Reserve Bank
of New Zealand
Te Pūtea Matua

Submission on Personal banking services market study: Draft report

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1 Introduction

The Reserve Bank is pleased to make this submission on the Commerce Commission's draft report on the personal banking services market study.

We first set out our views on improving competition in the personal banking market, including the interaction between competition and our role as the prudential regulator of the financial system. We then provide detailed comments on several of the draft report's recommendations.

2 Improving competition in the New Zealand banking market

We welcome the market study into the personal banking services market. Our vision for the financial system is that it is inclusive, trusted, and resilient, while also being efficient and competitive. A competitive banking system is an essential part of this.

The draft report provides a useful analysis of the current market structure and makes some valuable recommendations to improve how competition could work better for consumers. However, we disagree with some of the analysis and relative emphasis of some of the draft report's recommendations.

Like many jurisdictions around the world, the New Zealand banking market is characterised by a small number of large banks commanding a high market share. As the draft report notes, large banks are able to take advantage of significant scale, scope, risk diversification and funding cost advantages compared to smaller peers, particularly in the case of homogenous retail banking products. Larger banks can also be more able to sustain the investments required to offer innovative and attractive products and services for customers (e.g. new payment methods, and the increasing need for strong cyber security protections). Given this, a trend towards the industry being concentrated in a small number of large players appears common in developed markets.

It is possible that efforts to grow smaller banks or new players to the current scale of the four Australian-owned banks could drive more competition and improved outcomes for consumers. However, the scale of the required subsidisation (e.g. weaker prudential regulation or access to capital on non-commercial terms) is not clear and it is not obvious that moving from a market of four to five large banks on its own would necessarily change the incentives and other factors that contribute to the oligopolistic outcomes described in the draft report. Several of the countries assessed in Chapter 6 of the draft report have a more concentrated market than New Zealand (i.e. three major banks), while reporting lower average profitability and net interest margins.

In our view, the final report should place more emphasis on recommendations that would promote more disruptive competition among all players, including the large banks, effectively incentivising each to be a 'maverick'. This requires a holistic approach focused on promoting an ecosystem that enables disruption through innovation, rather than implicitly subsidising higher-risk or smaller banks. This ecosystem includes appropriately calibrated regulatory frameworks, but also more proactive policy settings that are supportive of competition.

The changes that we think would result in more disruption and innovation, both among the larger players and across the industry, are:

- Delivering open banking – we see this as being a multifaceted driver of competition and a catalyst for innovation, with strongly pro-competitive effects observed in markets more

progressed in open banking than New Zealand, such as the UK and EU. Accelerating open banking will open the personal banking market up to new players and challengers, incentivising new and existing players to invest in product and service development, and importantly in the enabling technology infrastructure necessary to develop and deploy these innovations. It will also provide customers with the opportunity to benefit from the value of their data incentivising and making it easier to switch providers.

- As the draft report notes, realising the potential benefits of open banking will require a wide range of changes across policy and industry practice, including looking at payments governance and whether the appropriate incentives are in place. This has been identified as a critical brake on the development of open banking in New Zealand.
- Reducing real and perceived barriers to switching and multi-banking, including better enabling digital identity.
- Enhancing financial literacy, which will put consumers in a better position to assess products, services, and relative costs. Ultimately, it is the choices and actions of consumers that drive competition – addressing apathy and inertia is critical.
- Enhancing access, including reducing barriers to access for marginalised individuals, and businesses and start-ups to bank accounts, as well as initiatives to support Māori access to capital, and basic bank accounts. This also includes access to infrastructure and payment systems for a wider range of deposit takers, noting we are currently reviewing ESAS access policy.

Combined, these initiatives are likely to be mutually reinforcing. Easier switching and multi-banking will make it easier for consumers to move to providers offering innovations through open banking.

These issues are complex and will require clear leadership, direction and prioritisation from government and industry, and resourcing to deliver. Targeted new legislation may also be needed to deliver wide-ranging competition outcomes for personal banking services. We are keen to be part of, and contribute to, these efforts and look forward to working with the Commission, regulatory counterparts, government and industry to pursue this important work.

