



**RESERVE
BANK**

O F N E W Z E A L A N D
T E P Ū T E A M A T U A

The calculation of risk weighted assets – Response to submissions

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Summary

The Reserve Bank recently [consulted](#) on proposals to reform the way banks calculate risk weighted assets ('RWA'). This paper provides a high-level summary of submissions and our responses to submissions; individual submissions can be found on the Reserve Bank [website](#).

After considering the feedback provided in submissions the Reserve Bank has made five in-principle decisions. These are:

- the capital framework will continue to permit qualifying banks to use internal models to estimate credit-risk related RWA (the 'IRB' approach), although there will be more restrictions on modelling;
- the IRB approach will not be permitted for any credit exposure with an external rating (for example, sovereigns, banks, some large corporates);
- there will be a RWA floor imposed on IRB models. This floor will be a proportion of the equivalent standardised calculation RWA value;
- all banks will calculate the RWA arising from operational risk in the same way, using the Basel Standardised Measurement Approach; and,
- IRB banks will be required to report RWA (and associated credit ratios) calculated using the standardised approach alongside those arising from the IRB approach ('dual reporting').

The Reserve Bank expects to consult stakeholders next year on the details of these decisions, when we consult on redrafts of the Handbook (BS2A and BS2B).

The next phase of work in the Capital Review is the Quantitative Impact Study (QIS), which will inform our analysis of the potential costs and benefits of the in-principle decisions made thus far. The QIS will be followed by a further public consultation with a focus on setting the ratios used by banks to calculate minimum capital requirements.

Overview

1. Banks' 'risk weighted assets' or RWA values are a key part of the regulatory capital framework. This is because the minimum capital required of a bank is a fixed percentage of the bank's aggregate RWA value.
2. The RWA calculation produces a value for the losses a bank might incur in three areas: credit risk, operational risk and market risk. The credit risk component relates to losses due to borrower defaults or the non-payment of interest. The operational risk component relates to losses arising from business-related shocks (for example, major IT failures). Market risk captures the losses a bank may incur due to changes in interest rates and exchange rates (and other market variables).
3. Banks that meet certain criteria are currently permitted to use an 'internal models' approach when calculating RWA ('IRB' banks). This means the credit risk component, and the operational risk component, are estimated using loss probability models (the 'internal ratings-based approach' or 'IRB' in the case of credit risk, and the 'advanced measurement approach' or 'AMA' in the case of operational risk). A standard formula, applied in common with other banks, is used to calculate the market risk component. At present only the four largest banks are IRB banks.
4. Other banks use a 'standardised' approach to calculating the credit risk and operational risk components of RWA. These banks convert on- and off-balance sheet credit exposures into RWA values by applying RBNZ-set scalars ('risk weights'), and apply a standard formula to balance sheet and income statement items to calculate operational risk. These banks use the same formula as the IRB banks when it comes to calculating market risk.
5. In December 2017 the Reserve Bank released a [paper](#) for public consultation that outlined possible reforms to the calculation of RWA. These proposals were predominantly about RWA modelling. Various options for constraining the use of credit risk models were proposed. These ranged from the *status quo*, through to requiring the IRB banks to use the standardised approach for specific credit exposures, and finally requiring all banks to use the standardised approach across the entire credit portfolio.
6. Another credit-risk related proposal was similar in nature to a policy adopted recently by the Basel Committee on Banking Supervision (the 'Basel Committee') – tying the internally modelled credit risk RWA to a set percentage of the credit risk RWA value that would arise if the risk weights set for standardised banks applied (a policy known as the 'output floor').

