RESPONSE TO SUBMISSIONS

Interest rate risk in the banking book for Authorised Deposit-taking Institutions

November 2022

Contents

Executive summary

Interest rate risk in the banking book (IRRBB) is the risk of loss in earnings or a fall in the value of banking book items due to adverse movements in interest rates. It is important that Authorised Deposit-taking Institutions (ADIs) appropriately manage the underlying risks associated with the interest rate environment and their balance sheet positions.

APRA requires ADIs to calculate a capital charge for IRRBB, which differs to other jurisdictions where a simple supervisory add-on to capital may be applied for this risk. By adopting this approach in Australia, APRA promotes greater market discipline and active management of IRRBB. If unmitigated, IRRBB is a material risk to ADIs, where much of their balance sheet is concentrated in housing loans, retail deposits and high-quality liquid assets.

Prudential Standard APS 117 Capital Adequacy: Interest Rate Risk in the Banking Book (APS 117), sets out the requirements that an ADI must meet in managing its IRRBB risk.

Key objectives

APRA's revisions to APS 117 aim to achieve three key objectives:

- **reduce some of the volatility in the IRRBB capital charge**, as has been evidenced through recent market conditions;
- **create better incentives for ADIs in managing their IRRBB risk**, including raising standards of governance and measurement of risk; and
- **simplify and remove complexities in the IRRBB framework,** including incorporating changes from the Basel Committee on Banking Supervision's (Basel Committee) IRRBB standard released in April 2016.

September 2019 consultation

APRA first consulted on proposed revisions to APS 117 with a release of a discussion paper in February 2018. In September 2019, APRA released a response to submissions and a draft revised APS 117 for consultation. This *Response to submissions* paper sets out APRA's response to feedback received to its September 2019 consultation. The key changes following consultation are:

- **application and scope of APS 117**: exclusion of non-significant financial institutions (non-SFIs) from the qualitative requirements of the standard, with Foreign ADIs excluded from the requirements of the standard; and
- **IRRBB capital charge methodology:** made less complex, more risk appropriate and computationally simpler.

New proposed revisions to APS 117

Recently, there has been a marked increase in ADIs' IRRBB capital requirements under the current APS 117, largely driven by the change in interest rate environment and ADIs' balance sheet management strategies and practices. Although APRA considers the current IRRBB framework is working broadly as intended, this volatility in capital requirements does warrant further examination.

As part of this response paper, APRA is consulting on new proposed revisions to APS 117 based on learnings from this recent period. APRA intends the revisions to result in a more stable IRRBB capital charge and does not intend any of these new proposed revisions (in combination), if made, to result in a further increase of the IRRBB capital charge for the industry as a whole.

Alongside the consultation, APRA will be conducting another Quantitative Impact Study (QIS) to better understand the capital impacts of the proposals and will use the results from the QIS as a guide to ensure that the revised APS 117 is calibrated appropriately.

Next steps

APRA intends to finalise the revised APS 117 in mid-2023, with the final revised standard expected to come into effect from 1 January 2025.

APRA's response to issues raised in the September 2019 consultation, as well as other issues raised by ADIs and industry, set out in Chapter 2 of this paper, is considered final.

APRA requests industry feedback on the new proposed revisions, outlined in Chapter 3, by 1 March 2023. This paper and the draft revised Prudential Standard are available on APRA's website at www.apra.gov.au.

Glossary

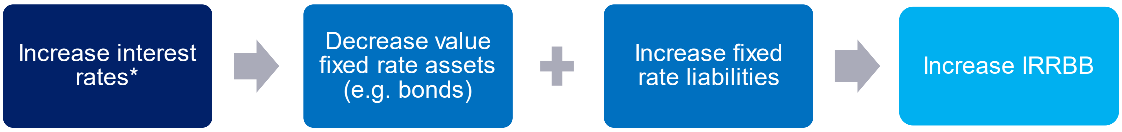
ADI	Authorised Deposit-taking Institution
APRA	Australian Prudential Regulation Authority
APS 117	*Prudential Standard APS 117 Capital Adequacy: Interest Rate Risk in the Banking Book*
Banking book item	An on-balance sheet asset, liability or equity item that is not part of an ADI's trading book, not deducted from an ADI's Common Equity Tier 1 (CET1) capital and not included in an ADI's CET1 capital; or an off-balance sheet position that alters an ADI's exposure to interest rate risk and is not part of the ADI's trading book.
Basel Committee	Basel Committee on Banking Supervision
Basis risk	The risk of loss in earnings or economic value arising from differences between the actual and expected interest margins on banking book items, where 'margin' means the difference between the interest rate on the items and the implied cost of funds for those items.
Calculation date	The date with reference to which an ADI's IRRBB capital requirements is calculated, such that the exposures and observations of interest rates used in the calculation are recorded at the close of business on that day.
Embedded gains and losses	The gain or loss arising from past movements in interest rates that have not been recognised in accounts.
Expected shortfall	An ADI's prospective IRRBB capital charge is the ADI's estimate of a 97.5 per cent expected shortfall of the prospective loss. The percentage expected shortfall is the expected loss conditional on the loss being in the worst 2.5 per cent of potential losses.
Foreign ADI	Has the meaning given in section 5 of the Banking Act.
IRB ADI	An ADI which has been approved by APRA to use the internal ratings-based approach to credit risk.
Non-significant financial institution (non-SFI)	An APRA-regulated entity (ADI) or its authorised non-operating holding company (NOHC) that is not a significant financial institution.
Optionality risk	The risk of loss in earnings or value due to cash flows varying from what an ADI had assumed, caused either by customers exercising stand-alone or embedded options differently from how the ADI had assumed they would, or by the operation of caps, floors and similar mechanisms that automatically adjust interest payments.
Repricing risk	The risk of loss in earnings or economic value caused by a change in the overall level of interest rates. This risk arises from mismatches in the repricing dates of an ADI's banking book items.