Competition and prudential regulation

The draft report makes a number of recommendations that relate directly to our core areas of responsibility, particularly prudential regulation. A more detailed response to specific recommendations is outlined in Section 3, but at a high level:

- We acknowledge that prudential regulation creates barriers inhibiting entry, but it exists for good reasons. This reflects the important social position banks have as entrusted safekeepers of other people's deposits, and the market failures that would prevail in the absence of regulation. By design, prudential rules aim to ensure the maintenance of financial system stability, which is a public good, by reducing the significant and costly economic, fiscal and societal impacts of deposit taker failures, even small ones in some circumstances. Reductions in resilience through weaker prudential regulation generally involves moving more risks and costs to customers or placing public funds at risk, and have the potential to undermine confidence. We must also be mindful that we operate in a global context with key prudential requirements based on internationally developed

standards, with adherence to these standards enhancing international confidence in New Zealand's financial system.

- With that said, we recognise that financial stability is not an end in itself, but a means to supporting a productive and inclusive economy. For this to occur the financial system needs to be stable, competitive, and inclusive. At times these principles need to be balanced, both theoretically and within the confines of our statutory mandate. But they are not always in tension. For example, creating confidence among consumers that a regulated deposit taker meets a baseline level of resilience can support competition.
- We consider the future regime covering all deposit takers under the Deposit Takers Act 2023 (DTA), including the purposes and principles in the DTA and associated Proportionality Framework,[1] is appropriately calibrated to enable taking competition into account, among other principles, in pursuit of our statutory objectives in the Reserve Bank of New Zealand Act 2021. These factors will drive future policy settings for deposit takers and will be part of the consultation on standards under the DTA scheduled for this year.
- The Commission's work provides valuable input into our ongoing and future considerations of competition, among other DTA principles, while noting that financial stability (and other objectives) remains our primary focus.
- Regarding prudential capital settings for banks, the current requirements are the result of decisions made during our 2017-2019 review.[2] The decision to increase capital requirements overall was about making the banking system more resilient. The changes will be implemented over seven years, giving plenty of time for banks to manage a smooth transition and minimise any adjustment costs.
- In the past, two aspects of our regulatory capital framework may have contributed towards a funding cost advantage for larger banks, as discussed in the Commission's draft report. This resulted from the use of internal ratings-based (IRB) models for risk-weighting purposes, and a single set of capital ratio requirements that didn't incorporate the importance of larger banks relative to smaller ones in terms of the systemic impact of their failure. Our calculations suggest the impact of these settings was relatively small historically, particularly when compared to other costs. We consider that the changes we introduced as part of the capital review, including to both the IRB approach and with the introduction of a domestic systemically important bank (DSIB) buffer requirement, have all but removed any advantage (see our response to recommendation 1 below and additional information in the annex).
- Suggested changes to the risk-weighting framework in the draft report would lead to very marginal benefits to competition, relative to other cost factors that smaller banks face compared to their larger peers (e.g. operating expenses). Changes to the IRB approach could result in unintended consequences such as undermining efficiency, risk management in the industry, and put us out of step with international regulatory approaches. That said, our regulatory stewardship requires us to review our regulation on an ongoing basis. We will build a review of the IRB approach into this plan, following completion of our work on the implementation of DTA standards.

[1] See https://www.rbnz.govt.nz/-/media/project/sites/rbnz/files/regulation-and-supervision/dta-and-dcs/the-proportionality-framework-under-the-dta.pdf

[2] Detailed papers covering the decisions, expected impacts, stakeholder submissions and external expert reviews are available here: https://www.rbnz.govt.nz/regulation-and-supervision/oversight-of-banks/how-we-regulate-and-supervise-banks/our-policy-work-for-bank-oversight/capital-review

3 Detailed comments on draft report recommendations

Recommendation 1: The Reserve Bank should review its prudential capital settings to ensure they are competitively neutral and smaller players are better able to compete.

This recommendation covers the role and the operation of the IRB framework for home loans, equalising capital requirements for some categories, making it easier to acquire IRB accreditation, and increasing the output floor for IRB banks. The recommendation also discusses the capital framework for non-bank deposit takers (NBDTs) and asks the Reserve Bank to provide further information on the prudential requirements NBDTs may face under the DTA.

- IRB and Standardised approaches

Capital requirements are a key tool in supporting the resilience of entities, reducing the risk of failure and promoting financial stability. They are inherently proportional in that they are set as a ratio of a bank's risk-adjusted exposures. In addition, the move to capital requirements under the DTA framework will incorporate our proportionality framework and an assessment of competition under the DTA principles.

