form of capital, CET1 capital is best able to absorb losses. The FSI therefore recommended that increases in capital ratios should primarily take the form of increases in CET1 capital.⁵ APRA fully supports this approach; establishing unquestionably strong requirements for CET1 capital provides the most effective means of strengthening the resilience of the banking sector, and is most likely to engender confidence in an ADI's financial strength.

2.2 Different measures of capital strength

The calibration of standards for unquestionably strong capital ratios should take account of a number of different measures of capital strength.

The calibration of standards for unquestionably strong capital ratios is ultimately a matter of judgement. Regulatory capital ratios are only one measure of financial strength, and APRA's assessment should be guided by a broad consideration of available information. For the ADIs using the internal ratings-based (IRB) approach to credit risk (IRB ADIs), this includes measures such as international capital comparisons, ratings agency methodologies and stress test results. The heterogeneous population of ADIs using the standardised approach to credit risk (standardised ADIs) makes comparison across the ADI population or with peer banks in overseas jurisdictions more difficult, but should take account of similar measures where they are available.

⁵ Financial System Inquiry, *Final Report* (November 2014) p59.

2.3 Broader considerations of financial strength

The calibration of standards for unquestionably strong capital ratios should have regard to the broad range of factors that contribute to an ADI's financial soundness.

While the FSI focussed on unquestionably strong capital ratios as the primary means of establishing confidence in the Australian financial system, capital is not the only contributor to an ADI's financial strength. A holistic approach to achieving an unquestionably strong banking sector will consider not only capital strength, but also other indicators of financial soundness, including liquidity and funding, governance and culture, risk management and asset quality. It will also need to take account of the current and proposed legislative framework in which the banking system operates and, as the FSI also recommended, that additional loss-absorbing capacity will be established in addition to unquestionably strong capital ratios.

APRA's supervisory philosophy will therefore continue to consider the full assessment of an ADI's risk profile, and the environment in which it operates. In establishing standards that produce unquestionably strong capital ratios for the industry as a whole, APRA will continue to have the capacity to impose additional capital requirements where idiosyncratic risks exist in individual ADIs.

2.4 Medium-to-long term focus

The calibration of standards for unquestionably strong capital ratios should reflect the appropriate level of capital over the medium-to-long term.

Although the FSI recommended a baseline target in the top quartile of internationally active banks for determining unquestionably strong capital ratios, APRA has previously indicated that it does not intend to mechanically tie its standards to movements in international benchmarks, and is not attracted to an approach that would require regular recalibration of Australian capital requirements in response to movements in capital levels in other jurisdictions. Rather, APRA intends the calibration of its capital standards should reflect a foundational, through-the-cycle view of appropriate capital levels for Australian ADIs.

To the extent that temporary adjustments to industry-wide capital requirements are necessary – for example, in response to excessive credit growth – APRA has other tools, such as the countercyclical capital buffer and other supervisory measures, which it can use to influence capital levels in a more dynamic manner in response to emerging risks.

2.5 Non-zero failure regime

The calibration of standards for unquestionably strong capital ratios should acknowledge that APRA does not seek to operate a zero failure regime.

APRA's 2014 *Statement of Intent* recognises that APRA cannot and should not establish a prudential framework that seeks to guarantee a zero rate of failure amongst prudentially

regulated institutions.⁶ Such a regime would impose significant cost on the Australian community, by unduly restricting the ability of regulated institutions to provide essential financial services.

The nature of the business of ADIs is risk-taking. In establishing standards that will generate unquestionably strong capital ratios, the goal should be to further reduce the risk of failure of an ADI, and thereby the risk of a call on taxpayer support, but stop short of attempting to eliminate this risk altogether. In other words, unquestionably strong capital ratios should not seek to remove, or be perceived as removing, the risk of ADI failure.

⁶ APRA *Statement of Intent* (July 2014), available at www.apra.gov.au.

Chapter 3 – Calibration for IRB ADIs

3.1 Indicators of capital strength

APRA has used a number of different indicators of capital strength to assist in calibrating capital requirements for IRB ADIs that would be consistent with the goal of ‘unquestionably strong’:

- **relative measures:** in line with the FSI’s recommendation, the quantum of capital has been calibrated with a view to positioning Australian ADIs comfortably within the top quartile of international peer banks;
- **alternative measures:** ratings agency methodologies provide another means for assessing the capital strength of Australian ADIs; and
- **absolute measures:** the results of stress tests, which do not rely on relativities with other ADIs, indicate the level of capital required to survive severe but plausible adverse scenarios.

Consistent with APRA’s previous capital comparisons, the calibration focuses initially on determining a benchmark CET1 capital ratio for the four major banks. APRA intends that this benchmark be reflected in stronger prudential requirements to be applied consistently across all IRB ADIs (see Chapter 5).

For ease of comparison, APRA has sought to use data as at December 2016 wherever possible for the purposes of this analysis.

3.2 Top quartile positioning

3.2.1. International capital comparison study

The FSI recommended that ‘APRA should raise capital requirements for Australian ADIs to make ADI capital ratios unquestionably strong. A baseline target in the top quartile of internationally active banks is recommended.’⁷

APRA has indicated previously that it does not intend to mechanically tie the calibration of Australian capital standards to movements in the capital levels of international banks. Nevertheless, top quartile positioning does provide a useful sense check as to the capital strength of Australian ADIs relative to their competitors for funding in international capital markets.

In recent years, APRA has sought to periodically estimate the capital strength of the four major Australian banks relative to their international peers. In July 2015, APRA released its

⁷ Financial System Inquiry, *Final Report* (November 2014) p41.

International capital comparison study (July 2015 Study),⁸ which assessed the capital strength of the four major banks against international peers as at June 2014.

In the July 2015 Study, APRA adopted the top quartile of the Basel Committee on Banking Supervision's (Basel Committee) Quantitative Impact Study (QIS) Group 1 banks as an appropriate and reliable measure of the top quartile of internationally active banks. To facilitate comparability with international peer banks, APRA applied a number of adjustments to both the numerator (capital) and denominator (risk-weighted assets (RWA)) of the four major banks' capital ratios to account for APRA's conservative implementation of the Basel Committee's framework. These adjustments resulted in internationally comparable CET1 capital ratios approximately 300 basis points higher than the ratios calculated under the APRA standards applying at that time.

Despite this uplift, the average internationally comparable CET1 capital ratio of the four major banks (11.7 per cent) was around 70 basis points below the 75th percentile of QIS Group 1 banks (12.4 per cent). Given the strengthening of bank capital ratios that was continuing to occur internationally, the July 2015 Study also suggested that the four major banks would likely need to increase their capital ratios by at least 200 basis points relative to their position in June 2014 in order to ensure that their capital levels were comfortably positioned within the top quartile of international banks over the medium-to-long term.

