



INFORMATION PAPER

Stress testing banks during COVID-19

15 December 2020

Disclaimer Text

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Executive summary

A banking system which is resilient during periods of severe financial stress is central to confidence and stability of the financial system. Core to the ability of the banks and other authorised deposit-taking institutions (ADIs)¹ to withstand financial stress is high levels of capital. In Australia, the capital adequacy requirements established by APRA are set with this in mind, reflecting the goal of ensuring Australian banking institutions have capital ratios that are regarded as 'unquestionably strong'. As a result, the capital position of Australian banks has been progressively built to withstand stress, with the banking system accumulating over \$150 billion of capital in the past decade. Recently announced reforms to the capital framework retain the core objective of maintaining capital levels that serve as the foundation for the ongoing strength of the financial system.

Stress testing is a core prudential tool APRA uses to assess the adequacy of bank capital to withstand adverse economic conditions. Stress testing is not a forecast, nor is it used by APRA as a pass-fail test for individual institutions. The primary objective is to provide assurance of the resilience of the banking system to a severe shock.

In response to the uncertain environment associated with COVID-19, APRA initiated a range of iterative stress testing activities in relation to the banking system.

These stress tests were based on very severe forward-looking economic assumptions, well beyond the current conditions under COVID-19. The Severe Downside scenario developed by APRA was composed of a very large fall in economic activity, with GDP falling by 15 per cent, unemployment rising to over 13 per cent and national house prices falling by over 30 per cent. The banks are assumed to not take any mitigating actions in response to the stress under this scenario.

The results of the stress tests concluded that the banking system is well positioned to withstand a very severe economic downturn, whilst retaining the capacity to support the broader economy by continuing to supply credit to businesses and households.

As expected, the impact of the severe stress on bank profitability and capital was significant, but the banking system remained above its minimum capital requirement throughout the stress period despite a very severe downside scenario.

However, impacts of the stress were still highly notable. For example, under the Severe Downside scenario, the profitability of the banking system – which achieved an annual profit of \$24 billion in the year prior the stress – was eliminated, with a total of \$45 billion in aggregate losses accumulated across the three years of the stress test horizon. The decline in profitability was primarily driven by the emergence of significant credit losses on banks' loan portfolios. These losses were absorbed by bank capital.

¹ For simplicity, the term 'bank' and 'banking' in this information paper refers to all organisations that are authorised deposit-taking institutions (ADIs) under the *Banking Act 1959*, regardless of whether they choose to refer to themselves as a bank.

As a result of absorbing the impact of economic stress from falls in earnings, significant credit losses and increases in risk-weighted assets, the banking system's existing substantial buffers reduced by \$96 billion. The banking system was able to absorb this impact, and even at the low point in the stress had the capacity to absorb a further \$48 billion in economic stress before hitting its minimum capital requirement.

Importantly, the outcome from these stress test results is before accounting for any actions banks can deploy in response to stress, which are significant. This would include, for example, capital raisings, asset sales, repricing and expense reductions. Together, these steps can substantially offset the impact of credit losses on a bank's capital position. This highlights the importance of banks not just having the ability to absorb the impact of stress, but also to have credible plans to recover from stress and restore capital resilience relatively quickly.

A number of uncertainties remain in respect to the current economic outlook. The learnings from stress testing during COVID-19 have reinforced the importance of ongoing and iterative stress testing to be undertaken at both the system and bank level. It is essential that stress testing continues to be undertaken by banks as a forward-looking input to capital planning, including dividends, in the current uncertain environment.

Chapter 1 - APRA's stress testing response to COVID-19

In response to the rapidly evolving macroeconomic environment which emerged with the onset of COVID-19, APRA refocused its priorities towards responding to the potential impact of the pandemic on financial institutions. A core component of this response was an increase in engagement with the banking industry on stress testing.

The most recent stress tests of the largest banks in both 2017 and 2019 had shown that the banking industry had sufficient capital to withstand a severe but plausible economic downturn and the capacity to support an economic recovery by continuing to lend to businesses and households.

Since the onset of COVID-19, APRA has undertaken a number of stress tests based on a range of scenarios designed to assess the resilience of the banking system to a continually evolving economic outlook, with an emphasis on severe downside risks.

This has included an iterative cycle of APRA-led common scenario stress tests undertaken by the largest ten banks. These stress tests were streamlined in design and focused on assessing capital resilience of the banking system to the potential drivers of economic stress arising from severe but plausible COVID-19 led downturns.

In parallel to the stress tests undertaken by the largest ten banks, APRA has undertaken stress tests of the banking system using its own internally developed stress testing models. **The output from APRA's internal stress testing models is the basis for the results set out in this paper**

The development and continued enhancement of internal stress testing models has allowed APRA to quickly reassess the resilience of the banking system, at an industry, cohort and individual bank level in line with a continually evolving and highly uncertain economic outlook. This is critical given the speed and size of the economic disruption that has emerged with the onset of COVID-19.

The breadth of APRA's internal stress testing models has also allowed the assessment of the impact of downside risks beyond the largest banks which participate in APRA-led industry stress tests.

The internal stress testing models and methodologies used by APRA have been iteratively developed, calibrated and benchmarked using a combination of prior and current stress test data collected from the largest banks, historical benchmarks to prior episodes of international stress and APRA's own research, data and judgement.

This analysis recognises there are always limitations in any forward-looking analysis; stress test results for individual banks will inevitably vary from the average; and individual banks have access to more detailed data and information which better reflects their own business models, portfolio mix and idiosyncrasies.

Importantly, APRA's internally modelled stress test results are not intended as forecasts of the size of losses or falls in capital that APRA anticipates the banking system to incur during severe downturns. Nor are the results intended to be a pass-fail exercise for individual banks. The stress tests are intended as an assessment of the resilience of the banking system, its ability to absorb economic stress and its capacity to continue to lend to support an economic recovery.

Box 1 – The role of stress testing

Stress testing is a forward-looking assessment of the capacity of financial institutions to withstand adverse conditions by estimating the impacts of severe but plausible downturns on their profitability, asset quality and capital. The results of stress tests provide assurance of financial resilience and insight on areas of vulnerabilities to current or emerging risks.