Significant financial institution (SFI)	An ADI or authorised NOHC that is not a foreign ADI and has total assets more than AUD 20 billion, or determined as such by APRA, having regard to matters such as the complexity in its operations or its membership of a group.
Standardised ADI	An ADI that only uses the standardised approach to credit risk, to determine its capital adequacy requirements, as the ADI has not been approved by APRA to use the internal ratings-based approach to credit risk.
Value-at-risk (VaR)	The expected maximum reduction of market value that can be incurred under normal market circumstances over a given time horizon or holding period and subject to a given confidence level.
Yield curve risk	The risk of loss in earnings or economic value caused by a change in the relative levels of interest rates for different tenors (that is, a change in the slope or shape of the yield curve). Yield curve risk arises from repricing mismatches between assets and liabilities.

Chapter 1 - Overview

IRRBB is the risk of loss in earnings or a fall in the value of banking book items as a consequence of adverse changes in interest rates. This risk arises primarily from loans, deposits, liquid assets and other market-related instruments (e.g. swaps) used to hedge banking book exposures. ADIs need to effectively manage this risk as part of their ongoing business operations and, where necessary, hold capital to cover potential losses.

Figure 1. IRRBB



* Vice versa for decrease in interest rates

ADIs can mitigate IRRBB by:	If IRRBB is unmitigated:
• hedging via interest rate swaps; • minimising their level of fixed interest rate risk; and • shortening their duration profile.	• changes in interest rates can lead to losses; • it is appropriate to capitalise these losses; and • this gives rise to an IRRBB capital charge.

Prudential Standard APS 117

APS 117 sets out the requirements that an ADI must meet in relation to IRRBB. ADIs are required to have a framework to manage, measure and monitor IRRBB commensurate with the nature, scale and complexity of their operations. IRB ADIs use internal models for determining their IRRBB capital requirements.

APS 117 is being revised to:

- **reduce some of the volatility in the IRRBB capital charge**, as has been evidenced through recent market conditions;
- **create better incentives for ADIs in managing their IRRBB risk**, including raising standards of governance and measurement of risk; and

- **simplify and remove complexities in the IRRBB framework,** including incorporating changes from the Basel Committee on Banking Supervision's (Basel Committee) IRRBB standard released in April 2016.[1]

APRA's review of APS 117 forms part of the broader review of the ADI capital framework, which includes the recently finalised credit and operational risk capital requirements.[2]

September 2019 consultation

APRA first consulted on proposed revisions to APS 117 with a release of a discussion paper in February 2018.[3] In September 2019, APRA released a response to submissions and a draft revised APS 117 for consultation.[4] APRA had planned to finalise the APS 117 reforms in 2020/21 but delayed this to allow ADIs to focus on managing risks associated with COVID-19.[5]

APRA received ten submissions from ADIs and industry bodies on the September 2019 consultation, of which seven were confidential. Submissions were broadly supportive of the proposals but raised some concerns on the application and scope of the standard and the IRRBB capital requirements methodology. APRA has made changes to the September 2019 proposals in these areas in response to submissions.

Table 1 provides a summary of the key revisions made to the draft APS 117 from the September 2019 consultation and how these compare to the current standard.

Table 1. Key revisions to September 2019 consultation

	Current standard	Revisions to the draft APS 117 from September 2019 consultation
Application and scope	All ADIs except Purchased Payment Facility providers (PPF providers)[6]	All ADIs (excluding non-SFIs, Foreign ADIs and PPF providers)
Capital requirements methodology	Sum of Repricing and Yield Curve Risk, Basis Risk, Optionality Risk, Embedded gains and loss (EGL)	Sum of prospective IRRBB capital charge[7], optionality capital charge,

[1] Basel Committee on Banking Supervision, *Interest rate risk in the banking book* (standard, April 2016) <https://www.bis.org/bcbs/publ/d368.htm>.

[2] https://www.apra.gov.au/news-and-publications/apra-finalises-new-bank-capital-framework-designed-to-strengthen-financial and APRA finalises updated prudential standard on operational risk requirements for ADIs | APRA

[3] Discussion paper Revisions to the capital framework for ADIs (apra.gov.au)

[4] Response_to_submissions -_IRRBB for ADIs September_2019 (apra.gov.au) and draft APS 117 Capital Adequacy: Interest_Rate_Risk_in_the_Banking_Book (apra.gov.au)

[5] Information Paper - APRA's Policy Priorities February 2022

[6] IRRBB capital requirements only applicable for internal-model approved ADIs.