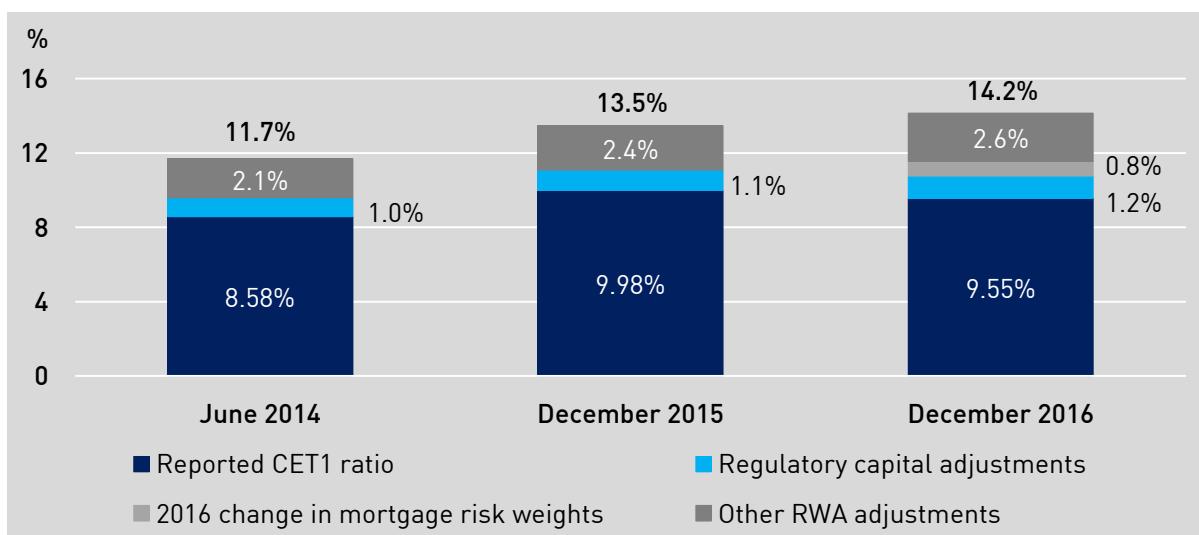
3.2.2. Developments since 2014

Over the period June 2014 to December 2016, the average reported CET1 capital ratio of the four major banks increased by approximately 100 basis points. However, the effective increase in CET1 capital ratios over that period was closer to 180 basis points, after adjusting for the introduction of higher IRB risk-weights for residential mortgages, which took effect from 1 July 2016.⁹

⁸ APRA, *Information Paper: International capital comparison study* (July 2015).

⁹ This change was announced in July 2015 and represented APRA's interim response to Recommendation 2 of the FSI that APRA raise the average IRB mortgage risk-weight to narrow the difference between IRB and standardised risk-weights. The change sought to increase the average IRB risk-weight for residential mortgages from 16 per cent to around 25 per cent.

Figure 3: Change in four major bank average internationally comparable CET1 capital ratios



Applying the same comparison methodology as in previous analysis,¹⁰ including an adjustment for the introduction of higher IRB mortgage risk-weights, APRA estimates that as at December 2016, the average internationally comparable CET1 capital ratio of the four major banks was in the order of 14.2 per cent. This increase of 250 basis points in the internationally comparable CET1 capital ratio since June 2014 reflects the strengthening of CET1 capital ratios by the four major banks over the period (180 basis points), plus an additional widening (70 basis points) in the differential between the CET1 ratio under APRA's requirements and the international comparison ratio.

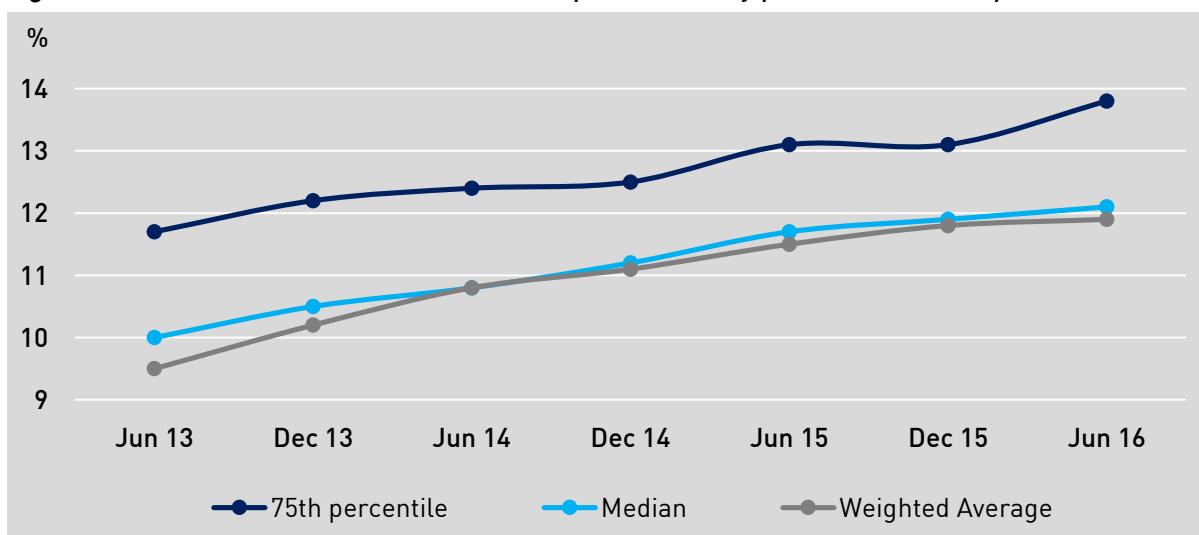
However, international peer banks have similarly evidenced strong growth in CET1 capital over this same period. The latest publicly available data is for June 2016, which shows the 75th percentile was 13.8 per cent.¹¹ This represents an increase of 140 basis points since June 2014.

APRA expects that the 75th percentile will have increased further between June 2016 and December 2016. Over the past two years, the 75th percentile has increased by an average of 35 basis points each six months. While the most recent six-monthly increase in the 75th percentile revealed an even stronger increase (70 basis points), that may be partly reflective of the volatility that can be evident in a quantile estimate. The weighted average and median ratios have also increased but, in contrast, show signs of some tapering, which would be expected as international jurisdictions near completion of their phasing-in of Basel III changes. Nevertheless, whichever measure is used, it is clear that the general trend of a strengthening in capital ratios within the global banking system has continued.

¹⁰ In addition to the July 2015 Study, see also APRA 'International capital comparison update' *Insight* (Issue two, 2016).

¹¹ Basel Committee, *Basel III Monitoring Report* (February 2017) p42. There is currently a nine month lag in the publication of the Basel III Monitoring Report. At the time of publication June 2016 data is therefore the latest publicly available data.

Figure 4: Recent trends in the Basel QIS Group 1 banks fully phased-in CET1 capital ratios



3.2.3. Results of latest analysis

For the purpose of assessing the amount of additional capital necessary to be comfortably positioned within the top quartile, APRA has compared the December 2016 average internationally comparable CET1 capital ratio of the four major banks against an extrapolated estimate of the 75th percentile level of international peers. Given that international capital levels are continuing to increase, albeit at possibly a more moderate rate than in earlier years, APRA has estimated that the 75th percentile is likely to be in the order of 14 per cent as at end December 2016. Figure 5 illustrates the movement in both the internationally comparable CET1 capital ratio of the four major Australian banks and the 75th percentile for the internationally comparable peers.

Figure 5: Major banks' internationally comparable CET1 ratios against the Basel 75th percentile

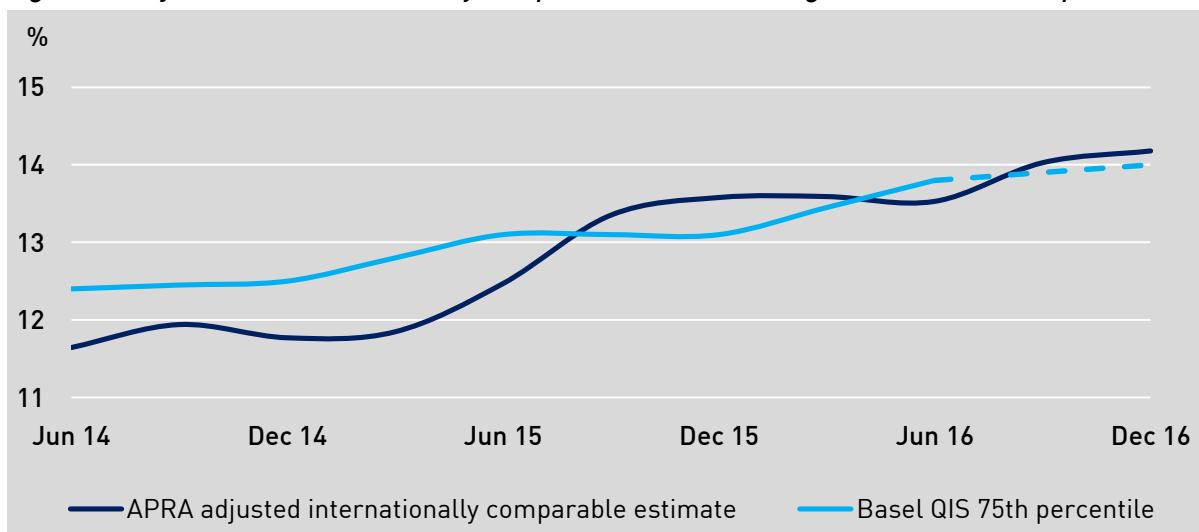


Figure 5 highlights that the significant growth in the internationally comparable CET1 capital ratios of the four major banks since June 2014 has, to a large extent, been mirrored by a corresponding increase in the 75th percentile level of international peer banks. Allowing for an element of imprecision in the extrapolation, this results in the December 2016 internationally

comparable average CET1 capital ratio of the four major banks roughly matching the estimated 75th percentile point. Some further strengthening would therefore be needed if their capital levels are to be comfortably positioned within the top quartile of international banks, and likely to remain there over the medium-to-long term.