The current bank capital and IRB frameworks result from careful and extensive analysis undertaken during the capital review which took place from 2017 to 2019, including a full consultation on the risk-weighted asset framework, and calibration of the IRB approach.[3] An assessment of competition impacts was specifically included in the cost-benefit analysis of the capital review, concluding the changes would materially level the playing field between IRB banks and Standardised banks, while preserving the risk sensitivity of capital requirements.

Our assessment of the materiality of the current differential between IRB and Standardised outcomes for home loans is significantly lower than presented in the draft report. With the restrictions we have put in place on IRB model outputs, the average difference in actual capital outcomes resulting from the Standardised approach and the IRB approach has a very small impact on funding costs and therefore the obstacles that the capital framework poses to competition (compared to other factors, such as relative operating expenses).[4]

When accounting for the 85 percent IRB output floor and 1.2x scalar, for an average home loan the differences in capital frameworks account for around a 6 bps difference in the weighted average cost of banks' funding of that loan (see Annex for worked example). Taking into account the 2 percentage point DSIB buffer that applies to the four IRB banks, the difference in weighted average cost of funds is approximately zero.

An aim of the IRB approach is to improve banks' understanding and management of the credit risk in their loan portfolios by encouraging granular modelling of risks. The supporting process and governance requirements for IRB accreditation help to reinforce improved risk management. As such, there is also a significant cost to banks in developing and maintaining IRB models and ongoing accreditation (approximately 10-20 FTE, systems costs, in addition to input and support

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[3] The outcome of external review by international experts is available here: https://www.rbnz.govt.nz/regulation-and-supervision/oversight-of-banks/how-we-regulate-and-supervise-banks/our-policy-work-for-bank-oversight/capital-review (see October 2019 section of page)

[4] https://www.rbnz.govt.nz/-/media/project/sites/rbnz/files/consultations/banks/review-capital-adequacy-framework-for-registered-banks/decisions/capital-review-cost-benefit-analysis.pdf

from their parent bank). These further reduce any cost advantage of IRB over the Standardised methodology.

The materiality of capital requirements in loan pricing compared to other factors is also important. As an illustration of the relatively low materiality of capital requirements for banks' overall loan pricing described above, RBNZ Dashboard data show that the average annual operating expenses relative to total assets for the four large banks was 95 bps over the period 2018-2023, compared to 130 bps for all other banks. This 35 bps difference in operating costs has a significantly larger impact on profitability than a 6 bps difference in funding costs due to IRB (or 0 bps, once the DSIB requirement is taken into account).

The draft report notes the desire to have like risks treated similarly. Our preference is to have capital requirements to reflect the risk of loans, and to encourage more granular risk management. The more granular the risk assessment the better calibration of the capital requirements, and therefore the more efficient the framework. A more granular assessment is also likely to support efforts to manage emerging risks, such as declining insurability due to climate change, as these begin to affect a loan's credit risk profile. But as noted above this granular assessment is not without cost. The Standardised approach functions as a default option for banks with less ability and/or resources to do granular comparisons of risk within portfolios (e.g. due to data and system limitations, and limited data histories with which to build robust credit risk models).

In our view, the benefits discussed above for risk differentiation are significant and support the continuation of the use of IRB modelling. Other restraints which have been put in place (scalar and output floor) ensure the capital benefits are appropriately constrained, and together with the DSIB buffer, significantly limit the extent to which IRB modelling leads to overall funding cost advantages for the four major banks.

We are open to Standardised banks applying for IRB accreditation. However, we do not agree that the threshold for gaining accreditation should be lowered. IRB modelling requires a depth of data and sophistication in systems that may be beyond the scope of smaller banks. It is a resource intensive process, and current IRB banks in New Zealand have been able to benefit from the expertise and support available from their large Australian parents. Models must be robust as the output of modelling directly contributes to a bank's regulatory capital calculation. It is common for only a small number of banks to be authorised to use the IRB approach in most jurisdictions – for example, only the six largest banks in Australia are currently accredited to use IRB models.

The draft report suggests consideration of raising the output floor beyond 85 percent. The decision to set the output floor for credit risk RWA at 85 percent was made after careful consideration and calibration in the capital review.[5] When combined with the increase in a scalar applied to credit risk RWA for IRB banks (from 1.06 to 1.2), our analysis indicated this would lead to RWA outcomes for IRB banks being approximately 90 percent of what would be calculated under the Standardised approach, an increase from a level of c. 70-75 percent in prior years. This was consistent with the purpose of promoting the maintenance of a sound and efficient financial system.