Stress testing is a core component of APRA's prudential toolkit to maintain the financial safety of institutions and the stability of the Australian financial system. APRA uses stress testing to provide a risk-based, forward-looking assessment of the banking system at an industry, cohort and an individual bank level. Stress testing is also a key input into APRA's Supervision Risk and Intensity Model for the assessment of risk and determination of supervisory intensity.²

Stress tests provide an indication, rather than a definitive answer, on the impact of adverse conditions on banks' resilience, and the results of stress tests embody the inherent uncertainty that exists within forward looking scenarios, models and analyses.

There are three main ways that stress tests are conducted for banks:

The first type is APRA-led industry stress tests conducted by banks using common scenarios provided by APRA. These stress tests are performed periodically to assess the resilience of the banking system and involve the participation of the largest banks. The outputs of these stress tests are based on banks' own data, modelling, parameters and judgement, subject to common guidelines and instructions to promote consistency and comparability.

The second type is banks conducting their own stress tests within their capital management framework. Instead of using common scenarios, banks generate their own scenarios, taking account of their own idiosyncratic risks and differences in each of their business models. These stress tests are used to inform banks' own decisions on capital management and dividends, inform their own assessments of their key risks and to understand the readiness and feasibility of their recovery options to respond to stress. APRA reviews banks' own stress testing activities as part of its supervisory activities.

The third type is stress tests generated from APRA's own internal stress testing models. These stress tests can be run in parallel with APRA-led industry stress tests using the same scenarios, and as such can be used to challenge of banks' own results. These stress tests allow for key and emerging risks across the system to be quickly assessed as economic conditions evolve.

This third type of stress testing is the basis of the results set out in this paper.

² For more information, see APRA's [Guide to Supervision and Risk Intensity Model](#).

Chapter 2 - Scenario overview

This chapter outlines the scenarios used in APRA's stress tests in response to COVID-19.

APRA uses multiple scenarios when stress testing future macroeconomic and financial conditions as the future may manifest in different ways. Scenarios constructed on emerging dynamics provide insight into the vulnerabilities and resilience to potential stress from the current environment.

Scenario development

The development of scenarios for stress tests need to be targeted to the objective of the activity and calibrated to the specific risks. In response to COVID-19, APRA's stress testing activities have been based on scenarios which are calibrated to current economic developments and uncertainty.

Scenarios were built using the starting point of the Baseline and Downside economic outlooks outlined by the Reserve Bank of Australia (RBA) in its August 2020 Statement of Monetary Policy. APRA took these scenarios, added some additional variables, and built some further scenarios. The RBA provided helpful input into this scenario development work. There was a particular emphasis by APRA on sufficiently severe yet plausible downside scenarios to provide assurance on the resilience of the banking system to withstand significant stress.

The next section details the scenario narrative and parameters of the 'Severe Downside' scenario, as part of APRA's internal stress tests of the banking system. The scenario covers a 3-year period beginning 1 July 2020. APRA's internal stress tests assume the existing capital framework remains in effect over this 3-year period.³

The scenario is not an official forecast or indicative of any current or potential government policy, and was based on the best available information at the time of development.

Scenario narrative and parameters

The Baseline scenario narrative and key economic indicators are set out in the RBA August Statement of Monetary Policy⁴.

APRA's Severe Downside scenario represents a deteriorating macroeconomic outcome relative to the RBA Baseline scenario, and represents a significantly worse outcome than the RBA Downside scenario. The APRA scenario was based on assuming continued COVID-19

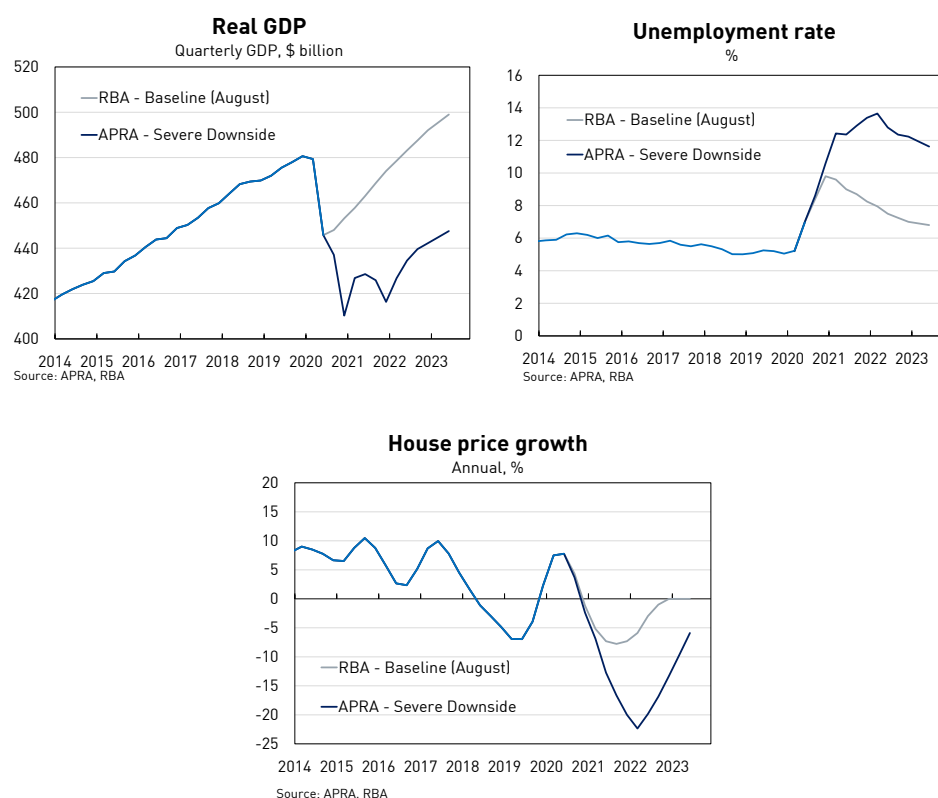
³ For the avoidance of doubt, APRA's internal stress tests do not incorporate the proposals of the recently released consultation to enhance the flexibility and resilience of the ADI capital framework <https://www.apra.gov.au/news-and-publications/apra-seeks-to-enhance-flexibility-and-resilience-of-adi-capital-framework>.

⁴ For more information, see *Reserve Bank of Australia Statement on Monetary Policy, August 2020*.

virus outbreaks occurring within different Australian states throughout 2021, leading to recurring Stage 3 and 4 restrictions. The scenario also assumed international borders are re-opened only in mid-2022, after severe second waves were experienced throughout developed countries during 2021.

