www.pwc.com.au

The Australian Banking Association

Basel 3.1 Capital Comparison Study

March 2023

pwc

Australian Banking Association

The Australian Banking Association

PO Box H218,

Australia Square

NSW 1215

6 March 2023

Dear Sir or Madam,

Basel 3.1 Capital Comparison Study

We are pleased to present our study on the comparability of the new capital framework for Australian Authorised Deposit-taking Institutions (ADIs), with the finalised Basel III reforms (or "Basel 3.1").

We carried out this study in accordance with our engagement letter dated 16 September 2022. The work comprised:

- A desktop comparison between APRA's revised capital framework and the Basel 3.1 framework, with a particular focus on Common Equity Tier 1 Capital
- Engagement with the ABA's members to understand their perspectives on key areas of divergence between the specified frameworks and consideration of these as part of the study

The scope of work did not include quantification of differences for Australian banks, nor did it include assessing how Basel 3.1 will be implemented in other countries.

Our report is intended solely for the information of the ABA. It may be published to your website; however, we do not accept any responsibility to any party other than the ABA.

Our engagement does not constitute an audit, review or assurance in accordance with Pronouncements or Standards issued by the Australian Auditing and Assurance Standards Board, and accordingly no such assurance has been provided in our report.

Yours faithfully,

Sam Hinchliffe

Partner

Assurance

PricewaterhouseCoopers, ABN 52 780 433 757
One International Towers Sydney, Watermans Quay, Barangaroo NSW 2000, GPO BOX 2650 Sydney NSW 2001
T: +61 2 8266 0000, F: +61 2 8266 9999, www.pwc.com.au
Level 11, 1PSQ, 169 Macquarie Street, Parramatta NSW 2150, PO Box 1155 Parramatta NSW 2124
T: +61 2 9659 2476, F: +61 2 8266 9999, www.pwc.com.au

Executive summary

APRA has introduced a new regulatory capital framework from 1 January 2023 with the objectives of locking in an unquestionably strong level of capital in the system, ensuring it is well-equipped to respond to any future shocks and aligning with changes to the internationally agreed Basel Framework, referred to as Finalised Basel III post-crisis reforms (or "Basel 3.1").

The changes to APRA's framework include:

- Increases to capital buffers
- Amendments to the credit risk standards, with discretion applied through simpler adjustments for Australian conditions that are intended to improve international comparability
- The introduction of a capital floor for advanced ADIs; which places a limit on the benefit gained under internal modelling of RWA, setting total IRB RWA to a minimum of 72.5% of standardised RWA. Its intention is to improve comparability and transparency between domestic banks.
- A revised **standardised approach for operational risk**, which replaces the existing standardised approaches and the advanced measurement approaches
- Changes to the **leverage ratio** measurement methodology and a minimum leverage ratio requirement of 3.5% for IRB banks

International capital comparability

When seeking to achieve more conservative prudential outcomes, many jurisdictions increase minimum overall capital requirements, rather than adjusting RWAs to be higher than the minimum requirements of the Basel Framework or narrowing the definition of capital, which are approaches adopted by APRA. In July 2015 APRA published an information paper *"International capital comparison study"* which concluded that the consequence of exercising its national discretions in this way is that published capital ratios of Australian banks are lower than they would be under rules that are typically applied overseas.

It is therefore common practice amongst the advanced Australian banks, which compete internationally for funding, to disclose "internationally harmonised" capital ratios that more fairly reflect their relative capital strength compared to international peers.

It is expected that the capital ratios of Australian banks will continue to be materially lower under APRA's new capital framework than they would be on an internationally harmonised basis. However, international comparisons will be somewhat more complicated in the short term because many countries are not moving to the new Basel 3.1 rules on 1 January 2023, and it remains to be seen how the new rules will be applied in practice when they do cut across.

This paper can therefore only reflect a comparison between APRA's capital rules and the minimum requirements of the Basel framework. A later phase of the work might examine how the new capital rules are applied in other jurisdictions to determine if there are material departures from the minimum Basel 3.1 standards in other jurisdictions that might need to be taken into account in determining internationally comparable capital ratios.

We understand that APRA plans to refresh its international comparison study in 2023.

Significant IRB differences between APRA and Basel 3.1

Existing differences:

1 

Capital deductions for DTA, Equity investments and capitalised expenses

2 

Interest Rate Risk in the Banking Book

3 

Supervisory Slotting for some forms of specialised lending

New differences from 1 January 2023:

4 

IRB scaling factor of 1.1

5 

Residential mortgage multiplier of: 1.4, 1.7 or 2.5, 5% risk weight floor and standardised treatment for non-standard mortgages

6 

IPRE multiplier of 1.5 for IRB-approved exposures

7 

Requirement to use RBNZ's RWA rules

8 

LGDs for non-retail exposures (some concessionary and others more conservative)

Possibly significant differences:

9 

Withdrawal of concessionary CCFs on unconditionally cancellable commitments

10 

Treatment of Expected Losses and Eligible Provisions

11 

Treatment of securities financing transactions secured by unrated bonds

12 

Treatment of purchased defaulted assets

13 

Correlation factor of 15% for Mortgage-backed SME Retail exposures

14 

Standardised output floor is based on APRA's more conservative rules

Additional considerations

The primary focus of this study was on the changes to APS113 IRB and APS112 Standardised approach to Credit Risk and how these compare to the equivalent BCBS standards. However, in discussions with participant banks, the following additional scope items have been added to the matters that were considered:

- Analysis of key differences in RBNZ capital rules – these are included in Section 2.
- Consideration of capital buffers – these are included in Section 4
- Operational risk – APRA has decided not to permit the inclusion of internal losses in the calculation of the capital requirements for operational risk using the new Standardised Measurement Approach (SMA). This may cause the capital requirement to be higher or lower than it would be if internal losses were included, so it is uncertain whether the treatment is concessionary or conservative. It is not known how other international regulators will implement SMA and therefore it is not possible to say whether or not APRA's approach is inconsistent with international practice.

Proposed next steps

- **Consistency of application of the Basel Framework in other countries**

The timetable for implementation of Basel 3.1 varies in different countries and it remains to be seen how the new rules will be applied in practice. Further work will be needed after implementation has occurred to identify variations in interpretation and adoption of the new framework overseas.

The Basel Committee on Banking Supervision undertakes and publishes reviews of domestic regulations in each of the 28 member countries to assess alignment with the current minimum regulatory standards, as well as monitoring reports which allow comparisons of RWA variability between banks. Initiatives such as the EBA's Targeted Reviews of Internal Models have helped to ensure greater consistency of implementation and to reduce inappropriate variability in RWA outcomes between banks in different countries. Conversely, concessionary treatments such as the Supporting Factors that have been introduced in the European Union for Small and Medium-sized Enterprises and more recently for infrastructure exposures, tend to reduce consistency of measurement.

Contents

01

Key differences between APRA and Basel 3.1 – IRB approach

Key harmonisation differences for the IRB approach

Australian banks that have been accredited to use the Internal Ratings Based approach to credit risk ("IRB banks") disclose capital ratios in accordance with the Australian Prudential Standards as well as "internationally harmonised" capital ratios that more fairly reflect their relative capital strength compared to international peers.

These harmonised ratios take account of the most material differences between Australia's capital framework and the minimum requirements of Basel, as noted in APRA's 2015 information paper *"International capital comparison study"*. From 1 January 2023, both frameworks are being updated and harmonised capital ratios will need to take account of the following differences which are expected to be significant for some or all IRB banks:

Key differences which are unchanged from current rules:

1. **Definition of Capital** – APS111 adopts a narrower definition of capital by comparison to the Basel Framework and requires capital deductions for certain equity investments, deferred tax assets and capitalised expenses.

2. **Interest Rate Risk in the Banking Book** – The Basel framework addresses IRRBB by way of a Pillar 2 add-on. APRA has exercised its national discretion and requires IRB banks to include RWAs for IRRBB in the minimum Pillar 1 capital requirements.

3. **Supervisory Slotting** – The revised APS113 allows IRB treatment for income producing real estate (IPRE), but still requires the use of Supervisory Slotting for other types of specialised lending (project finance, object finance and commodities finance) in contrast to overseas practice where slotting is either not mandated or where national discretion has been applied to reduce some of the applicable risk weights (refer to paragraph 3.3.5 of APRA International Capital Comparability paper).

New key differences which apply from 1 January 2023:

4. **IRB scaling factor of 1.1** – APS113 Attachment A, paragraph 2 requires a scaling factor of 1.1 for all IRB asset classes, except for exposures that are required to be slotted and residual value exposures on leases. Under Basel 3.1 the previous 1.06 scaling factor is being removed.

5. **Residential mortgages** – APS113 Attachment A, paragraphs 13-15 introduce new RWA multipliers of 1.4, 1.7 or 2.5 to different categories of "standard retail mortgage", together with a 5% risk weight floor. Paragraph 11 of the Standard also excludes "non-standard mortgages" from IRB treatment. By contrast, Basel 3.1 allows IRB treatment for retail residential mortgages without the application of multipliers or RWA floors. Basel permits supervisory discretion to treat loans to individuals that have mortgaged more than a specified number of properties or housing units as corporate exposures, whereas after consultation with IRB banks APRA opted to use the retail treatment (with a 2.5 scalar for borrowers that have mortgaged 5 or more investment properties) in order to maintain the use of existing PD/LGD models.