[7] Prospective IRRBB capital charge is the maximum IRRBB capital charges at the calculation date or the average of the last three month-ends.

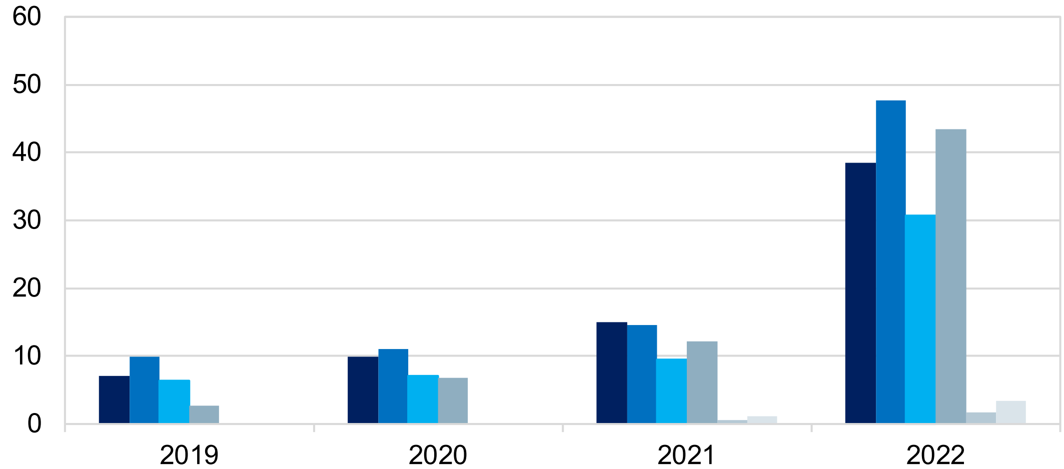
	Current standard	Revisions to the draft APS 117 from September 2019 consultation
		and other applicable charges (add-ons) (For the proposed treatment of EGL, refer to Table 2)
Estimation approach	99% Value-at-Risk (VaR), no prescription on choice of rate shocks scaled to a 1-year holding period	97.5% expected shortfall, 10-day overlapping absolute rate shocks, scaled to a 1-year holding period
Modelling of core deposits	ADIs may use their own repricing assumptions	Balance of core-deposits to be no more than 90% of total deposit balance and subject to meeting balance stability requirements

The revisions are expected to lead to more robust governance requirements and improved prudential outcomes.

New proposed revisions

Historically, IRRBB has been a relatively small component of IRB ADIs' total risk-weighted assets (RWA). However, there has been a marked increase in IRRBB RWA in recent periods (Figure 2).

Figure 2. IRRBB RWA ($billion) – Pillar 3 Disclosures



Note: values are as at June-end across each year

Most of the increase in IRRBB RWA is due to an increase in embedded loss, which is expected to amortise (run-off) over the next 12-24 months.[8] However, the increases in IRRBB RWA are greater than expected, mainly due to the volatility and speed in interest rate movements over the recent period.

APRA considers the current APS 117 IRRBB framework is working broadly as intended, as the increase in IRRBB capital requirements is reflective of an increase in risk, albeit with some degree of volatility which does warrant examination.

Through the practice of earnings "smoothing", APRA has observed that some ADIs have made strategic balance sheet decisions which were favourable in a low interest rate environment and resulted in them acquiring large embedded gains. Now, ADIs are experiencing a reversal of the build-up of those gains (embedded loss). With most of the increase in IRRBB capital requirements attributable to an increase in embedded loss, classifying embedded loss as a capital deduction as per APS 111 would remove the amplification of embedded gains and loss (EGL) that is currently applied to capital.

APRA is also considering further revisions to APS 117 to improve the operation of the IRRBB framework and reduce some of the volatility.

As part of this response paper, APRA is consulting on new proposed revisions to the draft APS 117 that were not included in the September 2019 consultation (**Table 2**).

Table 2. Proposed new revisions to APS 117

	Current standard	Proposed new revisions to the draft APS 117
Embedded gains and losses (EGL)	The IRRBB capital requirements considers EGL, among other inputs	Removal of EGL from the capital calculation in APS 117, with embedded loss instead to be deducted from CET1 capital under *Prudential Standard APS 111 Capital Adequacy Measurement of Capital* (APS 111)
Earnings offset	A 1-year earnings offset is calculated as part of estimating the impact of changes to the economic value of the banking book	No change, however, APRA is considering two options: no change to earnings offset (remain at 1-year) or removing the earnings offset
Stressed period	No stressed period	1-year stressed period
Observation period and data window frequency update	Minimum 6-years and to update the frequency of the observation period on a quarterly basis	8 years, split into the concatenation of a 1-year stressed period and 7-year latest data period. Choice of stressed period and update

