

6. The Australian Banking Market

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6.1 Introduction

This Chapter examines a number of aspects of the Australian banking sector. First it provides information on the structure of the market. One noticeable feature is the degree of concentration and hence the following section examines the issue of concentration versus competition in banking and economic welfare. One important potential influence on competition in the Australian banking market is the involvement of foreign banks in the market, and this is considered next. Also of interest is the activities of Australian banks in foreign markets which is then examined.

Three important issues are then considered. The first is the information disclosure required of banks. The second is the tax treatment of Australian banks. Then the question of how banks are valued by the stock market is addressed: while the principles involved are the same as for any company, the peculiar structure of bank balance sheets leads to specific approaches to valuation. Finally the chapter concludes with information on bank licensing and prudential standards applied by the regulator to banks.

6.2 The Structure of the Australian ADI Market¹

Figures 1 and 2 provide information on the relative size of the largest 20 Australian banks, based on the size of their resident business. (This is transactions conducted by the bank registered in Australia, which includes subsidiaries and branches of foreign banks, with Australian residents – a category which includes foreign owned businesses based in Australia). Note that the figures only refer to resident assets and deposits, and thus do not include debt financing of the banks nor funds provided by a foreign parent.

Figure 1 shows the position of the largest nine banks – which incorporates most of the “regional banks”. Only one foreign bank (ING) is large enough to make the top nine, which

¹ More detail on the structure of the Australian ADI market as at 2018 can be found in this [background paper](#) for the Hayne Royal Commission.

reflects the success of its on-line deposit strategy and financing of housing mortgage loans. Several features stand out.

- The first is the massive size of the four majors compared to the rest. The smallest of the four majors (ANZ) is almost four times the size of the next largest bank (Macquarie), which in turn is virtually double the size of the next largest (Bendigo).
- The second is the importance of funding assets by means other than deposits – in particular debt and equity. The figures vary between the banks, but generally only around half of resident assets are funded by resident deposits.



FIGURE 1: LARGEST AUSTRALIAN BANKS - RESIDENT BUSINESS (SOURCE APRA, [MADI](#))

What is not shown in the MADI figures used for figure 1 is the extent of offshore business of the banks. That varies quite substantially. For example, for CBA the resident assets of \$961 billion are not much different from the total assets reported for the group on the CBA 2020 Annual Report of \$1,014 billion (of which the bank had \$964 billion) with the difference most likely attributable mainly to NZ subsidiary operations. In contrast, for ANZ, total resident assets of \$642 billion are much less than the 2020 balance sheet figure for the group of \$1042 billion, reflecting a higher level of offshore activity than for CBA.

Figure 2 provides the same data for the mid-size banks (the next largest twenty or so), and includes BoQ which is the smallest bank in Figure 1 to give a perspective on size of this group relative to the large banks. Points to note include:

- The inclusion of a significant number of foreign banks in this group.
- The relatively small reliance on resident deposit funding for many of the foreign banks
- The inclusion of several mutual banks/credit unions/former (or current) building societies which are generally more reliant on resident deposit funding than other Australian banks

The smallest bank in Figure 2 has around \$12.5 billion in resident assets. As one proceeds down the list further, there are around 125 ADIs/banks included in the MADl statistics, and the bottom half each have resident assets less than \$4 billion and around 30 with less than \$1 billion. Many of these are credit unions, and their number has been declining as mergers have occurred.

Apart from their overall size difference, the major banks have also been the dominant players in the financial markets dealing with individuals. At April 2021, the four majors had a 74 per cent share of household deposits, a 75 per cent share of ADl loans for owner occupied housing, over 80 per cent of ADl non-housing lending to households, and an 82 per cent share of investment loans for housing. The 75 per cent owner occupied housing figure slightly overstates the share of total such loans since it does not incorporate securitised housing loans not on bank balance sheets. This would reduce the figure slightly – but not dramatically.

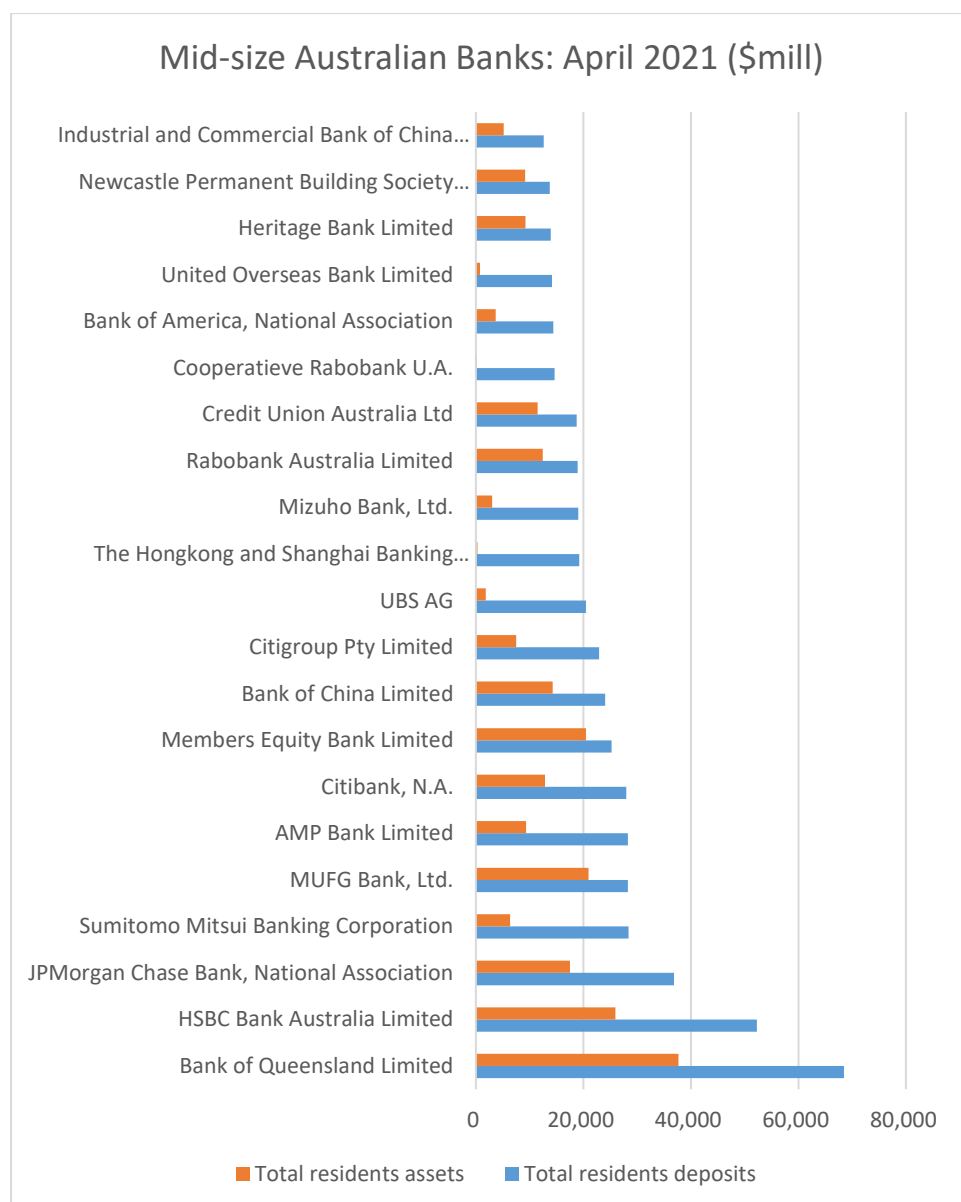


FIGURE 2: MID-SIZE AUSTRALIAN BANKS RESIDENT BUSINESS (SOURCE APRA, [MADI](#))

The majors are also dominant in their role in the payments system. Table 1 shows that they provide around 80-85 per cent of ATM machines and EFTPOS terminals. (Foreign banks are not participants in the EFTPOS system and transactions of their customers are routed from the EFTPOS terminals of other participants via VISA or MasterCard networks).