6. **Income Producing Real Estate** – APS113 Attachment A, paragraph 8 no longer mandates the use of Supervisory Slotting for IPRE exposures, but instead introduces a new multiplier of 1.5, which is not required by Basel 3.1.

7. **New Zealand subsidiary credit exposures** – APS113 paragraph 13 requires the application of RBNZ's capital rules for credit exposures in New Zealand banking subsidiaries, except in respect of the overall scaling factor and the Standardised floor, where APRA's rules must be applied.

8. **Non-retail Loss Given Default** – APS113 Attachment B, paragraphs 8-11 specify non-retail LGDs under the Foundation approach that are lower than Basel 3.1 for sovereigns (5% or 25%) and critical infrastructure operators (25%), but higher for other general corporate exposures (50%). Paragraph 12 specifies higher LGDs under the Advanced approach for corporate exposures (50%) but lower LGDs for critical infrastructure operators (25%).

Other differences which may be significant for some banks but not others:

9. **Unconditionally cancellable commitments** – APS112 Attachment C, paragraph 5 does not include a category for unconditionally cancellable commitments (for which Basel 3.1 applies a CCF of 10%). Such exposures may be classified as "other commitments" which attract a CCF of 40%.

10. **Treatment of Expected Losses and provisions** - APS 113 Attachment C paragraphs 7-9 requires Expected Losses (EL) and Eligible Provisions to be assessed separately for defaulted and non-defaulted exposures. Unlike Basel, APRA does not permit the use of excess provisions from defaulted exposures to offset EL on non-defaulted exposures.

11. **Trading Book concession for Securities Financing Transactions** – APRA has removed the concession available in Basel 3.1 for all trading book instruments to be counted as eligible collateral (CRE55.2) and such exposures would therefore be treated as unsecured.

12. **Purchased defaulted assets (PDAs)** – APS113 Attachment B, paragraph 30 does not permit discounts on PDAs to be accounted for in eligible provisions, whereas CRE30.3 permits their inclusion.

13. **Mortgage-backed SME Retail exposures** – APRA's risk weight function for mortgage-backed SME retail loans applies a correlation factor of 15%, resulting in higher RWAs by comparison to Basel 3.1 rules.

14. **Standardised output floor –** Consistent with Basel 3.1, APRA has introduced an output floor of 72.5% of total RWA calculated using the standardised approach. However, APRA's implementation of the floor is more conservative than Basel 3.1 in that:

    a. the standardised rules per APS112 result in higher RWAs (see Section 3 of this report) and

    b. APRA requires the floor to be applied in full from 1 January 2023, whereas Basel 3.1 prescribes a tapered 5-year implementation period, starting at a floor of 50% in the first year. Furthermore, as noted in the Executive Summary, many other countries are not moving to the new Basel 3.1 rules on 1 January 2023, and it remains to be seen how the new rules will be applied in practice when they do cut across.

Other differences which may not be significant:

APRA does not permit the internal models method for counterparty credit risk – APS180 requires IRB banks to the use the Standardised Approach for Counterparty Credit Risk.

Related party RWAs – Under APRA's rules, RWAs are a function of the external rating of the entity, whereas under Basel IRB the treatment is not specified and hence the risk weight is 100% unless 0% is applicable under standardised approach.

Margin lending – APRA requires standardised treatment for margin lending rather than Basel which defines margin lending as a type of securities financing transaction and permits IRB treatment.

Operational Risk – APRA has exercised its national discretion to not to permit the inclusion of internal losses in the calculation of the capital requirements for operational risk using the new Standardised Measurement Approach (SMA). This may cause the capital requirement to be higher or lower than it would be if internal losses were included, so it is uncertain whether the treatment is concessionary or conservative. Furthermore, it is not known how other international regulators will implement SMA and therefore it is not possible to say whether or not APRA's approach is inconsistent with international practice.

Sovereigns FIs – APRA permits FIRB treatment for sovereigns, where Basel permits AIRB treatment.

Effective maturity – Basel 3.1 gives national supervisors the option to allow banks who use the advanced approach to fix the effective maturity at 2.5 years for facilities to certain smaller domestic corporate borrowers if the reported sales as well as total assets for the consolidated group of which the firm is a part of are less than €500 million. APRA has used its national discretion not to permit this treatment either in the current rules, or in the new capital framework.

02

Key differences between RBNZ and BCBS capital rules – IRB rules

Key RBNZ differences

APRA requires RWAs and ELs for exposures of an overseas banking subsidiary that is prudentially regulated by RBNZ to be calculated using RBNZ rules except that, in calculating RWA, the ADI must apply APRA's scaling factor of 1.1 (per APS113 paragraph 2 of Attachment A) and APRA's standardised output floor.

This requirement is likely to have a significant impact on the four major Australian banks which each has a material New Zealand banking subsidiary.

Overview of RBNZ capital Framework for IRB banks

Locally incorporated registered banks in New Zealand calculate their exposures based on the Basel 2 framework.

New Zealand banks using the internal ratings-based (IRB) approach under Pillar 1 are subject to conditions of registration that require capital adequacy to be calculated using the frameworks set out in:

- BPR132-Credit-Risk-Mitigation
- BPR133-IRB-Credit-Risk-RWAs
- BPR134-IRB-Minimum-System-Requirements
- BPR140-Market Risk
- BPR151-AMA-Operational-Risk
- BPR160-Insurance-Securitisation-and-Loan-Transfers

As part of the RBNZ's Capital Review decisions made in December 2019, banks accredited to use the IRB approach will be subject to an 'output floor' from 1 January 2022. This means their estimates of risk-weighted assets (RWA) will be either the outcome of their IRB models, or 85% of the standardised outcome, whichever is highest.

By the end of the transition period in 2028, New Zealand's D-SIBs will have to meet the following minimum requirements:

- a CET1 capital ratio of 4.5%
- a Tier 1 capital ratio of 7%
- a total capital ratio of 9%.

In addition, a D-SIB will be required to have a prudential capital buffer (PCB) of at least 9%, completely made up of CET1 capital. This will result in a total capital ratio of at least 18%.

Comparison of credit RWA requirements for locally incorporated IRB banks in New Zealand

Areas of divergence between RBNZ's prudential requirement and the Basel Framework were the subject of a study commissioned by the New Zealand Bankers Association in 2017 and refreshed in 2019 *https://www.nzba.org.nz/wp-content/uploads/2019/05/Appendix-Two-International-comparability-of-capital-ratios-2019.pdf*.

This body of work concluded that the main areas of divergence in respect of credit RWAs are as follows:

1. **Farm lending -** Farm lending exposures are a sub-class of the corporate asset class and are defined as exposures to borrowers that are classified within "agriculture" in ANZSIC06. The Basel Framework does not specify any different rules for farm lending exposures, however RBNZ applies the following additional requirements:

    - Minimum LGD for farm lending exposures (BPR 133 Table C3.2):

        LVRs of 70% and over: 42.5%

        LVRs of 60-69%: 40.0%

        LVRs of 50-59%: 32.5%

        LVRs of 40-49%: 22.5%

        LVRs of 30-39%: 15.0%

        LVRs under 30%: 10.0%

    - The firm-size adjustment to correlation for small-medium sized entities for firms with consolidated turnover of less than $50 million must not be applied (BPR 133 C7.4)
    - The effective maturity period for each facility is subject to a minimum of 2.5 years (BPR 133 C6.2)

2. **Mortgages –** Basel 3.1 prescribes a 5% floor for LGD and 0.15 correlation factor for exposures secured by residential mortgages that must be applied at the sub-segment of exposures to which the risk weight asset formula is applied.

    RBNZ prescribes minimum LGD and correlation factors for different levels of LVR, distinguishing between non property-investment residential mortgage loans and property-investment residential mortgage loans (BPR 133 Table D3.2 and Table D6.2).

    RBNZ's minimum LGD requirements are 10% or higher, and correlation factors are 0.15 or higher.

    In addition, the RBNZ may require banks to apply the TUI model to calibrate their PD estimates.

3. **Specialised lending -** RBNZ does not allow any internal modelling of specialised lending (SL) risk parameters and prescribes the more conservative slotting approach for all SL sub-asset classes.

4. **Unsecured non-retail LGDs -** RBNZ rules permit the use of own estimate LGDs in line with the Basel framework. However, LGDs under RBNZ typically result in higher LGDs than international average for senior unsecured exposures and are consistent with those used by APRA regulated parent banks

5. **Undrawn non-retail EAD -** RBNZ rules permit the use of own-estimate EADs in line with the Basel framework. However, EADs under RBNZ approved models typically result in higher EADs than international norm, and are consistent with those used by APRA regulated parent banks

6. **Currency thresholds** - For small business exposures, the Basel Framework set a threshold of €1 million to be included in the retail portfolio. RBNZ converts this threshold to New Zealand Dollars on a 1:1 basis (effectively setting a lower threshold).

    For retail revolving exposures, Basel sets the maximum exposure to a single individual in the qualifying revolving retail sub-portfolio at €100,000. RBNZ converts this threshold to New Zealand Dollars on a 1:1 basis (effectively setting a lower threshold). However, RBNZ has not allowed exposures to be included in a qualifying revolving retail portfolio. Such (otherwise qualifying) exposures fall into the other retail portfolio (or possibly the corporate portfolio), which results in a higher capital requirement.

