



Bank Capital Management in the COVID-19 Environment

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Summary

The COVID-19 pandemic is a public health and an economic crisis. The Federal and State governments in Australia reacted quickly by implementing necessary public health measures such as social distancing and restriction of movement to limit the spread of COVID-19. A consequence of restricting travel and activity means that we face a severe economic shock.

Banks are better placed as they implemented stronger risk management and capital standards following the Global Financial Crisis (GFC). By implementing 'unquestionably strong' benchmarks at the end of 2019, Australian banks have never been so well capitalized.

In the benign economic environment leading to 2020, banks typically developed capital plans that were based on stable future growth paths. Stress testing provided information on the banks' financial resilience during a severe but plausible economic shock. Banks usually set a single target capital level over the forecast period of three to five years. Informed by analysis of stress testing outcomes, banks set their target capital levels, capital management triggers and associated recovery plans.

Now, with COVID-19, economic growth will stall, reverse and then recover. During the June quarter Australia's GDP shrunk by 7%, the largest drop since the Great Depression¹. There is still significant uncertainty around

the time frame and full extent of the economic shock. APRA has articulated that banks will be able to use unquestionably strong buffers to continue lending and support economic activity. Therefore, banks can expect to operate with lower levels of capital going forward.

Banks need to reset their capital management plans to allow for the adverse conditions they are facing. In our view banks should look to manage their capital planning over three distinct time horizons. In the short term economic activity stalls, but impacts are largely masked by government support (short term), then follows a period of economic contraction (medium term) and finally ending with a return to economic growth (long term).

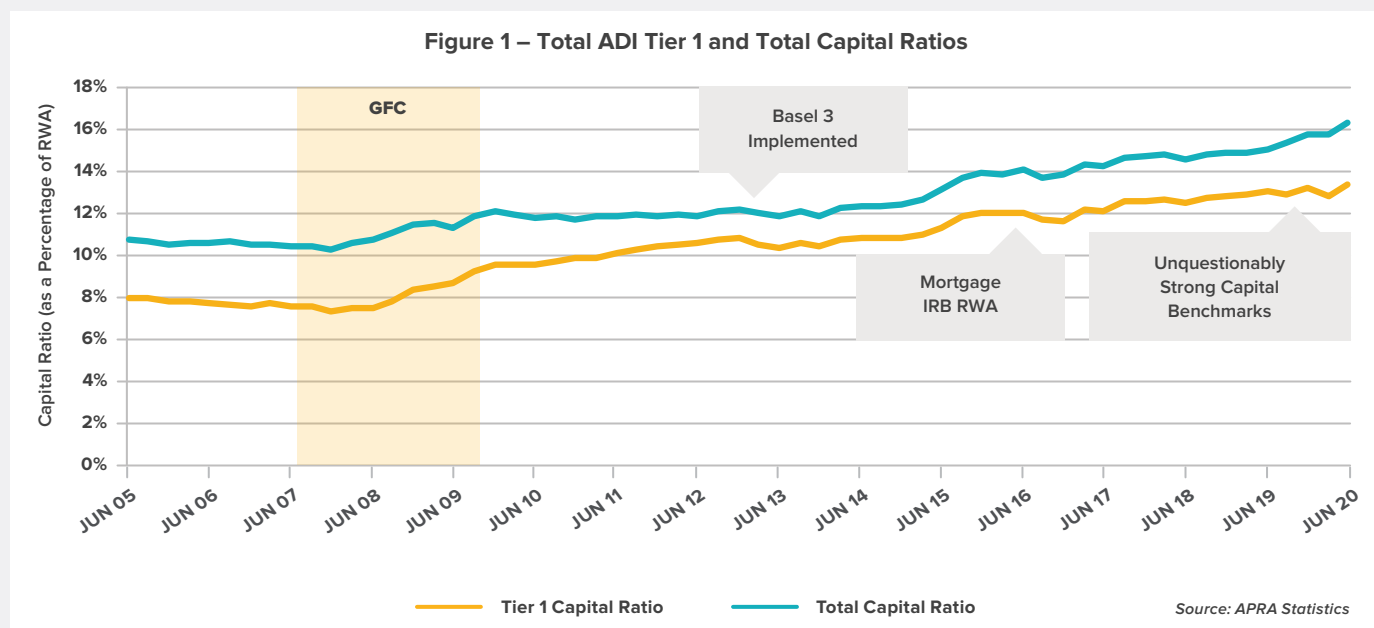
Across all three phases, capital planning, monitoring and implementation activities are informed by risk appetite, and business strategy. Phases are also interlinked as actions taken over one phase will support actions that are required in a subsequent phase. For example, maintaining higher capital in the short term, gives greater flexibility and larger capital buffers in the medium and potentially allows a bank to recapitalize more quickly in the long term.