7. The paper also outlined possible reforms to the calculation of operational risk capital. These included no longer allowing modelling in this area, but to require all banks to use a standardised approach for operational risk (rather than allowing some banks to use the AMA approach).
8. In addition, the paper proposed requiring the IRB banks to report RWA calculated using both the internal model approach and the standardised approach ('dual reporting').
9. The consultation period ended on 19 March 2018. Nine submissions were received in response to the paper. Relatively few submissions were received from standardised banks. In addition, 22 submissions were provided in response to an earlier consultation paper (the "Issues Paper") and these included responses that related to the calculation of RWA.
10. The purpose of this paper is to provide a response to the feedback provided by submitters to both papers and to outline next steps for the Capital Review.
11. Our aim in this paper is not to describe in detail the views of each submitter, but to extract and respond to what we understand to be the key views expressed by submitters. Most of the individual submission provided to the Reserve Bank are available from the Reserve Bank's website (one bank requested that its submission be withheld).
12. By way of a general response to submissions, the Reserve Bank holds the view that there are potentially net benefits in allowing qualifying banks to model credit-related RWA. However, we continue to believe that credit risk models need to be constrained more in the light of our experience with the IRB framework. This is consistent with the view about internal models held by the Basel Committee and many overseas regulators.
13. In-principle decisions about externally-rated exposures, the output floor and operational risk are all steps to achieve greater constraint on models, a more level playing field amongst IRB banks and between standardised and IRB banks, and confidence in the IRB framework. As well, the Reserve Bank believes that dual reporting will bring much needed improvements in transparency, and hence market discipline, in the case of banks permitted to model RWA.
14. We note that, at this stage, we are outlining five key in-principle decisions about the capital framework, and make the following points:
 - First, these are essentially framework design decisions, rather than calibration decisions. For example, we have decided that the framework should include an output floor on capital for IRB banks that is calibrated against the standardised framework: we are not making any decisions at this point about

what level to set the floor. We need more data from the banks in order to assess the appropriate calibration.

- Second, the next step in the Capital Review will be to conduct a Quantitative Impact Study (QIS), and this requires in-principle decisions to be made about the framework. For example, in order to estimate IRB bank capital costs a decision had to be taken as to whether externally-rated exposures will be subject to the standardised approach. Similarly, in order to estimate transitional and steady-state operational costs, an in-principle decision about dual reporting was required. In order to gather useful data, for the purpose of the QIS, we may need to make further specific calibration assumptions about key features of the in-principle capital framework (all changes to the proposed capital framework will be consulted on in due course).
- Third, the Reserve Bank sees these five in-principle decisions as a package that can assist in addressing concerns raised by some submitters that are not the focus of this paper. For example, IRB banks are concerned about the operational efficiency of the internal model approval process, in that they would prefer the Reserve Bank to be less interventionist with respect to the design and capital output of models, and more efficient at processing model approvals. Most of the in-principle decisions being announced in this paper – dual reporting, output floors, standardising externally-rated exposures, and removing the internal modelling of operational risk – are of the nature of risk mitigants to replace, to some extent, the more direct and time-consuming interventions that are currently central to the model approval process.¹

15. Steps will be taken to progress the in-principle decisions over the course of 2018 and 2019, in a process that will be consultative and iterative. As well, public feedback will be sought on the minimum capital ratio settings, targeted for Q4 2018.

The feedback provided by submitters and our response

Issue 1: Global standards

16. The bank capital regime in New Zealand does not exist in a void. The starting point is the set of global standards ('Basel III') promulgated by the Basel Committee, and then, given the dominance of Australian banks in the New Zealand system, the Australian regime administered by the Australian Prudential Regulatory Authority (APRA). In practice, most regulators adapt the global standards to reflect local conditions i.e. the international standards are the starting point. The result is not a single, synchronised international framework, but rather country-specific frameworks that reflect underlying minimums and common themes set out by the Basel Committee.

¹ There will be further work and consultation on the details of changes to the model approval process in due course.