We think a further increase in the output floor would have the effect of reducing the differential with the Standardised approach to a level that negates the risk sensitivity benefits of IRB modelling.

[5] See page 11 onwards in the following document for as detailed analysis: https://www.rbnz.govt.nz/-/media/project/sites/rbnz/files/regulation-and-supervision/banks/capital-review/part-4-october-2019.pdf

This would be equivalent to moving away from IRB modelling completely, which we do not think is desirable.

It is also worth noting that under the finalised Basel III framework currently being implemented by most bank regulators, including APRA, the output floor is set at 72.5 percent.[6] Our analysis indicated that the floor would be unlikely to bind on New Zealand banks at that level.[7]

Based on the above we do not consider a review of prudential capital settings, including the IRB framework, to be necessary or desirable at this stage. The forthcoming consultation regarding capital standards under the DTA will provide stakeholders a further opportunity to comment on these matters. In addition, our regulatory stewardship requires us to review our regulation on an ongoing basis. We will build a review of the IRB approach into this plan, following completion of our work on the implementation of DTA standards, this is likely to include consideration of enhancements to the risk sensitivity of the Standardised approach.

- NBDTs

By the time the final report is issued by the Commerce Commission, we will have published the first consultation on the proposed policy relating to core and non-core standards to be issued under the DTA. The core standards cover the requirements for capital, liquidity, disclosure and the depositor compensation scheme (DCS). The non-core standards relate to governance, related party exposures, risk management, outsourcing, lending, operational risk, general restrictions and branches.

NBDTs will be considered as Group 3 deposit takers under the proportionality framework. The consultation materials will set out our proposed framework for all groups, including differentiation in requirements across the groups, and will set out the policy reasons that support the proposed approach. The draft report recommendation suggests we should explicitly and transparently articulate how we are thinking about our role in setting prudential requirements with reference to the purposes and principles set out in the DTA. We believe this recommendation will be satisfied when the standards consultation is published.

- Mutual capital instruments

Paragraph 7.56.4 of the draft report refers to some smaller banks being constrained in the way they can raise capital because of their structure, noting that only certain capital instruments can be used to meet regulatory capital requirements. We note that the October 2023 update to BPR120 added the Mutual Capital Instrument (MCI) which is a new form of capital instrument able to be issued by banks structured as mutual entities. MCIs can count towards a bank's capital requirements by qualifying as Common Equity Tier 1. They were developed because we recognised that mutual banks are limited in their options to raise CET1 capital due to their mutual structure.

Summary

Given the above and the recent and through review of capital requirements which included consideration of competition, we do not support a further review or changes to the IRB approach

[6] See https://www.bis.org/bcbs/publ/d424_inbrief.pdf.
[7] See para 132 2017.12.07 4th Draft -- Capital Review Denominator Consultation Paper (rbnz.govt.nz)

at this time. As part of our regulatory stewardship role, we will review the IRB framework after DTA implementation.

We are pursuing the recommendation relating to consideration of purposes and principles under the DTA as part of our consideration of capital levels for current NBDTs. This will be published as part of the core standards policy consultation in May 2024.

Recommendation 4: The Government should reduce the barriers imposed by the AML/CFT regime on banks working with fintechs.

We support the direction of this recommendation but have reservations about the benefits and workability of a code of practice.

The AML/CFT regime relies on businesses undertaking their own assessment of the money laundering and terrorism financing risks that customers might pose. A code of practice is typically used to provide clarity to reporting entities on specific obligations and then provide a 'safe harbour' if reporting entities act consistently with such a code. A code of practice cannot deem that a type of business or sector is not 'high risk'. Rather, it would describe the factors that reporting entities should consider when onboarding new higher risk customers – factors that are already well known and understood by New Zealand's banks. A code of practice would not, in our view, reduce de-risking/de-banking of higher risk businesses – decisions that are largely driven by the individual risk appetites of reporting entities, i.e. banks.

Our view is that the more effective avenue for addressing actual and perceived risks relating to fintechs would be to advance two other recommendations in the MoJ's 2022 AML/CFT review, namely R. 72 (including fintech providers as reporting entities under the AML/CFT Act) and R. 92 (a licensing framework for high-risk sectors).