Given continued efforts to boost capital levels internationally, further increases in the 75th percentile remain likely. However, given that international jurisdictions are nearing the completion of their phasing-in of Basel III changes, APRA expects the rate of growth to taper. In estimating the capital ratios that would be necessary to establish internationally comparable capital ratios in the top quartile, APRA has allowed for some further growth in the 75th percentile, and then provided for a margin above this, given projection uncertainty and the objective to be comfortably positioned within the top quartile.

Taking the above into account, APRA has concluded that top quartile positioning, as recommended by the FSI, would likely necessitate internationally comparable CET1 capital ratios comfortably in excess of 15 per cent, or of the order of 100-150 basis points above December 2016 levels.¹² This is the equivalent of an additional 70-110 basis points in terms of reported CET1 capital ratios under APRA's approach.

3.3 Ratings agencies

3.3.1. Importance of credit ratings agency assessments

Investors in bank debt and equity, and other financial market participants utilise information from a number of sources to assess the capital strength and resilience of banks. The major ratings agencies such as Fitch Ratings, Moody's, and S&P Global Ratings (S&P) provide ratings information on banks to market participants and facilitate transparency in financial markets. Bank rating methodologies generally synthesise external and internal factors to arrive at an issuer credit rating for the bank or a rating for a particular debt or capital instrument being issued. This assignation of ratings allows investors to more easily assess the creditworthiness of a bank's debt and capital issuance, and also has a direct impact on the funding costs faced by banks.

Given the influence of ratings agencies in the investment decision-making process, APRA has considered how their assessments may contribute to views on whether ADIs' capital ratios are 'unquestionably strong'. In this context, APRA has considered analysis based on S&P's risk-adjusted capital (RAC) ratio, which S&P uses as an input in assessing the capital adequacy of a bank.¹³ This ratio differs from the Basel framework calculation of regulatory capital ratios and so provides an alternative means of assessing capital strength.

The analysis presented below does not constitute in any way an endorsement of S&P's ratings or methodology. The other main ratings agencies have either not published detailed

¹² The FSI noted that international studies typically find that the optimal level of equity capital ratios is 10-20 per cent of RWA: Financial System Inquiry, *Final Report* (November 2014) p58.

¹³ S&P 'Bank Capital Methodology and Assumptions' (December 2010).

capital methodologies or tend to utilise capital ratios based on the Basel framework as inputs into rating assessments.

3.3.2. Capital strength rating methodology

S&P assigns a bank a capital strength assessment on the basis of its RAC ratio. The classification of a bank's capital strength assessment as 'strong' will, all else being equal, result in a one notch uplift to the stand-alone credit profile (SACP) of the bank. A 'strong' capital assessment requires a RAC ratio of at least 10 per cent and the expectation that it will remain at or above this level over the medium term.

It is not APRA's goal to calibrate its capital standards such that Australian ADIs always have a 'strong' RAC ratio, or to recalibrate them in response to changes in S&P's assessment. To the extent that factors influencing S&P's assessment change in response to the evolving risk environment, this would impact the RAC ratio and hence the level of capital required to achieve and maintain a 'strong' capital assessment at any given point in time. However, averaging a RAC ratio above 10 per cent over the cycle would improve the likelihood of being perceived by financial market participants as having unquestionably strong capital ratios. It is therefore a useful benchmark against which APRA can calibrate its own requirements.

3.3.3. Results of latest analysis

The RAC ratio seeks to apply an internationally consistent approach to measuring capital adequacy, with eligible capital roughly equivalent to Tier 1 capital under the Basel framework and RWA driven by macroeconomic risks. As risk-weights for assets are assigned according to the economic risk score of the country to which the exposure is held, the RAC ratio is subject to substantial cliff effects if there is a change in the economic risk score, which is to be expected from time to time through the credit cycle.¹⁴

The latest published average RAC ratio of the four major banks was 9.3 per cent,¹⁵ producing a capital strength assessment of 'adequate'. All else being equal, achieving and maintaining a RAC ratio of greater than 10 per cent would allow for the potential reclassification of the capital strength assessment from 'adequate' to 'strong' and provide a one notch uplift in the SACP.

In May 2017, S&P announced that it had downgraded the economic risk score of Australia from 3 to 4 in response to the continued build-up of economic imbalances in the country.¹⁶

¹⁴ S&P assigns most countries an economic risk score of between 1 and 10, with a score of 1 reflecting an assessment of low economic risk. For the purpose of deriving RWA in the RAC ratio, the risk-weights to be applied to the various asset classes increase as a function of a higher economic risk score (i.e. residential mortgages in jurisdictions with an economic risk score of 3 are assigned a risk-weight of 29 per cent, whereas in jurisdictions with an economic risk score of 4, the risk-weight is 37 per cent): S&P 'Request for comment: Bank Capital Methodology and Assumptions' (July 2016) p21.

¹⁵ This is based on data for CBA at June 2016 and ANZ, NAB and WBC at September 2016.

¹⁶ S&P 'Ratings on 23 Australian Financial Institutions Lowered on Buildup of Economic Imbalances' (May 2017).

Data provided by S&P suggests that this will have reduced the RAC ratios of the four major banks, on average, by approximately 90 basis points (i.e. from 9.3 per cent to 8.4 per cent).¹⁷

Consistent with the principle that the calibration for unquestionably strong capital ratios is intended to be appropriate in the medium-to-long term, and therefore through the credit cycle, APRA considers that it is appropriate to conduct its analysis using a normalised economic risk score. Australia's current economic risk score of 4 is representative of a heightened risk environment, and S&P considers that actions by Australian authorities should aid in an unwinding of the imbalances in an orderly fashion.¹⁸ APRA has adopted an economic risk score of 3 for the purposes of its analysis.

Based on 2016 data, and the assessment of economic and industry risks applying at the time, the four major banks would have needed to increase their RAC ratios by at least 70 basis points to be positioned within the 'strong' range under the S&P methodology. Although eligible capital under the RAC ratio more closely approximates regulatory Tier 1 capital, consistent with the calibration principles set out in Chapter 2, APRA expects that additional capital raised would be in the form of CET1.¹⁹ Accordingly, APRA has expressed the amount of additional capital required on a CET1 basis.

Changes in the reported CET1 capital ratio do not correspond one-for-one with changes in the RAC ratio; the most recent S&P reports as at December 2016 indicate that the major bank average denominator in S&P's measure (RWA calculated under the RAC methodology) was approximately 40 per cent higher than the corresponding regulatory measure. Given these differences, APRA estimates that an increase in average reported CET1 capital ratios of approximately 110 basis points would have been needed to achieve an average RAC ratio of 10 per cent.

¹⁷ S&P 'Rising Economic Imbalances and Weakening Government Support Pose Risks to Australian Banks' Credit Quality in 2017' (February 2017); S&P webcast 'Rising Imbalances, Weakening Sovereign Support Pose Risks to Australian Bank Ratings' (February 2017).

¹⁸ The economic risk score was 2 from December 2011 to October 2014 and then 3 until May 2017.