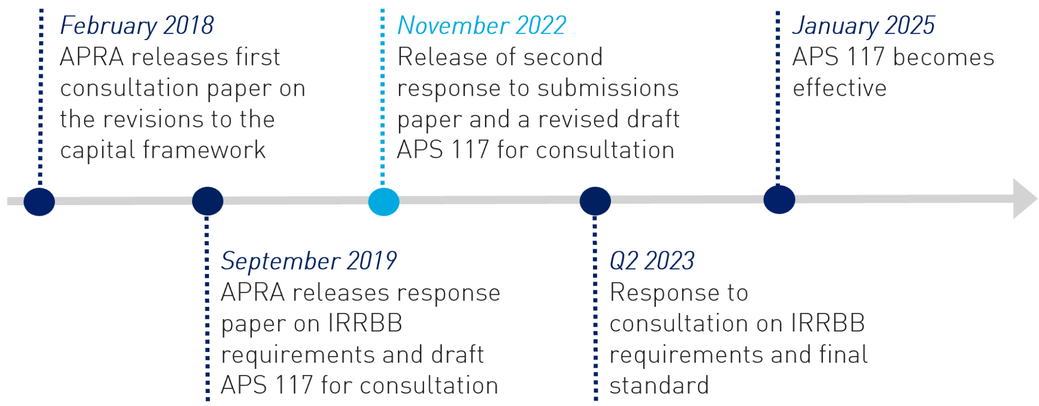
[8] Embedded loss is the difference in the book value of all banking book items minus the economic value of the banking book (vice versa for an embedded gain). The economic value of banking book items is driven by prevailing interest rate curves that have not been recognised in the accounts.

	Current standard	Proposed new revisions to the draft APS 117
		frequency of the latest 7-year data period to be updated annually
Qualitative requirements on banking book profile, including maturity of shareholders' equity	General qualitative requirements on risk management of banking book profile	Specifically require an ADI to have a robust risk management framework and strategy underpinning its choice and use of the maturity of shareholders' equity. An ADI will be required to notify its Board or Board Committee when the ADI materially changes its banking book profile

APRA intends the revisions to result in a more stable IRRBB capital charge and does not intend any of these new proposed revisions (in combination), if made, to result in a further increase of the IRRBB capital charge for the industry as a whole.

Timeline

Consultation on the new proposed revisions will mean the final revised APS 117 will now be delayed by one year, being released in the second quarter of 2023, with an effective implementation date of 1 January 2025. This will mean the implementation date on revised prudential standards for market risk will be pushed out by a further 12 months to 1 January 2026.[9]



[9] The Basel Committee's fundamental review of the trading book (FRTB) will be implemented by APRA through a revised *Prudential Standard APS 116 Capital Adequacy: Market Risk*. The Basel Committee also released a revised version of the Credit Valuation Adjustment (CVA) risk framework, which will be implemented by APRA through a revised *Prudential Standard APS 180 Capital Adequacy: Counterparty Credit Risk* (APS 180). APRA will consult on the proposed revisions to these standards in 2023/24.

Chapter 2 - Response to submissions

This chapter outlines the changes to APS 117 in response to submissions, following consultation in September 2019 and other issues.

2.1 Application and scope of APS 117

In its September 2019 consultation, APRA proposed that APS 117 apply to all ADIs except PPF providers. All ADIs except PPF providers would have to comply with the qualitative requirements of the standard, including *APS 117 Attachment A – IRRBB management framework and governance*. Only IRB ADIs are subject to the capital requirements, set out in *APS 117 Attachment B – Approved IRRBB models*.

Comments received

Several submissions requested the exclusion of Foreign ADIs (foreign bank branches) from the standard, due to their short-dated asset profiles and the imposed cost and regulatory burden given the scale and complexity of their IRRBB risk profile. Some submissions raised concerns of the qualitative requirements of the standard, and whether these were fit-for-purpose for small ADIs.

APRA's response

APRA considers it appropriate to exclude Foreign ADIs from APS 117. IRRBB risk is not considered material for Foreign ADIs who typically have short-dated asset profiles, substantially rely on head office for funding and are subject to home supervisor requirements.

APRA is also excluding non-SFIs from the scope of the standard to align with the approach to proportionality used in other standards. This means that these ADIs will be excluded from the qualitative requirements of the standard and Attachment A will only apply to IRB and standardised ADIs that are designated significant financial institutions (SFIs). However, APRA will retain the ability to 'carve in' select small ADIs i.e. those that are non-SFIs, to certain requirements of the standard and Attachment A if it considers that these ADIs are not appropriately managing, measuring or monitoring IRRBB or have excessive risk relative to the nature, scale and complexity of the ADI's IRRBB risk profile and operations.

All ADIs are subject to *Prudential Standard CPS 220 Risk Management* and as such are still required to appropriately manage their IRRBB risk in a proportionate way relative to their scale and complexity. Prudential reporting requirements continue to be required to monitor potential IRRBB risk.[10]

[10] All ADIs are currently required to provide APRA with balance sheet repricing profile information under *Reporting Standard ARS 117.0 Repricing Analysis* (ARS 117.0). APRA will commence consultation on revised reporting standards for IRRBB in 2023.

2.2 Capital requirements methodology

The major part of an ADI's IRRBB capital charge is an estimate, based on a partly APRA-prescribed method, of the potential severe adverse loss of economic value from changes in interest rates and customer behaviour. As part of the methodology, APRA proposed several constraints within the estimation methodology to reduce variability in IRRBB capital outcomes across ADIs.