Under the Severe Downside scenario, Australian GDP fell by 15 per cent during 2020, as a widespread second wave late in the year led to a further contraction in economic activity⁵. A more geographically limited third wave led to a second economic contraction in late 2021. The recovery was assumed to remain relatively weak even after the pandemic subsidies, due to low business and consumer confidence and the scarring effect of business failures.

Due to the very large contraction in economic activity, and a fiscal response assumed to be more muted than seen to date, unemployment rose to over 13 per cent. It was assumed there was no extension of widespread loan forbearance beyond early 2021. National house prices fell by over 30 per cent and commercial real estate values fell by over 40 per cent.



The assumption that banks continue to lend to business and households was a key feature of APRA's stress tests, to ensure that banking system is resilient enough to continue to lend throughout a severe downturn. The Severe Downside scenario assumed there was no reduction in aggregate lending in the system during the period of stress. Systemic reductions in credit supply, whilst reducing the size of banks' balance sheets and hence bolstering capital adequacy ratios, have the potential to exacerbate the severity of the scenario. However, the feedback loops, second order effects and competitive reactions from these actions are inherently difficult to model.

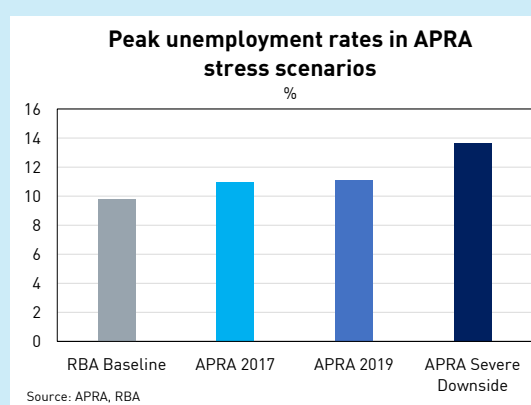
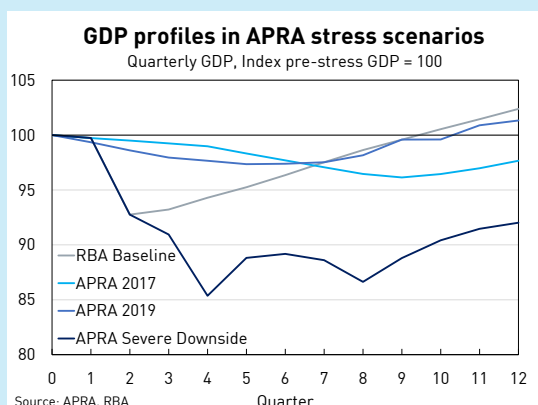
⁵ Although this scenario has not eventuated during 2020, if it were to occur at a late date, this would not materially impact the results and outcomes of the stress test.

Box 2 – Assessing the Severe Downside scenario

Comparison to prior APRA stress test scenarios

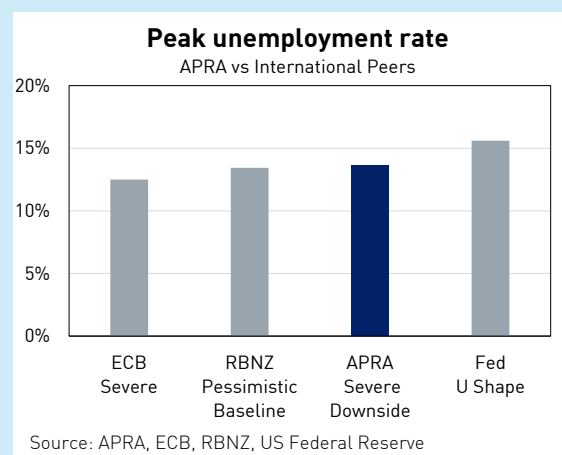
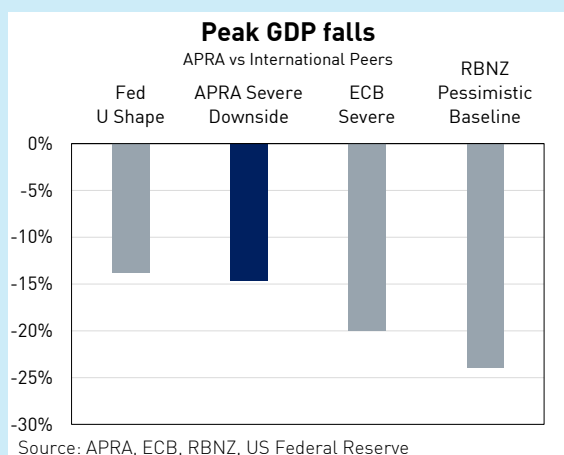
APRA has regularly conducted stress tests of the largest banks since the global financial crisis, with its most recent industry stress tests conducted in 2017 and 2019. These stress tests were based on a significant downturn in the housing market, triggered by a downturn in China and a collapse in demand for commodities. In these stress tests, GDP fell by up to 4 per cent, unemployment rose to 11 per cent and house prices fell by 35 per cent over 3 years.

The Severe Downside scenario used in this paper featured a much sharper and deeper macroeconomic contraction than these previous stress tests, reflecting the unprecedented speed and nature of the COVID-19 pandemic. It also featured a less pronounced recovery, reflecting ongoing uncertainty in both health and economic outcomes domestically and internationally.



Comparison to international COVID-19 scenarios

The Severe Downside scenario has also been compared to stress test scenarios peer regulators have undertaken in response to COVID-19. Falls in GDP and rises in unemployment are similar to the severe downturn scenarios used in these stress tests. House prices falls are larger than those assumed by many peer regulators, reflecting the significance of the housing market on the resilience of the Australian banking system.



Chapter 3 - Stress test results

This chapter details the results of APRA's internal stress tests under the Severe Downside scenario, using APRA's internal data, models and methodologies.

Box 3 – Summary of results

The banking system entered the pandemic with historically high capital ratios, achieving 'unquestionably strong' capital benchmarks following a decade long accumulation of capital to bolster its resilience.

A severe downturn to the current economic outlook was used in stress testing the banking system.

Under such a severe scenario, the banking system's profitability would be expected to be significantly negative, as a result of large credit losses from banks' loan portfolios. Aggregate banking sector profitability fell from \$24 billion in the year prior to the stress, to a loss of \$37 billion in the second year of the stress period.