The diagram below breaks down the three phases in terms of the analysis required, key uncertainties at each phase, interdependencies and the key decisions that banks need to make as part of their capital management.

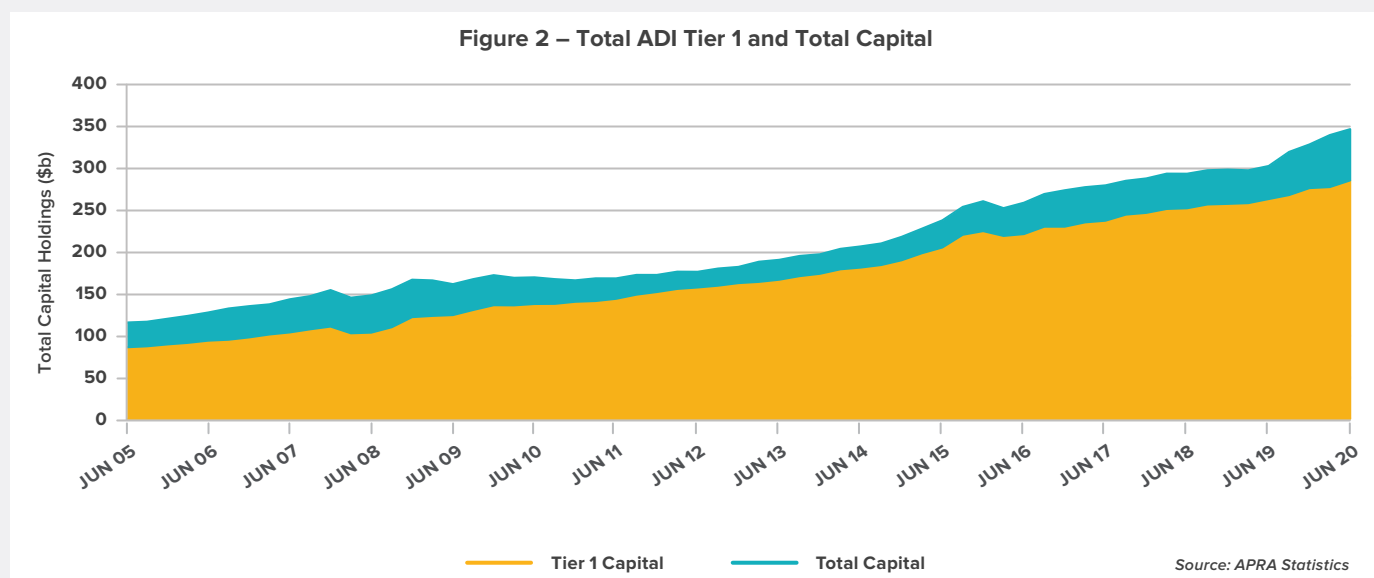
	Adapting and Coping (Short Term)	Ongoing Resilience (Medium Term)	Positioning for Growth (Long Term)
Key Risks	Current underlying level of credit deterioration and capital position	Extent and timing of economic recession and resulting loan impairment	Timing for recovery and competitive landscape
Analysis Required	Development of indicators based on alternative data sources	Economic forecasting, granular stress testing	Economic forecasting, stress testing and strategic planning
Interdependencies	<ul style="list-style-type: none"> ▶ Credit management process ▶ Approach to collective provisions 	<ul style="list-style-type: none"> ▶ Risk appetite ▶ Business plan 	<ul style="list-style-type: none"> ▶ Business strategy ▶ Business strategy and plan
Decisions	<ul style="list-style-type: none"> ▶ Dividend deferral ▶ Capital raising 	<ul style="list-style-type: none"> ▶ Target capital level ▶ Capital triggers ▶ Recovery actions 	<ul style="list-style-type: none"> ▶ Long term level of capital ▶ Capital requirement for growth