The September 2019 draft APS 117 proposed that the risk factor shock methodology requires ADIs to calculate 5-day overlapping shocks with an adjustment to de-mean shocks (scaled to a 1-year holding period). It also proposed that the IRRBB capital charge be calculated by selecting the most adverse loss vectors across each of the three (central, shorter, longer) repricing scenarios before calculating the 97.5 per cent expected shortfall.

Comments received

A number of submissions commented that some constraints were unduly complex and imposed unnecessary computational burden and cost for little added benefit. These constraints related to the risk factor shock methodology and the application of repricing assumptions in the capital charge methodology.

APRA's response

In response to the feedback, APRA is adjusting and simplifying the methodology. APRA is changing the risk factor shock methodology to use 10-day (rather than 5-day) overlapping shocks (scaled to a 1-year holding period) as well as removing the requirement to de-mean shocks. Moving to a 10-day holding period is expected to result in a less volatile overall IRRBB capital charge with the removal of the de-mean requirement resulting in a simpler calculation that better reflects observed market movements and profit or loss outcomes, whilst also removing unnecessary computational burden.[11]

In addition, APRA has further modified the IRRBB calculation methodology requiring ADIs to calculate IRRBB capital by applying the most adverse 97.5 per cent expected shortfall across each of the three scenarios (central, shorter, longer) rather than using the most adverse loss vectors across the scenarios. The application of the three repricing scenarios in the IRRBB capital charge methodology has been revised to be less complex, computationally simpler whilst also reducing undue conservatism in the IRRBB capital charge calculation.

2.3 Core deposits

APRA proposed that the definition of core deposits align with the definition of stable or operational deposits in *Prudential Standard APS 210 Liquidity* (APS 210). APRA also proposed that the balance of core deposits is expected to be no more than 80 per cent of the total deposit balance for modelling purposes.

[11] The holding period relates to the time horizon of interest rate shocks applied to banking book items.

Comments received

Submissions raised concerns over the appropriateness of the APS 210 definition for IRRBB modelling purposes, as the definition excludes deposits that are not interest rate sensitive. Some submissions requested that the balance of core deposits should be increased to 90 per cent, to provide more flexibility for ADIs to apply their own behavioural modelling assumptions.

APRA's response

APRA considers it appropriate to change the definition of core deposits in APS 117 to better reflect IRRBB repricing characteristics, given APS 210 focuses on liquidity risk rather than interest rate risk. This change restricts core deposits to the intended types of stable, non-interest-rate-sensitive products and provides an incentive for ADIs to hedge relevant portfolios, thus reducing volatility. APRA has also modified the core deposit balance threshold from 80 per cent to 90 per cent to provide more flexibility for ADIs to apply their own behavioural modelling assumptions. As a result, this allows ADIs to further spread out the fixed interest rate gap risk of core deposits over a 5-year tractor, which in turn should result in a less volatile IRRBB capital charge.

2.4 Securitisation

Under the existing APS 117, all securitisations (e.g. residential mortgage-backed securities (RMBS)) are treated as market-related, for which an ADI must calculate spread risk in the banking book.[12] APRA did not propose any change to this requirement.

Comments received

Several submissions requested their own RMBS should be treated as non-market related, in order not to model spread risk on them.

APRA's response

APRA considers it appropriate to allow a look-through approach for funding-only and self-securitisation, but not capital relief securitisation. This will remove the requirement to calculate spread risk on funding-only and self-securitisation. For funding-only and self-securitisation, the originating ADI applies the prudential treatment as if the securitisation has not occurred. For capital relief securitisation, where most if not all RMBS is held by third parties and the securitisation is treated for prudential purposes as a third-party vehicle, APRA considers it appropriate that an originating ADI treat any holdings it retains just like any other security i.e. as market-related. Consequently, ADIs can treat securitisations (for IRRBB purposes) in the same way an ADI treats them for Credit Risk (APS 112 and APS 113) and consistent with the definitions within APS 120. The securitisations, funding-only and self-securitisation, are still to be classified as market-related, although no spread risk is to be calculated on them.

[12] Spread risk is the risk of adverse mark-to-market valuation changes due to changes in the interest rates in an economy not all moving in parallel with one another.

2.5 Classification of market and non-market related items

As part of the September 2019 consultation, APRA set out a taxonomy of banking book items in the draft revised APS 117. The top-level split items into market-related (MR) and non-market-related (NMR) items, with different modelling treatments applying to the two types.

Comments received

Several submissions requested APRA remove the linkage of MR and NMR items to hedge accounting and the accounting definitions for hedge effectiveness to avoid the risk of regulatory uncertainty and unintended consequences from future changes to the accounting standards. Some submissions instead requested APRA link the definition of effective hedge relationship to the ability to demonstrate an economic hedge and allow ADIs to determine which type of derivatives should be eligible to be modelled as an NMR item.

APRA's response

APRA considers it appropriate to remove the linkage of MR and NMR items to the hedge effective designation under the accounting standards in APS 117. This will provide ADIs more flexibility to appropriately assign items as MR or NMR. This means ADIs may designate derivatives as NMR regardless of the accounting determination of hedge effectiveness. In particular, an ADI can designate an item as NMR if the item is in an effective hedge relationship with an NMR item. As such, APRA has revised the definitions of MR and NMR items to appropriately reflect this.