As a result of the scenario, the industry's CET1 capital ratio of 11.6 per cent prior to the stress period fell to 6.6 per cent at its lowest point. In other words, notwithstanding these losses, banking system capital adequacy remains above its minimum capital requirement (which is a CET1 capital ratio of 4.5 per cent).

Furthermore, this outcome assumes banks have not taken actions to respond to and mitigate the stress, such as capital raisings, asset sales, repricing and expense reductions, some or all of which would occur in reality and would lessen the impact of the stress on capital ratios.

These results provide confidence that the banking system remains resilient and is well positioned to absorb the impacts of a severe economic downturn, remain above its minimum capital requirement, whilst supporting the economy by continuing to lend to businesses and households.

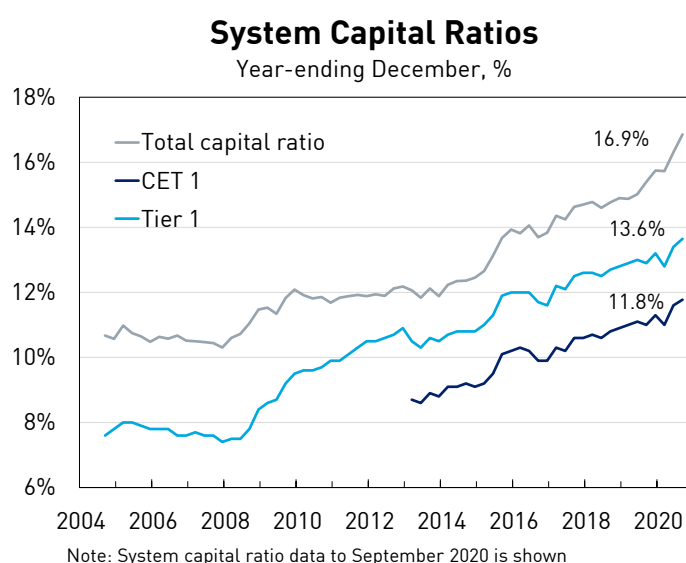
Banking system capital

Capital is the cornerstone of a bank's financial strength and banks hold capital to ensure that they can absorb losses, retain the confidence of their creditors, and continue to lend, even during a severe downturn. High levels of capital increase the resilience of banks, thereby protecting depositors, maintaining market confidence and promoting financial stability – especially during periods of financial stress.

Since the global financial crisis (GFC), there has been a significant increase in capital within the banking system, first built upon the international post-GFC Basel III reforms⁶ and then domestically on the recommendation of the 2014 Financial System Inquiry⁷.

Over this period, the banking sector has bolstered its resilience and has built up substantial capital buffers, achieving its goal of reaching 'unquestionably strong' capital benchmarks set by APRA by the beginning of 2020, prior to the emergence of COVID-19.

Since the onset of COVID-19, banks' capital ratios and provisioning levels have been further strengthened, and as at June 2020, the banking system remains above the 'unquestionably strong' benchmarks, with large capital buffers available to absorb the impacts of economic stress and facilitate lending to the economy.



Key results of the stress test

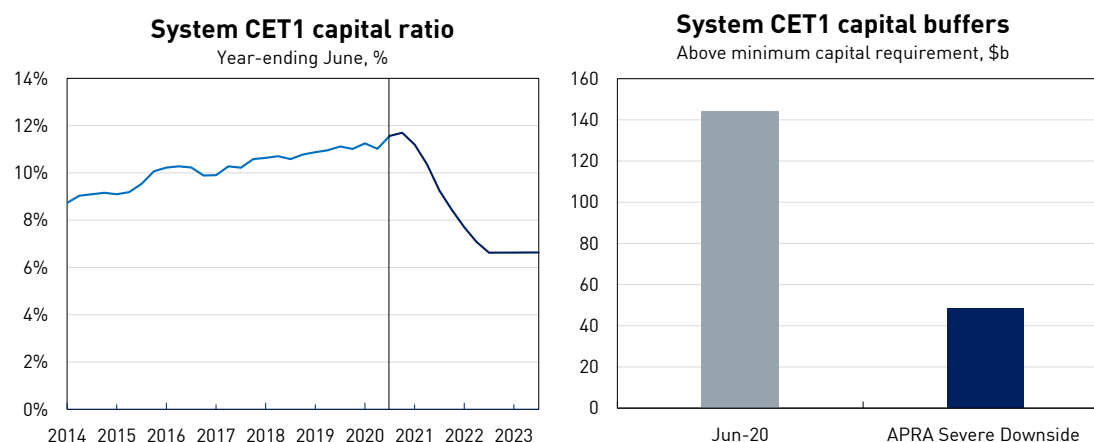
The results of the stress test indicate that despite the emergence of significantly reduced earnings and loss of capital in the banking system under a severe economic downturn, the banking system is able to absorb the impacts of economic stress, remain above its minimum capital requirement, and continue to lend to the economy.

The banking system's existing substantial capital buffers over its minimum capital requirement fell by \$96 billion as it absorbed the impacts of economic stress. This fall in capital was reflected in the banking system's aggregate common equity tier 1 (CET1) capital ratio, which was estimated to decrease by 5 percentage points from 11.6 per cent prior to the stress to a low point of 6.6 per cent in 2022.

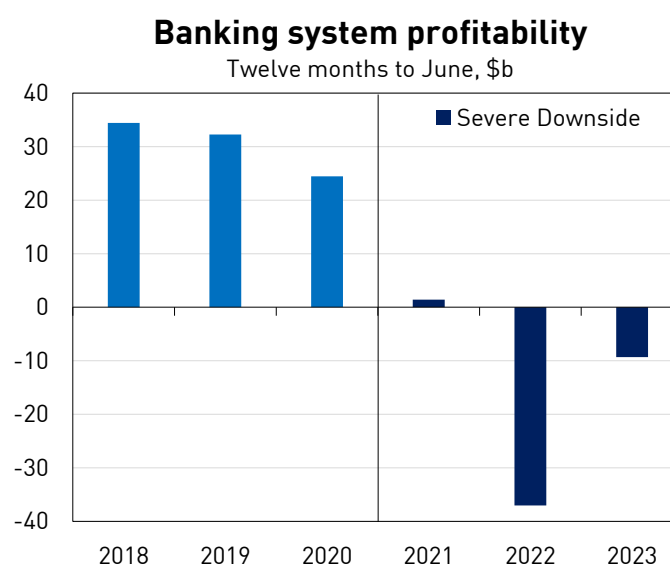
⁶ For more information, see *Basel III: A global regulatory framework for more resilient banks and banking systems - revised version June 2011*.