Current and Historic Capital Positions of Australian Banks

Following the GFC, Australian banks have steadily built up their capital buffers. Tier 1 Capital Ratios (Total Tier 1 Capital / Total Risk Weighted Assets) increased from 7.4% in December 2007 to 13.2% in December 2019. The average Total Capital Ratio increased from 10.3% to 15.7% over the same period.



As at March 2020, Australian banks held \$340bn of Total Capital (of which \$277bn consisted of Tier 1 Capital). This is a more than double the amount of total capital held by banks at December 2007.

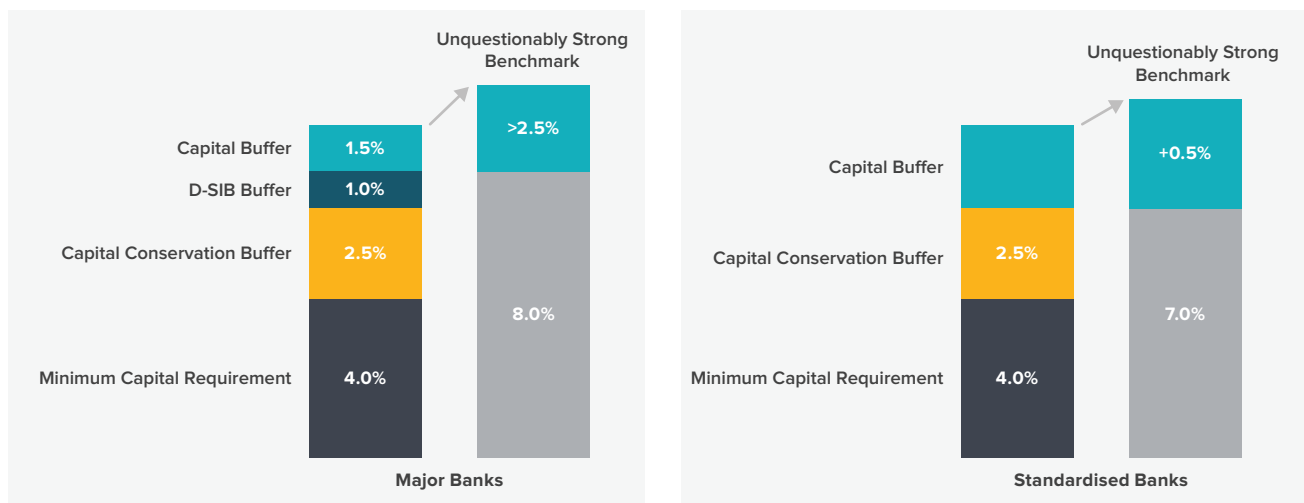


Drivers of the increased capital over the period included regulatory initiatives such as:

- Basel 2 enhancements for market risk, and counterparty credit risk implemented in 2012
- Basel 3 initiatives implemented from January 2013 such as the capital conservation buffer (2.5%), countercyclical buffer (currently 0%) and the G-SIB buffer (1% for the Big 4 Banks)
- Strengthening RWA rate for mortgage loans under the internal ratings based approach in 2016
- Implementation of unquestionably strong capital benchmarks by December 2019

Unquestionably strong benchmarks were set out by APRA in 2017². For major banks, APRA set the benchmark at 10.5% CET1 ratio by January 2020, an average increase of 1% above the CET1 ratios of major banks in December 2016. For other banks APRA suggested an increase of 0.5% in their CET1 ratios to achieve the unquestionably strong benchmark. APRA's expectation is that the additional buffer built up can be used to support lending in the future. Banks will need to engage with their supervisors to understand APRA's expectations specifically for their bank.