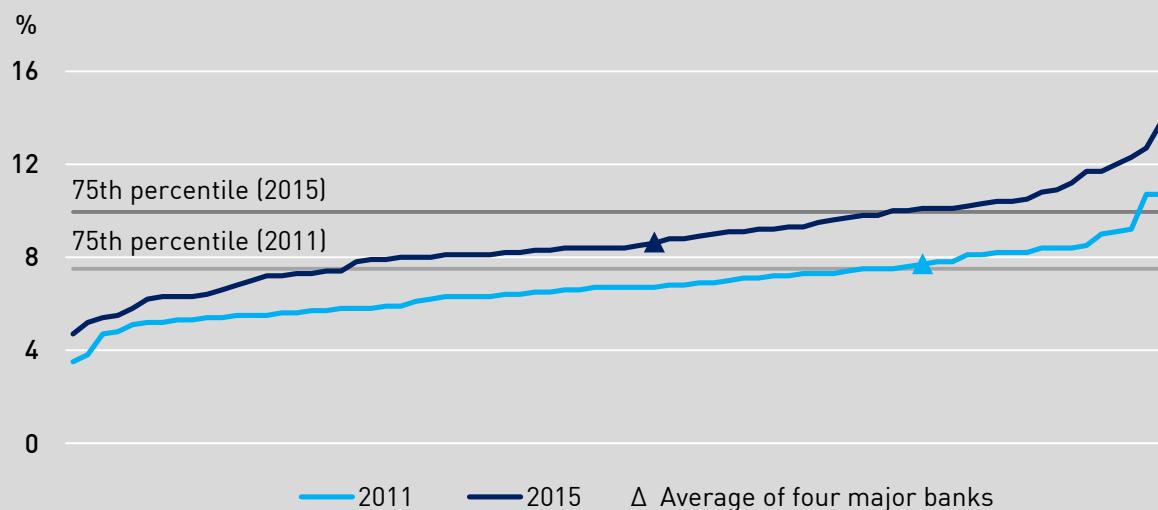
¹⁹ It would also be possible for ADIs to seek to target a RAC ratio of greater than 10 per cent by increasing Additional Tier 1 Capital.

Box 1: Top quartile positioning using RAC ratios

The FSI advocated top quartile positioning for Australian ADI capital ratios, measured using the Basel capital framework. However, the RAC ratio also provides an alternative international capital comparison measure. Using RAC ratio data for international banks from 2011 and 2015, APRA has estimated the relative capital strength of the four major banks against international peers.²⁰

In recent years, the RAC ratios of large international banks have increased such that the 75th percentile has moved from just below 8 per cent in 2011 to 10 per cent in 2015. Although the four major banks have also increased their RAC ratios over this period by 90 basis points, this has not kept pace with the broader increase in RAC ratios internationally. As a result, the relative positioning of the Australian major banks has declined over the period.

Figure 6: Rank ordering of S&P RAC ratios over time



As noted above, the latest published average RAC ratio of the four major banks was 9.3 per cent. This would have still been 70 basis points below the 75th percentile of S&P's 2015 figures, and given the recent global trend in strengthening capital, the gap would likely be wider if measured against the 75th percentile as at December 2016.

3.4 Stress tests

3.4.1. The role of stress tests

Stress test results provide another means to assess the calibration of unquestionably strong capital ratios. Stress tests provide an absolute measure of resilience rather than a relative measure of strength. APRA conducts regular banking sector stress tests using common assumptions and one or more severe but plausible scenarios, usually incorporating a significant economic downturn. These stress tests allow APRA to estimate the capital impact

²⁰ See S&P 'Top 100 Rated Banks: S&P Capital Ratios and Rating Implications' (February 2013) and S&P 'Top 100 Banks: Risk-Adjusted Capital Ratios Have Improved for Most Banks in 2015' (August 2016).

across the industry, and for specific ADIs, of a severe stress event of the sort for which capital is designed to be a key mitigant.

Stress test results show ADIs' positions relative to minimum regulatory capital requirements following a severe stress event. Consistent with the objectives set out in Chapter 1, ADI capital ratios are more likely to be considered 'unquestionably strong' if it can be demonstrated that, during a severe stress event, ADIs would be able to maintain sufficient capital to be able to continue to raise funding, lend and provide other critical economic functions.

When considering the implications of stress test results for the calibration of unquestionably strong capital ratios, APRA has recognised that an ADI may use its existing internal and regulatory buffers to absorb losses during periods of financial and economic stress; however, utilisation of regulatory buffers will lead to the ADI being increasingly limited in its capacity to make certain types of distributions.²¹ In more extreme cases, use of the regulatory buffer will also trigger the conversion into equity, or write-off, of certain capital instruments (this occurs when an ADI's CET1 ratio falls to or below 5.125 per cent – the loss absorption trigger point (LATP)).

In establishing 'unquestionably strong' capital ratios, APRA has considered both the conservatism underlying the stress test assumptions and the goal that, during periods of stress, the four major banks would be able to continue to provide critical economic functions without undue constraint. This is likely to be a reasonable proposition if the banks' CET1 capital ratios remained, at worst, within the upper ranges of the CCB (including the D-SIB surcharge) during a severe but plausible stress event. ADIs operating in the lower ranges are more likely to be materially constrained in their activities, both due to a possible need to limit balance sheet growth and the additional costs of raising new capital at a time when distributions to investors are restricted.

3.4.2. Analysis

The results of APRA's 2015 ADI stress test indicated that the four major banks' CET1 capital ratios, on average, would be eroded by in the order of 350 basis points during the stress event.²² While this outcome is necessarily scenario- and model-dependent, and care therefore needs to be taken with assuming too much precision in the results, this outcome was broadly consistent in magnitude with earlier stress tests using alternative scenarios, and

²¹ The regulatory capital buffer framework includes the capital conservation buffer (CCB) of 2.5 per cent of RWA, the countercyclical capital buffer of up to an additional 2.5 per cent (but likely to be set to zero in a stress event), and a 1.0 per cent domestic systemically important bank (D-SIB) buffer, which applies to the four major banks. This total regulatory buffer must be held in the form of CET1 capital, and equates, for the major banks, to a requirement to hold at least an additional 3.5 per cent of RWA on top of the minimum CET1 capital ratio of 4.5 per cent. When an ADI meets the minimum CET1 capital ratio of 4.5 per cent, but does not have sufficient capital to meet the aggregate regulatory buffer requirement, constraints are applied to the ADI's ability to make discretionary distributions to investors and discretionary payments to staff (see *Prudential Standard APS 110 Capital Adequacy*).

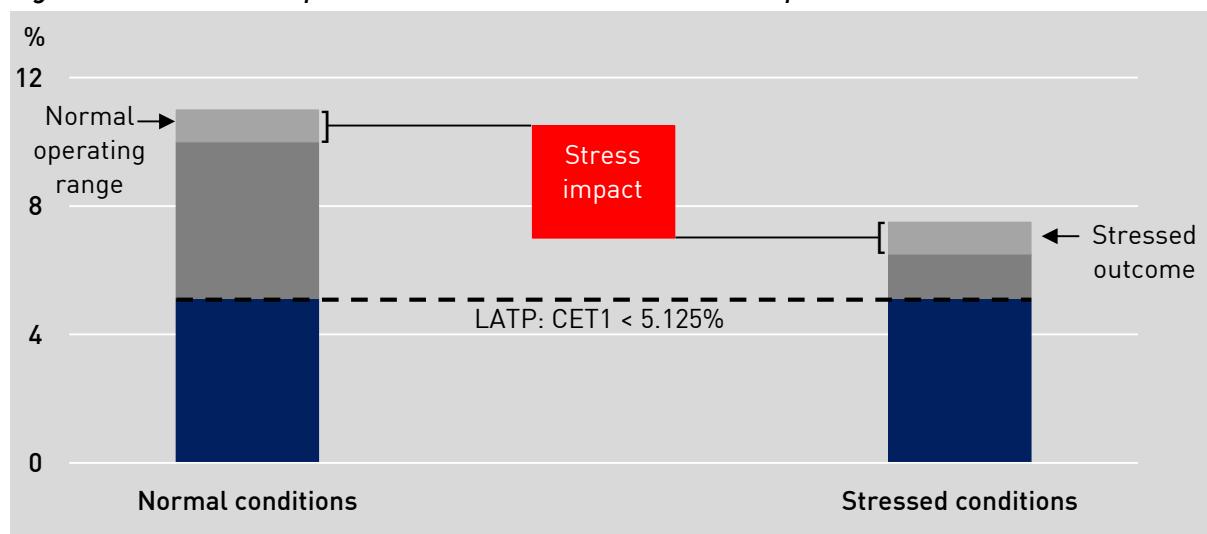
²² The basis of the stress scenario was a slowdown in China and withdrawal of foreign investment in the Australian housing market, leading to a severe economic downturn in Australia. This resulted in GDP falling by 5 per cent, the unemployment rate increasing to 14 per cent, and house prices dropping by approximately 40 per cent over three years.