The Basel II firm size adjustment for small and medium-sized entities that are risk-weighted on the corporate curve cuts out for firms with a turnover above €50 million. RBNZ converts this threshold to New Zealand Dollars on a 1:1 basis (effectively setting a lower threshold).

Changes to RBNZ's prudential requirements announced in 2019 and which come into effect on or before 1 January 2023:

1. **Standardised treatment for sovereign and bank exposures** (BPR130 Table C1.5B) whereas Basel 3.1 permits AIRB treatment for sovereign exposures and FIRB treatment for banks, FIs and corporates with revenues over €500m.

2. **Scaling factor of 1.2 on all RWAs calculated using IRB** and standardised floor of 85% (per BPR130 C1.4) – However, as noted above, these provisions have no impact in Australia because APRA's rules require them to be eliminated and APRA rules substituted.

Adjustments to RWAs and ELs to translate NZ exposures to minimum Basel requirements

APRA's requirement for credit RWAs and ELs to be calculated using RBNZ rules will have a significant impact on the capital ratios of the Australian major banks, by comparison to applying Basel rules.

The adjustments needed to recalculate RWAs and ELs on a Basel basis will most likely require assistance from New Zealand management. Care will be needed to ensure there are no omissions or double counting, and we suggest that banks follow the methodology that was adopted during the industry-wide study that was carried out in conjunction with the New Zealand Bankers' Association in 2019, with appropriate modifications for the changes in rules in respect of sovereign and bank exposures.

Those instructions included:

- applying a 20 basis point reduction of the estimated impact of removing the LGD floors on farm lending in order to align with previous RBNZ estimates, and
- A further downward revision of 60 basis points of the harmonised CET1 ratio was also applied for the sake of conservatism

03

Key differences between APRA and Basel 3.1 - Standardised approach

Key Standardised differences

The following are the key standardised differences between APRA's new capital requirements and the minimum requirements of Basel 3.1.

1. **Definition of Capital** – APS111 adopts a narrower definition of capital by comparison to the Basel Framework and requires capital deductions for certain equity investments, deferred tax assets and capitalised expenses.

2. **Residential mortgages** – APS112 imposes higher risk-weights for regular mortgages in certain LVR bands, compared to Basel. APRA also applies higher risk weights to mortgages that are not to owner-occupiers and interest only loans. On the other hand, Basel 3.1, requires higher risk weights for mortgages which are materially dependent on the cash flows generated by the property, which would include some but not all investor loans. APS112 also does not recognise eligible lenders mortgage insurance as a form of credit mitigation that can be used to reduce exposures, but instead allows lower risk weights for insured loans.

3. **Credit cards** – APS112 specifies 75% risk weight on all credit card exposures, whereas Basel 3.1 has introduced a concessionary rate of 45% for card holders who are transactors (where balances are paid in full each month).

4. **Credit Conversion Factors** – APRA has removed the concessional treatment in Basel 3.1 (10% CCF) for unconditionally cancellable commitments.

5. **Securities Financing Transactions** – APRA has removed the concession available in Basel 3.1 for all trading book instruments to be counted as eligible collateral (CRE55.2) and such exposures would therefore be treated as unsecured.

6. **Non-bank financial institutions** – Basel 3.1 (CRE20.40) extends the concessional risk weights applicable to banks to prudentially regulated securities firms and other financial institutions.

7. **Margin lending –** APS112 requires 20% risk weighting for margin lending exposures that are fully collateralised by eligible collateral, whereas Basel 3.1 treats such exposures as a type of securities financing transaction and permits eligible collateral to be used to reduce the exposure to zero (after haircuts). Furthermore, APS112 Attachment C paragraph 4 requires ADIs to recognise commitments (and hold RWAs) in respect of unused lending capacity on margin lending facilities.

04

Minimum capital requirements

Comparison of minimum capital requirements

APRA has announced the following increases to capital buffers from 1 January 2023:

- **Capital conservation buffer (CCB)** will increase from 2.5% to 3.75% for IRB bank ADIs, but will remain at 2.5% for standardised banks. By comparison, the CCB requirement in Basel 3.1 is unchanged at 2.5%.
- **Counter Cyclical buffer (CCyB)** will increase from 0% to a new default level of 1% for both IRB and standardised banks, and that it can be varied in the range of 0% to 3.5% (previously 0% to 2.5%). By comparison the CCyB requirement in Basel 3.1 is unchanged and prescribes a range of 0% to 2.5%. Most international regulators have historically maintained a default level of 0%, but we note from Basel's update as at 18 October 2022, that some other countries have recently announced increases in their CCyBs in 2023 (for example: Norway – 2.5%, Sweden – 2%, UK – 2%, Netherlands – 1%, Germany – 0.75% and France 0.5%, whereas 19 other countries listed have a CCyB of 0% and no plans to increase).
- **Domestic Systemically Important Banks buffer (D-SIB**) is unchanged at 1% and is applicable only to the four major banks. Basel does not prescribe a range for the D-SIB buffer, however the G-SIB buffer is between 1% and 3.5%.

There is no change to the minimum Common Equity Tier 1 requirement of 4.5%, which is consistent with Basel.

The overall CET1 requirements for Australian banks are therefore as follows:

- 8% for standardised banks (vs Basel 3.1 minimum of 7%)
- 9.25% for Advanced banks that are not D-SIBs (vs Basel 3.1 minimum of 7%) and
- 10.25% for D-SIBs (vs Basel minimum of 8%)

Additional Pillar 2 requirements

It is important to acknowledge that it is common practice for regulators in other jurisdictions to impose additional capital requirements on banks to allow for Pillar 2 risks such as interest rate risk in the banking book.

Appendix A – Detailed analysis

Table 1 Internal Ratings-Based Approach to Credit Risk

APS 113 IRB Credit	CRE30 to 36 IRB Credit	Differences
Definitions		
Paragraph 11: Scope APRA requires application of standardised treatment (APS112) for the following: • non-standard retail residential mortgage exposures • equity exposures • margin lending exposures • cash items • fixed assets • unsettled and failed transactions • related-party exposures **Per APS112 Attachment A, Paragraph 19: Non-standard loans** include interest only loans with an LVR greater than 80 per cent and an interest-only term greater than five years or is of unspecified duration. They also include certain reverse and shared equity mortgages and loans to self-managed superannuation funds.	**CRE30.4: Categorisation of exposures** BCBS does not exclude non-standard mortgages from IRB treatment, rather exposures that do not meet the regulatory definition of a mortgage would be treated as IRB corporates. Basel includes margin lending within the definition of securities financing transactions and permits IRB treatment. For the equity asset class, the IRB approach is no longer permitted, which in this respect is consistent with APRA. However, APRA also requires capital deductions for certain equity exposures in the banking book per APS112 Attachment B paragraph 38 & APS111 Attachment D paragraphs 9 to 16).	**Likely significant** APRA's requirement to apply standardised treatment for non-standard mortgages may be significant depending on the quantum of such mortgages that would be granted IRB treatment under Basel. APRA also mandates standardised treatment for margin lending, however this type of lending has declined in recent years and this departure is therefore less likely to be significant.
Paragraph 13: NZ exposures APRA requires RWAs and ELs for exposures of an overseas banking subsidiary that is prudentially regulated by RBNZ to be calculated using RBNZ rules except that, in calculating RWA, the ADI must not apply the prescribed RBNZ's (a) scaling factor that is equivalent to paragraph 2 of Attachment A to this Prudential Standard, and instead must only apply a scaling factor of 1.1; and (b) floor value and calculation that is equivalent to paragraph 4 of Attachment A to Prudential Standard APS 110 Capital Adequacy (APS 110), and instead must only apply the floor value and calculation in APS 110.	There are no equivalent BCBS requirements. RBNZ credit rules are more stringent than the Basel Framework in respect of: • Farm lending • Mortgages • Specialised lending • Currency thresholds • Unsecured non-retail LGDs • Non-retail EADs • Standardised treatment for sovereign and bank exposures	**Likely significant** APRA's new requirement for ADIs to incorporate exposures of NZ banking subsidiaries using RWAs that are calculated using RBNZ's rules will impact banks with material NZ subsidiaries.