⁷ For more information, see *Australian Government, Improving Australia's financial system, Government response to the Financial System Inquiry (October 2015) p9*.

After withstanding the impact of the stress, at its lowest point, the banking system had the capacity to absorb a further \$48 billion of economic stress before reaching its minimum capital requirement⁸.



The profitability of the banking system is a key source of capital for rebuilding resilience. Under the stress test, the banking system's annual profitability fell from \$24 billion in the year prior to the stress, to a peak estimated loss of \$37 billion in 2022. The fall in profitability was primarily driven by the emergence of significant credit losses from the banks' loan portfolios. Losses reduce significantly by the third year of the stress, as unemployment remained elevated and GDP remains subdued throughout the scenario.



Dividends from banks, which represent the amount of their profits distributed to their shareholders, fell significantly as their profitability fell, and was assumed to cease when they fell into loss. As capital in the banking system fell as it absorbs economic stress, some banks began to enter their capital conservation buffer⁹.

⁸ This result has not assumed the conversion or write-off of banks' Additional Tier 1 capital instruments.

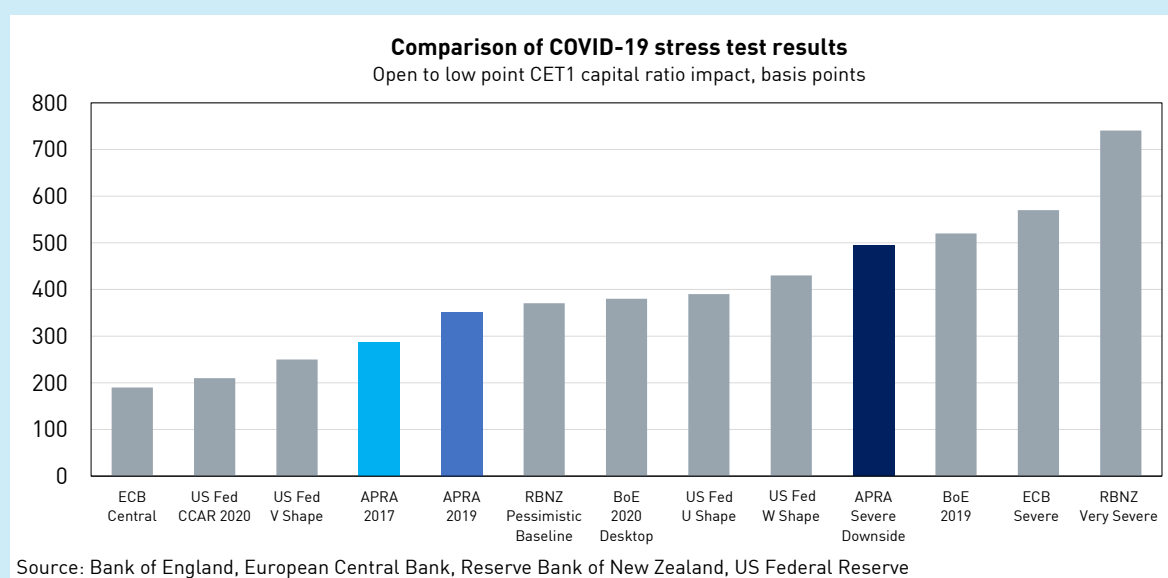
⁹ APRA's internal stress tests assume the current capital framework, including the current settings for banks' capital buffers. For more information on capital buffers, see <https://www.apra.gov.au/capital-buffers>.

APRA's internal stress tests included this feature of APRA's prudential framework, which automatically triggers increasingly greater restrictions on the amount of dividends that banks are permitted to distribute to their shareholders as they fall further into their capital conservation buffer. Profits that are restricted from being paid out as dividends are retained within banks as capital, further fortifying their resilience.

Box 4 – Comparing the results of the stress test

The fall in the banking system's aggregate CET1 capital ratio under the Severe Downside scenario was larger than those estimated in APRA's prior industry stress tests, and was of similar magnitude to stress tests undertaken by peer regulators in response to COVID-19.

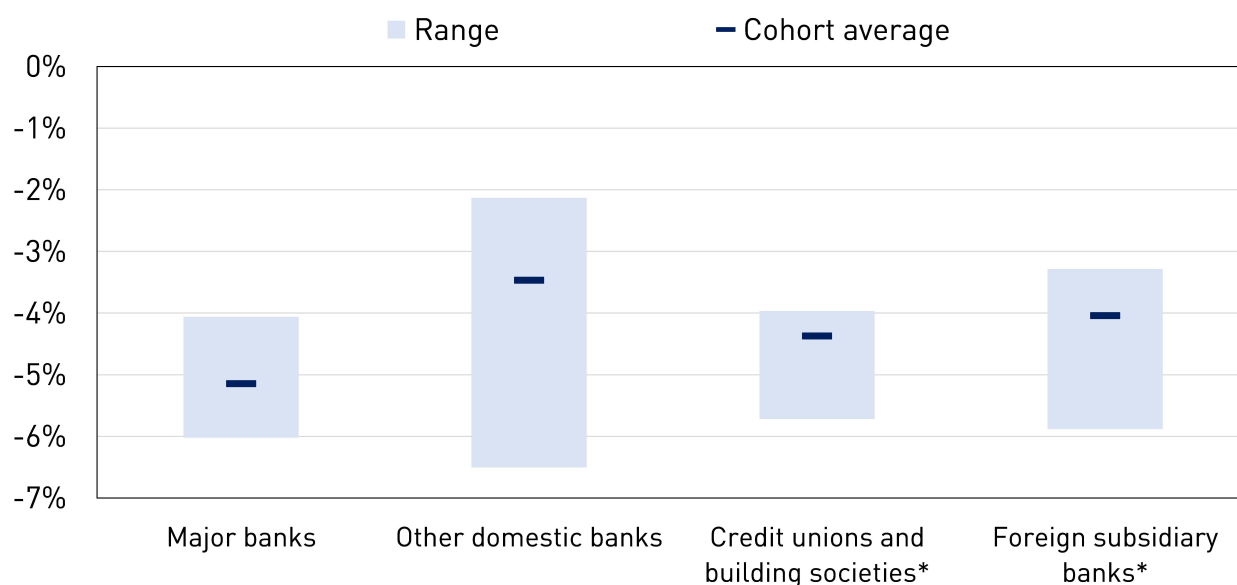
This reflected not only the sharp deterioration in economic conditions and increased severity of the Severe Downside scenario, but also the incorporation of the recently introduced AASB 9 accounting standard for the provisioning of credit losses. AASB 9 requires banks to adopt a more forward-looking approach to recognising the impact of increases in credit losses on their profitability, which leaves less time to generate earnings to offset rising credit losses as economic conditions deteriorate.