APRA considers the outcome remains broadly indicative of the potential impact of a severe economic downturn.

These aggregate results assume limited management actions to avert or mitigate the impacts of the scenario. Aside from capital raisings, such actions might include repricing to boost profitability, cost cutting and asset sales, or limits on new lending. However, consistent with the aims of setting unquestionably strong capital ratios, APRA has sought to target capital levels that would reduce the likelihood of ADIs being forced to materially reduce, or raise the cost of, lending under the stressed conditions of a severe but plausible economic downturn. Therefore, APRA has not taken into account the impact of these mitigating actions.

To maintain a healthy buffer of capital above the LATP during a severe stress event that saw a major bank's capital ratio eroded in the order of 350 basis points, a bank would need an operating CET1 capital ratio in the range of 10 to 11 per cent in normal times. Such a starting position may see a bank's CET1 capital ratio fall within the CCB range (i.e. below 8 per cent for a D-SIB) during a severe downturn, as is envisaged by the capital framework, but at the same time still stay sufficiently well above the LATP.

Figure 7: Illustrative impact of severe stress event on CET1 capital ratio



On the basis of the above, APRA estimates that a CET1 capital ratio of 10 to 11 per cent (an additional 50-150 basis points above December 2016 levels) would be consistent with the concept of 'unquestionably strong'.

3.5 Other aspects of resilience

The table below shows the indicative increase in average CET1 capital ratios that would be implied by the various indicators used to assess the potential calibration of 'unquestionably strong' for the four major banks.

Table 1: IRB calibration indicators – four major banks

Amount of additional CET1 capital required	Comfortably positioned within the top quartile	Achieving a RAC ratio above 10 per cent on average over a cycle	Ongoing operation during severe stress event
	70-110 basis points	100-120 basis points	50-150 basis points

However, consistent with the principles in Chapter 2, APRA also considered the potential amount of additional capital within the broader context of other influences on financial strength.

Since the FSI provided its recommendation in December 2014, not only have capital ratios steadily increased within the banking system, but there have been a range of other developments that have an impact on the resilience of the system, and individual ADIs within it. For example:

- There has been continued improvement in the liquidity and funding profiles of ADIs, underpinned by the introduction of the Liquidity Coverage Ratio (from 2015) and the Net Stable Funding Ratio (from 2018). Growth in the share of funding provided by domestic deposits, reduced reliance on short-term wholesale funding sources, and a lengthening of term funding profiles have all helped to reduce, to an extent, some of the risk identified by the FSI.
- Asset quality has remained high, with loan defaults at cyclical lows and hence reduced need for provisioning. Existing accounting standards have limited the capacity of ADIs to build up provisions in anticipation of a future deterioration in credit conditions. From 1 January 2018, the introduction of expected loss provisioning under *AASB 9 Financial Instruments* will provide banks with the capacity to take a more anticipatory approach to provisioning, although at this stage it is unclear to what extent this will impact provisioning levels, or see them built up earlier in the credit cycle.
- The banking sector has also experienced changes in asset composition, with an increased concentration in residential mortgage lending at a time of heightened risk. The existing capital adequacy framework is not particularly sensitive to this build-up in the concentration of loan portfolios.
- ADIs have increasingly focussed on understanding and improving their risk culture, particularly (but not exclusively) since the introduction of requirements in *Prudential Standard CPS 220 Risk Management* for boards to form a view on the risk culture of their institutions. This area of activity has shown positive signs but remains very much a work-in-progress.
- Work on the development of credible recovery plans, designed to aid ADIs in navigating periods of severe financial stress without the need for public sector support, remains ongoing. Recovery planning is an important crisis prevention tool, and needs to be continually reassessed and updated to reflect changing business and market conditions. In the context of unquestionably strong capital ratios, this includes robust plans to quickly recapitalise an ADI should it suffer a material diminution in capital.
- Measures to implement FSI Recommendation 3 (the implementation of a requirement for additional loss-absorbing capacity, over and above unquestionably strong capital ratios) and Recommendation 5 (the implementation of strengthened statutory crisis

management powers for APRA) are yet to occur. The Government has indicated that it regards the new crisis management powers as a priority item in its agenda, and the agencies comprising the Council of Financial Regulators continue to review the most appropriate means to establish additional loss-absorbing capacity, consistent with the FSI's recommendation that initiatives in this area should draw lessons from, and not move ahead of, the rest of the world.²³

In establishing its view on the appropriate calibration of standards that will deliver unquestionably strong capital ratios, APRA has taken these developments into account. In some cases, these factors (such as the structural improvement in funding profiles) add to resilience and allow for a lower calibration of capital requirements than might otherwise be the case. In others (such as the concentration in mortgage lending), they suggest a higher calibration might be more appropriate. In the case of measures that are ongoing (e.g. risk culture improvements and strengthening recovery plans) or yet to be implemented (e.g. crisis management powers, additional loss-absorbing capacity and viable resolution plans), APRA has assumed expected improvements will be delivered in due course. Were this not to be the case, it might necessitate a revision to the conclusions of this analysis.

3.6 Targeted capital increase

As noted previously, the calibration of standards to deliver unquestionably strong capital ratios is ultimately a matter of judgement. No single measure exists that provides a definitive answer, and capital strength will be judged differently by different stakeholders. On balance, APRA has concluded that a target of an additional 100 basis points of CET1 capital, on average, relative to December 2016 capital levels reflects an appropriate quantum of additional capital for the four major banks to be perceived to have capital ratios that are 'unquestionably strong'.

APRA intends to calibrate revised capital standards for all IRB ADIs to be consistent with the four major banks achieving this target operating level (see Chapter 5).²⁴ Given IRB ADIs are likely to always be dominated by the largest institutions, with at least some degree of international financial market presence, a common calibration for IRB ADIs is considered appropriate.

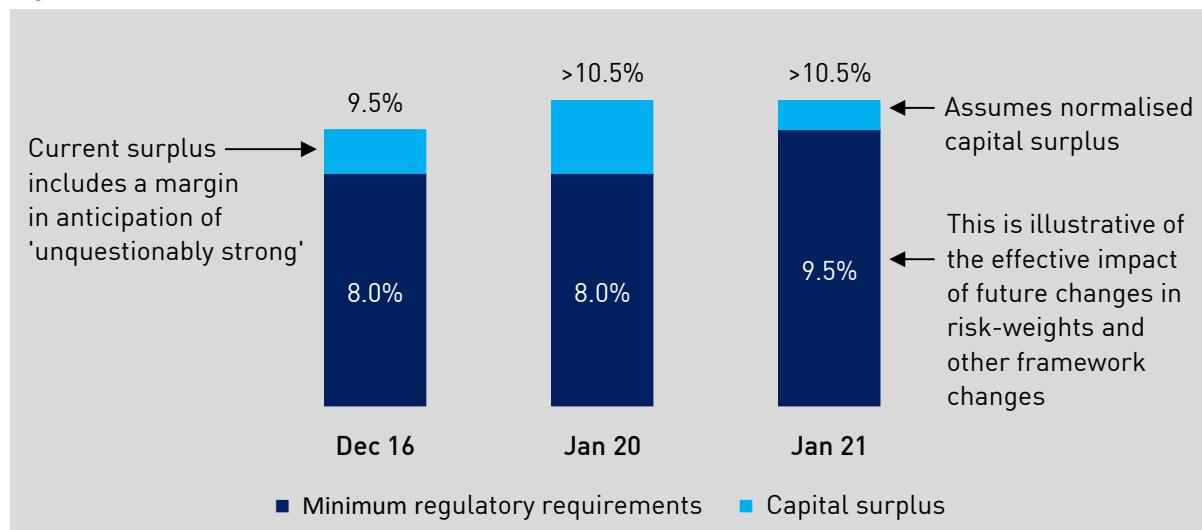
All IRB ADIs are generally operating with higher capital ratios than they might normally do, in anticipation of APRA's implementation of the FSI's recommendation. APRA therefore expects that to meet any increase in minimum capital requirements, these ADIs may wish to reduce the capital surplus they hold in excess of minimum regulatory requirements. APRA therefore intends to increase minimum capital requirements for IRB ADIs by more than 100 basis points to ensure that actual capital ratios are increased to achieve the benchmark. APRA has concluded that, assuming ADIs revert to their preferred levels of capital surplus, it is likely to