Figure 3 – APRA Unquestionably Strong Benchmarks



Source: APRA, *Strengthening banking system resilience – establishing unquestionably strong capital ratios, July 2017*

Short Term: Adapting and Coping

In the short term the challenge is to understand the proportion of impaired loans in the portfolio. Banks have not recorded materially higher arrears or defaults to date due to repayment deferrals offered to retail and SME clients. June 2020 results presentations from banks, as well as, APRA data³ show that some mortgage customers have resumed repayments recently. APRA has allowed banks to continue to record loans with deferrals due to COVID-19 as performing for capital purposes. In August, APRA announced it will formalise the arrangements by amending APS 220⁴. These measures will be in place until 31 March 2021. Some of these loans to individuals and businesses will default as government support is wound back and repayment deferrals end.

Key uncertainties or risk

The key uncertainty is the number of loans that are about to become impaired. The underlying rate of default can vary significantly by the borrower's industry segment and geography. Conventional credit metrics such as current arrears rates will not capture the underlying financial stress that clients may be facing.

Analysis

We recommend that banks integrate additional data sources and develop new lead indicators of credit default risk. Examples of alternative data sources for indicators include:

- Transaction data from customers to provide lead indicators on the level of economic activity by region and industry sector
- Financial statement data provided by customers as part of underwriting can be used to understand the risk of default given impacts to their industry or geography
- Using third party data vendors to obtain a range of data such as data on movement of people and vehicles. This can be used as a proxy for economic activity.
- Public data sources e.g. ABS economic indicators at SA4 level that can be used to support other data sources. However there can be limitations for example unemployment rates do not capture employees currently receiving JobKeeper.

Indicators should be responsive and sufficiently granular enough to detect changes in underlying economic activity. A good example is where metropolitan Melbourne was placed back into lockdown putting additional unexpected financial strain on businesses. This can be a potential risk for other regions of Australia in the near future.

Interdependencies

In the short term, banks need to refine credit management policies and processes for existing loans. In particular, banks need to develop strategies for managing and monitoring clients on repayment deferrals. Capital forecasting should reflect how impaired loans will be identified and handled by the bank's credit risk team.

The bank will need to review its approach to setting collective provisions. Banks have all raised additional collective provisions in their latest financial results to reflect the deterioration in credit quality. The IFRS Foundation notes that "companies may need to adjust their approaches to forecasting and determining when lifetime losses should be recognised to reflect the current environment"⁶. The approach that banks take to recognising significant increases in credit risk in the current environment and the interaction with the General Reserve for Credit Losses (GRCL) will impact their capital position.

Medium Term: Ongoing Resilience

The economic position is likely to get worse as government support is wound back. Ultimately banks will also need to end support provided to customers such as loan repayment deferrals. Both these factors will result in large number of defaults across different loan asset classes.

Key uncertainties

The depth and length of time that the Australian economy spends in a recession is the key uncertainty. At this stage no one can predict how long the economy will continue to contract, and when the contraction will reverse. This will depend on factors such as the ability to balance public health protective measures such as social distancing with some level of returning to normal economic activity. Ultimately economic activity may not get to pre-COVID-19 levels unless an effective vaccine is developed and administered to a large part of the population. For bank modelling teams there are no similar historical events to assist in calibrating models.

Analysis

Banks need to take a view on future economic conditions to set business plans and capital targets. This should be supported by detailed scenario and stress tests to inform the bank on the level of uncertainty around this forecast.