The varying impact of COVID-19 on different industries, different geographic regions and across different market sectors is a key feature of APRA's internal stress tests. This variation led to a wide range of impacts of the stress on individual banks, reflecting differences in their business models and the composition and characteristics of their loan portfolios.

Range of Severe Downside CET1 capital ratio falls

Open to low point, percentage points

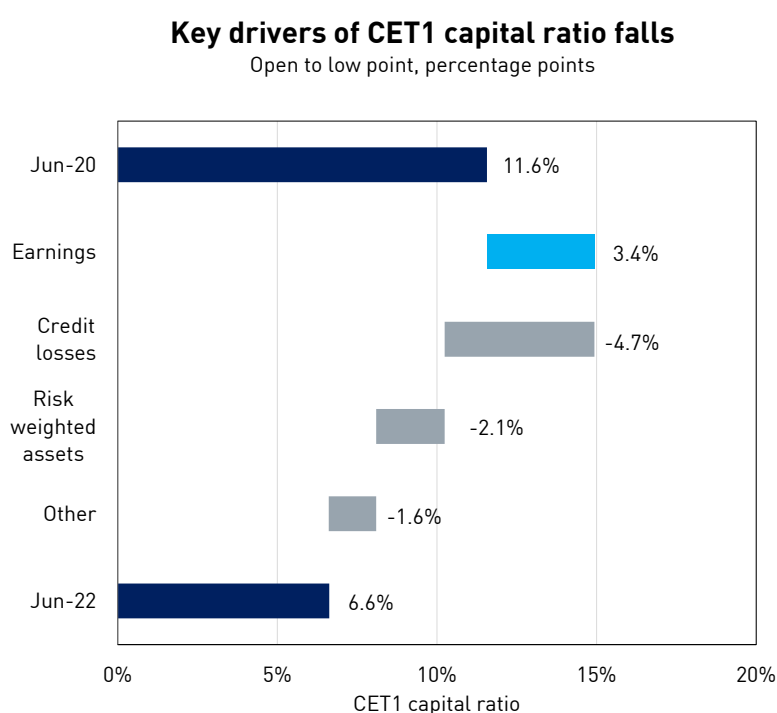


*The 25th-75th percentile range has been shown for Credit unions and building societies and Foreign subsidiary banks

Chapter 4 - Key drivers of stress test results

This chapter details the key drivers of APRA's internal stress tests results under the Severe Downside scenario, using APRA's internal data, models and methodologies.

The banking system's fall in its aggregate CET1 capital ratio was driven by a combination of lower earnings, significant credit losses and increasing risk-weighted assets¹⁰. The increase in risk-weighted assets reflected a deterioration in asset quality requiring higher risk weights, as economic conditions worsen.



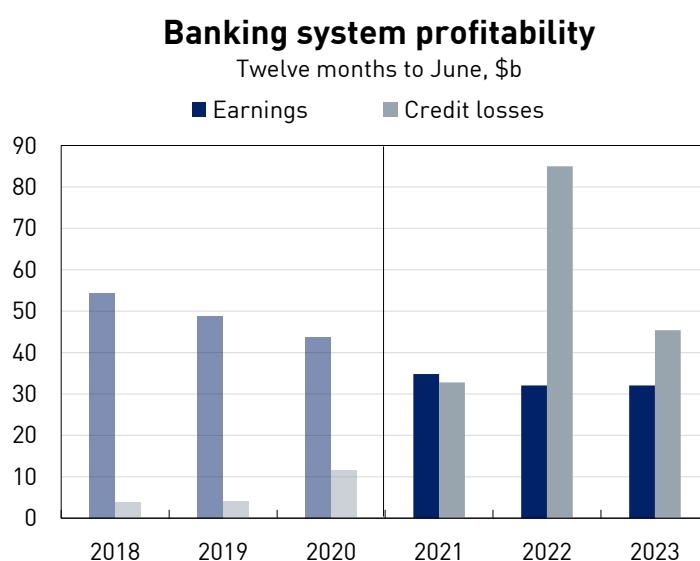
Earnings

A bank's earnings, comprised of its net interest income and other sources of income, less its operating expenses, provide a benefit to its capital levels by acting as a first loss absorber to increasing credit losses. The banking system's annual earnings were estimated to fall by up to 25 per cent in APRA's internal stress tests.

¹⁰ 'Other' primarily consists of increases in deferred tax assets (DTA) from rising credit losses. Deferred tax assets represent timing differences between when credit losses are recognised on a bank's profits and when they are recognised for tax purposes. APRA requires banks to 'deduct' or remove from its measurement of capital the value of a bank's DTA as they not considered to have value in the event of insolvency.

Net interest income¹¹, which is typically the largest source of earnings for a bank, declined substantially, reflecting a continued low interest rate environment and rising costs of funding as economic conditions worsened. Other sources of income, such as fees, trading and transaction-related income also declined as transactions and volumes fell. Operating expenses were assumed to remain unchanged from current levels throughout the stress period.¹²

Falls in earnings varied widely between individual banks, with those banks able to continue to generate greater levels of earnings under the stress having greater capacity to absorb credit losses as economic conditions deteriorate.