TABLE 1: POINTS OF PRESENCE 2020 (SOURCE: [APRA](#))

	Total	Majors	Foreign Banks#	Other Domestic*	Bank@Post
Branches	5173	3130	162	1781	
ATMs	9621	7708	35	1878	
EFTPOS	780861	666289	0	114572	
Other face to face	18053	2150	196	1459	14248

* Other domestic banks, building societies, credit unions and service providers

Foreign subsidiaries and branches

It is also noticeable that the other domestic ADIs have a much higher number of branches than might be expected given their share of resident deposits. But the number of both those and major bank branches have been in decline in recent years, as electronic communications reduce the need for easy access to physical branches for many customers. In some locations however, the absence of a physical presence can be problematic, and the growth of Bank@Post² (where services of participating banks are provided via a local post office) has been important in that regard.

6.3 Competition in Banking Markets

There are few national banking markets where there is not a high degree of concentration. The USA is the main exception. In most markets, the largest four or five banks generally have a share of bank deposit and loan markets of around three-quarters or more. And while there are non-bank competitors in these markets, including them would not markedly change the picture.

Australia is thus hardly unique in having four large (major) banks which tower over a field of smaller ADI and non-bank competitors. At March 2021, APRA Monthly ADI statistics show that the four majors (ANZ, CBA, NAB and Westpac) had total residents' loans and finance leases of \$2.1 billion out of a total for all ADIs of \$2.9 billion – a share of approximately seventy five per cent (and a similar share for deposits). The smallest of the four majors in terms of loans was ANZ with \$410 million, and the largest of the other banks was Macquarie with \$80 million.

Figure 3, showing only the top twenty ADIs by loans, illustrates the dominant position of the four majors in the loans market. Notably, among the top twenty ADIs there is only one US bank – with the large US institutions having focused primarily on investment banking business rather than traditional banking deposit taking and lending.

² See Chapter 13 for more information

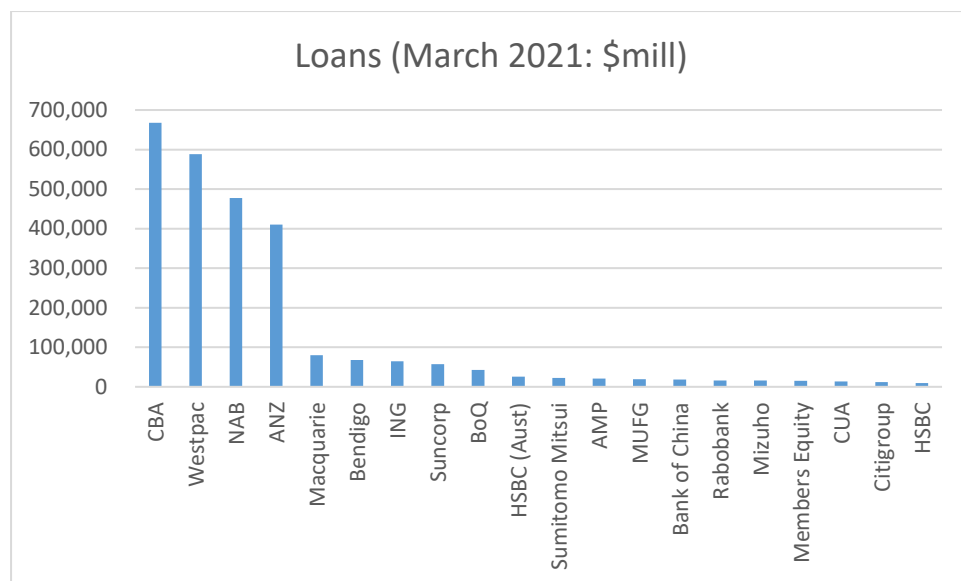


FIGURE 3: LOANS AND LEASES TO RESIDENTS (SOURCE APRA, MONTHLY ADI STATISTICS)

Concentration and Competition: The Issues

The degree of concentration in banking markets has been a topic of interest to policy makers and researchers for many years. One reason is that concentration may lead to the exploitation of market power such that prices (interest rates) are not set at levels consistent with market efficiency. High interest rate margins which generate high profits, for example, would reduce deposits and loans below a competitive market, economically efficient, level. To the extent that this occurs (and historically high profit rates of the majors lead many to think this is the case) the subsidiary question arises of what prevents smaller institutions from competing away market share. Is it the existence of explicit or implicit barriers to entry, policies which generate competitive advantages for the larger banks, or economies of scale or scope which give the larger institutions a cost advantage. Even if so, why wouldn't competition between the big four lead to an erosion of any abnormal profits?

One policy issue which means that a focus on bank competition is important is the privileged position banks have in terms of relationships with the Central Bank. Generally they are the only institutions with accounts at the Central Bank (Exchange Settlement Accounts at the Reserve Bank in Australia) through which financial transactions throughout the economy are ultimately settled. Banks have access to the RBA for liquidity. Non-bank financial institutions use bank deposits as their means of exchange or liquidity. Thus the behavior of the banking sector is relevant for the entire financial sector. Securitisation is one example, where non-bank securitisers are generally reliant on bank warehouse loans to finance mortgage loans they have made until the scale is large enough to be securitised.

Another reason for interest in the level of concentration is the question of whether financial stability will be better promoted by a competitive or concentrated banking system. Competition could lead to failures of less efficient banks (as suggested by Joseph Schumpeter's phrase "[creative destruction](#)"). But, in addition to losses imposed on customers, it can create problems of instability in banking markets due to the possibility of spillovers to other banks either as a result of investor confidence or interrelationships between institutions. A wide range of policies have been put in place to try to enhance financial stability.

Yet another issue is whether innovation (relevant for "dynamic efficiency") will be better fostered in a competitive or concentrated market. There is no simple answer to that question, but the "fintech" revolution has raised the important issues of whether: (a) large "tech" firms (such as Apple, Google, Microsoft, etc) will emerge as competitors to established institutions; (b) whether smaller tech innovators will create new competition in some spheres of bank activity or be swallowed by the large institutions.

Difficulties in Assessing Competition in Banking

One of the main problems in talking about competition in banking is that banks operate in a wide range of markets - deposit taking, lending, payments services provisions to name but a few, and within each of these there are sub-markets defined by type of customer, type of product, geography, etc. Examining relative size of institutions using aggregate shares of lending or deposit taking, such as was done above, may hide significant differences in the degree of competition in sub-markets. Moreover, customers generally deal with a bank in more than one product or service market. Bank attempts to capture "whole of wallet" business of a customer thus has implications across a range of markets (and a range of government policies have attempted to prevent banks adopting strategies aimed at "locking in" customers from dealing with other suppliers).

Measuring Competition in Banking Markets

There are three main styles of analysis which can be found in the literature attempting to measure competition in banking. More detail can be found [here](#).

Structure-Conduct-Performance

The "Structure-Conduct-Performance" paradigm suggests that industry structure determines the conduct of industry participants and thus economic performance (such as profitability, margins, rates of return, efficiency etc).

Within this paradigm three types of statistics are commonly used as market structure indicators

- *Concentration ratios* (market share of the largest 3, 4 or 5 banks) are generally readily available for most nations (eg from the [World Bank](#)), but do not provide information on the composition of market share of the remaining institutions. Figure 4 shows 5 firm bank concentration ratios for a number of countries.

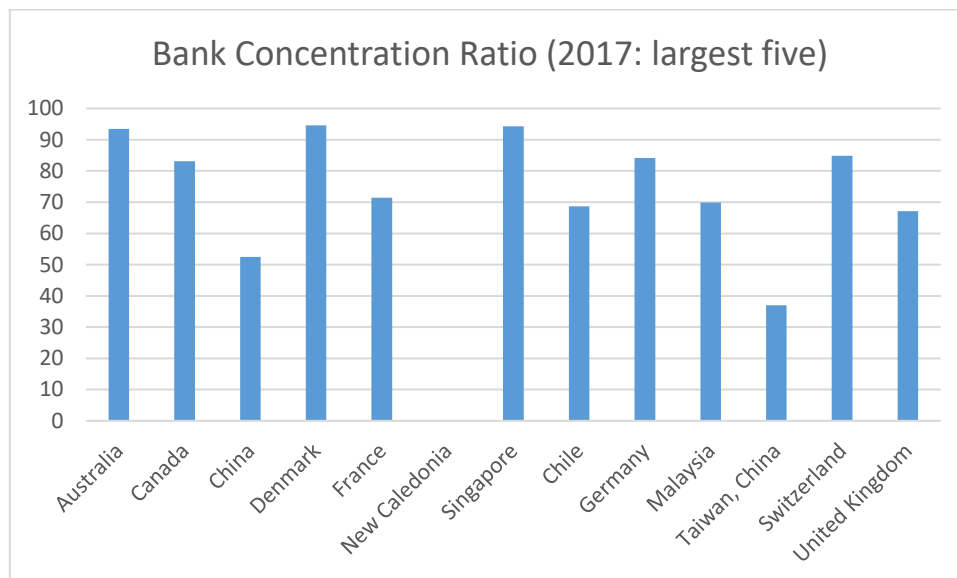


FIGURE 4: 5 FIRM BANK CONCENTRATION RATIO - 2017: SOURCE:
[HTTPS://DATABANK.WORLDBANK.ORG/HOME.ASPX](https://databank.worldbank.org/home.aspx)