Recommendation 5: The Reserve Bank should use its new decision-making framework under the DT Act to explicitly and transparently consider competitive effects.

As highlighted by the capital review, competition has been an important consideration in our prudential decision making previously. The need to maintain competition within the deposit-taking sector is helpfully even more explicit as one of a number of principles we need to take into account when developing standards under section 4 of the DTA.

Our policy consultation material on the DTA standards, which will set out our proposed prudential requirements, will outline our analysis of the policy proposals against the relevant DTA principles, including the need to maintain competition within the deposit taking sector. All principles will be taken into account when policy decisions are made following consultation.

Recommendation 6: The Reserve Bank should explicitly and transparently articulate how it is applying the purposes and principles of the DT Act to its Deposit Compensation Scheme levy advice.

When we formulate levy advice the Reserve Bank is acting as the Minister of Finance's advisor in accordance with section 241 of the DTA. General principles under the section 4 of the DTA (including the need to maintain competition within the deposit-taking sector) are relevant to the Reserve Bank providing levy advice to the Minister. There are also specific levy principles - stipulated in section 239 of the DTA - that the Minister must have regard to before making a

recommendation to the Governor-General to make levy regulations. There is a clear process for the Reserve Bank to develop the levy advice that is set out in section 242 of the DTA. In accordance with section 243 of the DTA, we are also required to, and intend to, publish our levy advice on our website after levy regulations are made.

We suggest amending this recommendation to reflect the various statutory requirements and criteria that need to be considered in setting the DCS levy requirements.

We disagree with some of the positions outlined in chapter 7 of the draft report relating to our levy consultation. While the proposed method in our consultation paper uses risk-based pricing to mitigate moral hazard issues and match the cost to the risk of an entity calling on the scheme, the levies paid by larger banks would still be much larger overall (since their deposit bases are much larger and the risk-based levy applies to total insured deposits). In our view this means the proposed levies would reflect the 'disproportionately larger call' (see para 7.105) on the scheme a major bank failure would cause.

We also remain confident that the net benefit from the DCS is larger for riskier firms (who tend to be the smaller firms, based on credit ratings and historical failure rates) since at least some customers will be more confident banking with them once the deposits are guaranteed and we expect some rate compression (as per our consultation paper).

<u>Recommendation 7:</u> The Reserve Bank should consider broadening access to ESAS accounts.

This is the subject of current policy work following our consultation on ESAS access last year. In releasing the consultation, we noted 'broader access could enable and encourage welcome innovation in the financial system but may also pose risks'. Our analysis will include competition considerations.

We are working towards a second consultation on ESAS access in Q3 2024. That consultation will outline our proposed approach to opening to a broader range of participants. We expect to have a new access policy in place by the end of 2024.

<u>Recommendation 8:</u> The Government should amend the DT Act to allow the Reserve Bank to promote competition, rather than maintain competition.

This is a matter for Government policy. However, we note the DTA legislative architecture is the result of a deliberate, lengthy, and thorough policy and legislative process that began in mid-2018 (including Select Committee scrutiny). The Review included significant public consultation and canvassed the advice from, and views from a range of experts. The DTA passed with bipartisan support in mid-2023 and is now in the process of being implemented over the next 4-5 years. Changes at this point would likely mean delays in the implementation of the DCS and DTA.

<u>Recommendation 9:</u> The Government and policy makers should seek competitive neutrality across banks and other providers in their decision-making wherever possible.

As a policy maker our decision making is governed by a range of factors and instruments, including legislative purposes and principles (e.g. DTA), Ministers' Letters of expectations, the

Financial and Monetary Policy Remits and principles of good policy making. Competition is already reflected in a number of ways across these instruments.

Recommendation 15: Industry and Government should prioritise work to reduce the barriers to lending on Māori freehold land.

We support this recommendation. In 2022, we published our Māori Access to Capital Issues paper, noting findings similar to those acknowledged in Chapter 3 of the draft market study.[8] We also note that Te Kooti Whenua Māori recently published a practice note regarding lending on Māori freehold land.[9] This practice note helps landowners, lawyers and the banking sector to understand the mortgage process on whenua Māori, potentially reducing transaction costs, and increasing efficiencies.

Recommendation 16: Industry and Government should prioritise ensuring widespread availability of basic bank accounts.