APS 113 IRB Credit	CRE30 to 36 IRB Credit	Differences
Paragraph 18: Approach APRA requires that an ADI must apply the: (a) FIRB approach to all sovereign, financial institution and large corporate (Revenues > A$750m) exposures. For IPRE exposures that meet the definition of a large corporate exposure the ADI may apply a FIRB or supervisory slotting approach in accordance with its IRB approval. (b) retail IRB approach to all retail exposures; and (c) supervisory slotting approach to all project finance, object finance and commodities finance exposures	**CRE30.34: Foundation and advanced approaches** AIRB treatment is not permitted for: • Exposures to general corporates with revenues >€500m • Banks and other FIs Unlike APRA, Basel permits AIRB treatment for sovereigns and corporates with turnover of less than €500m. Basel also permits either AIRB or Slotting for specialised lending, by comparison to APRA which only allows AIRB treatment for IPRE (and with a multiplier of 1.5).	**Likely significant** APRA requires supervisory slotting for certain types of specialised lending (project finance, object finance and commodity finance) whereas many overseas jurisdictions currently permit general corporate treatment. In contrast to Basel 3.1, APRA requires FIRB treatment for: • IPRE exposures (with a multiplier of 1.5) • sovereign exposures Conversely, BCBS permits AIRB treatment for these asset classes, but with no multiplier.
Paragraph 28: Asset classes An ADI must assign its banking book exposures to one of the following IRB asset classes: (a) corporate (which includes the **four** sub-asset classes of specialised lending – project finance, object finance, commodity finance and income producing real estate exposures); (b) sovereign; (c) financial institution; and (d) retail (which consists of **four** separate sub-asset classes: residential mortgages, qualifying revolving retail, SME retail and other). APRA includes SME Retail as a separate sub-asset class, whereas Basel 3.1 requires SME retail exposures to be included in either qualifying revolving retail or other. The risk weight function in Attachment A of APS113 is the same for SME Retail Others and Other Retail, and which are consistent with Basel.	**CRE30.4: Asset Classes** BCBS requires assignment into the following asset classes: (a) Corporate, sovereign and bank/FIs (which includes **five** sub-asset classes of specialised lending – the additional category being **high volatility commercial real estate**) (b) Retail (which consists of **three** separate sub-asset classes: residential mortgages, qualifying revolving retail and other)	**Unlikely to be significant** APRA has never included HVCRE as a type of specialised lending. This is a longstanding difference of approach between APRA and Basel, but it has not been included in international harmonisation adjustments because its impact was not considered significant and in any case is not able to be reliably measured. In APRA's new framework, IPRE exposures may be treated as general corporates with a multiplier of 1.5, which will produce lower risk weights than under slotting, but higher than the minimum requirements of Basel.

APS 113 IRB Credit	CRE30 to 36 IRB Credit	Differences
Paragraph 32: IPRE definition Where the borrower meets certain criteria (e.g., >$250m of assets which the ADI has recourse to, diversity of properties or tenants, etc) it is permitted to be treated as a general corporate rather than IPRE. We understand these criteria have been used historically, based on APRA's guidance but have not been included in APS 113 until now.	**CRE30.14** BCBS provides a less prescriptive definition of IPRE, but otherwise appears to be equivalent to APRA's rules.	**No differences**
Paragraph 37: Mortgages The retail residential mortgage IRB sub-asset class includes exposures that are: (a) partly or fully secured by residential real estate (b) managed in a similar manner to other retail exposures; and (c) not for business purposes	**CRE30.20 (2) Retail residential mortgages** Under Basel 3.1, residential mortgages are eligible for retail treatment regardless of exposure size so long as the credit is: (a) an exposure to an individual; or (b) an exposure to associations or cooperatives that are regulated under national law and exist with the only purpose of granting its members the use of a primary residence in the property securing the loan.	**Unlikely to be significant** APRA's definition is not identical to Basel, but the difference is not considered significant.
Paragraph 38: QRR The maximum exposure for QRR exposures is $100k	**QRE30.24 (3): QRR** The maximum exposure for QRR exposures is €100k, and hence more exposures would meet the BCBS definition of QRR	**Unlikely to be significant** Credit card portfolios are declining, and it is unlikely that there would be many exposures between A$100k and A$150k.
Paragraph 40: SME retail The SME retail IRB sub-asset class includes exposures that meet the following criteria: (a) the total business-related exposure of the ADI to a small-business borrower or group of connected borrowers is less than $1.5 million. (b) the reported consolidated annual revenue of a small-business borrower or group of connected borrowers is less than $75 million.	**CRE30.20 Loans to small business** Loans to small businesses and managed as retail exposures are eligible for retail treatment provided the total exposure is less than €1 million. However, Basel 3.1 no longer has a separate sub-asset class for SME Retail. Small business loans would not meet the definition of a retail mortgage, and must therefore be classified as either qualifying revolving retail or other retail under CRE30.23.	
APS 113 Attachment A: IRB risk-weight functions		
Attachment A, paragraph 2: Scaling factor	BCBS does not apply a scaling factor	**Likely significant** APRA imposes a scaling factor of 1.1

APS 113 IRB Credit	CRE30 to 36 IRB Credit	Differences
RWA scaling factor of 1.1 for all IRB asset classes except slotted exposures and operating leases		
Attachment A, paragraph 4: Corporate, sovereign and FIs Defines the calculation of correlation, maturity adjustment, capital requirement and RWA	**CRE31.4: Corporate, sovereign and FIs** BCBS formulae for R,b,K and RWA are the same as APS113.	**No differences**
Attachment A, paragraph 5: Asset value correlation multiplier AVCM of 1.25 applied to regulated FIs with assets over A$125bn	**CRE31.7: Correlation multiplier** A correlation multiplier of 1.25 applied to regulated FIs with assets over US$100bn	**No differences** The amounts in the APRA formula have been converted from US Dollars to Australian Dollars at a rate of 1.25.

APS 113 IRB Credit	CRE30 to 36 IRB Credit	Differences
Attachment A, paragraph 6: Firm size adjustment for SMEs For SMEs with revenues below $75m an ADI must apply an adjustment to the corporate risk-weight function by substituting a concessional correlation formula. In the formula, "S" is expressed as total consolidated annual revenue between $7.5 million and $75 million.	**CRE31.8: Firm size adjustment for SMEs** For SMEs with revenues below €50m an ADI must apply an adjustment to the corporate risk-weight function by substituting a concessional correlation formula. In the formula, "S" is expressed as total annual sales in millions of euros with values of S falling in the range of equal to or less than €50 million or greater than or equal to €5 million.	**No differences** The amounts in the APRA formula have been converted from Euro to Australian Dollars at a rate of 1.5.
Attachment A, paragraph 8: Risk-weighted asset adjustment for income-producing real estate For non-defaulted IPRE exposures subject to the FIRB or AIRB approach, the calculation of RWA for UL is: RWA = K × 12.5 × EAD × 1.5	**CRE31.11: Specialised lending (including IPRE)** IRB banks that meet the requirements for the estimation of PD, LGD or EAD (where relevant) will be able to use the foundation or advanced approach for the corporate asset class to derive risk weights for SL sub-classes, including IPRE. In this case, RWA is calculated as follows: RWA = K × 12.5 × EAD	**Likely significant** APRA imposes a multiplier of 1.5 for IPRE exposures.
Attachment A, paragraph 10: Risk-weighted assets for specialised lending exposures subject to the supervisory slotting approach (project finance, object finance and commodity finance) **Table 1 Supervisory slotting risk weights** RWA for non-defaulted specialised lending exposures must apply the supervisory slotting approach, using the following risk weights depending on the grading (70%, 90%, 115% or 250%)	**CRE31.10: Specialised lending (including IPRE)** IRB banks that meet the requirements for the estimation of PD, LGD or EAD (where relevant) will be able to use the foundation or advanced approach for the corporate asset class to derive risk weights for SL sub-classes, including IPRE. In this case, RWA is calculated as follows: RWA = K × 12.5 × EAD	**Possibly significant** APRA requires slotting for types of specialised lending other than IPRE.
High volatility commercial real estate (HVCRE) APS 113 does not recognise HVCRE as a type of specialised lending, but any such exposures would be included in IPRE and subject to a multiplier of 1.5.	**CRE31.10: Specialised lending – HVCRE** Basel applies a more conservative asset correlation formula for high volatility commercial real estate.	**Unlikely to be significant** APRA has never included HVCRE as a type of specialised lending. This is a longstanding difference of approach between APRA and Basel, but it has not been included in international harmonisation adjustments because its impact was not considered significant and in any case is not able to be reliably measured.

APS 113 IRB Credit	CRE30 to 36 IRB Credit	Differences
Attachment A, paragraphs 12 to 15: Retail residential mortgage exposures The correlation factor and capital requirement formula are as per BCBS framework, however the calculation of RWA is subject to multiplier. Per APRA rules, RWAs for owner-occupied, principal-and-interest residential mortgage exposures are: RWA = EAD × Max [K × 12.5 × 1.4, 0.05] RWAs for borrowers that have mortgaged five or more investment properties are: RWA = EAD × Max [K × 12.5 × 2.5, 0.05] RWAs for other retail residential mortgage exposures are: RWA = EAD × Max [K × 12.5 × 1.7, 0.05]	**CRE31.14: Residential mortgage exposures** BCBS specifies RWAs for residential mortgages should be calculated as follows: RWA = K x 12.5 x EAD Basel permits supervisory discretion to treat loans to individuals that have mortgaged more than a specified number of properties or housing units as corporate exposures, whereas after consultation with IRB banks APRA opted to use the retail treatment (with a 2.5 scalar for borrowers that have mortgaged 5 or more investment properties) in order to maintain the use of existing PD/LGD models.	**Likely significant** Under APRA rules, RWAs for retail mortgages apply a multiplier of 1.4 for owner-occupied P&I loans, 1.7 for other residential mortgages and 2.5 for loans to borrowers who have 5 or more investment property mortgages. Unlike Basel 3.1, APS113 defines certain mortgages as “non-standard” and imposes standardised treatment on these exposures. Also, APS 113 applies a 5% RWA floor which is not imposed by Basel.
Attachment A, paragraphs 16 and 19: QRR and other retail Correlation factor, capital requirement and RWA formulae are as per BCBS framework in respect of QRR and other retail exposures.	**CRE31.15 & 31.16: QRR and other retail exposures**	**No differences**
Attachment A, paragraph 17 & 18: SME retail exposures **Paragraph 17:** The risk weight functions for SME retail exposures secured by residential real estate include the following: Correlation (R) = 0.15 RWA = K x 12.5 x EAD In other words, mortgage-backed SME loans are treated in the same way as retail mortgages, but without any multipliers or RWA floor. Under Basel 3.1 SME retail exposures would be classified as other retail. **Paragraph 18:** The risk weight functions for Other SME retail exposures are the same as the Basel 3.1 rules for other retail exposures per CRE31.16.	Basel 3.1 no longer has a separate sub-asset class for SME Retail. Small business loans would not meet the Basel definition of a retail mortgage or qualifying revolving retail, and would therefore be classified as other retail per CRE30.23, and the risk weight function would be as follows (per CRE31.16): Correlation (R) = Weighted average of between 0.03 and 0.16, based on a formula which varies with PDs RWA = K x 12.5 x EAD	**Possibly significant** APRA's risk weight function for mortgage-backed SME retail loans applies a correlation factor of 15%, resulting in higher RWAs by comparison to Basel 3.1 rules.
Attachment A, paragraphs 20 & 21: Risk-weighted assets for lease exposures Leases, other than those that expose an ADI to residual value risk, may be	**CRE36.146 & CRE147 Leasing** BCBS does not specify the 250% risk weighting in cases where exposure to residual value is over 10% of Tier 1 capital.	**Unlikely to be significant** APRA’s more conservative capital deduction treatment is not expected to have a material impact at the present time.