- *The Herfindahl-Hirschman Index (HHI)* attempts to correct for the concentration ratio focus on only the few largest firms. It is calculated as the sum of squared market shares of all participants in the industry.³ If market shares are expressed as a percentage, the maximum value of the index is 100,000 (ie 100^2) when there is only one participant. The index falls as the number of market participants increases and the level of disparity of market shares declines. In the USA, a value for the HHI in excess of 1,800 has been regarded by competition authorities as highly concentrated. Four firms with 20 per cent market share each, 5 firms with 2 per cent share each, and 50 with 0.02 per cent share each (roughly representative of the Australian ADI market) would lead to a HHI value of around 1,620. The US competition authorities criteria would suggest the Australian market is concentrated, but not highly so.
- *Performance measures*, such as high profit rates might be seen as indicating monopoly power. Similarly a larger gap between output price and average costs would be indicative of less competition. In banking, this approach is complicated by the difficulty in clearly identifying outputs and inputs. One simple approach has been to

³ If s_i is the market share of participant i (expressed as a percentage), $HHI = \sum s_i^2$. If market shares are expressed as a fraction (eg 0.10) the index has a maximum value of 1

consider measures such as NIM (the net interest margin between interest earned on assets and interest paid on deposits). Apart from problems in controlling for different types of assets and deposits (and thus different operating costs which are covered by the NIM) there is also a problem of banks using pricing strategies which involve different mixes of fees and interest. Where banks operate across a wide range of financial markets and activities, it is also not possible to identify the degree of competition in specific markets. More “sophisticated” approaches involve econometric exercises which aim to determine whether differences in performance indicators (across time or markets) can be explained by measures of industry structure.

A major problem with these market structure based approaches is that they generally ignore the role of contestability, whereby the threat of potential entrants can induce competitive behavior in a concentrated industry. Another problem lies in the fact that performance data is generally based on firm level data which reflects activities across a number of markets which may have differing competitive features. A third problem is that the approach is implicitly based on a static equilibrium framework in which structure is assumed exogenous and where dynamic innovation and its benefits are ignored.

New Economic Industrial Organization (NEIO) approach

A second type of approach is commonly referred to as the New Economic Industrial Organization (NEIO) approach. This relies on considering the nature of profit maximizing conditions under differing assumptions about market structure and consequent hypothesized reactions of price setting to exogenous changes in costs or other market factors. [Shaffer and Spierdijk \(2017\)](#) provide an overview of the various measures developed in the literature. This approach has generated a number of indicators of competitive structure. Unfortunately, none of them is definitive and there is generally not a high degree of correlation between them.

The Lerner Index

While the Lerner Index (traced back to Lerner, 1934, see [Elzinga and Mills, AER 2011](#)) precedes the NEIO approach, it is based on an analysis of profit maximizing conditions. The Index is calculated as:

$$\text{Lerner Index} = 1 - \text{marginal cost/price.}$$

In a hypothetical perfectly competitive industry, marginal cost equals price and thus the index should equal zero. If there is monopolist, price will exceed marginal cost, with the difference depending on the elasticity of the demand curve confronting the producer. Thus an index of

less than unity is interpreted as reflecting market power, and the lower the value the greater the loss of “consumer surplus” discussed in microeconomic textbooks. The Lerner Index is relatively easy to calculate, but its simplicity also creates problems in interpreting it as a measure of competition in real world situations of imperfect competition and dynamic interactions among market participants.

The Rothschild – Bresnahan – Lau Indicator

This indicator is related to the Lerner Index, but involves an adjustment for the market elasticity of demand. Inchauspe and Cronje ([ER, 2021](#)) analyse the Australian banking sector using this indicator

Panzar-Rosse H statistic

The Panzar-Rosse “H-statistic” is based on the insight that the extent of the transmission of an increase in marginal and average costs (input factor prices) into product prices will depend upon the nature of competition in the market. In a perfectly competitive market, an increase in marginal costs should be reflected one-for-one in product prices. However, where the firm has market power such that the demand curve faced is less than perfectly elastic, equation of marginal cost and marginal revenue will lead to a higher increase in prices following an increase in marginal costs (and larger fall in output) than in a competitive market. The H-statistic is calculated as the sum of elasticities of total revenue to factor input prices. It is generally interpreted as a negative value signaling monopoly, a positive value of less than one signaling monopolistic competition, and a value of one signaling perfect competition.

There are several difficulties faced in applying this approach. First, it assumes that markets are in equilibrium. Hence, it is common to also test this assumption by calculating the E-statistic which is defined as the sum of elasticities of the profit rate to factor input prices. Since, in equilibrium, profit rates will be equalized across the industry, a test of $E = 0$ is a test of the hypothesis of equilibrium.⁴ A second problem relates to that of defining banking sector inputs and outputs. The “intermediation” approach, using interest income as the measure of revenue and including the average interest paid on deposits as one of the costs of factor inputs, is commonly applied in studies. Ignoring non-interest income seems inappropriate, and general use of the intermediation approach is at variance to the common use of the production approach commonly found in studies of bank efficiency and economies of scale. Related to this is the implicit assumption that banks only produce one product, rather than operating across a number of product markets. For example, the use of the cost of deposits

⁴⁴ However, [Goddard and Wilson \(2008\)](#) identify problems with the standard approach used to undertake this test and in calculating the H-statistic.

as an explanatory variable assumes, if it is treated as exogenous, that banks are price-takers in the deposit market.

There have been a very large number of empirical studies estimating the H-statistic in different banking markets. However there are theoretical issues associated with interpretation of the statistic.

The Boone Indicator

Another approach within the NEIO paradigm is that developed by Boone ([EJ, 2008](#)). The intuition behind the Boone indicator is that more efficient firms should achieve higher market shares. Hence, the sensitivity of market share to marginal cost provides an estimate of competitive forces and can be obtained as the coefficient β by estimating an equation such as:

$$\ln s_i = \alpha + \beta \ln mc_i$$

in which s_i is market share of bank i and mc_i is marginal cost. Marginal cost is estimated from the estimation of a (translog) cost function. The “Boone Indicator” β is expected to be negative (higher marginal costs lead to lower market share) and stronger competition implies more sensitivity and thus a larger absolute (more negative) value.

[Davis \(2007\)](#) summarizes the results of several older studies which indicate little correlation between concentration measures and NEIO measures.

Behaviour and Characteristics

A third approach is to examine behaviour and characteristics within banking markets. This can overlap the NEIO approach, such as in empirical studies of conjectural variation (competitor responses to particular actions).

Many analyses of bank competition rely on additional indicators such as interest margins or profitability measures (such as the *Lerner Index* giving the markup of price over marginal cost) to supplement imperfect concentration or other measures. There is also a need to recognize the existence of non-price competition, such as by way of branches.

The Productivity Commission calculated the Lerner Index for both the major and other Australian banks. In a competitive market the Index should be zero, since price equals marginal cost. The existence of market power and price exceeding marginal cost indicates market power. For the Major banks the Index had hovered in the range of 40-50 per cent for the decade up to 2018. For other Australian-owned banks it had increased gradually to a figure of around 20 per cent in 2018. These figures are consistent with the argument that the major banks are the price-setters and that other banks, with higher costs of funds and lower

efficiency, are price-followers not earning significant above normal profits. The Lerner Index for the major banks was also around 10 percentage points above the figure found in other high income countries.

Another type of approach is to examine information about rates of entry/exit, changing conditions in the market, innovation, customer relationships, product pricing, and behavior in order to infer how strong competitive conditions are. The weakness in such an approach is best illustrated by noting that low switching rates of bank customers might reflect either high switching costs, lack of information about alternatives, or satisfaction with existing suppliers.