We support an inclusive financial system in which all New Zealanders have reasonable access to financial products and services that meet their needs. Our position regarding access to bank accounts is outlined in our submission to the Petitions Committee on 5 February 2024.[10] We note that bank accounts are vital for people to be able to participate in the financial system, and we encourage regulated entities to support access to banking, for example by supporting financial inclusion in customer onboarding processes.

[8] See Improving Māori Access to Capital - Reserve Bank of New Zealand - Te Pūtea Matua (rbnz.govt.nz)
[9] See https://www.rbnz.govt.nz/hub/news/2024/04/rbnz-welcomes-progress-on-whenua-maori-lending
[10] See d3303c274528ea271a48773b69a38611a2fbe616 (www.parliament.nz)

Annex: worked example of differences in capital requirements and loan pricing

The following simplified example illustrates how differences in regulatory capital requirements can translate into differences in banks' cost of funding for a home loan.

For the purposes of the example, we make the following assumptions:

- A cost of debt of 4%
- An equity risk premium of 6% (meaning a cost of equity of 10%)
- The corporate tax rate of 28% (which is applied to the cost of equity to give the required pre-tax return the bank needs to generate)
- Average risk weights for a residential mortgage loan (as in tables 7.1 and 7.2 of the Report):
- 37% under the Standardised approach, the approximate average over recent years
- 28% under IRB, the approximate average over recent years (pre-capital review changes)
- 31.45% under IRB after applying the output floor, but before the increase in IRB scalar (the situation that applied between 1 Jan 2022 and 30 September 2022)
- 31.7% under IRB with the higher IRB scalar (which has applied from 1 October 2022)
- Banks operate with a 10% CET1 capital ratio prior to the capital review changes (approximately the level banks operated with in practice)
- Following the capital review changes, banks' CET1 ratios increase by around 2 percentage points (to 12%) for non-DSIB banks, and 4 percentage points for DSIB banks
- The cost of equity doesn't decline as the equity share of funding increases (in practice we would expect the cost of equity to fall given it would have a less volatile return)

This analysis suggests that, prior to the capital review changes, differences in the two regulatory capital frameworks could account for an approximately 9 bps difference in average funding costs for a residential mortgage. Following the changes to the IRB framework (output floor and change in scalar), this reduces to around 6 bps. Taking into account the additional DSIB buffer that applies to the four IRB banks, the difference in average funding costs due to the different capital calculations is approximately 0 bps.

	Formula	Pre-capital review		With IRB output floor	
		Standardised	IRB	Standardised	IRB
Cost of equity		10%	10%	10%	10%
Corporate tax rate		28%	28%	28%	28%
Required return on equity	A	13.9%	13.9%	13.9%	13.9%
Cost of debt	B	4%	4%	4%	4%
Total loan value	C	$100.00	$100.00	$100.00	$100.00
Risk weight	**D**	**37%**	**28%**	**37%**	**31.45%**
Risk-weighted asset value	E = C x D	$37.00	$28.00	$37.00	$31.45
CET1 capital ratio	F	10%	10%	12%	12%
Quantity of equity funding	G = F x E	$3.70	$2.80	$4.44	$3.77
Quantity of debt funding	H = C - G	$96.30	$97.20	$95.56	$96.23
Weighted average cost of funding	I = (A x G + B x H) / C	4.37%	4.28%	4.44%	4.37%
Funding cost advantage (bps)			**8.9**		**6.6**

	Formula	With increased IRB scalar		Including DSIB buffer	
		Standardised	IRB	Standardised	IRB
Cost of equity		10%	10%	10%	10%
Corporate tax rate		28%	28%	28%	28%
Required return on equity	A	13.9%	13.9%	13.9%	13.9%
Cost of debt	B	4%	4%	4%	4%
Total loan value	C	$100.00	$100.00	$100.00	$100.00
Risk weight	**D**	**37%**	**31.70%**	**37%**	**31.70%**

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	Formula	With increased IRB scalar		Including DSIB buffer	
Risk-weighted asset value	E = C x D	$37.00	$31.70	$37.00	$31.70
CET1 capital ratio	F	12%	12%	12%	14%
Quantity of equity funding	G = F x E	$4.44	$3.80	$4.44	$4.44
Quantity of debt funding	H = C - G	$95.56	$96.20	$95.56	$95.56
Weighted average cost of funding	I = (A x G + B x H) / C	4.44%	4.38%	4.44%	4.44%
Funding cost advantage (bps)			6.3		0.0

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