However, APRA expects each ADI to make classifications consistently over time and to be supported by documentation for each hedge relationship, and its measure of effectiveness. An ADI that wishes to change the way that it makes classifications will need to obtain APRA approval, as a formal model change. In determining model approvals, APRA will seek to maximise consistency between ADIs in how they make those classifications. APRA will also seek to ensure that ADIs do not make classifications that lead to them not modelling certain important risks such as single-currency basis risk, where those risks arise.

2.6 Modelling of non-market related items

In its September 2019 consultation, APRA proposed that for each currency to which an ADI has material exposures, the ADI must identify and collect data to enable modelling of a single, maturity-indexed, collection of risk factors. This is the NMR curve for the currency.

Comments received

Some submissions recommended that APRA adopt a more flexible framework or principles-based approach rather than being prescriptive for non-market related items. For example, by requiring any deviations from a single curve approach to be APRA-approved as part of the accreditation process to allow ADIs to use multi-curve modelling of NMR items where it is appropriate for this risk.

APRA's response

APRA does not consider the use of multiple curves as reasonable for NMR items. For each currency to which an ADI has a material exposure, the ADI must use a single NMR curve for that currency. However, for currencies to which an ADI has non-material exposures, it may be appropriate in exceptional circumstances for an ADI to use more than one NMR curve per currency. This is to cater for exceptional circumstances where an ADI may not be able to group non-material exposures to one single NMR curve. This requirement will be subject to APRA's approval.

2.7 Liquid asset portfolio

In the September 2019 consultation, APRA requested ADIs' views on a potential requirement for uniformity of where ADIs placed their liquid asset portfolios – the requirements to either place it in the banking book or trading book.

Comments received

One submission favoured requiring ADIs to place the portfolio in the banking book, while others preferred to have no specific rule. No submissions expressed a wish for APRA to require ADIs to place the relevant portfolios in the trading book.

APRA's response

APRA has decided to continue with its current practice of having no specific requirement in APS 117 regarding the placement of liquid asset portfolios.[13] However, APRA may, as a condition of continuing approval of a particular model, set requirements regarding placement, if it sees that as necessary in a particular situation in order to prevent regulatory arbitrage.

2.8 Other APS 117 changes

APRA has also made a number of other changes to APS 117 to incorporate feedback from submissions, as outlined in Table 3 below.

Table 3. Other APS 117 changes

Issues	Reference to draft revised APS 117 - September 2019 version	APS 117 changes
Regular model testing	Attachment A, paragraph 34	APRA has removed the requirement that the model testing process must include a regular comparison of actual loss to prior model estimates to ensure

[13] *Prudential Standard APS 116 Capital Adequacy: Market Risk* (APS 116) sets out conditions for items to be included in the trading book compared to the banking book in. As such, APRA does place some restrictions on how ADIs are to specify exposures across banking and trading books in standards other than APS 117.

Issues	Reference to draft revised APS 117 - September 2019 version	APS 117 changes
		reasonableness. The comparison to model estimates raises an issue when using expected shortfall model estimates (draft revised APS 117) compared to when using the VaR framework (current APS 117). APRA has replaced the wording to a more general description that achieves the desired outcome of performing model testing against actual loss.
Non-market-related items	Attachment B, paragraph 10	APRA has undertaken minor wording edits to ensure that an ADI may, with APRA's approval, treat multiple items arising from different products as a single item e.g. allow the stable balance of a part of a portfolio of bonus interest accounts that forfeits the extra interest as a core deposit.
Interest rate data	Attachment B, paragraphs 11, 12 and 13	APRA have removed the requirement that the logarithm of a stochastic process must be used for processes that can never attain negative values (e.g. implied volatility). The intention is to be 'principles-based' and allow ADIs to make the choice as being overly prescriptive could have unintended consequences in different interest rate environments. APRA has also narrowed the requirements of the relevant paragraph to ensure that an ADI must analyse and collect data to enable modelling of all non-issuer specific risk factors.
Calculation of prospective capital charge – NMR items	Attachment B, paragraph 19	APRA has modified a sentence to ensure that the notional cash flows in the pre-shock and post-shock economic values (EVs) are the same, other than for items under Attachment B, paragraph 35 or for items which feature contractual notional resetting. This addition caters for principal resetting cross-currency swaps that qualify as NMR items (via being a hedge) as the notional cash flows would differ between pre- and post-shock scenarios as forward FX rates move as derived rates in response to interest rate perturbations. The addition also caters for items that have embedded caps and floors.
Calculation of prospective capital charge – NMR items	Attachment B, paragraph 20	APRA have included a sentence for the avoidance of doubt that where a counterparty to an item, including an ADI customer, may exercise a choice in relation to the item, the ADI must assume the counterparty will exercise the choice in a way that is most adverse to the ADI.
Additional Optionality Risk	Attachment B, paragraph 36	APRA have modified the first sentence of the paragraph to ensure that ADIs are measuring the

Issues	Reference to draft revised APS 117 - September 2019 version	APS 117 changes
		additional optionality risk at inception and at least annually.