17. The Basel Committee announced a number of reforms to the international standards in December 2017 and more recently APRA has also released reform proposals for consultation, building on the international reforms.
18. Most submitters were in favour of harmonising New Zealand's capital framework with either the newly revised Basel III standards or APRA's framework (to the extent APRA departs from Basel III). The potential advantages of harmonisation cited by submitters included administrative efficiencies for banks and regulators (given the Trans-Tasman nature of New Zealand's IRB banks), and the potential for a greater understanding of the New Zealand framework among external observers including ratings agencies, creditors and investors.
19. There would be marginal operational efficiencies of aligning with APRA for the large banks, although these would be a cost for the standardised banks. On the other hand, a broad adoption of the APRA framework is a significant undertaking, and there are New Zealand-specific circumstances that have driven the design of, for example, asset classes in the New Zealand framework. Moreover, APRA is in the midst of its own broad ranging capital review.
20. The Basel reforms have been set at quite a high level, with few detailed prescriptions (leaving jurisdictions free to apply the standards in ways that are locally appropriate). In contrast, APRA's reform proposals are quite detailed (for example, requiring new commercial property models). Submitters' feedback on the benefits of alignment with APRA was more of the nature of in-principle support, rather than feedback on APRA's detailed reform proposals. Hence, it is not clear from the submissions whether the sector supports all of the reforms proposed by APRA. As explained later in the paper, once APRA finalises its proposals the Reserve Bank plans to assess whether or not to adopt the detailed reforms and may seek further, more detailed, feedback from submitters.
21. It is worth commenting on the concept of 'harmonisation' in the context of Basel III. The Basel standards are minimum requirements, and the Basel Committee expects countries to take local circumstances into account when designing capital regimes, applying conservatism as and when appropriate (and, in some limited circumstances, applying "national discretion" that is allowed within the Basel framework to be less conservative than the international standards). This makes the concept of 'harmonising with Basel' less clear-cut than it may appear at first.
22. In their guidelines on the Regulatory Compliance Assessment Programme (used to assess countries application of the Basel standards) the Basel Committee notes:
- "Domestic measures that strengthen the minimum requirements are fully in line with the nature of the international agreements, which are intended to set minimum requirements, and will therefore be considered as compliant."

23. That is, countries can be more conservative than the Basel minima and considered to be compliant with Basel standards. Similarly, they can choose to exercise some of the prescribed areas of “national discretion” within the Basel framework to be less conservative if certain conditions are met. This leads the Reserve Bank to believe that ‘compliance with the Basel capital standards’ can really only mean harmonisation of the framework in the broadest sense, and this makes the arguments against applying New Zealand-specific conservatism somewhat tenuous.
24. Illustrating this point, the 2017 International Monetary Fund assessment of New Zealand’s compliance with the Basel standards concluded:
- “The capital adequacy framework is, in substance, aligned with international standards, with a simple and conservative bias. Departures from the Basel framework (leverage ratio, Pillar 2, Pillar 3, SIFI surcharges) can be considered examples of regulatory policy choices tailored to national circumstances.”²
25. The Reserve Bank plans to continue to take a pragmatic approach, using the Basel Committee’s new standards as a base, adding New Zealand-specific variations when warranted. When APRA makes final decisions these will be considered closely, although at this stage these are not expected for a year or so.
26. The in-principle decisions to introduce an output floor, require dual reporting and to standardised operational risk all reflect December 2017 Basel reforms (these decisions are explained in more detail below), and could accommodate further subsequent alignment with the details of the APRA framework once finalised.

Issue 2: Should models be permitted at all?

27. There are potential benefits from allowing qualifying banks to model RWA. For example, allowing banks to distinguish between low risk and high risk credit exposures within an asset class means there is no capital penalty for investing in low risk assets.³ As well, some argue that allowing banks to use models to calculate RWA encourages them to invest in better risk management systems than they otherwise would.
28. However there are also potential disadvantages in allowing banks to model RWA. A common finding in the literature is that different IRB banks’ models will often assign significantly different risk estimates to the same underlying set of obligors. The Reserve Bank’s benchmarking exercise of a portfolio of identical, hypothetical dairy

² Page 213 of <http://www.imf.org/~media/Files/Publications/CR/2017/cr17120.ashx>

³ A complaint often aired about the standardised approach is that, when the regulator-imposed risk weight is applied to an asset class, the same amount of capital has to be held for low risk and high risk credit exposures within that asset class, discouraging banks from making low-risk, low-return loans.

farm borrowers provided evidence to support these findings in the New Zealand context.⁴