Credit losses

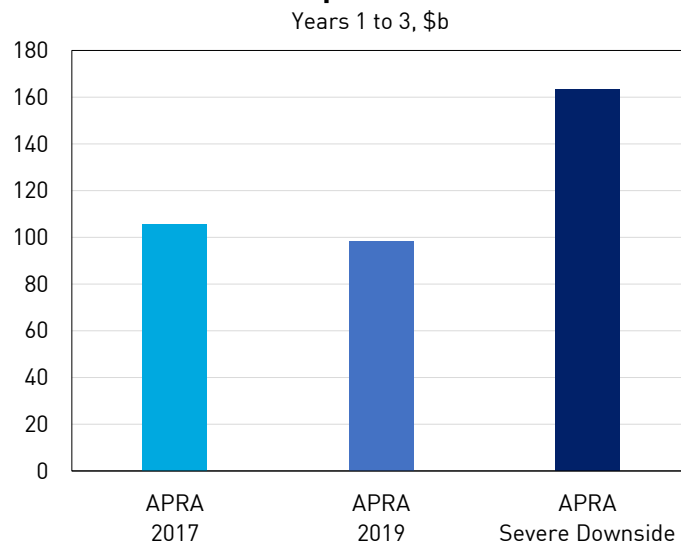
Rising credit losses reduce a bank's profitability and during severe downturns, can be significant enough to erode a bank's capital levels. Credit losses increase during severe downturns as weakness in economic activity and rising levels of unemployment increase the likelihood that borrowers are unable to meet their financial obligations, eventually reaching the point of default, and sharp falls in asset values reduce the amount banks can recover from these loans.

APRA's internal stress tests estimated the banking system's credit losses under the Severe Downside scenario totalled \$163 billion over the three years of stress, which is higher than in prior APRA-led industry stress tests. This reflects the scenario's sharper and more severe deterioration in economic conditions, as well as the impact from variations in data, methodologies, models and judgements used by the banks in these prior stress tests.

¹¹ Net interest income is the difference between what banks receive on their assets (primarily loans) and what they pay on their liabilities (primarily deposits from customers and funding sourced from institutional investors).

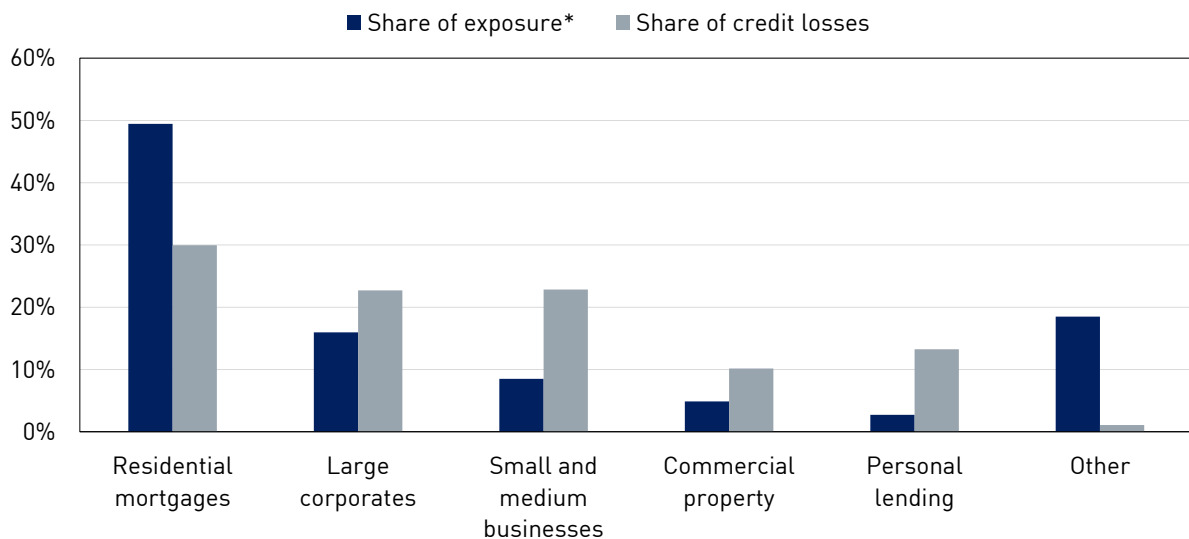
¹² Operating expenses were adjusted for material one-off costs incurred by the industry over the prior 12 months including asset write downs, remediation costs and fines.

Stress test comparison: Credit losses



Credit losses estimated for individual banks varied with differences in the composition and characteristics of their loan portfolios. APRA's internal stress tests incorporate several drivers of this variability including differences in an individual bank's exposures to different types of loans, geographic regions, industries and levels of collateralisation. However, this variability is expected to be greater in practice as elements of idiosyncratic risk present amongst individual banks cannot be wholly captured by APRA's internal stress tests.

Breakdown of stress test credit losses by asset class



*Includes on and off balance sheet exposures

Residential mortgages represent the largest proportion of the banking system's loans, and in APRA's internal stress tests, were a significant driver of credit losses. Credit losses for residential mortgages rose significantly as sharp rises in unemployment increased the likelihood that borrowers defaulted on their mortgages and deep house price falls reduced the amount that banks could recover from these loans.

Credit losses for residential mortgages totalled \$49 billion over 3 years, representing 30 per cent of total losses over the stress period. As a loss rate, this would translate to 2 per cent and would be broadly consistent with the experience in the UK in the early 1990s, however lower than the losses seen in Ireland or the US during the global financial crisis.¹³

Credit losses for residential mortgages amongst individual banks varied by their exposure to different geographic regions, their exposure to different types of mortgages (such as owner-occupied, principal and interest mortgages) and each bank's distribution of loan-to-value ratios.

Business lending credit losses, including loans to both large corporates and small and medium businesses, were estimated to rise significantly due to prolonged economic weakness persisting under the Severe Downside scenario.

Credit losses for business lending totalled \$74 billion over the 3 years, representing 46 per cent of total losses over the stress period.

The size of credit losses estimated across individual banks varied by the composition of their exposures to different geographic regions, and their exposures to different industries highly impacted by COVID-19 (such as hospitality and discretionary retail industries). Credit losses estimated for individual banks were also impacted by the proportion of their loans secured by an underlying asset, including housing for loans to small businesses.

Commercial property lending, although a relatively small component of the banking system's total lending activities, has the potential to be a material contributor to overall credit losses during severe downturns.

The potential impact of the stress on commercial real estate lending on individual banks was uneven across key sectors (such as office buildings, shopping centres and warehouses), reflecting some of the pre-existing strains facing parts of the sector which have been exacerbated under COVID-19.