APS 113 IRB Credit	CRE30 to 36 IRB Credit	Differences
treated in the same manner as exposures secured by the relevant collateral. The ADI may use its own estimates of LGD if it uses the AIRB approach. Where the ADI uses the FIRB approach, the minimum requirements in relation to eligible collateral must be met as detailed in Attachment E. For leases that expose an ADI to residual value risk, the discounted lease payment stream must be risk weighted according to the PD and LGD the ADI assigns to the lessee, and the aggregate residual value of all lease exposures must be risk weighted at 100% where aggregate residual value is less than 10% of Tier 1 Capital (or otherwise at 250%)		

APS 113 IRB Credit	CRE30 to 36 IRB Credit	Differences
Attachment A, paragraphs 22 & 23: Risk-weighted assets for defaulted exposures The capital requirement, K in respect of UL for a defaulted exposure under the AIRB or retail IRB approach is equal to the greater of zero and the amount by which the LGD estimate for that exposure exceeds an ADI's best estimate of EL. RWA and K in respect of UL for a defaulted exposure under the FIRB or supervisory slotting approach is zero.	**CRE31.3: Risk-weighted assets for exposures that are in default** BCBS rules are the same as APRA.	**No differences**
APS 113 Attachment B: Risk components for each asset class		
Attachment B, paragraphs 3 to 6: Probability of default estimates Consistent with BCBS, a PD floor of 0.05% must be applied, except for sovereign exposures. APRA applies a PD floor of 0.1% to all QRR "revolvers" and 0.05% for QRR "transactors".	**CRE32.4 & 32.58: Probability of default** With the exception of exposures in the sovereign asset class, the PD for each exposure that is used as input into the risk weight formula and the calculation of expected loss must not be less than 0.05%. CRE32.58 Basel applies a PD floor of 0.1% for qualifying revolving retail exposure (QRRE) revolvers.	**No differences**
Attachment B, paragraphs 8 to 11: Loss given default (FIRB non-retail) **Table 3:** 5% LGD for sovereigns rated AA- or above 25% LGD for A rated sovereigns or unrated Australian local councils **Paragraph 10:** 25% LGD for infrastructure/utility operators **Paragraph 8:** 50% LGD to all other senior exposures that are not secured by eligible collateral (vs 45% or 40% under BCBS rules) **Table 4** allows LGDs of 40% (corporate) or 45% (sovereigns or FIs) where there is non-standard physical security, and specifies a 40% haircut. While there is no equivalent BCBS rule, the prescribed LGDs in Table 4 are in line with the BCBS rules for non-retail unsecured. **Table 5** prescribes supervisory LGDs and collateral haircuts for exposures	**CRE32.6 to 32.14: Loss given default (FIRB non-retail)** 45% LGD for senior unsecured claims on sovereigns, banks and FIs 40% LGD for senior unsecured claims on other corporates 75% LGD for subordinated claims on corporates, sovereigns and banks CRE32.11 prescribes supervisory LGDs and collateral haircuts for exposures secured by eligible collateral which are consistent with APS113. As noted on page 22, Under Basel 3.1, banks with accredited LGD models are permitted to use their own LGD estimates for sovereign exposures, compared to APRA which requires FIRB treatment.	**Likely significant** APRA's LGD rules for FIRB are less stringent for eligible sovereigns (5% or 25 vs 45% per Basel), and for infrastructure/utility operators (25% vs 40% or 45% per Basel) but more stringent for certain corporates and FIs (50% vs 40% or 45% per BCBS). Under Basel 3.1, banks with accredited LGD models are permitted to use their own LGD estimates for sovereign exposures, compared to APRA which requires FIRB treatment.

APS 113 IRB Credit	CRE30 to 36 IRB Credit	Differences
secured by eligible collateral, which is consistent with BCBS.		
Attachment B, paragraphs 13 (FIRB or AIRB) An ADI must assign a 75% LGD to all subordinated debt.	**CRE32.7 Subordinated debt (FIRB)** FIRB banks must assign a 75% LGD to all subordinated debt, however no such LGD is prescribed for AIRB banks.	**Unlikely to be significant** APRA requires 75% LGD for subordinated debt held by AIRB banks, whereas BCBS permits AIRB banks to estimate LGDs using advanced models.
Attachment B, paragraphs 12 & 19 to 21: Loss given default (AIRB non-retail) **Paragraph 12** An ADI that uses the AIRB approach must apply a 50% LGD to all senior unsecured exposures or 25% for domestic large public infrastructure or utilities operators. Paragraph 18. For the purpose of calculating the LGD applicable to a sovereign exposure that is secured by eligible collateral, where applicable, an ADI is permitted to adopt the lower of the: (a) relevant LGD specified in paragraph 9 and (b) LGD determined in accordance with paragraph 16 to 17 **Table 6** provides LGD floors for secured and unsecured exposures under AIRB that are consistent with BCBS rules: Financial collateral – 0% Receivables, commercial or residential real estate – 10% Other physical collateral – 15% Other collateral & the unsecured component of partially secured exposures – 25%	**CRE32.15 to 32.19: Loss given default (AIRB non-retail)** CRE32 has no equivalent 50% LGD requirement for senior unsecured exposures nor a 25% LGD for exposures to infrastructure or utilities CRE32.16 provides LGD floors for secured and unsecured exposures under AIRB that are consistent with APRA rules (including a 25% LGD floor for unsecured non-retail exposures).	**Likely significant** APRA applies a 50% LGD to senior unsecured non-retail exposures, or 25% for domestic large public infrastructure or utilities operators, whereas BCBS permits AIRB banks to estimate LGDs using advanced models, with a floor of 25%.
Attachment B, paragraphs 22 to 26: PDs and LGDs for retail exposures Table 7 provides LGD floors for secured and unsecured retail exposures under AIRB. These are consistent with BCBS rules, except for: • residential mortgages where APRA's floor is 10% vs BCBS of 5% and • other collateral where APRA's floor is 30% but BCBS is silent	**CRE32.57 to 32.59 PDs and LGDs for retail exposures** The LGD floor for residential mortgages is fixed at 5%, irrespective of the level of collateral provided by the property.	**Unlikely to be significant** APRA imposes a 10% LGD floor on all mortgage exposures, vs 5% under BCBS, however based on previous work we understand that modelled LGDs are likely to be above 10% for most portfolios, so this difference will have an immaterial impact on mortgage risk weights APRA's 30% LGD floor for other collateral floor is also not expected to be material.

APS 113 IRB Credit	CRE30 to 36 IRB Credit	Differences
Attachment B, paragraphs 27 to 39 (and APS112 Attachment C): Exposure at default **Paragraph 35:** An ADI must apply the CCFs as specified in Attachment C to APS 112 when calculating EAD, with the exception of: (a) non-revolving retail exposures, for which the CCF is 100%; and (b) revolving retail exposures, excluding exposures subject to a CCF of 100% in Attachment C to APS 112, for which the ADI may use its own estimates of EAD. The APRA IRB rules for EAD are the same as BCBS, except in relation to: 1. Other commitments with certain drawdown 100% CCF per APRA, but not mentioned by BCBS. 2. Unconditionally cancellable commitments, where APRA removed this category. Any such commitments would therefore fall under "other commitments" which have a CCF of 40% (per APS112 Attachment C Table 17) vs 10% under BCBS (CRE32.33).	**CRE32.29 to 32.43: Exposure at default** **32.36** For exposures for which A-IRB is permitted (see CRE30.33 to 35 which states that the AIRB approach cannot be used for corporates with revenues over €500m, and FIs) banks are permitted to use their own internal estimates of EAD for undrawn revolving commitments, purchase assets or issue credit substitutes provided the exposure is not subject to a CCF of 100% in the foundation approach (see CRE32.33). Standardised approach CCFs must be used for all other off-balance sheet items (for example, undrawn non-revolving commitments), and must be used where the minimum requirements for own estimates of EAD are not met. The EAD for each exposure that is not in the sovereign asset class that is used as input into the risk weight formula and the calculation of expected loss is subject to a floor that is the sum of: (i) the on-balance sheet amount; and (ii) 50% of the off-balance sheet exposure using the applicable CCF in the standardised approach. **32.33** The types of instruments and the CCFs applied to them under the FIRB approach are the same as those in the standardised approach, as set out in CRE20.94 to CRE20.101. Guarantees, repos, securities lending, forwards, etc. – 100% Revolving underwriting facilities, transaction-related contingencies etc. – 50% Commitments – 40% Short-term trade finance – 20% Unconditionally cancellable commitments – 10%	**Possibly significant** APRA imposes 40% CCF on unconditionally cancellable commitments (within other commitments) by comparison to BCBS which allows 10% CCF. Under APS113, AIRB banks can only use modelled EADs for revolving retail exposures (Standardised for everything else) whereas Basel allows modelled EADs for revolving commitments for both retail and non-retail exposures.