29. Moreover, the limited availability of detailed historical credit loss data, particularly covering an economic cycle that includes a severe downturn, makes it difficult to produce model outputs that are sufficiently conservative to be consistent with the statistical assumptions underlying the IRB framework. Without this data history, banks' models may understate the full credit risk in their portfolios and may require regulatory overlays to maintain appropriate levels of capital. This is particularly the case in New Zealand, as the Reserve Bank does not view the 2008-2009 recession as being severe for the purposes of banks' internal modelling. Similar issues arise in operational risk modelling, where there are few historical examples available to model the impact of low probability, high severity operational risk events.
30. The *potential* for qualifying banks to underestimate RWA is related to incentives. Qualifying banks arguably face an incentive to "engineer" as low a RWA value as possible, as this reduces the amount of capital they are required to hold for regulatory purposes
31. Views among submitters varied widely as to the benefits of allowing risk modelling in the capital regime. Some submitters said being allowed to model RWA gave the large four banks an unjustified competitive advantage. These submitters said the major retail credit portfolios of the big four are unlikely to be materially different in terms of risk than those held by the standardised banks, but the big four are required to hold less capital than standardised banks because the IRB models deliver a low RWA value.⁵ Some submitters also argued that the IRB approach introduces unnecessary complexity and opacity into the capital framework.
32. The IRB banks emphasised the potential benefits of permitting models, as described above.
33. The Reserve Bank acknowledges that there are both potential advantages and disadvantages to a framework that includes IRB modelling. In particular, the Reserve Bank notes: the additional risk-sensitivity that IRB modelling can provide; the complexity and lack of transparency introduced into the capital regime by IRB modelling; and the significant gap between standardised and IRB risk weights.
34. On balance, the Reserve Bank prefers an approach that retains IRB models in the New Zealand framework, while putting in place restraints on IRB modelling to mitigate the disadvantages of internal modelling (competitive neutrality and the opaqueness of internal models). These mitigating measures are discussed in more detail below.

⁴ The Reserve Bank published the results of a recent benchmarking exercise in the [May 2018 Financial Stability Report](#) pg 34.

⁵ This is because the RWA value is less, for a given risk, than the standardised bank would calculate.

Issue 3: Mitigant #1 – dual reporting

35. If IRB banks are under-estimating the risk associated with the credit exposures in a fully transparent system, one would not expect the under-estimation to persist for long. However, as outlined in the consultation paper, there is considerable opacity with internal models; it is not clear to external parties how IRB banks arrive at the model RWA values. This lack of transparency reduces the effectiveness of market discipline. Regulators around the world, including in New Zealand, also find it difficult to monitor because it is extremely hard to disentangle portfolio from model drivers of risk. Exercises such as benchmarking can help in this regard, but they are time consuming and costly for all parties.
36. One way of improving transparency, and the market's ability to monitor IRB banks, is to require IRB banks to report RWA (and the resulting capital ratios) using both the IRB approach for credit risk and the standardised approach ('dual reporting').
37. There is growing international support for dual reporting. For example, the Basel standards for *market* risk that were recently finalised, and will be implemented in G20 jurisdictions, require parallel reporting of internal-model and standardised outcomes. There is also to be some parallel reporting under the new Basel IRB approach, although the precise form of this reporting is yet to be spelled out.⁶
38. Consistent with this indicated direction, and reflecting the relatively high reliance placed on market discipline in New Zealand compared to other jurisdictions, full 'dual reporting' was proposed in the Reserve Bank's December 2017 consultation paper.
39. Views about the proposal among submitters were mixed. Some support for the policy came from the standardised banks that submitted (although these banks were generally sceptical of the value of including modelling in the framework). Those who opposed the proposal claimed it would be confusing for third parties to interpret two reported capital ratios (one using modelled RWA and one using the standardised approach); it would be onerous to explain the difference between the two calculations; and it would be costly to produce this additional information.
40. The Reserve Bank has considered this feedback, but is of the view that, providing there is design alignment with the output floor policy (outlined below), compliance with dual reporting will not be onerous for IRB banks and would provide considerable transparency. The recent experience of the Global Financial Crisis also provided strong evidence that in times of stress, market participants and other stakeholders quickly demand simplicity and clarity about the measurement of capital, which is a clear advantage the standardised framework has over the IRB approach.