Credit losses were estimated to increase across the banking system as GDP fell and commercial real estate values deteriorated, with losses for commercial real estate lending totalling \$17 billion over 3 years, representing 10 per cent of total credit losses

Risk-weighted assets¹⁴

Risk-weighted assets are used to link the minimum amount of capital that banks must hold with the risk profile of their loans (and other assets). The more risk a bank is taking, the more capital is needed to protect depositors. Risk-weighted assets for a bank's loan portfolios form the majority of the Australian banking system's risk-weighted assets

¹³ A lower rate of loss than the US and Ireland would reasonably be expected for a given level of stress, due to a stronger collateral position in Australia – a product of full recourse lending and the absence of large volumes of lending at very high loan to value ratios.

¹⁴ For more information, see *APRA Explains: Risk-weighted assets* (APRA Insight Issue Two – 2020, May 2020) <https://www.apra.gov.au/apra-explains-risk-weighted-assets>.

(approximately 85 per cent), and represent the loans of a bank, weighted by a percentage factor, known as a risk-weight, to reflect their respective level of risk to the bank.

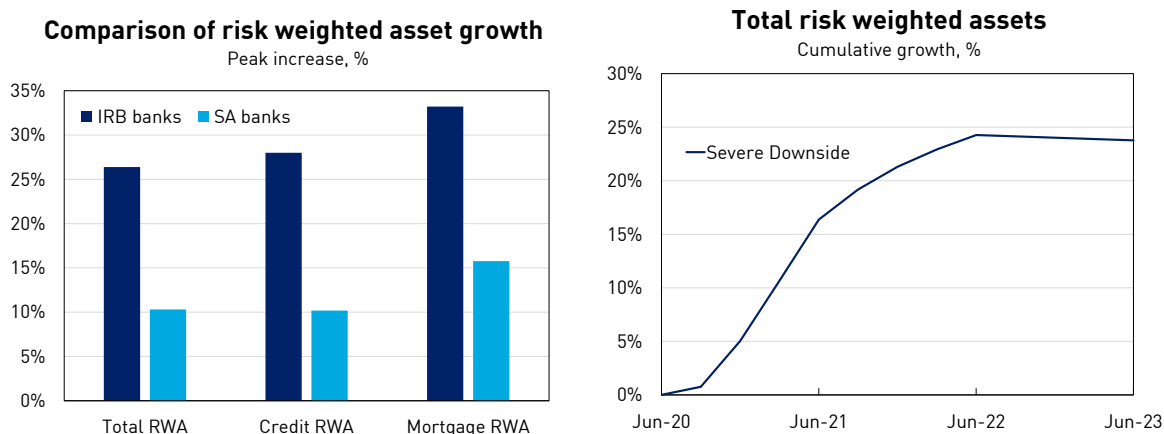
Risk-weighted assets are designed to be responsive to changes in the quality and composition of a bank's loans. During economic downturns, as credit risk increases, risk-weighted assets will increase in response. All else being equal, this will reduce a bank's capital ratios.

The banking system's risk-weighted assets were estimated to increase by 24 per cent under the Severe Downside scenario. These increases were driven by rises in risk-weights in line with rising credit risk within the banking system as economic conditions deteriorate.

Consistent with the prudential framework, estimates of risk-weighted assets in APRA's internal stress tests incorporate both the standardised approach (SA) and the internal ratings-based (IRB) approach, typically used by the largest banks.

These differences in approach creates variability within the size of risk-weight increases across the banking system, particularly for residential mortgage loans. Banks using the standardised approach to risk-weighted assets are not expected to revalue residential mortgage properties for the purpose of measuring risk-weighted assets¹⁵, which reduces the size of increases in risk-weighted assets for these banks as house prices fall.

Within each of these approaches, APRA's internal stress tests incorporated key drivers of variability between individual banks' risk-weights, including their exposures to different States, industries and levels of collateralisation. However, this variability is expected to be greater in practice as elements of idiosyncratic risk present amongst individual banks cannot be wholly captured by APRA's internal stress tests.



¹⁵ For more information see *Banking COVID-19 frequently asked questions* (Last updated 19 November 2020) <https://www.apra.gov.au/banking-covid-19-frequently-asked-questions>.

Chapter 5 - Key learnings and next steps

Key learnings

The results of APRA's stress tests provide assurance that the banking system would remain resilient in the face of deteriorating earnings, rising credit losses and falling levels of capital under a severe but plausible downside to the current economic environment. This resilience is further bolstered by recognising that these results are before mitigating actions, which banks can use in response to financial stress.

The results from stressing the banking system also show that banks can maintain this resilience while continuing to lend to businesses and households during a severe downturn, supporting an economic recovery.

This conclusion reinforces the value of a decade-long bolstering of resilience within the banking system, firstly built on the post-crisis Basel III reforms and then subsequently on the recommendations of the 2014 Financial Services Inquiry to reach 'unquestionably strong' benchmarks.

APRA remains of the view that regular and iterative stress testing is critical to provide assurance in a period of continued uncertainty, and to contribute to the continued development of stress testing capabilities within the banking system.

The resilience of the banking system in aggregate is built upon the resilience of individual banks within the industry. The variability in stress test results between banks illustrates the importance of individual banks undertaking a program of regular and robust stress testing targeted to their own business models and portfolio idiosyncrasies.

APRA's engagement with the largest banks on stress testing has also highlighted the importance of a dynamic and iterative approach to stress testing being integrated into a bank's capital management framework to inform their decisions on capital and their understanding of key risks as uncertain economic conditions evolve.

The impact of mitigating actions on capital results also underpin the importance of planning for stress recovery. This highlights the importance of having robust recovery plans in place, with key actions that may be used in the current environment, are well-tested and pre-positioned, and ready to be used if needed.

Next steps

The learnings and insights from stress testing in the current environment reinforce the importance of stress testing as an important source of timely insight and assurance in respect to financial stability in times of economic uncertainty.

The benefits of a strong industry capability in stress testing, including data and systems, has also been emphasised. The significance of timely and sufficiently granular data in stress testing in turn highlights the importance of APRA's broader data modernisation program.

The progression to a more regular regime of APRA-led industry stress testing for the banking system will play an important role in building these capabilities. This includes continued engagement with banks on stress testing processes and outcomes.



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