APS 113 IRB Credit	CRE30 to 36 IRB Credit	Differences
APS 112 Attachment C Table 17 CCFs Direct credit substitutes 100% Sale and repurchase agreements and asset sales with recourse 100% Lending of securities or posting of securities as collateral 100% Forward asset purchases, forward deposits and partly paid shares and securities 100% Other off-balance sheet items that are credit substitutes 100% Unsettled securities, commodities and foreign exchange transactions accounted for at settlement date 100% Other commitments with certain drawdown 100%. (While this is not directly stated in Basel, a CCF of 100% can be inferred where drawdowns are certain.) Note issuance and revolving underwriting facilities 50% Performance-related contingencies 50% Other commitments 40% Short-term self-liquidating trade letters of credit arising from the movement of goods 20% Intraday limits 0% Irrevocable standby commitments under industry support arrangements 0% Commitments that are unconditionally cancellable at any time by the bank without prior notice: n/a	**CRE20.94 – 20.100 Off balance sheet items** Direct credit substitutes 100% Sale and repurchase agreements and asset sales with recourse 100% Lending of securities or posting of securities as collateral 100% Forward asset purchases, forward deposits and partly paid shares and securities 100% Other off-balance sheet items that are credit substitutes 100% Unsettled securities, commodities and foreign exchange transactions accounted for at settlement date 100% Other commitments with certain drawdown n/a Note issuance and revolving underwriting facilities 50% Performance-related contingencies 50% Other commitments 40% Short-term self-liquidating trade letters of credit arising from the movement of goods 20% Intraday limits n/a Irrevocable standby commitments under industry support arrangements n/a Commitments that are unconditionally cancellable at any time by the bank without prior notice: 10%	**Possibly significant** APRA does not apply the concessional BCBS treatment of 10% CCF for unconditionally cancellable commitments. Such exposures may therefore be classified under “other commitments” and would attract 40% CCF.
Attachment B Paragraphs 40 to 44 Effective maturity For corporate, sovereign, and financial institution exposures, an ADI must calculate M for each facility, based on the remaining maturity in years (but with a minimum of 1 year and a maximum of 5 years).	**CRE32.44 to 56 Effective maturity** **CRE32.44** Effective maturity (M) will be 2.5 years for exposures to which the bank applies the foundation approach, except for repo-style transactions where the effective maturity is 6 months.	**Possibly significant** APRA does not permit effective maturity to be fixed at 2.5 years for corporate, sovereign or financial institution borrowers, however this is not considered significant.

APS 113 IRB Credit	CRE30 to 36 IRB Credit	Differences
	32.45 Banks using any element of the A-IRB approach are required to measure effective maturity for each facility using the same approach as APRA. However, national supervisors may allow the effective maturity to be fixed at 2.5 years (the "fixed maturity treatment") for facilities to certain smaller domestic corporate borrowers if the reported sales as well as total assets for the consolidated group of which the firm is a part of are less than €500 million. Except as noted in CRE32.51, the effective maturity (M) is subject to a floor of one year and a cap of 5 years.	
Attachment B Paragraphs 47 to 54 Guarantees and credit derivatives An ADI may recognise the risk-mitigating effect of guarantees and credit derivatives by applying either a FIRB, AIRB or retail IRB substitution approach. The application of CRM in the form of guarantees and credit derivatives must not reflect the effect of double default nor result in an adjusted risk weight that is less than that of a comparable direct exposure to the guarantor or credit protection provider	**CRE32.27 & 28 Operational requirements for recognition of double default** A bank using an IRB approach has the option of using the substitution approach or the double default framework, subject to the meeting certain operational requirements. A bank may decide separately for each eligible exposure to apply either the double default framework or the substitution approach.	**Unlikely to be significant** This is a longstanding difference of approach between APRA and Basel, but it has not been included in international harmonisation adjustments because its impact was not considered significant and in any case is not able to be reliably measured.
Attachment B Paragraph 55 Maturity mismatch Where a maturity mismatch exists between the residual maturity of collateral, guarantees or credit derivatives by comparison to the exposure, the ADI must apply the adjustments detailed in APS 112	**CRE32.50 Treatment of maturity mismatches** The treatment of maturity mismatches under IRB is identical to that in the standardised approach (see CRE22.97 to CRE22.100).	**No differences**
Attachment B Paragraph 56 Securities financing transactions For the purpose of calculating RWA and EL amounts for SFTs, including securities lending transactions, an ADI must calculate: (a) the LGD of the counterparty in accordance with Attachment B; (b) EAD in accordance with Attachment G to APS 112; and (c) the capital requirement for the credit risk or market risk inherent in any securities the ADI lends or posts	**32.38 Exposures that give rise to counterparty credit risk** For exposures that give rise to counterparty credit risk according to CRE51.4 (i.e. over-the-counter, or OTC, derivatives, exchange-traded derivatives, long settlement transactions and securities financing transactions), the EAD is to be calculated under the rules set forth in CRE50 to CRE54. **CRE55.2 counterparty credit risk in the trading book**	**Likely significant for some banks** APRA's decision to remove the concessionary treatment for all trading book instruments may be significant for Banks that enter into securities financing transactions that involve unrated debt securities.

APS 113 IRB Credit	CRE30 to 36 IRB Credit	Differences
as collateral if that risk remains with the ADI. **APS112 Attachment G** **Paragraph 21** An ADI using the comprehensive approach may take into account the risk mitigating effects of any eligible collateral, in calculating the EAD for each counterparty. **Paragraph 22** The definition of eligible financial collateral excludes unrated corporate bonds, which under Basel rules can be used to reduce EAD and therefore RWAs. **Paragraph 8** of Attachment G of the current APS112 Standard has been omitted from the new standard applicable from 1 January 2023. This paragraph currently permits ADIs to use all instruments included in its trading book as eligible collateral for SFTs included in the trading book and instruments that would otherwise not be treated as eligible collateral for the purposes of APS112 are subject to a haircut at the level applicable to non-main index equities listed on recognised exchanges.	In the trading book, for repo-style transactions, all instruments, which are included in the trading book, may be used as eligible collateral. Those instruments which fall outside the banking book definition of eligible collateral shall be subject to a haircut at the level applicable to non-main index equities listed on recognised exchanges (as noted in CRE22.49 and CRE22.50).	
APS 113 Attachment C: Treatment of expected losses and provisions		
Attachment C, paragraph 7 to 9 Treatment of expected loss and provisions An ADI must separately compare the total EL amount for defaulted exposures and non-defaulted exposures with total eligible provisions associated with the relevant exposures. 8. Where the total EL amount is higher than total eligible provisions for the relevant exposures, the difference must be deducted from Common Equity Tier 1 Capital as detailed in APS 111. 9. For non-defaulted exposures, where the total EL amount is lower than eligible provisions associated with these exposures, the difference may be included in Tier 2 Capital up to a maximum of 0.6 per cent of credit RWA calculated under the IRB approach as detailed in APS 111.	**CRE35.8 & 9 Treatment of EL and provisions** As specified in CAP10.19 and CAP30.13, banks using the IRB approach must compare the total amount of total eligible provisions (as defined in paragraph CRE35.4) with the total EL amount as calculated within the IRB approach (as defined in paragraph CRE35.2).	**Likely significant for some banks** APRA's treatment of expected losses and eligible provisions may result in capital deductions for some banks that are significantly higher than under Basel rules.

APS 113 IRB Credit	CRE30 to 36 IRB Credit	Differences
APS 113 Attachment F: RWAs for purchased receivables		
Attachment B, paragraph 30 Defaulted exposures purchased by an ADI are not subject to the floor specified in paragraph 28 of this Attachment. For those exposures, EAD must be based on the exposure's carrying value and the discount must be set equal to zero.	**CRE32.29 Exposure at default** All exposures are measured gross of specific provisions or partial write-offs. The EAD on drawn amounts should not be less than the sum of: (i) the amount by which a bank's regulatory capital would be reduced if the exposure were written-off fully; and (ii) any specific provisions and partial write-offs. When the difference between the instrument's EAD and the sum of (i) and (ii) is positive, this amount is termed a discount. The calculation of risk-weighted assets is independent of any discounts. Under the limited circumstances described in CRE35.4, discounts may be included in the measurement of total eligible provisions for purposes of the EL-provision calculation set out in CRE35. CRE35.4 Total eligible provisions are defined as the sum of all provisions (e.g., specific provisions, partial write-offs, portfolio-specific general provisions such as country risk provisions or general provisions) that are attributed to exposures treated under the IRB approach. In addition, total eligible provisions may include any discounts on defaulted assets	**Likely significant for some banks** The requirement under APS113 for discounts on purchased assets to be set to zero results in lower eligible provisions and therefore higher capital deductions where expected losses are lower than eligible provisions.