⁶ In December 2017 the Basel Committee reported that "...banks must disclose more granular information related to the calculation of their risk-weighted assets under internally-modelled and standardised approaches, which will be set out in forthcoming disclosure templates as part of the Committee's Pillar 3 disclosure framework."

41. The Reserve Bank agrees that there will be a need to explain the presence of two RWA values (and thus reported capital ratios) for IRB banks. The Reserve Bank accepts that, as a regulator, it has an important educational role to play in explaining what various disclosures mean. This could include why, conceptually, there can be valid reasons for the risk weights implied by IRB models to depart from standardised risk weights.
42. Additionally, the Reserve Bank notes that the international Basel IRB framework is to include more parallel disclosure using standardised calculations. As such, some form of dual reporting will become common place and not a novelty for sophisticated investors and/or foreign creditors of New Zealand IRB banks.
43. Taking these points into consideration, the Reserve Bank has made the in-principle decision to adopt dual reporting as part of its revised IRB framework. The nature of the standardised calculation to be done by IRB banks is more meaningful the closer it is to the actual standardised requirements and becomes less meaningful the less granular the calculation becomes.⁷

Issue 4: Mitigant #2 – output floor

44. One of the reforms announced in December 2017 by the Basel Committee was the introduction of an ‘output floor’ for aggregate RWA produced by risk models. The general idea with this policy is to provide a binding lower limit on the aggregate RWA value, with the limit set by some set percentage of the RWA that would arise had the standardised approach been applied. The output floor goes one step further than dual reporting policy, supplementing enhanced market discipline by preventing modelled RWA values from falling too far below what would arise under the standardised approach.
45. The policy could also be applied to the components of RWA. The anchoring of modelled, credit-risk RWA to the standardised approach could occur at the level of an individual exposure, the asset class level or at total credit exposures.⁸ While the Basel Committee announced a floor applying at the aggregate RWA, the output floor policy could be applied to individual credit exposures or at the asset class level and still be compliant with the Committee’s policy.⁹

⁷ A decision has to be made about the exact nature of the calculation IRB banks will be required to undertake (e.g. to calculate the standardised RWA at the same level – exposure or asset class – as a standardised bank, or on a less granular basis, for example, applying the average risk weight of standardised banks at the total credit exposure level).

⁸ At the exposure level the policy would mean anchoring the risk weight implied by the model (and applied to the exposure) to the risk weight that would apply in the standardised approach; if applied at the asset class level, the risk weight used by the IRB bank would be the greater of the implied asset class risk weight produced by the model or the set % of the standardised risk weight applying to that asset class; if at the total credit exposure level, the aggregate credit-risk related RWA calculation would be anchored by some percentage to the standardised approach.

⁹ The RWA calculated using a floor at the exposure or asset class level can be expected to always be at least as much as, and maybe more than, a RWA calculated using a floor applied to total credit exposures.

46. The Basel Committee decided, after much debate between members, to set the floor at 72.5% (i.e. the modelled RWA cannot go below 72.5% of the RWA that would arise if the standardised approach was applied).
47. Some submitters were largely silent on the issue of output floors (arguing instead for the removal of modelling from the regime). The issues that arose in submissions from IRB banks related to global harmonisation (some banks supporting following Basel and thus applying the floor only at the total portfolio level); system costs (one bank expressing the view that implementing a floor at the exposure level would be onerous); and the appropriate *level* of the floor (i.e. two banks supported following Basel and APRA when it comes to setting the percentage of the standardised risk weight that will be used to anchor the model RWA).
48. The Reserve Bank views the output floor as an essential mitigant for the risks posed by IRB models. As such, it offers benefits in terms of financial system stability (which can be calculated in terms of avoided output losses). While there are private costs to banks of implementing and maintaining dual reporting, these need to be considered in a holistic way that includes the potential net social benefits. To recap, we are not yet at the point of formally calculating the costs and benefits of these decisions: that will follow the gathering of further information, including through the Quantitative Impact Assessment process.
49. While detailed design decisions, such as where to apply the floor, will be made at a later date (and with consultation), the Reserve Bank's preference is to align the dual reporting and output floor policies in a meaningful way – i.e. require IRB banks to use the same level of disaggregation (exposure, asset class or total credit exposures) when calculating a standardised RWA for dual reporting purposes, and when applying the output floor.