6.4 Australian Competition Policy towards Banking

There have long been concerns that the oligopolistic structure of the Australian banking sector does not generate adequate competition. (See, for example the 2011 Senate Economics Committee [Inquiry](#) into Banking Competition) Prudential regulation is also argued by some to not pay sufficient attention to ensuring adequate competition (and capital requirements which favour the large banks using the internal ratings based approach are often referred to in this regard). Australia's dividend imputation tax system is also argued by [some](#) to reduce the competitive ability of mutual ADIs (because they are unable to distribute franked dividends to members). The Murray AFSI 2014 report argued that regulators needed to give more regard to competition (having it included in their mandates), and that regular reviews of banking (and financial sector) competition be undertaken. The Productivity Commission produced a [report](#) in 2019 on this matter, and the ACCC has undertaken a number of market studies ([home loan pricing](#), [foreign currency conversion services](#), [residential mortgage products pricing](#)), investigating specific competition related issues.

The Productivity Commission was not convinced that competition was sufficiently strong in the banking market, with smaller banks not providing effective competition to the major banks⁵ and limited scope for consumers to offset market power of the larger banks. What participants claimed was competition was viewed by the PC as being primarily marketing activity involving product alternatives with inadequate information provision. They recommended the introduction of a *Principal Integrity Officer* for banks. Whereas the initial growth of securitization and mortgage brokers provided a period of increased competition, the PC argued that mortgage broking no longer fulfilled that role and recommended, consistent with the Hayne Royal Commission recommendation rejected by the government,

⁵ In 2010, then Treasurer Wayne Swan was pushing the idea that the mutual ADIs could become a "fifth pillar" to challenge the four majors.

that mortgage broker remuneration needed restructuring. Others have noted that platforms operated by aggregators may reduce opportunities for smaller lenders to effectively market their products via mortgage brokers. As at mid 2021, the government had not responded to the recommendations of the PC.

One important feature of Australian bank competition policy has been the Four Pillars policy, preventing mergers between the four major banks. There is no well articulated rationale for this policy (and the PC report argued it was redundant and should be abolished), other than that having four large banks may be more conducive to competition than having a lesser number. It is worth noting that should a merger between two of them occur, it is quite likely that the other two would consider merging – leading to only two majors. It is also worth noting that this policy does not preclude takeover by a foreign bank.

In principle, the FCS, by guaranteeing retail deposits (up to \$250,000) of all ADIs should have improved the competitive position of small ADIs (removing perceptions of inherent greater safety of large banks, or implicit guarantees) but there is no evidence of such an effect having occurred. Relatively higher safety could also be perceived to arise from being labelled a “bank” rather than an ADI, creating a competitive disadvantage for credit unions and building societies. APRA’s 2011 decision to allow large mutuals (with capital above \$50 mill) use the term mutual bank, and subsequently remove the minimum capital requirement should, again have removed any such competitive distortions.

APRA has also relaxed entry restrictions into banking by allowing restricted licences. These allow a potential entrant to undertake limited banking activities to assess whether its business model is likely to be viable and successful, before requiring the investment of fixed or sunk costs required for full banking activities. At mid 2021, restricted licence holders were Alex Bank and IN1 Bank. Volt Bank had “graduated” to a full banking licence while Xinja Bank had relinquished its restricted licence. Direct entry for new domestic banks via full bank licences was granted in 2019 to [Judo Bank](#) and [86400 Bank](#) (whose controlling shareholder is CUSCAL which was established as a service provider for credit unions).

One concern of many commentators has been the extent of vertical and horizontal integration within the financial sector. Recent divestments of wealth, insurance and financial advice activities by banks have tended to reduce horizontal integration.

A range of somewhat *ad hoc* regulatory measures have been implemented to improve competition. Concerns that switching costs inhibited financial consumers from changing banks led to legislation in 2011 to prevent exit fees being charged on variable rate mortgages (as

explained in [ASIC RG 220](#). Despite that there remains significant inertia among consumers which has enabled the banks to make significant profits on their “back book” of loans – even though cheaper loan rates could be obtained from switching to access new borrower loan rates available at other lenders. In this regard, policy makers have hopes that Open Banking (a first step in consumer data access rights) may lead to fintech innovations assisting financial consumers to better understand alternative options and promote switching.

Concerns about possible coordination of interest rate changes following RBA cash rate decisions led to a no “price signaling” requirement – introduced by [legislation](#) in 2011 – preventing bank executives from intimating how they might adjust interest rates. The 2015 [Harper Report](#) into Competition Policy recommended the removal of this requirement directed solely at the banking market in favour of a more general “concerted practices” legislation

In contrast, faced with the potential loan repayment problems arising from economic shut down in response to the Covid Crisis – the government permitted banks to adopt a coordinated approach to approving deferrals of loan repayments.

6.5 Foreign Banks in Australia

Foreign banks were not allowed to enter the Australian banking market until regulatory changes in 1984 – although there were three long-standing foreign owned banks operating, with a small presence in Australia. These were the Bank of New Zealand, The Bank of China (1942) and the Banque Nationale de Paris (which came under the restrictions applied to branch status in 1992). Restrictions on allowing foreign bank presence in domestic banking markets were quite common internationally. Other foreign banks participated in the Australian financial sector via equity interests in non-bank financial institutions such as merchant banks, finance companies, and money-market dealers.

Now, foreign banks have a significant presence in the Australian banking sector by number although their market penetration, particularly of retail banking, is relatively low.

The Introduction of Foreign Banks

The Final Report of the Campbell Australian Financial System Inquiry, published in 1981 considered (in [Chapter 25](#)) the case for allowing entry of foreign banks.⁶ It recommended that entry should be allowed in a controlled fashion, with *reciprocity* (ability of Australian banks to

⁶ The committee drew on a report on foreign bank entry it had commissioned from Kevin Davis and Mervyn Lewis.

enter the foreign bank's home market, an important consideration). It was hoped that entry would generate increased competition in Australia's banking market and that foreign banks would bring enhanced skills and expertise into the Australian market.

Subsequently in 1984 (after several further committees reviewed the arguments) the Labor Government announced that foreign bank entry would be permitted in the form of subsidiaries. While it was indicated that the number of entrants would be limited to around six to eight, the government ultimately announced that sixteen banks (out of 42 applicants) would be offered licences. Not all sixteen took up the offer of a licence, and some subsequently relinquished their licences. Relaxation of foreign investment rules also led to substantial consolidation in the merchant banking sector which had been a main method of access to the domestic financial market.

In 1992, following recommendations of a Parliamentary Inquiry entitled "[A Pocketful of Change](#)", foreign bank branch entry was permitted, but restricted essentially to wholesale banking (which was the main interest of foreign banks) by limiting the minimum initial deposit which could be taken to \$250,000. The limit on foreign subsidiary licences was also removed.

Only a few of the foreign subsidiary banks survived and prospered (and some converted to branch status when permitted) such that at March 2021, only the seven foreign subsidiary banks listed below were operating, and Citigroup was in the process of exiting from retail activities (including a large presence in credit card issuance). Several of the foreign banks, including Citi, have both a subsidiary and a branch operating in Australia. Foreign branches are focused on wholesale activities.

TABLE 2: FOREIGN BANK (SUBSIDIARIES) IN AUSTRALIA; 2021

Foreign Subsidiary Banks in Australia	Total Resident Deposits (\$ mill)	Loans to Households (\$ mill)
Arab Bank Australia Limited	863	473
Bank of China (Australia) Limited	2,552	3,725
Bank of Sydney Ltd	2,027	1,201
Citigroup Pty Limited	7,463	11,287
HSBC Bank Australia Limited	27,444	23,068
ING Bank (Australia) Limited	45,910	52,027
Rabobank Australia Limited	12,676	250
<i>Memo (Comparison) Items</i>		
ANZ Bank	326,915	280,492

<i>Bendigo and Adelaide Bank</i>	59,460	52,383

The Theory of Foreign Bank Entry

There is a large academic literature examining the reasons behind the decisions of banks to expand offshore from their domestic markets.

One argument has been that the global expansion of the bank's customers either via foreign trade or establishing foreign operations, creates an incentive for the bank to expand internationally into those jurisdictions where its customers are active. That suggests that expansion will be primarily in the area of wholesale banking.