Table 2 Standardised Approach to Credit Risk

APS 112 Standardised Credit	CRE20 Standardised Credit	Differences
Attachment A paragraphs 14 to 21 Residential property **Standard owner-occupied P&I** < 50% LVR – 20% 50 – 60% LVR – 25% 60 – 70% LVR – 30% 70 – 80% LVR – 35% 80 – 90% LVR – 40% or 50% (no LMI) 90 – 100% LVR – 55% or 70% (no LMI) >100% LVR – 70% or 85% (no LMI) **Standard other mortgages (i.e., not owner-occupied or P&I)** < 50% LVR – 25% 50 – 60% LVR – 30% 60 – 70% LVR – 40% 70 – 80% LVR – 45% 80 – 90% LVR – 50% or 65% (no LMI) 90 – 100% LVR – 70% or 85% (no LMI) >100% LVR – 85% or 105% (no LMI) **Non-standard mortgages** Reverse mortgages < 60% LVR – 50% Reverse mortgages > 60% LVR – 100% Other non-standard loans – 100% Non-standard loans are: a) interest only loans with an LVR greater than 80 per cent and an interest-only term greater than five years b) Certain reverse mortgages c) Shared equity mortgages d) Loans to self-manages super funds 35% risk weight applies to residential property exposures that satisfy the conditions for inclusion within the First Home Loan Deposit Scheme or the Family Home Guarantee Scheme, and in respect of which the National Housing Finance and Investment Corporation has issued a guarantee certificate to the ADI.	**CRE20.82 to 20.84 Residential property** **CRE20.82** Risk weights for residential property loans (that are not materially dependent on rents) < 50% LVR – 20% 50 – 60% LVR – 25% 60 – 70% LVR – 30% 70 – 80% LVR – 30% 80 – 90% LVR – 40% 90 – 100% LVR – 50% >100% LVR – 70% **CRE 20.84** Risk weights for residential property loans (that are materially dependent (i.e. >50%) on rents) < 50% LVR – 30% 50 – 60% LVR – 35% 60 – 70% LVR – 45% 70 – 80% LVR – 45% 80 – 90% LVR – 60% 90 – 100% LVR – 75% >100% LVR – 105% Some of the risk weights specified in CRE20.84 are higher than APRA's equivalent rates for standard other mortgages, therefore APRA's risk weights are concessional for any investor loans that are materially dependent on rents, and which fall within those LVR bands **20.76 guarantees (including LMI)** A guarantee or financial collateral may be recognised as a credit risk mitigant in relation to exposures secured by real estate if it qualifies as eligible collateral under the credit risk mitigation framework. This may include mortgage insurance if it meets the operational requirements of the credit risk mitigation framework for a guarantee. Banks may recognise these risk mitigants in calculating the exposure amount.	**Likely significant** APRA imposes higher risk-weights for investor or interest only loans and non-standard loans. Conversely, Basel risk weights for certain LVR bands of investor loans which are materially dependent on rents are higher than APRA's risk weights. APRA also imposes higher risk weights for 70-80% LVR loans and loans above 80% LVR that do not have LMI. APRA does not permit eligible LMI to be recognised in the calculation of the exposure amount, although there is some abatement of risk weights to partly mitigate this difference. We understand that typical Australian LMI contracts would not meet the eligibility criteria in CRE22.73 which include a requirement that the insurance pays out without first having to take legal action in order to pursue the counterparty for payment.

APS 112 Standardised Credit	CRE20 Standardised Credit	Differences
Attachment A paragraphs 22 to 26 Commercial property Attachment A, Table 3 Risk weights for commercial property loans (that are primarily dependent on rents) is consistent with BCBS percentages shown opposite, except for non-standard loans for which 150% applies, as compared to Basel which would apply risk weights of 70%, 90% or 110% depending on the LVR. Attachment A Table 4 Risk weights for commercial property loans (that are not materially dependent on rents) is consistent with BCBS percentages shown opposite. An exposure may be classified as 'commercial property exposures - not dependent on property cash flows' where an ADI has recourse to a borrower that meets certain criteria.	**CRE20.82 to 20.84 Commercial property** **CRE20.87** Risk weights for commercial property loans (that are materially dependent on rents) < 60% LVR – 70% 60 – 80% LVR – 90% >80% LVR – 110% **CRE 20.85** Risk weights for commercial property loans (that are not materially dependant on rents) < 60% LVR – Min (60%, RW of counterparty) >60% LVR – RW of counterparty	**Possibly significant** APRA imposes a risk weight of 150% for non-standard commercial property loans.
Attachment A paragraph 27 to 30 Land acquisition, development and construction (ADC) Risk weights of 100% or 150% as per BCBS. APRA specifies that for 100% weighting: a) debt to development cost limit of 75% and b) 100% presale requirement for loans over $5m	**CRE20.90 & 20.91 ADC exposures** National supervisors will give further guidance on the appropriate levels of pre-sale or pre-lease contracts and/or equity at risk to be applied in their jurisdictions.	**No differences**
Attachment B Table 5 Sovereign risk weights Risk weights of 0%, 20%, 50%,100% or 150% depending on risk grade, as per BCBS	**CRE20.7 Exposure to sovereigns** No differences	**No differences**
Attachment B Table 6 Domestic public sector entities (PSEs) Risk weights of 0%, 20%, 50%,100% or 150% depending on risk grade, as per BCBS	**CRE20.11 Non-government PSEs** No differences	**No differences**
Attachment B Tables 7 & 8 Banks (including Multi-Development Banks) APS 112 prescribes risk weights of 20%, 30%, 50%,100% or 150% depending on risk grade, and maturity. These are consistent with Basel, except for certain AAA-rated MDBs for which APRA imposes a 20% risk weight as compared to zero risk weight from Basel.	**CRE20.13 to 20.21 Exposure to MDBs, other types of bank and other financial institutions (CRE20.40)** AAA rated and other conditions – 0% Otherwise, risk weights for MDBs are the same as the base case RWAs for banks (per Tables 5 and 6): AAA to AA- - 20% A+ to A- - 30% BBB+ to BBB- or unrated - 50% BB+ to B- - 100% Below B- - 150%	**Possibly significant** APRA imposes a 20% risk weight for certain AAA-rated MDBs vs 0% under Basel 3.1. Basel 3.1 (CRE20.40) extends the concessional risk weights applicable to banks to prudentially regulated securities firms and other financial institutions.

APS 112 Standardised Credit	CRE20 Standardised Credit	Differences
Attachment B Table 9 Covered bonds RWAs of 10%, 20%, 50% or 100% depending on risk grade.	**CRE20.33 to 20.39 Covered bonds** No differences	**No differences**
Attachment B Paragraphs 18 to 25 General corporates **Tables 10 & 11 Rated exposures -** RWAs of 20%, 50%, 75%, 100% or 150% depending on risk grade, and maturity as per BCBS. Unrated corporates – RWAs of 100%, 85% or 75% depending on whether the exposures are to large corporates, SME corporates (revenues below $75m) or SME retail (exposures below $1.5m)	**CRE20.42 to 20.47 General corporate exposures** No differences. Definitions: CRE20.47 SME Corporates = revenues below E50m CRE20.56 SME retail = exposures below E1m	**No differences**
Attachment B Paragraphs 26 to 29 Specialised lending **Table 13** Project Finance – 110% Object and commodity finance – 100%	**CRE20.48 to 20.52 Specialised lending CRE20.51** Project finance (pre-operational phase) – 130% Project finance (operational phase) – 80% Object and commodity finance – 100%	**Unlikely to be significant**
Attachment B Table 14 Retail exposures A retail exposure is any exposure to one or more individual, that is not a property exposure or margin lending exposure. Retail SMEs are included in general corporates (see above). **Table 13 - risk weights** Credit cards – 75% Other retail – 100%	**CRE20.63 to 20.68 Retail Exposures** The retail exposure class includes exposures to an individual person or persons; and exposures to retail SMEs (for which RWAs are 75% - see above) **CRE20.68 – risk weights** Regulatory retail transactors (e.g. Credit cards which repay in full each month) – 45% Regulatory retail non-transactors – 75% Other retail (e.g. loans >€1m) – 100%	**Possibly significant** APS112 specifies 75% risk weight on all credit card exposures, whereas Basel 3.1 has introduced a concessionary rate of 45% for card holders who are transactors.
Attachment B Paragraph 32 Margin lending **Risk weights** Secured by eligible financial collateral – 20% Secured by other collateral – 100% Attachment C Paragraph 4 The committed amount is the maximum amount that the borrower can draw down based on the terms of the loan (such as the notional credit limit and the maximum allowable LVR) and the value of the security underlying the loan	**CRE52.14** The Replacement Cost for margined transactions in the SA-CCR is defined as the greatest exposure that would not trigger a call for Variation Margins, taking into account the mechanics of collateral exchanges in margining agreements.	**Possibly significant** APS112 requires 20% risk weighting for margin lending exposures that are fully collateralised by eligible collateral, whereas Basel 3.1 allows eligible collateral (after haircuts) to be offset against exposures.
Attachment B Paragraphs 34 to 38 Equity An ADI must risk-weight equity exposures that are not required to be deducted from Regulatory Capital under APS 111 at 250% (if listed) or 400% (if unlisted). The requirements for capital deductions under APS 111 are more onerous than the equivalent BCBS requirements.	**CRE20.57 Sub debt, equity etc** Banks will assign a risk weight of 400% to speculative unlisted equity exposures and a risk weight of 250% to all other equity holdings, provided they are not required to be deducted from capital per CAP30, or risk weighted at 1250% (significant minority or controlling investments in commercial entities).	**Likely significant** The requirements for capital deductions under APS 111 are more onerous than the equivalent BCBS requirements.