Many banks have scenarios that are built around GFC type events where the narrative or setting for down turns is built on economic shocks such as a China slow down or a housing price shock which leads to a recession. In the current situation however, scenarios developed are likely to involve uncertainty on the progression of COVID-19 such as:

- Resurgence of infections in Australia in the short term leading to a second lock down
- Prolonged partial lockdown conditions with eventual wind back of government economic support

Decisions and actions

As banks gain a better understanding of their current capital position, after reflecting loan loss provisions, asset value movement and RWA changes, they should consider whether to initiate any actions from their capital management toolkit. Actions available in the short term include:

- Deferring dividends: APRA has signalled that buffers should be used for maintaining lending activity and dividends should be reduced or deferred. Banks therefore need to review their dividend strategy such that it balances competing priorities.
- Raising or injecting capital: NAB, for example, tapped capital markets earlier this year to bolster its capital position. Approaching markets early can provide more certainty than considering this later when economic conditions worsen.

- Timing for development of a vaccine that eventually leads to complete removal of restrictions
- Border closures (both interstate and international) that result in disruptions to supply chains and people movements.

Bank modelling teams need to consider alternative modelling approaches when historical data linking defaults to economic conditions is not available. Further below we describe a modelling approach used by the Bank of England using individual corporate financial data to explicitly model each corporate's financial position. This moves away from modelling defaults as a response to economic predictor variables.

Bank should also consider the impact across geographies and industry sectors within Australia. So far, the scale of the economic impact has affected some regions and sectors more than others. Models should be built to provide results at granular levels. Industries such as Accommodation and Food Services, Transport Postal and Warehousing and Arts and Recreation have felt the immediate impacts of COVID-19 as a direct result of social distancing rules and restrictions on travel. Industries, such as professional services, and financial services are likely to be affected due to decreased discretionary spending and capital investment.

Banks need to improve the infrastructure that supports stress testing, so that stress testing can be completed quickly. Stress testing should not be just an annual or semi-annual exercise. As conditions change and evolve, banks will need to run multiple stress tests to continually keep informed. Previously stress testing had long lead times to produce bank level forecasts of profit and loss and balance sheet metrics. Granularity is important as the effects so far have varied markedly between regions and industry sectors. Models should be designed to use granular input assumptions, to produce accurate results at regional and industry level, in addition to asset class forecasts.

Overview of UK Financial Policy Committee Desktop Bank Stress Tests

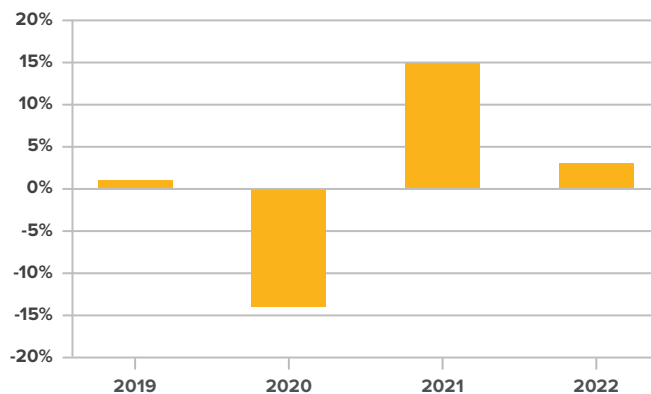
The Bank of England's Financial Policy Committee (FPC) conducted a desktop stress test on UK banks⁷. The approach provides an example of using granular economic forecasts together with detailed financial information on non-retail borrowers to understand credit default risk. The stress test found that banks have sufficient capital buffers to survive an economic downturn caused by the current pandemic. Under the COVID-19 stress scenario, aggregate CET1 capital ratio for UK banks is projected to decrease by 3.8% to 11%. This modelling took into account the various support measures provided by the UK government.