Another argument is that banks perceive opportunities in foreign markets for the application of skills and expertise developed in their home markets. This suggests diversification into foreign markets where the banking sector is relatively underdeveloped – perhaps due to regulation.

While retail banking markets are a potential area for foreign expansion, history shows that this has not been an easy route to take. One reason is a natural preference for retail customers to deal with domestic banks, due to either lack of knowledge about foreign banks, or perceived greater safety of domestic banks. Another, albeit less relevant as electronic commerce has evolved, has been the significant cost of establishing the “bricks and mortar” presence in the host market necessary for dealing with retail customers. A third reason has been widespread existence of government barriers to entry to domestic retail banking markets.

Yet another possible reason is the globalization of financial markets. Particularly for large banks actively engaged in international securities markets and the facilitation of international capital flows, a presence in major financial centres is a virtual necessity. However, that does not necessarily require involvement in the host country's domestic banking market.

A further possibility is that international differences in regulation and taxation create incentives to undertake certain activities in foreign rather than domestic markets in order to profit from regulatory or tax arbitrage.

In understanding the growth of foreign bank presence in the Australian market, these theories provide some insights. For example, in the years since the GFC, there has been a relative increase in the number of Asian banks (and their size) in the Australian banking sector. In the

decade after the GFC, European banks holding of Australian domestic assets fell substantially, while those of American banks grew relatively slowly.

The Current Position of Foreign Banks

At the start of 2021, of the 66 foreign banks operating in Australia, 19 were from Europe, 11 from North America, 8 from the UK, 28 from Asia (with Japanese and Chinese having the largest representation)

While deposits in foreign subsidiary banks are covered by the Financial Claims Scheme (FCS), deposits in branches of foreign banks are not. Typically, the deposit insurance scheme operating in the home jurisdiction of the branch will apply to deposits in the branches, but possibly not if the scheme has limitations on insurance of foreigners. In any event, the restriction preventing foreign branches from accepting initial deposits of less than \$250,000, which is the FCS cap and of similar size to the cap in overseas schemes, effectively means that no deposits would qualify for coverage anyway.

As at 2021 there are three major factors likely to influence future developments in foreign bank presence in Australia. One is the international restrictions on travel and impediments to trade arising from the Covid Crisis. A second is the fraught political position with China, which has included the introduction of tariffs on Australian exports and threats regarding Chinese investment in and trade with Australia. A third is the ramifications of Brexit, including changes to trade and financial flow patterns and financial institution location decisions.

Foreign Banks: Their Impact

The original arguments for allowing foreign bank entry revolved around the potential benefits they could bring to the domestic economy. These included: increased competition in banking and greater choice for customers; lower cost banking due to greater efficiency of foreign banks; technology transfer as processes and methods employed by foreign banks spread to local competitors.

While relatively low market penetration might be thought to suggest little impact on the domestic market, that is not necessarily the case. Competition from efficient foreign banks may lead to domestic banks protecting their market share by improving their efficiency or reducing prices (less exploitation of market power). If so, it could be expected that either local bank efficiency would have improved and/or profitability would have declined following foreign bank entry. These types of issues (as well as investigating whether foreign banks do have an efficiency advantage) have been examined empirically by a number of researchers.

While it seems reasonable to conclude that only limited overall effects have been found from the empirical studies, some specific situations such as the impact of ING Direct on retail deposit markets and mortgage loan markets have been noticeable.

6.6 Global Strategies of Australian Banks

The major Australian banks have a chequered history in their more recent global expansion strategies and activities, although Merrett ([JFIFMIM, 2000](#)) indicates that earlier expansionary moves were relatively well founded. Significant holdings of overseas assets reflected NZ and London activities as well as balances in branches in major international money market centres. Merrett traces the earlier global expansions to motives of: providing trade related services to customers; undertaking treasury functions for their own balance sheets; providing banking services (similar to those in the Australian market) in markets such as New Zealand and the Pacific Islands.

More recently, both NAB (in the 1990s) and ANZ (following the GFC), driven by grandiose visions of their then CEOs embarked on ambitious globalisation strategies which have since been reversed. Westpac and CBA have developed significant international presences in the Asia-Pacific region, but have also pulled back from some of those activities to focus primarily on Australia and New Zealand activities. As well as a geographical refocusing, this is also associated with a divestment of many insurance and wealth management activities.

The exception to the retreat to Australia is the Macquarie Group (incorporating Macquarie Bank) which has diversified into a range of activities in many overseas markets. This 2018 [AFR article](#) by Joyce Moullakis provides an overview of that history – but it is worth noting that the overseas activities of Macquarie relate primarily to its funds management and investment bank activities rather than commercial banking.

NAB

NAB's period of global expansion, and subsequent retreat is well outlined in a Pat McConnell [article in The Conversation](#) in 2016. It was largely driven by Don Argus who was CEO from 1 Oct 1990 (and before that Executive Director Banking) who retired as CEO 1999.

In 1987 NAB bought Clydesdale Bank, Northern Bank in Northern Ireland, and National Irish Bank in the Republic of Ireland from Midland Bank. The latter two were sold in 2004 to Danske Bank, for an accounting profit of around \$1 bill. But in the interim, in December 2004, the Northern Bank was subject to a [robbery](#) in Belfast of GBP 26.5 mill, purported to be by the IRA – one of the largest bank robberies in the UK's history

In 1990 NAB bought Yorkshire Bank (which was subsumed into Clydesdale in 2005) and in 1992 bought Bank of New Zealand (BNZ). It then expanded into the USA, initially buying Michigan National Corporation (MNC) in 1995 (which it sold 2000 to ABN-AMRO for an accounting gain of \$1 bill). Its largest disaster was the 1998 purchase of Homeside, a US mortgage servicing company for \$1.2 billion. Eventually it was discovered that the profit forecasts were completely erroneous due, *inter alia*, to wrong assumptions about mortgage duration and fees to be received, requiring massive write downs of asset value. It was sold in 2002 for a \$2 bill plus loss which never received the headlines or public explanation which might be thought appropriate for such a massive loss.

In 2007 NAB purchased the US bank Greater Western Bancorp (GWB) for a cost of \$1bill.

In 2009, the new CEO Cameron Clyne announced the bank's focus was to be on Australia, reversing the global expansion strategy. In 2015 GWB was sold for a small accounting loss. In 2016 Clydesdale Bank was spun-off (and later acquired by Virgin Money) – involving an accounting loss \$4 bill. In the interim, Clydesdale, like other UK banks, had suffered significant reputational and financial costs through the need to make provisions for and make reparations for miss-selling of PPI (Payments Protection Insurance) policies.

NAB's overseas expansion involved acquisition of a range of banking activities where there was little apparent scope for transfer of knowledge and expertise, or strategic market impact.

ANZ

ANZ had long had a presence in the Asia-Pacific having established operations in 1970 in Vanuatu, and in 1977 establishing ANZ PNG. It substantially also increased its international footprint with the purchase of Grindlays in 1985. After some significant losses in its Indian operation it sold Grindlays in 2000 to Standard Chartered for \$1.6 bill. It also started a Cambodian joint venture *ANZ Royal* in 2005, and had a Hanoi branch since early 80s.

The new CEO (Michael Smith) launched a [2008 strategy](#) for becoming a super regional bank, with an objective of twenty per cent of revenues coming from Asia Pacific, Europe and America by end 2012. (He also introduced a new logo thought to be more appealing to Asian customers)! The strategy also involved increased location of operations and technology centres offshore (eg Bangalore).

ANZ acquired Asian assets from RBS in Taiwan, Singapore, Indonesia, Hong Kong, Philippines and Vietnam for \$550mill. There was local incorporation in China in 2011, and partnership investments with Shanghai Rural Commercial (20%) and Bank of Tianjin (12%). ANZ increased its presence in Indonesia and increased its stake in PT Panin Bank to 39%

It obtained a universal banking licence in Philippines, locally incorporated in Vietnam, and recommence operations in India with a branch in Mumbai. It had 18 branches in Taiwan and commercial hubs in HK and Singapore with large numbers of employees. It increased its stake in Malaysia's AmBank from 19% to 24% (which was involved in the 1MDB scandal)

Before the new CEO Shayne Elliott appointed in 2016, announced a reversal of the Asia strategy, ANZ had around 2.6 mill customers in the Asia-Pacific, 8,200 employees and 100 branches/points of presence. Since then the bank has sold down or closed many of its Asian operations to focus its activities on the domestic market.