APS 112 Standardised Credit	CRE20 Standardised Credit	Differences
Per APS111 Attachment D Paragraph 3: All equity and other capital support provided to financial institutions, and holdings of own capital instruments must be deducted following the corresponding deduction approach (i.e. the deduction is to be applied to the same category of capital for which the capital would qualify if issued by the ADI itself).	**CAP30.26** A deduction is required if the total of all holdings of capital instruments and other TLAC liabilities of FIs exceeds certain thresholds (e.g. 10% of the bank's common equity). **Unlikely to be significant**	
Attachment B Table 15 Leases For finance leases, the ADI should apply the risk weight of the counterparty as with any other loan. Where an ADI is exposed to residual value risk, a risk weight of 100% applies, or 250% if the aggregate residual value exposure is more than 10% of Tier 1 capital.	Basel has no equivalent requirements.	**Unlikely to be significant**
Attachment B Paragraph 41 Exposures through a third party An ADI must apply a risk weight of 150% to credit exposures originated through a third party where the ADI: (a) does not undertake the credit assessment and approval of the underlying borrower under its own credit risk policies and processes (b) is unable to administer the workout or default processes; and (c) does not have direct recourse to the third party or underlying borrower in the event of default.	Basel has no equivalent requirements.	**Unlikely to be significant** It is unlikely ADIs would have a significant amount of such exposures.
Attachment B Table 16 Other exposures Risk weights of 0% for cash and gold, 20% cash items in the process of being collected, 100% for fixed assets or other exposures	**CRE20.109 & 110** Same risk weights are applied for cash, gold and cash in the process of being collected.	**Unlikely to be significant**
Attachment B Paragraphs 43 to 44 Risk weight multiplier for certain exposures with currency mismatch For exposures originated after 1 January 2023, an ADI must apply a 1.5 times multiplier.	**CRE20.92 & 93** Similar requirements to APRA.	**No differences**
Attachment C Off-balance sheet commitments **Table 17 CCFs** APRA's Standardised rules for CCFs are the same as BCBS, except in relation to: **1.** Other commitments with certain drawdown 100% CCF per APRA, but not mentioned by BCBS. **2.** Unconditionally cancellable commitments, where APRA removed this category. Any such commitments would therefore fall under "other	**CRE20.100** A 10% CCF will be applied to commitments that are unconditionally cancellable at any time by the bank without prior notice, or that effectively provide for automatic cancellation due to deterioration in a borrower's creditworthiness.	**Possibly significant** APRA has removed the Basel concessional treatment (10% CCF) for unconditionally cancellable commitments.

APS 112 Standardised Credit	CRE20 Standardised Credit	Differences
commitments" which have a CCF of 40% vs 10% under BCBS (CRE32.33).		
Attachment D – Unsettled and failed trades Table 18 - Risk weights of between 100% and 1,250% according to the elapsed time since delivery date	**CRE70.9 –** Basel provides an equivalent table based on days past due, albeit expressed in capital required to be held rather than RWA	**No differences**
Attachment E – Defaulted exposures **Table 19** specifies risk weights for defaulted standard mortgage exposures of between 80% and 120% depending on whether the property is owner-occupied and P&I and whether the exposure is insured, or 150% for non-standard mortgages. Basel applies 100% for residential mortgages which are not materially dependent on rents. **Table 20 -** For other exposures, APRA follows the Basel framework	**CRE20.106** With the exception of residential real estate exposures, the unsecured or unguaranteed portion of a defaulted exposure shall be risk-weighted net of specific provisions and partial write-offs as follows: (1) 150% risk weight when specific provisions are less than 20% of the outstanding amount of the loan; and (2) 100% risk weight when specific provisions are equal or greater than 20% of the outstanding amount of the loan. **20.107** Defaulted residential real estate exposures where repayments do not materially depend on cash flows generated by the property securing the loan shall be risk-weighted net of specific provisions and partial write-offs at 100%.	**No differences**
Attachment F – External credit ratings APRA's rules are similar to Basel	**BCBS 21 Standardised approach: use of external ratings**	**No differences**
Attachment G – Collateralised transactions **Paragraph 3** An ADI must select either the simple approach or the comprehensive approach and apply that approach consistently to all of its banking book exposures for which it has received collateral. An ADI that is approved to use the internal ratings-based approach to credit risk is not permitted to use the simple approach. APRA has removed the concession in Paragraph 8 of the current standard that permits an ADI to use all instruments included in its trading book as eligible collateral for SFTs included in the trading book (after application of a haircut).	**CRE 55.2** In the trading book, for repo-style transactions, all instruments, which are included in the trading book, may be used as eligible collateral. Those instruments which fall outside the banking book definition of eligible collateral shall be subject to a haircut at the level applicable to non-main index equities listed on recognised exchanges.	**Likely significant for some banks** APRA has removed the concession available in Basel 3.1 for all trading book instruments to be counted as eligible collateral (CRE55.2) which means that any such exposures secured by ineligible collateral will be treated as unsecured.
Attachment H – Netting **Paragraph 5** For Regulatory Capital purposes, an ADI may only net the following types of transactions: (a) on-balance sheet loans and deposits; (b) SFTs; and (c) OTC derivative transactions (across both the banking and trading books) with a single counterparty.		**No differences**
Attachment I – Guarantees	**20.76** A guarantee or financial collateral may be recognised as a credit risk	**Possibly significant**

APS 112 Standardised Credit	CRE20 Standardised Credit	Differences
Paragraph 1 Where an ADI's exposure to a counterparty is covered by a guarantee from an eligible guarantor, an ADI may substitute the risk weight of the counterparty for the risk weight of the guarantor for the covered portion of the exposure. The uncovered portion of the exposure must be risk-weighted according to the risk weight applicable to the original counterparty.	mitigant in relation to exposures secured by real estate if it qualifies as eligible collateral under the credit risk mitigation framework. This may include mortgage insurance. Banks may recognise these risk mitigants in calculating the exposure amount; however, the LTV bucket and risk weight to be applied to the exposure amount must be determined before the application of the appropriate credit risk mitigation technique.	
Attachment J – Credit derivatives The rules in Attachment J are more extensive than the equivalent Basel rule (CRE20.103) and cover both purchased and sold credit protection.	**CRE20.103** A bank providing credit protection through a first-to-default or second-to-default credit derivative is subject to capital requirements on such instruments.	**Unlikely to be significant**

Appendix B – Glossary

Glossary of terms

ADI	Authorised deposit-taking institutions
Advanced banks	Banks which have been accredited to use their own models for calculating risk-weighted assets
AIRB (or Advanced IRB)	Advanced internal ratings-based approach
APRA	Australian Prudential Regulation Authority
Basel Framework	The Basel Framework is the full set of standards of the Basel Committee on Banking Supervision (BCBS), which is the primary global standard setter for the prudential regulation of banks.
BCBS	Basel Committee on Banking Supervision
BIS	Bank for International Settlements
CCF	Credit conversion factor
CET1	Common Equity Tier 1
CRR	Capital Requirements Regulation
D-SIB	Domestic systemically important bank
DTA	Deferred tax asset
EAD	Exposure at default
EL	Expected loss
FI	Financial institution
FIRB (or Foundation IRB)	Foundation internal ratings-based approach
G-SIB	Global systemically important bank
HVCRE	High-volatility commercial real estate
Internationally comparable CET1	Measurement using Basel Framework rules
IRB	Internal ratings-based approach
IRRBB	Interest rate risk in the banking book
LGD	Loss-given-default
LMI	Lenders Mortgage Insurance
LVR	Loan to value ratio
PD	Probability of default

PSE	Public sector entity
QRRE	Qualifying revolving retail exposures
RBNZ	Reserve Bank of New Zealand
RCAP	Regulatory Consistency Assessment Programme
RWAs	Risk-weighted assets
SL	Specialised lending
SME	Small and medium-sized entity
TC	Total capital
TUI model	Reserve Bank of New Zealand's TUI (Tool for Unobservedevent Investigation). The model, which is used for residential mortgage portfolios in New Zealand, correlates the loan default process with macroeconomic risk drivers (mortgage interest rate, unemployment rate and house price index) and customer characteristics (Loan to Value Ratio and Debt Service Ratio) to predict probability of default.

www.pwc.com.au

At PwC Australia our purpose is to build trust in society and solve important problems. We're a network of firms in 158 countries with more than 250,000 people who are committed to delivering quality in assurance, advisory and tax services. Find out more and tell us what matters to you by visiting us at www.pwc.com.au.

PWC200668377