²³ Financial System Inquiry, *Final Report* (November 2014) p67.

²⁴ The calibration of the IRB standards will, of course, take into account that the four major banks are subject to an additional 1 per cent capital buffer required for ADIs designated as D-SIBs.

be necessary to raise minimum capital requirements for IRB ADIs by around 150 basis points in order to achieve the desired 100 basis point increase in actual capital ratios.

Figure 8: Illustrative example – major banks' increase in capital requirements



As at December 2016, the average CET1 capital ratio of the four major banks was just above 9.5 per cent. A 100 basis point strengthening of the capital ratios therefore suggests a CET1 capital ratio of at least 10.5 per cent as an appropriate benchmark for 'unquestionably strong'. Bearing in mind that the four major banks have, on average, already substantially increased their CET1 capital ratios since 2014 (see section 3.2.2. above), the additional 100 basis point increase will mean that those banks will have, on average, increased their CET1 ratios by the equivalent of more than 250 basis points since the release of the FSI report.

It should be noted that this estimate of an additional 100 basis points of reported CET1 capital relative to the December 2016 position represents an *average* increase for the four major banks. The actual required increases in CET1 capital ratios will vary from bank to bank depending on both their individual starting position, and the extent to which the proposed detailed changes to capital requirements that will follow this paper (see Chapter 5) will have a differential impact.

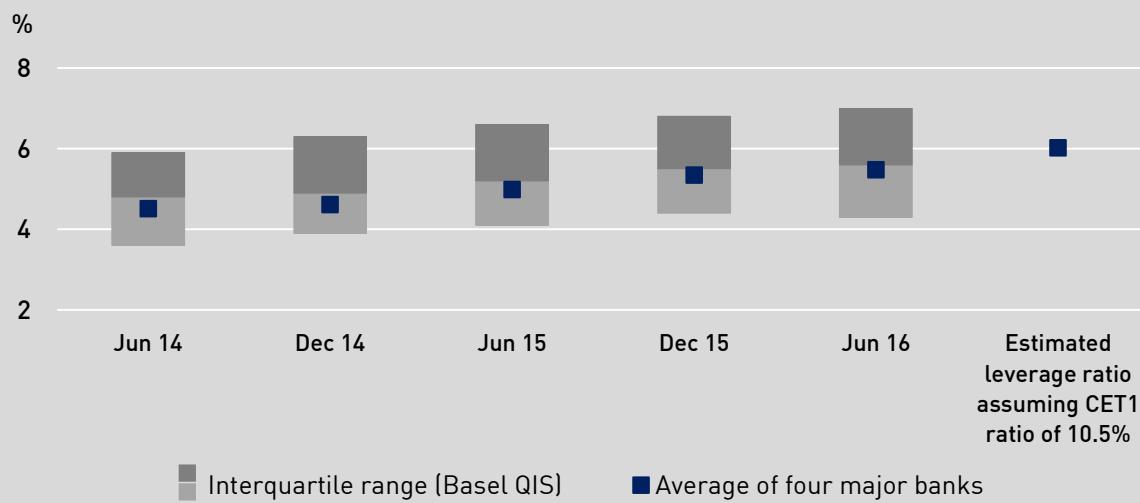
Given there have also been some further improvements in CET1 capital since December 2016, the gap to the benchmark has already been reduced somewhat.

Box 2: Leverage ratio

APRA's risk-based approach to regulation seeks, amongst other things, to align capital requirements with risk – put simply, within an ADI's business, higher risk activities should be matched by higher capital. On that basis, the use of risk-weighted capital ratios is the most appropriate mechanism for determining an ADI's capital adequacy. However, due to the potential for model risk in the risk-weighted framework, the leverage ratio (a simple measure of capital to non-risk-weighted assets) was endorsed by the FSI as providing a useful backstop measure.²⁵

As a large proportion of assets in the Australian banking system are residential mortgages, which benefit from lower risk-weights relative to other types of lending, the reported leverage ratios of Australian ADIs will generally be expected to be lower than those of overseas counterparts, all else being equal. This is evidenced by the fact that, although the average CET1 ratios of the four major banks are typically well above the median of international peers, the average leverage ratio has generally been positioned at or just below the median.

Figure 9: Major banks' internationally comparable Tier 1 leverage ratio



APRA estimates that, after increasing their CET1 capital ratios to achieve the 'unquestionably strong' benchmark, the average leverage ratio for the four major banks could increase to approximately 6 per cent on an internationally comparable basis. This would place the banks a margin above the latest published international peer bank median of 5.6 per cent. However, APRA expects that, as with risk-based ratios, further increase in the median leverage ratio is also likely, and so this margin may diminish over time.

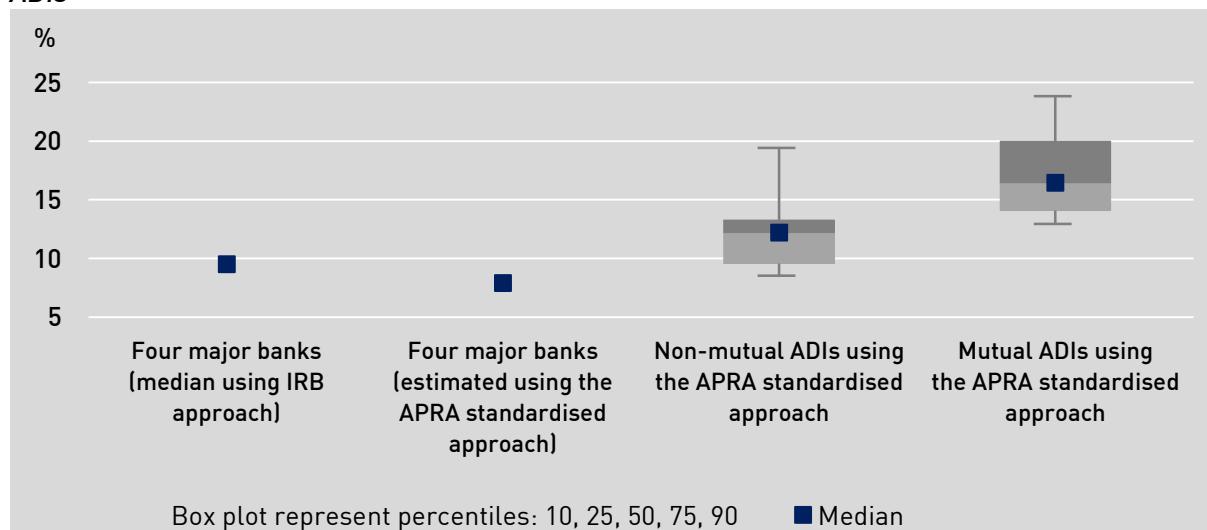
²⁵ The FSI recommended that APRA introduce a minimum leverage ratio that is 'comparable with Australia's global peers', and expressed the view that an appropriate range for a minimum requirement would be 3-5 per cent calculated in accordance with the Basel framework: Financial System Inquiry, *Final Report* (November 2014) p84.