Westpac

Even though Westpac never had the same global expansion strategy of NAB or ANZ, it did undertake a number of significant investments in both banking and non-banking businesses in the 1980s, many of which were divested in the early 1990s following the bank's domestic problems at that time. Now, the [Westpac website](#) 3 May 2021 stated that the bank was "Returning to our core businesses of banking in Australia and New Zealand, including exiting some businesses and international locations". It had long had a presence in the Pacific nations, but in 2015 sold banking operations in Samoa, Cook Islands and Tonga to the Bank of South Pacific. It still retains branches and/or representative offices in Fiji, PNG, Vanuatu and Westpac Fiji has a 40% market share

Expansion into China was contemplated in 2018 – looking at taking advantage of Chinese liberalisation, with a focus on institutional business. But by 2020 it was closing offices in Shanghai, Beijing, HK, Mumbai and Jakarta, and aiming to consolidate offshore business in NY, London, and Singapore

CBA

As a government owned bank until its privatisation in the first half of the 1990s, CBA did not pursue significant offshore expansion other than into NZ via acquisition of ASB in the late 1980s. CBA's Asia-Pacific presence was partly due to its acquisition of Colonial Mutual in 2000 and its offshore insurance operations. These included operations in Hong Kong Fiji, China, Vietnam, Indonesia. In addition it had 99% of PT Bank Commonwealth in Indonesia, 20% in Qilu Bank and Bank of Hangzhou in China and 20 % stake in Vietnam International Bank.

As a result of an August 2018 strategy review it undertook sale of its 37.5% equity in BoComm Life Insurance company to Mitsui Sumitomo, the planned sale of shareholding in TymeDigital in South Africa and undertook a review of shareholding in Vietnam International Bank and Indonesian life insurance business PTCL

New Zealand Activities

All four banks have significant presence in New Zealand and dominate the financial markets there to even a greater degree than they do in Australia. Each has had a presence in NZ for a very long time (with Westpac having had a branch presence in NZ since 1860's). ANZ increased its role through the purchase in 2003 of the National Bank of NZ, and its eventual integration with its existing operations of ANZ NZ in 2012.

In 2001, the RBNZ required those of the major banks with NZ operations not already structured as subsidiaries (but as branches) to convert to subsidiary form. In 2021, the RBNZ announced very substantial increases in capital requirements for NZ banks, which could possibly influence the Australian banks to divest their NZ subsidiaries.

Reasons for a Retreat from Asia

History shows that successfully becoming a multinational bank operating in many countries is difficult. Many banking skills are transferable across national borders, but there are institutional and cultural impediments to overcome, not to mention regulatory barriers.

And at this point in history, those regulatory barriers are significant, particularly for expansion into Asia.

First among these is the [ASEAN Banking Integration Framework \(ABIF\)](#) initiated at the end of 2014. This involves the designation of banks headquartered in the ASEAN region as Qualified ASEAN Banks (QABs). Such a designation, not available to Australian banks, means that they will be able to operate in other ASEAN countries under exactly the same regulatory arrangements as domestic banks. While the specific competitive advantages this will provide over non-QABs are unclear (and may vary from country to country), this is in essence a barrier to entry for banks from outside the ASEAN region.

It remains to be seen whether the ABIF will succeed, given the vast differences in banking structure and development across the region, not to mention political factors. Nevertheless, the development is not conducive to an Asian expansion strategy for Australian banks.

A second factor is the regulatory arrangements driven by the Basel Committee, and implemented in Australia by APRA. Capital requirements associated with offshore subsidiaries or joint ventures can be higher than for purely domestic operations. The Australian banks have complained about this in the past, and given bankers' aversion to higher capital, that also creates a disincentive to offshore operations. (Given generally poor experience with bank offshore expansion over the years, that may be a good result for bank shareholders arising from such regulation).

A related regulatory consideration is the imposition of higher capital requirements on banks which are regarded as systemically important. The major Australian banks are already subject to a higher capital charge for being Domestic Systemically Important Banks (D-SIBS), but offshore expansion could ultimately lead to a Global SIB categorisation and further capital imposts. In general, the thrust of post-crisis regulation is towards disincentives for banks becoming “too big”.

A final factor, virtually unique to Australia, arises from tax considerations. An increasing share of earnings generated offshore would reduce the ability of Australian banks to pay fully franked dividends. This is equivalent to banks facing a higher cost of capital for overseas activities than for domestic activities.

For shareholders in Australian banks, this would mean that offshore expansion would need to be even more profitable than domestic activities to be value adding. Then, and it is an unlikely outcome, higher partially franked dividends could be paid to offset the reduction in franking.

So: the cost of capital is probably higher for overseas versus domestic activities of Australian banks (due to dividend imputation); capital requirements are a bigger problem; and the ASEAN region is putting some potential roadblocks in place which hinder ease of foreign bank entry and competitiveness. And added to all that is the massive potential disruption to traditional banking being posed by innovation and Fintech, requiring a focused response to preserve competitive advantages in existing markets and products.

Given these problems retreat to Australia appears like a sensible response for Australian banks.

6.7 Bank Taxation and Large Bank Levies

Special tax and levy arrangements are applied to the banking sector in many countries, reflecting the special nature of bank activities and their implications for the economy. One example is liability for supervisory levies which aim to recover, in part or whole, the cost of prudential supervision. Another is the application of size-related levies to compensate for their role in creating systemic risk or to partially offset the benefits they receive from implicit guarantees (reflecting perceptions of being Too Big to Fail (TBTF)). In some cases these levies are explicitly directed towards creation of a “resolution fund” to assist regulators and government in dealing with bank failures and crises. (These are in addition to deposit insurance fees which are levied in exchange for the protection of retail deposits from loss due to bank failure, and which are best considered separately).

Taxes or levies have also been applied to particular types of transactions conducted via banks or on balances in some types of accounts. In some cases, but not all that often, these have been justified as compensating from the exemption of banking from value added taxes (VAT) such as the Goods and Services Tax (GST) in Australia. In 2017 the South Australian government proposed, but ultimately did not proceed with, a levy on the major banks as a substitute for their exclusion from the GST (revenues from which are paid by the Commonwealth government to the State governments). Often, other general forms of taxes can significantly impact on specific types of bank transactions – such as stamp duties on documentation of financial transactions (such as creation and discharge of mortgages).⁷ The Australian Banking Association provides information on taxes paid by Australian Banks [here](#).

FID and BAD

Historically, there were several specific taxes related to bank (and financial institutions) activities. The poorly named BAD (Bank Accounts Debit Tax) was initiated by the Federal Government in 1982, and responsibility transferred to the State Governments in 1991, before being abolished as part of the introduction of the GST in the early 2000's. The tax involved a charge against all debits to an account with chequing facilities on a sliding scale from zero for smaller transactions up to a maximum of \$4 for large transactions (\$10,000 or above).

The FID (Financial Institution's Duty) Tax was levied by State Governments on amounts deposited with financial institutions. It was introduced in different states between 1982 and 1992 and abolished in 2001 as part of the agreements involved in the introduction of GST. In most states the tax was 0.06 per cent of amount deposited with a maximum amount of \$1,200.

Both taxes were generally viewed as distortionary.

Large Bank Levies Internationally

In the wake of the Global Financial Crisis, there was widespread adoption of specific taxes (levies) on large banks (and some other financial institutions). In Europe, the UK did so in the budget of June 2010. Levies were introduced in Germany and France in 2011 and in a number of other European countries at around the same time. While some see such an impost as an *ex post* charge for the costs incurred by governments and national economies for excessive risk taking by banks which led to the GFC, most support was based on a forward looking view. Thus the [IMF](#) argued in 2010 that “[e]ven countries that provided little or no support to their

⁷ Governments may also aim to fund costs of certain activities by levies on particular types of financial instruments. In Australia, a (declining) number of State governments have in the past applied a Fire Services Levy on house insurance contracts written by insurers as a means for funding fire brigade services.

financial sectors during the recent crisis should consider forward-looking contribution schemes.”