Issue 5: Mitigant #3 – standardising externally rated exposures

50. The experience in New Zealand has been that the risk weights implied by the IRB models have been lower than those imposed in the standardised framework, for common, externally-rated exposures, and that there can be a large variation in assigned risk weights between IRB banks for similar exposures. Given the credit-worthiness of the loans has been assessed by independent external parties, we are not convinced that there is a sound economic rationale for the difference. Hence, in the consultation paper the Reserve Bank proposed standardising the RWA calculation applying to externally rated loans (and loans to externally rated borrowers).
51. As noted elsewhere, some submitters supported modelling being removed from the regime entirely, and thus did not explicitly support this partial approach (although it seems reasonable to assume conditional support for it in the absence of removing IRB). The IRB banks, as a general statement, prefer more limited constraints on their

models versus the complete replacement of modelled outputs with standardised risk weights (pointing to the benefits of risk discrimination outlined earlier).

52. The Reserve Bank considered the feedback provided but was not persuaded that anything other than the standardised approach is appropriate for externally rated exposures. Hence, the in-principle decision has been made to introduce this reform.
53. The policy on externally rated exposures goes further than the output floor but is not incompatible with it. In effect, this policy amounts to applying the output floor policy at the exposure level, and using a 100% floor scaler, in the case of externally rated exposures.

Issue 6: Operational risk

54. In line with the global standards, in New Zealand, operational risk RWA can currently be modelled by qualifying IRB banks while other banks use a standardised approach. Uncertainty about the appropriate modelling approach for operational risk has been dealt with by imposing floors on the model outputs. These floors are often binding (i.e. capital is held at levels higher than the bank's own model suggests is appropriate).
55. In December 2017 the Basel Committee announced that it was replacing both the AMA and standardised approaches for operational risk with a new standardised approach. Operational risk modelling frameworks were under-developed at the time the AMA approach was first allowed by the Basel Committee and it was hoped they would mature in time. However progress has been unsatisfactory in the Basel Committee's view, and as a result it has rejected the AMA approach.
56. Basel's new standardised approach makes use of two measures. The first is a "business indicator", which is a combination of gross and net income and expenses across various areas of a bank's business. The second measure, to be used only by qualifying banks, is an adjustment based on the historical operational loss experience of the bank.
57. APRA proposes adopting the Basel standard with the exception that no adjustment based on historical loss experiences will be permitted.
58. In the Consultation Paper the Reserve Bank sought feedback on adopting Basel's new standardised approach, potentially combined with specific new risk management process requirements. The process requirement suggestion reflected concerns that qualifying banks might cease to model operational risk if there was no capital benefit from doing so.
59. The majority of submitters supported adopting the Basel standardised approach, but some banks questioned Basel's adjustment for the historical loss experience, saying that it may say little about the future losses. There was support for maintaining good

risk management processes among the AMA banks, but no consensus on whether this required prescriptive processes in addition to the standardised approach for measuring operational risk.

60. In broad terms, the Reserve Bank agrees with the views largely expressed in submissions and has made the in-principle decision to follow APRA – namely to apply the Basel standardised approach to operational risk but to not allow any adjustment for the historical loss experience. In terms of risk management processes, the new Basel standard includes requirements for loss identification, collection, and treatment (which goes some way to mitigating concerns about risk management). The Reserve Bank will continue to monitor operational risk management processes and systems through its normal supervisory activity.

Issue 7: Market risk

61. Under Basel III, qualifying banks may model market risk and other banks use a standardised approach. New Zealand has not adopted the Basel framework, preferring a much more rudimentary approach for the calculation of market risk (and this applies to all banks).
62. In 2016 the Basel Committee made changes to the market risk framework. These impacted on both the internal models and standardised approaches and were aimed at addressing shortcomings revealed by the global financial crisis.
63. The Reserve Bank noted in the consultation paper that, while New Zealand's current rudimentary market risk approach needs to be updated, and the use of models might need to be considered, its preference is not to assess the current market risk framework at present (for example, consider aligning with Basel).
64. Overall most submitters appeared to be supportive of retaining the current framework at present, as a pragmatic position. A relatively common view among submitters was that, because New Zealand banks have relatively 'vanilla' business models (with profits reliant on loan-related income, rather than trading gains), the level of market risk in New Zealand is relatively low, and therefore anything more than the current (simple) standardised approach may not be justified. The lack of risk-sensitivity in the current approach was raised as a concern, and this is acknowledged by the Reserve Bank.
65. While no in-principle decision has been made in this area, the Reserve Bank continues to work on other, higher priority, aspects of the Capital Review. It is however recognised by the Reserve Bank that market risk is an area that will be deserving of more attention in future.