The narrative of the scenarios is that social distancing is maintained until early June and gradually lifted by the third quarter. Government support is wound back as restrictions are lifted. Over this stressed scenario:

- GDP drops 30%, and then recovers as restrictions are eased (see Figure 4)
- Unemployment rises sharply then recovers to pre-pandemic levels (see Figure 5)
- House prices decline 16% compared to 33% in the 2019 industry wide stress test

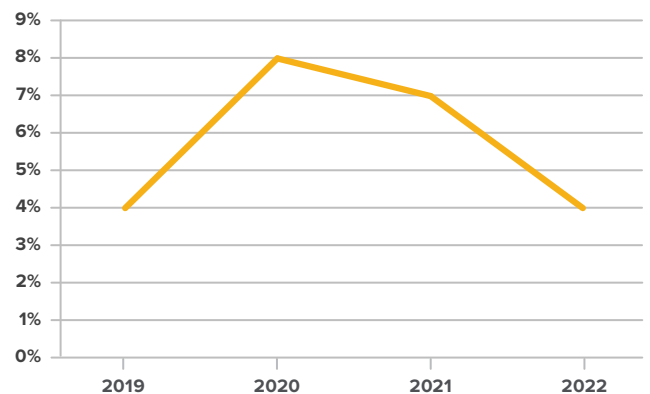
The chart shows how GDP and unemployment are impacted:

Figure 4 – FPC Scenario GDP Growth



Source: Bank of England

Figure 5 – FPC Scenario Unemployment



Source: Bank of England

Given the uncertainty around the scenario, the FPC also carried out sensitivity analysis such as:

- Extension of social distancing measures: If an additional two weeks of current social distancing and policy support measures were announced, activity in that quarter would fall by around 1.25% of annual GDP.
- Household and corporate savings rate are either 2% higher or lower than forecast: The higher rate reflects the scenario that households and businesses are more cautious. The lower rate represents release of pent up demand. This finds a 1% impact in short term GDP, but a smaller 0.25% longer term impact. The impacts are measured as a percentage of 2019 GDP.
- FPC's modelling considered a higher long term unemployment rate as unemployment could be more persistent.

FPC's modelling used three different approaches for corporate loans, consumer loans, and mortgages. For corporate loans, the modelling team used three years of financial accounts covering 85,000 companies.

The modelling team adjusted turnover for companies and cross-checked this to forecast revenue impacts at an industry level. The modelling team also made assumptions on each company's ability to adjust expenses as business activity declines. Companies are expected to continue paying rent, while scaling back other expenses. A company defaults where it cannot meet cash flow deficits from either cash reserves or external funding. For consumer loans, default forecasts are based on historic relationships between defaults and unemployment.

The approach adopted by FPC for corporate lending is an example of using granular borrower level data to build a bottom-up model of the impact of COVID-19. Banks have a combination of financial position data and transaction data on clients to leverage in developing more detailed models.

Interdependencies

Over this longer term the bank has an opportunity to adjust more fundamental drivers of the bank. From a capital management perspective the most relevant factors are:

- **Risk appetite:** The risk appetite setting process is complex and needs to balance expectations of stakeholders. While a discussion on risk appetite setting is beyond the scope of this article, one key factor for risk appetite setting is the bank's risk capacity, which will have been eroded.
- **Business plan and business mix:** The business plan should reflect risk appetite settings through changes to product mix, use of credit mitigations, credit and exposure limits.
- **Pricing:** Adjusting pricing strategies in response to changes to competition, demand for new lending and funding costs can help increase profitability.

Long Term: Positioning for Value Creation

Banks should also plan a return to normal and stable economic growth. In this phase banks will need to recapitalize, as APRA is likely to expect that banks will return to having unquestionably strong benchmarks. APRA will also resume implementing changes to the prudential framework that were consulted on prior to COVID-19.

The competitive landscape can change, as returning to economic growth will draw new competitors. Over this time, bank customers will be more aware and comfortable with open banking and use this to compare and shop for banking products. Banks need to build capabilities to compete in this environment, and need to plan to accumulate capital resources to make the necessary investments.

Key uncertainties

Timing of the recovery and economic conditions in the post COVID-19 period is uncertain. It is likely that a low interest rate environment could persist for a number of years making it challenging to generate Net Interest Margin (NIM).