2.9 Other issues

2.9.1 Capitalisation of spread risk for public bonds

On 10 September 2021, APRA announced the phase-out of the RBA's Committed Liquidity Facility (CLF) by end-2022. For IRRBB, this highlighted the requirement to capitalise the 'open' risk of adverse mark-to-market valuation changes due to changes in the interest rates in an economy not all moving in parallel with one another.

Industry raised with APRA a concern of what it considered a misalignment between the regulatory and economic incentives in the IRRBB capital framework. In particular, that banks are required to hold capital for public bonds (and respective asset swaps) when purchasing Australian Government Securities (AGS) and semi-government bonds (semis) is beneficial for the economy in times of stress.

APRA consider it appropriate to include spread risk in the IRRBB framework to cover for the mark-to-market risk of the exit price of the bonds, as well as the hedging derivatives. APRA also expects ADIs to make strategic balance sheet decisions on their composition of HQLA (AGS, semis) during 'normal' market conditions to ensure that in times of stress, the ADI is able to use built-up capital to absorb losses.

Chapter 3 - New proposed revisions

As part of this response paper, APRA is consulting on new proposed revisions to APS 117 that were not included in the September 2019 consultation. IRRBB is sensitive to an increase in the level, volatility, and speed of interest rate movements, and it is a combination of these three factors that can exacerbate the volatility in an ADI's IRRBB capital charge.

The new proposed revisions are designed to reduce volatility in the IRRBB capital charge calculation as well as creating better incentives for ADIs in managing their IRRBB risk. APRA will be separately issuing a Quantitative Impact Study (QIS) to impacted entities, with the results of the QIS informing the appropriate level of calibration.

3.1 Embedded gains and loss

Under the current APS 117, embedded gains and loss (EGL) is an input in the IRRBB RWA calculation. APRA is proposing to remove EGL from APS 117, with embedded loss to be treated as a regulatory adjustment i.e. a CET1 capital deduction under APS 111. The RWA calculation is broadly predicated for capitalising unexpected losses whereas deductions are for expected losses. As such, it is more appropriate for embedded loss to be captured within APS 111 instead.

The proposal should provide for a more stable IRRBB capital charge, by removing the amplification that is currently applied to EGL as an RWA. This proposal is intended to create better incentives in the IRRBB RWA framework to better shape the behaviour of ADIs' balance sheet management and practices to a change in interest rate environment. This proposal also provides greater alignment to the Basel Committee's approach to EGL, which only recognises embedded loss.

To give effect to the proposed capital treatment of embedded loss, Attachment D of APS 111 will be amended to include a requirement for an ADI to deduct from CET1 capital, at both Level 1 and Level 2, the sum of the differences of the book value and economic value of each banking book item, unless the embedded loss has been written off to the ADI's profit or loss. If the embedded loss is negative (i.e. embedded gain), the regulatory adjustment must be set to zero.

Currently, an ADI is required under Attachment D of APS 111 to eliminate from its CET1 capital the amount of any cash flow hedge reserve that relates to the hedging of items not recorded at fair value on its balance sheet. Attachment D of APS 111 also requires net deferred tax assets (net DTA) to be deducted from CET1 capital.

To clarify, where an ADI eliminates amounts in its cash flow hedge reserve associated with losses on derivatives (to hedge IRRBB) from its CET1 capital under these provisions, it may also eliminate the associated tax effects when calculating its net DTA deduction, eliminating any potential for double counting of tax effects with the embedded loss. APRA would also be interested in any feedback from industry on any wider implications of this clarification beyond losses on derivatives to hedge IRRBB.

3.2 Earnings offset

Under the current APS 117, an earnings offset is calculated as part of estimating the impact of changes to the economic value of the banking book. The earnings offset is an adjustment for the impact of interest rate changes on economic-value based earnings over a one-year holding period. The earnings offset is the economic value, as at the beginning of the holding period, of a notional portfolio of fixed-for-floating interest rate swaps. For example, an interest rate increase will generally reduce the economic value of the banking book, but economic-value based earnings will be higher for the period from the increase date to the end of the holding period.

APRA has observed that the current setting of a one-year earnings offset does not bear any material outcome on ADIs' choice of banking book profile or balance sheet management strategy. Rather, earnings offset provides a benefit to IRRBB capital requirements. As such, APRA views the earnings offset as a calibration component within the IRRBB capital calculation.

APRA is seeking feedback from industry on two options for this item.

Option 1: No change to the current treatment of a one-year earnings offset	Option 2: Removal of the one-year earnings offset
• No change to the current treatment of earnings offset provides ADIs with an IRRBB capital benefit that reflects the increased earnings that are incurred on banking book items due to interest rate movements.	• The removal of earnings offset removes incentives in APS 117 for an ADI to set a specific choice of the maturity of shareholders' equity to best achieve IRRBB capital stability. • This option would require deletion to paragraph 30 of Attachment B to APS 117 and removal of the reference to the "augmented" banking book in paragraph 18 of Attachment B.

3.3 Stressed period

APRA is proposing to demarcate the 8-year observation period into the concatenation of a 1-year stressed period and a 7-year latest data period. The choice of stressed period is the period that would give rise to the highest prospective IRRBB capital charge based on an ADI's current banking book portfolio composition.