Chapter 4 – Calibration for standardised ADIs

APRA's objective in implementing the framework for unquestionably strong capital ratios is best achieved by targeting strong capital outcomes for the whole banking system and not just individual ADIs, or a small group of them. APRA does not see benefit in establishing clearly different levels of soundness across the ADI population, as this risks creating a perceived 'second class' of institutions in which the community places less confidence. Therefore, in line with the FSI's recommendation, APRA intends that the concept of 'unquestionably strong' should apply to all ADIs, irrespective of the approach used to calculate capital requirements.

Most standardised ADIs already have capital ratios well in excess of minimum requirements: the median CET1 capital ratio exceeds 15 per cent under APRA's standards. However, reflecting the heterogeneity of ADIs in this population, there is considerable variation in capital ratios around the median (see Figure 10).

Figure 10: Comparison of the distribution of CET1 ratios: four major banks vs standardised ADIs²⁶



In calibrating the framework for unquestionably strong capital ratios for standardised ADIs, APRA has sought to use a range of indicators, similar to the approach applied to the calibration for IRB ADIs. However, there are several limitations in applying this approach:

- unlike the four major banks, standardised ADIs do not have a readily identifiable international peer group;

²⁶ The estimate of the equivalent 'standardised' CET1 capital ratio for the four major banks allows for the fact that an IRB ADI's CET1 capital ratio includes a specific calculation in respect of interest rate risk in the banking book that is not a component of the capital requirements for standardised ADIs. While it is possible to estimate the impact on the CET1 capital ratio of an IRB ADI were it to be calculated using the standardised approach, it does not follow that a standardised ADI would benefit from a corresponding impact were it to receive IRB approval. Note also that the figures presented have not been calculated on an internationally comparable basis, as they do not include adjustments to take into account APRA's conservative implementation of the Basel framework for both the IRB and standardised approaches.

- published RAC ratios are available only for some standardised ADIs. While the RAC ratio seeks to produce a harmonised capital ratio, S&P's measure of exposure may be influenced by the regulatory measure of exposure. However, APRA's IRB treatment of off-balance sheet exposures is more conservative than its standardised treatment, so APRA expects that the RAC ratios of IRB ADIs will be understated relative to those of the standardised ADIs; and
- relative to the four major banks, the stress testing capabilities of standardised ADIs are less well developed, and APRA's engagement with the vast bulk of standardised ADIs on stress testing has been considerably more limited than its engagement with the four major banks.

For these reasons, the indicators of capital strength used to calibrate IRB ADIs have not been directly used to establish a calibration for standardised ADIs in the same manner as for IRB ADIs. Rather, in order to establish a consistently calibrated framework, the CET1 capital ratio benchmark for the four major banks (10.5 per cent) has been used as a reference point. In calibrating for standardised ADIs, APRA has taken into account the following considerations:

- an estimate of the relative level of conservatism built into the IRB and standardised capital frameworks, noting that this varies by portfolio;
- the desire to preserve some degree of differentiation between the IRB and standardised frameworks, consistent with the general principle underlying the Basel framework that ADIs that are able to demonstrate more advanced risk measurement capabilities should benefit from a reduced allowance for conservatism in their capital requirements; and
- that the four major bank CET1 benchmark of 10.5 per cent incorporates the 100 basis point D-SIB buffer.²⁷ All other things being equal, ADIs that are not D-SIBs should have a lower target than D-SIBs.

There is considerable variation in the relative capital strengths of standardised ADIs (see Figure 10). As a result, the 'unquestionably strong' benchmark for these ADIs cannot effectively be expressed in terms of a CET1 capital ratio, and so is expressed only in terms of the target increase in minimum capital (prudential capital requirement (PCR) + regulatory buffer) requirements.²⁸ Similar to the approach for IRB ADIs (Chapter 3), the intention is that this target will be reflected in stronger prudential requirements to be applied consistently across all standardised ADIs (see Chapter 5).

On balance, the available analysis suggests that an appropriate increase in capital requirements for standardised ADIs to achieve unquestionably strong capital ratios should be materially less than for the IRB ADIs. This would also be consistent with an expectation that there should be a narrowing of the gap between the effective mortgage risk-weights of IRB ADIs and standardised ADIs (see further discussion on this issue in Section 5.2).

Taking all of the above into account, APRA has concluded that an increase in CET1 capital requirements of approximately 50 basis points would be required to produce capital

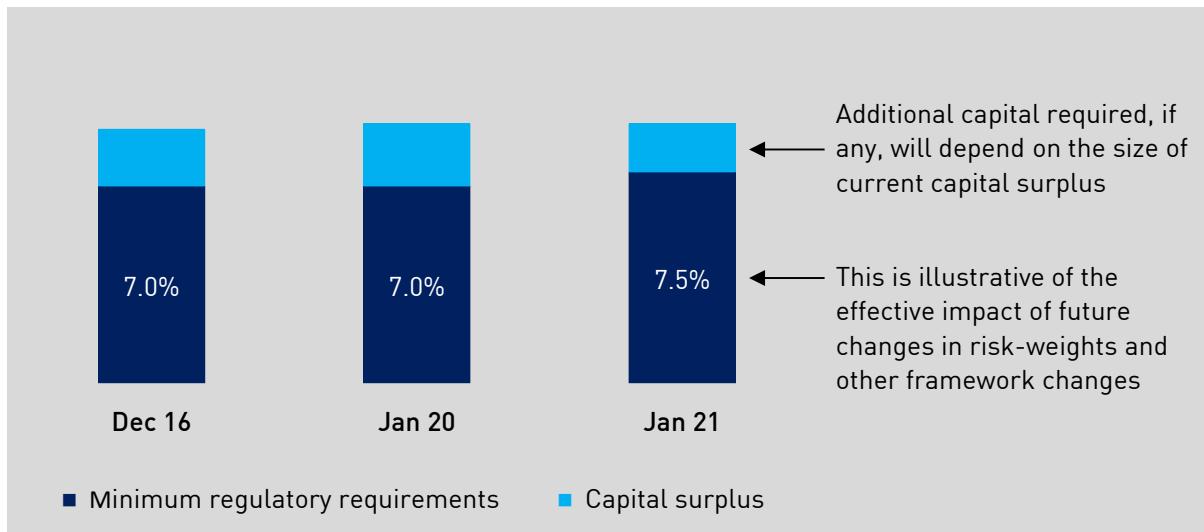
²⁷ Many of the international peers that the four major banks have been benchmarked against also have similar D-SIB buffers (typically ranging between 50-200 basis points).

²⁸ There is considerable variation across standardised ADIs in terms of both PCRs set by APRA and capital surpluses held above these requirements.

standards for standardised ADIs that are consistent with the concept of 'unquestionably strong'.

APRA expects that, for standardised ADIs, the total increase in minimum CET1 capital requirements is, on average, likely to be closely aligned to the impact of strategic measures to target higher-risk lending. The actual outcome for any individual ADI will depend on the precise risk characteristics of its portfolio.

Figure 11: Illustrative example – Standardised ADI increase in capital requirements



Given many smaller ADIs already have capital ratios well in excess of current minimum requirements, APRA expects that any increase in requirements will largely be met through existing capital surpluses. Some larger standardised ADIs currently have built surpluses sufficient to absorb a 50 basis point increase in capital requirements. However, others may need, over time, to raise or retain additional capital to cover at least part of the 50 basis point increase, in order to restore their surplus to appropriate levels.

Chapter 5 – Implementation considerations

5.1 Implementing proposed Basel III changes

APRA's implementation of capital standards to produce unquestionably strong capital ratios will incorporate changes to the prudential framework resulting from the finalisation of Basel III. The final Basel III reforms are likely to result in significant changes to the risk-weighting framework, and include revisions to:

- both the standardised and IRB approaches to credit risk;
- the operational risk framework, including the removal of the advanced measurement approaches;
- the credit valuation adjustment risk framework; and
- the introduction of a capital floor for internal model-based methods, based on standardised approaches.