Issue 8: The standardised approach

66. In December 2017 the Basel Committee announced changes to the standardised framework. The new Basel framework makes the standardised approach more sensitive to risk by introducing new asset classes for residential mortgages, specialised lending, commercial real estate, and land and property development.
67. The consultation paper discussed these changes and, with one exception, proposed retaining the *status quo* at present.¹⁰ Views among submitters were mixed, however, with some small banks favouring the new Basel framework, saying that it provided “a better empirical base” for their RWA calculation than the present regime. Two banks sought changes to the treatment of unrated corporate exposures, saying the current blanket 100% risk weight penalises relatively less risky exposures. Another bank said the current approach to residential mortgages should be amended to incorporate other known drivers of risk.
68. In addition to the Basel changes, APRA is also considering making changes to the standardised approach. For example, APRA has identified four characteristics of residential mortgages that are associated historically with relatively high probabilities of loss: interest-only loans, poorly documented loans, high debt-to-income loans, and investment property loans. APRA is proposing to classify mortgages with one or more of these characteristics as ‘non-standard’, which means they will incur a 100% risk weight (compared to 25% normally). In the New Zealand standardised framework the loan-to-value ratio is the main basis for the capital charge.¹¹
69. No in-principle decisions have been made in relation to the standardised approach, in part as it is currently believed to be fit for purpose in the New Zealand context. However, there are likely to be technical changes considered in due course, and the Reserve Bank intends to undertake further work in this area, including further consultation. There are two reasons for this:
- APRA is not due to finalise its policy until 2019, so it is not clear what changes (if any) will be made. Assuming APRA proceeds as planned, alignment with APRA could imply significant changes to the standardised treatment of residential mortgages. Hence the issue is an important one which needs to be given consideration in due course.
 - While the dual reporting policy can be implemented with the current standardised framework as it stands, there may be compliance efficiencies for the large four banks if some aspects of New Zealand’s standardised approach are modified in order to facilitate dual reporting (for example, alignment of

¹⁰ The exception was to increase the standardised risk-weight for sovereign exposures to 2% from zero. No in-principle decision has been made about this issue, which is a low priority for the Capital Review.

¹¹ Whether or not the exposure is covered by lenders mortgage insurance is another driver of the residential mortgage risk weights used in the standardised framework.

definitions). These details will be worked through, as part of the design work, and consulted on at a later date.

Decisions and next steps

70. After considering the feedback provided in submissions the Reserve Bank has made five in-principle decisions. These are:

- The capital framework will continue to permit qualifying banks to use internal models to estimate credit-risk related RWA (the 'IRB' approach), although there will be more restrictions on modelling;
- The IRB approach will not be permitted for any credit exposure with an external rating (for example, sovereigns, banks, some large corporates);
- There will be a RWA floor imposed on IRB models. This floor will be a proportion of the equivalent standardised calculation RWA value;
- All banks will calculate the RWA arising from operational risk in the same way, using the Basel Standardised Measurement Approach; and
- IRB banks will be required to report RWA (and associated capital ratios) calculated using the standardised approach alongside those arising from the IRB approach ('dual reporting').

71. The Reserve Bank expects to consult stakeholders next year on the details of these decisions, when we consult on redrafts of the Handbook (BS2A and BS2B).

72. The next phase of work in the Capital Review is the Quantitative Impact Study (QIS), which will measure the potential costs and benefits of applying the in-principle decisions made thus far. The QIS will be followed by public consultation on setting the ratios used by banks to calculate minimum capital requirements.