APRA is proposing that ADIs assess the appropriateness of the choice of stressed period at least annually. If the ADI changes the choice of stressed period, they must notify and provide supportive analysis to APRA justifying the reasons for the change.

The inclusion of a 1-year stressed period within the 8-year observation period is envisaged to reduce the volatility in an ADI's IRRBB capital charge. APRA considers a 1-year stressed period as theoretically sound, given that most interest rate stresses are typically contained within a 1-year time horizon, and expects that most of the stressed period will dominate the 97.5 per cent expected shortfall tail and IRRBB capital outcome.

3.4 IRRBB observation period and data frequency update

The current APS 117 requires ADIs to update the frequency of the observation period on a quarterly basis.

APRA considers having a 1-year stressed period within the 8-year observation period lends support to reducing the data frequency update from quarterly to annually. As such, APRA is proposing that the 8-year observation period be updated annually.

APRA expects the stressed period to dominate the 97.5 per cent expected shortfall tail and IRRBB capital outcome. As such, reducing the data frequency update to an annual basis should reduce an ADI's operational and computational burden, without any material difference in IRRBB capital outcomes. The annual frequency data update is also intended to reduce the quarter-to-quarter volatility in the IRRBB capital charge due to movements in interest rates. As such, quarterly movements in expected shortfall and corresponding IRRBB capital outcomes will be due to changes in portfolio position (size and composition) rather than reflecting volatility due to market movements.

However, APRA is proposing to caveat this proposal with the requirement that if an ADI materially changes their banking book profile (including their choice of the maturity of shareholders' equity), then the ADI must immediately update the 8-year observation period. At the time of the update, the ADI must also perform an assessment of the choice of stressed period and notify APRA as well as providing supporting analysis of the outcome.

3.5 Banking book profile

An ADI's choice of the maturity of shareholders' equity, or component thereof, and balance sheet management decisions have a material impact on an ADI's IRRBB exposure, and thus capital charge. As such, APRA proposes to strengthen some of the qualitative requirements in Attachment A of the standard to enhance the governance, oversight, risk management and controls on ADIs' choice of the maturity of shareholders' equity.

Where an ADI implements a strategy that includes an assumption for the maturity of shareholders' equity, APRA proposes to require the setting of a choice of the maturity to be seen as a strategy that is set and approved by the ADI's senior management, consistent with the risk appetite for IRRBB set by the Board, and not just seen as an assumption that ADIs set. An ADI's senior management function is to inform the Board or relevant Board Committee of this strategy with the ADI's risk management function to provide constructive challenge of this strategy as well as effectively assessing whether the performance and risk of this strategy is adequately measured and monitored.

APRA expects that ADIs set appropriate risk metrics and internal measures that appropriately capture the risk of loss on the maturity of shareholders' equity portfolio, with performance outcomes tracked over time and reported to senior management and the Board or relevant Board Committee at an appropriate frequency.

Chapter 4 - Consultation

4.1 Request for submissions

APRA invites written submissions on the proposed new revisions to APS 117 outlined in Chapter 3 of this paper.

Written submissions should be sent to ADIpolicy@apra.gov.au by 1 March 2023 and addressed to the General Manager, Policy, APRA.

Following review of feedback and submissions received, APRA plans to finalise the standard in mid-2023 and release a draft prudential practice guide covering IRRBB for consultation.

4.2 Request for cost benefit analysis information

APRA requests that all interested stakeholders use this consultation opportunity to provide information on the compliance impact of the proposed changes and any other substantive costs associated with the changes. Compliance costs are defined as direct costs to businesses of performing activities associated with complying with government regulation. Specifically, information is sought on any increases or decreases to the compliance costs incurred by businesses as a result of APRA's proposal.

Consistent with the Government's approach, APRA will use the methodology behind the Regulatory Burden Measurement Tool to assess compliance costs. This tool is designed to capture the relevant costs in a structured way, including a separate assessment of upfront costs and ongoing costs. It is available at: https://rbm.obpr.gov.au/home.aspx.

Respondents are requested to use this methodology to estimate costs to ensure that the data supplied to APRA can be aggregated and used in an industry-wide assessment. When submitting their cost assessment to APRA, respondents are asked to include any assumptions made and, where relevant, any limitations inherent in their assessment.

Feedback should address the additional costs incurred as a result of complying with APRA's requirements, not activities that entities would undertake regardless of regulatory requirements in their ordinary course of business.

Important disclosure notice — publication of submissions

All information in submissions will be made available to the public on the APRA website, unless a respondent expressly requests that all or part of the submission is to remain in confidence. Automatically generated confidentiality statements in emails do not suffice for this purpose. Respondents who would like part of their submission to remain in confidence should provide this information marked as confidential in a separate attachment.

Submissions may be the subject of a request for access made under the *Freedom of Information Act 1982* (FOIA). APRA will determine such requests, if any, in accordance with the provisions of the FOIA. Information in the submission about any APRA-regulated entity that is not in the public domain and that is identified as confidential will be protected by section 56 of the *Australian Prudential Regulation Authority Act 1998* and will therefore be exempt from production under the FOIA.