The Basel Committee has also released changes to the capital framework that APRA has not yet instituted, including the standardised approach for measuring counterparty credit risk exposures and the market risk framework (also known as the fundamental review of the trading book).

While the finalisation of Basel III may include transitional arrangements to phase in any new requirements, possibly at national discretion, APRA considers that a fully phased-in implementation is most likely to align with the aim of the timely implementation of the framework for unquestionably strong capital ratios. However, no decision will be taken on this issue until the final Basel III framework is published and its impact can be fully assessed.

APRA expects that any changes to the capital framework that may eventuate from the finalisation of the international reforms will be able to be accommodated within the calibration set out in this paper, and will not necessitate further increases to requirements at a later date.

5.2 Measures to address residential mortgage concentration

Residential mortgage loans have always constituted a material proportion of the loan portfolios of Australian ADIs; however, over time this has built to become a very material concentration, and one which is unlikely to reduce in the foreseeable future. The assumption that residential mortgages are relatively low-risk credit exposures, while generally appropriate when viewed at the level of individual loans, is open to challenge when the concentration of mortgage exposures within the overall balance sheet of the banking system is high and increasing, underwriting standards have become less stringent over time, and the capital framework does not adequately address this concentration.

In response to increasing risk from mortgage lending, APRA has instituted a number of prudential measures, including:

- improvements to reinforce sound loan underwriting practices, including more prudent assessment of borrower income and expenses, and additional buffers to allow for future increases in interest rates;
- increasing the amount of capital required for Australian residential mortgage exposures by IRB ADIs, consistent with the FSI's recommendation to 'raise the average IRB mortgage risk-weight to narrow the difference between average mortgage risk-weights for ADIs using IRB risk-weight models and those using standardised risk-weights'; and
- establishing benchmarks designed to moderate higher-risk lending, including on the rate of growth in lending to property investors, and on the proportion of lending on an interest-only basis.

These tactical and, in some cases, interim measures help to mitigate risks to ADIs in the residential mortgage lending market. However, they do not address the fundamental concentration in mortgage lending that has built up within the banking system. A central element of the implementation approach for 'unquestionably strong' will therefore be strengthened capital requirements for residential mortgage lending. The design of these measures will seek to target higher risk lending, balanced against avoiding undue complexity in the prudential framework. It will build from the revised Basel III framework, once finalised, which will likely modify standardised risk-weights for higher loan-to-valuation ratio loans, and identify separate risk-weights for investor lending. As part of its implementation of revised standards, APRA will ensure these measures are also appropriately reflected in the IRB framework.

5.3 Changes to improve transparency, comparability and flexibility

The FSI recognised that achieving unquestionably strong capital ratios would be facilitated by increased transparency, leading to improved comparability with international peer banks.²⁹ In implementing revised capital standards, APRA will consider amendments to the design of the capital framework (both capital requirements and disclosure requirements) that will improve transparency, comparability and flexibility, while maintaining appropriate capital adequacy and risk sensitivity.

The Basel framework establishes minimum standards for the measurement of capital adequacy. In implementing the international standards, APRA has typically sought to go above minimum requirements, and adopted a more conservative approach to the measurement of capital adequacy through targeted measures that strengthen the definitions of capital and RWA. While this approach improves the quality of domestic capital requirements, it can also impede international comparisons of capital strength. In turn, it may, particularly at times of dislocation in international capital markets, make it more difficult and/or more costly for banks to access international capital markets if these domestic differences are not well understood.

²⁹ Recommendation 4 provided that APRA should develop a reporting template for Australian ADI capital ratios that is transparent against the minimum Basel capital framework. APRA has primarily addressed this issue through the publication of its methodology for international capital comparisons, which has been adopted by the industry in its own disclosures.

APRA is considering how modifications could be made to the existing framework which would improve transparency while still maintaining appropriate capital strength and risk sensitivity. Such modifications could include, for example:

- implementing domestic adjustments to the international standards in a manner that makes them easier to identify;
- maintaining the same overall minimum capital requirements, but using more internationally harmonised measurements of capital and RWA coupled with transparent and targeted increases in minimum capital and regulatory capital buffer requirements;
- improving transparency through enhanced disclosure requirements; and/or
- enhancing the flexibility of the system's response during times of crisis by altering the balance through which higher domestic capital requirements are implemented, i.e. through minimum capital requirements versus regulatory capital buffer requirements.

The benefits of any such modifications would need to be balanced against any additional complexity that would be introduced, and would only be pursued if they are consistent with the overarching objective of achieving unquestionably strong capital ratios.

5.4 Impact of increased capital requirements

5.4.1 Impact on capital management

The implementation timetable for 'unquestionably strong' has been determined so that ADIs should be able to build any additional capital required in an orderly fashion. In doing so, however, ADIs are encouraged to consider whether they can achieve the capital benchmarks more quickly.

The four major banks will be expected, on average, to have larger increases in their CET1 capital ratios than most other ADIs. However, their CET1 capital ratios have further increased since December 2016, such that the average capital growth rate needed through to January 2020 is now in the order of 25-30 basis points per annum. APRA estimates that the major banks should be able to generate this level of additional capital from retained earnings, without significant change to business growth plans or dividend policies, and without consideration of other capital management initiatives such as asset sales or equity raisings. On this basis, APRA considers that the CET1 capital ratio benchmark of 10.5 per cent can reasonably be met by the four major banks in an orderly fashion.

Many standardised ADIs are more constrained in their ability to raise capital organically, relative to the four major banks. However, most of the smallest ADIs, many of whom are mutually owned, already have very high capital ratios and APRA expects that little or no increase in actual capital may be required for the vast bulk of these ADIs. Some of the larger standardised ADIs currently have capital surpluses sufficient to absorb a 50 basis points increase in capital requirements; however, others may over time, need to raise or retain additional capital to cover at least part of the 50 basis points increase, in order to restore their surplus to appropriate levels.

5.4.2 Impact on profitability

An increase in an ADI's capital base will, all other things being equal, increase the dollar value of its profits. This is because each additional dollar of equity (which does not generate any expense in the ADI's profit and loss) can be used to replace a dollar of debt funding which incurs interest expense. However, this increase in profit is not sufficient to offset the impact of a larger capital base. As a result, an increase in an ADI's capital base will reduce its return on equity (ROE), all other things being equal.

If the ADI accepts this lower return, then the impact of the regulatory change will largely be borne by shareholders. Alternatively, if the ADI seeks to restore its ROE to previous levels, it may choose to pass on some or all of this impact to customers through some combination of the repricing of lending and/or deposit rates, adjustment to fees or by seeking savings in operational costs. Precise impacts from these decisions will depend on the individual circumstances of each ADI, including its revenue mix, cost structure, and competitive positioning, as well as each ADI's decisions about the extent to which shareholders and customers should share the cost.

For a conservative upper estimate of the potential customer impact, it can be assumed that an ADI seeks to restore its ROE entirely through repricing. APRA estimates that an instantaneous 100 basis points increase in the CET1 capital ratios of the four major banks would, if entirely passed on through repricing of loans and deposits, require an increase in margins of approximately 10 basis points. This is, however, only an illustrative example, and the precise impact will vary by ADI and by product.

Moreover, any potential margin expansion attributable to increased capital requirements should be limited by competitive pricing pressures within the industry. This is particularly the case as not all ADIs will face the need to grow their capital base, and hence would have no need to adjust their margins in response to these new requirements. Furthermore, where an ADI is already increasing its capital ratios through earnings retention, its products are currently priced at rates that allow the ADI to organically grow both its balance sheet and capital ratios. To the extent that the current organic growth rate of the capital ratio is in line with or exceeds the required future growth rate, there may be no customer repricing impacts attributable to the achievement of 'unquestionably strong' capital ratios.



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