There was not unanimous support for such an approach, as reflected in the communiqué of the G20 leaders Toronto Summit [declaration](#). “We agreed the financial sector should make a fair and substantial contribution towards paying for any burdens associated with government interventions, where they occur, to repair the financial system or fund resolution, and reduce risks from the financial system. We recognized that there are a range of policy approaches to this end. Some countries are pursuing a financial levy. Other countries are pursuing different approaches.”

This reflects the fact that other strategies such as increased risk-based capital requirements are an alternative to taxation of banks in terms of their potential effects on risk-taking. There was also relatively little evidence on what effects such taxes would have, and how best to structure them. The USA did not proceed down this path (except for a proposal to levy a fee on banks which had not repaid funds provided under the TARP scheme).⁸ Nor did Canada, Japan, China or many other non-European countries.

In Europe, individual national schemes have been overtaken by the Single Resolution Mechanism and establishment of the Single Resolution Fund.

The UK levy was set at an initial rate of 0.04 per cent, eventually rising to 0.07 per cent, of a bank’s aggregate liabilities excluding tier 1 capital (equity), insured retail deposits, repo funding backed by sovereign debt, and any retail insurance policy liabilities. There is also a reduced levy rate for long-term wholesale liabilities, reflecting the intention of the levy to encourage adoption of funding arrangements less exposed to instability. In this regard, it would have interactive effects with Basel II proposals for a *Net Stable Funding Ratio* requirement.

The Australian Major Bank Levy

The Major Bank Levy was announced in the 2017 budget.

The levy has the following features.⁹ The four majors and Macquarie pay a levy of six basis points p.a. on liabilities other than deposits protected by the Financial Claims Scheme (ie

⁸ Proposals for a levy funded Systemic Dissolution Fund as part of the Dodd- Franks Wall Street Reform and Consumer Protection Act were dropped in favour of expanded resolution powers for the FDIC

⁹ It is not clear from the budget papers, but by categorising the impost as a levy rather than part of company tax, the banks may not generate further franking credits from payment of the levy (which otherwise could be passed on to shareholders and, through use of those credits, offset a large part of the revenue consequences for the budget).

under \$250,000) and additional Tier 1 capital instruments. As a ballpark estimate, it applies to around 50 per cent of a bank's total funding, raising the overall average cost of funding for the affected banks by around three basis points.

While the government did not initially provide a justification for the levy, a number of arguments can be advanced. One argument is that the large banks are perceived as receiving a competitive benefit (lower borrowing costs) from an "implicit government guarantee" associated with being "Too Big To Fail". On this basis the levy could be seen as a charge for that benefit.

A second argument could be that (as in Europe) it would be desirable to establish a "resolution fund" to enable APRA to facilitate a smooth exit (eg by merger) of a failing bank. Although the levy goes into general budget revenue rather than a distinct fund, it could be further argued that by improving the fiscal health of the government it makes them better placed to support APRA in any needed bank resolution activities.

A third argument could be that the nature of the regulatory system (such as capital adequacy requirements) creates a competitive imbalance favouring the big banks. Operating under the Advanced Internal Models approach for determining capital requirements, the big banks face lower capital requirements than do others operating under the Standardised approach.

A final argument could be that Australian banks have relied too much on funding other than "core/stable" deposits and capital, with potential consequences for safety and systemic stability. Indeed, the large banks have funded their increased share of home mortgage lending since the GFC to a significant degree from wholesale borrowings.

The levy has a number of significant effects on financial markets and consumers of financial services. The first point is to note that the levy will flow through the banks' funds transfer pricing systems to affect loan pricing. In this regard it is somewhat silly to simultaneously suggest that the big banks shouldn't increase loan interest rates, but that the measure will improve the competitive position of smaller banks. The latter will only happen if the large banks do respond in that way! The ACCC was tasked by the Treasurer in 2018 with examining the extent to which the MBL was passed on to mortgage borrowers by the banks – a bit like looking for a needle in a haystack, given that the introduction of a levy of 6 basis points on a part of bank borrowings is relatively small compared to other impacts on interest rates – such as the 25 basis point changes in the cash rate which the RBA usually makes when policy is adjusted.

A second effect is that the incentives for large banks to fund loans differently. In particular, by originating and then securitising loans (to get them off-balance sheet and funded by the capital market) they will avoid the levy on that part of their activities. However, that benefit won't apply if they use "covered bond" securitisation. The levy is thus likely to give a kick to traditional securitisation over on-balance-sheet lending, but stymie the growth of covered bond funding.

A third effect will be upon the structure of bank deposit interest rates. Because retail deposits are exempt from the levy, the large banks can be expected to bid for these deposits – pushing up the interest rates offered relative to the cost of borrowing in wholesale and large deposit markets. That is going to compound the already apparent effect on relative interest rates due to recently and forthcoming liquidity regulations being applied by APRA. But it will worsen the relative returns that superannuation funds can get on (their large) bank deposits and possibly induce them to look towards investing more in securitised products.

A further likely effect is to encourage banks to make more use of equity capital and additional Tier 1 (AT1) capital funding (the preference share structures listed on the ASX and held by many retail investors) relative to Tier 2 capital funding (provided by the wholesale and institutional markets) or other wholesale funding.

How much of the impact of the changes will fall on shareholders in the large banks (and how large will the effect be) rather than upon customers? That is difficult to answer with any confidence without further detailed analysis beyond the scope of this article. The revenue to be raised is large in absolute dollar amount – but is relatively small as a percentage of current bank profits (in the order of 4-5 per cent).

The MBL and the FCS

Is the imposition of a levy on non-insured liabilities consistent with the government not charging an insurance fee for sub-\$250,000 deposits covered by the FCS. Yes.

The reasoning starts with the principle that those who provide insurance should be paid for the costs, and those that receive insurance should pay for the benefits from this transfer of risk.

The logic for absence of an ex-ante fee paid to the government for insuring sub-\$250,000 deposits under the Financial Claims Scheme is simple. It is not the government that bears the ultimate risk of paying out those depositors in a failed bank.

[If APRA liquidated a failed bank](#) it would pay insured depositors but would then have first claim on the proceeds of the sale. Given the structure of Australian bank liabilities it would recover all it paid out – so the government does not incur a cost – and shouldn't receive a fee for insurance it will never have to pay out.

Who is bearing the risk in that case? It's the other uninsured creditors of the bank – wholesale funders and uninsured (large) depositors, who will not get back full value of their claims. Because such creditors realise such credit risk, they charge the banks a correspondingly higher interest rate. In that way the banks effectively pay their uninsured creditors for the insurance received by insured depositors.

But is that the likely scenario? Many would argue, validly in my view, that the response of government would instead be to take actions, such as injecting funds or providing guarantees, to prevent the bank from failing – particularly for large banks. This is typically referred to as the Too-Big-To-Fail problem (TBTF).

If that is the likely response of government, uninsured bank creditors will (arguably) take the view that they are in fact protected from loss from a bank failure. The government is providing implicit insurance to them. They will thus not require a higher interest rate from the banks to compensate for possible default risk.

In this scenario, the banks benefit from not having to pay an "insurance premium" built into higher interest rates on uninsured liabilities. It is the government who is ultimately providing this insurance to the banks via taking on the risk of making uninsured creditors whole in the event of looming bank failure.

If that scenario is credible, it provides an economic case for a levy on uninsured bank liabilities. But is it credible?

There is certainly a widely held view that TBTF exists. Many researchers have produced studies indicating that, in banking systems around the world, large bank borrowing costs are lower as a result of perceived implicit guarantees. Those studies can, of course, be challenged – but it should be noted that for many years the ratings agencies have included an "uplift" to bank ratings to reflect perceived government support.

If this argument is accepted, is the bank levy the appropriate approach? An alternative is higher capital ratios and other prudential measures to ensure that banks are "unquestionably strong". That would remove the value of implicit guarantees, since they are then redundant.

GST and Banks¹⁰

Currently, some financial services (such as insurance) for which explicit fees are levied are subject to GST. But a major part of banking - taking deposits and making loans - is not. Historically it was seen as too difficult because of the nature of financial intermediation, but modern technology should make it feasible – albeit still difficult.

To understand the issues involved, a short primer on GST is required. GST, or Value Added Tax (VAT), applies a rate of tax (eg 10%) at each stage of the production process, based on the value added by the business (essentially equal to wages and profits). It achieves this by levying the tax on the value of the goods sold by the business but allowing tax credits for the GST included in the price paid by the business for purchases of goods and services as inputs (referred to as input tax credits).