In the past, economic downturns often led to mergers and acquisitions. This could happen over the period following COVID-19 as some banks struggle while other banks look to increase scale and acquire capabilities. New competitors can emerge from technology and payment providers, as well as non-banks lenders.

APRA is also likely to resume the capital reforms (FRTB, Basel III finalization) that were delayed during the pandemic. During this phase banks will need to start focusing again on regulatory change, and contend with capital goal posts moving.

Analysis

Forecasting and stress testing continue to be important analysis tools, though in the longer term

Decisions

Over this horizon, the key decisions the bank needs to make are the target capital level and triggers around the target level. The target level of capital should be sufficient to cover losses from plausible stress events. This will also need to meet expectations on the level of capital buffers from investors, rating agencies and regulators.

If banks expect their target capital to be lower with a smaller buffer over minimum requirements, then the trigger points will be set closer. The actions associated with the triggers need to be reviewed and updated based on the management's view on the effectiveness of recovery actions. Stress testing will provide insights into factors or events that lead to different triggers being breached.

granularity of forecasts and stress tests are potentially less important.

At this horizon, strategic analysis is important. Banks will need to consider what business as usual will look like after the pandemic. Capital management needs to be set so that the bank is positioned to pursue different strategic options identified in strategic analysis.

Interdependencies

Banks will need to take into account expectations of rating agencies, regulators and investors. A starting point for the longer term capital position is that the banks will return to a similar level of capital buffers it held prior to the COVID-19 pandemic. The expected timing for when banks are expected to restore capital buffers to pre-COVID-19 levels is also important.

Decisions

Key decisions are what level of capital the bank will need to build up and over what timeframe. This is based on analysis of the potential uses for the capital linked to a strategic analysis, as well as expectations for the level of capital required. In particular, at a minimum a bank will need to return to holding capital consistent with unquestionably strong benchmarks.

Based on the view of capital required, banks can start to consider how they will recapitalize and set dividend plans accordingly. From forecasting carried out, banks should gauge whether organic capital generation is sufficient to return to the long run target level, or if additional capital initiatives are required. This process is likely to be iterative and banks may revise their business plan and strategy.

Conclusion

The fluid nature of the pandemic means that the economic impact is constantly evolving. This has been seen recently as Metropolitan Melbourne was forced into a second lockdown putting financial strain on businesses that were looking forward to slowing increasing turn over.

We see that taking a three horizon view can help with capital planning and management given the different features of the external environment and the associated uncertainties. There are also different strategic decision that a banks needs to make at each horizon. Potentially the target level and associated triggers will no longer be static. Extensive monitoring and modelling, particularly stress and scenario testing will be required.

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 - 2 APRA Information Paper, Strengthening banking system resilience – establishing unquestionably strong capital ratios, 19 July 2017. Available: https://www.apra.gov.au/sites/default/files/Unquestionably%2520Strong%2520Information%2520Paper_0.pdf
 - 3 APRA Temporary loan repayment deferrals due to COVID-19 dashboards. Available: <https://www.apra.gov.au/temporary-loan-repayment-deferrals-due-to-covid-19-dashboards-accessible-version>
 - 4 Consultation on treatment of loans impacted by COVID-19. Available: <https://www.apra.gov.au/consultation-on-treatment-of-loans-impacted-by-covid-19>¹¹
 - 5 Response to submissions – treatment of loans impacted by COVID-19. Available: <https://www.apra.gov.au/response-to-submissions-%E2%80%93-treatment-of-loans-impacted-by-covid-19>
 - 6 <https://www.ifrs.org/news-and-events/2020/03/application-of-ifrs-9-in-the-light-of-the-coronavirus-uncertainty>
 - 7 Interim Financial Stability Report May 2020 - Bank of England, Available: <https://www.bankofengland.co.uk/-/media/boe/files/financial-stability-report/2020/may-2020.pdf>



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