Each business in the production process supply chain pays a net tax amount equal to the GST tax rate applied to its value added. When the completed good or service is sold to a consumer, the price incorporates all the net GST amounts paid in the production process, such that total GST revenue is essentially the 10% tax rate applied to the pre-GST sale price of goods and services sold to consumers.

The challenge

How would this apply to taking deposits (on which interest is paid) and making loans (on which interest is charged)? The value added in this process is relatively easy to identify. The difference between those interest rates (the net interest margin), if we ignore explicit fees charged for services provided, must cover costs of purchased inputs of goods and services by the bank (such as paper, pens, ink, or nowadays computer services) plus wages and profits.

So total value added by a bank can be readily calculated as the sum of its wage bill and its profits. The problem lies in splitting the value between business and retail customers and providers of deposits and loans.

As a very simplistic example, suppose the bank has \$90 of deposits and \$100 of loans (and \$10 of equity capital) and a total value added (net interest margin minus purchased input costs) of \$5. What method can be used to divide that \$5 between depositors and borrowers as the value of services provided to each? And if there are numerous depositors and borrowers (and some of them business and some retail customers), possibly receiving or paying different interest rates, how much of the value added represents the cost of services provided to each?

¹⁰ Adapted from an article published on [The Conversation](#)

Why it makes sense

Putting this process into the “too hard” basket, however, creates distortions to production and consumption. First, banks pay substantial amounts of GST on purchased inputs, and receive input tax credits which they are largely unable to use. Of course, banks can be expected to pass on the taxes paid to customers in the form of lower deposit rates or higher loan rates.

This creates a distortion of costs for business customers of the bank. For example, the loan interest they pay indirectly includes an implicit GST cost, but they do not receive any input tax credits to offset the GST amount they add to their product price.

As a very simplistic example, consider an individual who provides personal services using no purchased inputs for deferred payment and has a bank loan to meet living expenses until the payment is received. The loan interest is \$10 and the individual needs a net \$1,000 for those services and is subject to GST as a business. If there is no input tax credit on the loan interest the individual will need to charge GST on \$1010, or GST of \$101 such that the gross price charged to the purchaser of these services would need to be \$1,111. If the loan included (for example) an input tax credit of \$1 because intermediation services were “GST-able”, the gross price would only need to be \$1,110 (because the net GST bill paid by the individual would only be \$100).

Because of the current GST exemption, businesses do not get the benefit of all the GST paid in the “upstream” parts of the production process and therefore need to charge higher prices.

A second type of distortion arises from consumer demand for financial services. While the GST paid by banks is reflected in interest rates paid and charged, the absence of GST on the value added by bank intermediation reduces the relative price of financial services. Arguably, this contributes to higher demand for financial services relative to other goods and services, perhaps contributing marginally to the growth in size of the finance sector over recent decades.

A third type of distortion arises from decision making by banks regarding supply and pricing of different types of financial services. For example, costs of intermediation can be recouped by the net interest margin or by explicit fees for services associated with intermediation – some of which may be “GST-able”.

Difficult to measure

Is it possible to overcome these difficulties? One would hope so. Banks have very sophisticated activity based costing systems and funds transfer pricing systems which are designed to

identify the cost and value created by each transaction. Using these to identify value added for each type of transaction, and thus the base for applying GST, may be complicated but not infeasible.

Is it worth doing? Certainly the sum of profit and wages paid (ie value added) of banks, is a very large sum, much of which is not subject to GST. While the banks will claim they pay large amounts of GST (on their purchased inputs) which they can not claim as input tax credits, it is ultimately the users of bank financial services who pay those amounts.

Broadening the GST base to fully include financial intermediation would increase GST revenue (estimated at around A\$3.5 billion from households) and would remove a number of distortions from the current system (including almost A\$1 billion from over-GST taxation of business. But identifying precisely the overall effects, the benefits, and the cost of change is a fairly Herculean effort.

6.8 Bank Disclosures and Market Discipline

Banks have traditionally been relatively secretive about their activities. One reason is customer confidentiality. Another is the concern about how public disclosure of information might affect public perceptions of their financial condition, perhaps sparking “runs” by depositors or other counterparties, or adversely affecting their stock prices and borrowing costs.

At the international level, banks have been major participants in, and facilitators of, transfers of assets and flows of funds involving international tax haven countries, for which secrecy is needed to achieve the tax avoidance or evasion prompting those actions. Historically, the Swiss banking sector was long regarded as attractive for the rich seeking to hide their wealth because of the nation’s privacy laws.

AML/CTF issues and tax avoidance and evasion are discussed in Chapter 13. The focus here is upon bank disclosures of their financial position and other aspects of their activities (such as ESG strategies).

Basel 2’s Pillar 3

When Basel 2 was released in 2006, it emphasized the role of “market discipline” as the third pillar of the regulatory framework (with pillars one and two being capital requirements and effective supervision respectively). The rationale was that market discipline, informed by public disclosures of financial information which allowed assessment of bank capital adequacy, would complement regulatory and supervisory measures in ensuring bank safety.

Informed market participants might come to different opinions about a bank's capital adequacy than that indicated by regulatory measures – particularly where bank capital positions would be determined using the Internal Models approach. Resulting effects upon the bank share price or cost of borrowing could then act as another influence upon the bank's financial policy.

Basel 3 Disclosures

The Basel 2 disclosure requirements were overtaken by the introduction of Basel 3. Following the Global Financial Crisis, the Basel Committee announced in 2010 (as part of Basel 3) increased disclosure requirements for banks. These were designed to address substantial gaps in publicly available information about banks' practices and conditions. With such gaps, effectiveness of the "third pillar" of the Basel framework for banking strength and stability, that of market discipline, was seriously undermined. In Australia APRA adopted the Basel 3 disclosure requirements in its Prudential Standard [APS 330 Public Disclosure](#), which initially came into effect on 30 June 2013 and which has since been broadened in its scope.

In its revised [Pillar 3 disclosure requirements](#) the Basel Committee notes that "provision of meaningful information about common key risk metrics to market participants is a fundamental tenet of a sound banking system. It reduces information asymmetry and helps promote comparability of banks' risk profiles within and across jurisdictions." One consequence is the specification of common templates for provision of required information by banks across a number of disclosure categories.

What is disclosed?

Originally, the Basel 2 disclosure requirements involved relatively limited provision of certain information on a quarterly basis, with more substantive disclosures required annually. And the requirements were significantly more substantial for the large banks operating under the Internal Models (Advanced) capital requirements than for those on the Standardised approach. Information on capital ratios, credit risk exposures (by portfolio), and loans past due was required quarterly with annual disclosures also providing more detail including information about capital instruments.

Now, the regulatory disclosures include: Capital and Risk Disclosures; Capital Instruments Disclosures; and Remuneration Disclosures. For the large Australian banks APRA also requires

disclosure of some components of the Basel G-SIB disclosure requirement¹¹, and if the group contains insurance activities, there will also be an insurance capital adequacy disclosure.

Apart from the required differences in disclosure for large banks operating under the internal models (Advanced) approach there are significant differences in presentation relative to the smaller banks and ADIs (operating under the standardised approach). An important difference is in the qualitative information provided, with the large banks providing extensive discussion of risk management practices (as required of Advanced IRB Banks), but smaller banks generally present only the required statistics without supporting discussion. The large banks are required to provide information on their leverage ratio. Banks operating under the Liquidity Coverage ratio approach (rather than the Minimum Liquidity Holdings approach used for smaller banks) are also required to make liquidity disclosures. The disclosure of capital instruments on issue is relatively substantial for major banks, but for smaller banks, credit unions and other mutual ADIs there is generally little to show.

Using Disclosure Statements

Banking is, unfortunately, sufficiently complicated that there is likely to be only a relatively few specialists who can make much sense out of the disclosures provided. But, of course, it only requires a few well informed participants to create market discipline – if they can easily access, and compare across peers, timely information. Unfortunately, the Basel disclosures do not really meet those conditions of easy access, comparability and timeliness, which might facilitate greater and better analysis of our banks.

There are at least three failings in the nature of disclosure by Australian banks.

Data Extraction and Comparability

The first failing is impediments to easy comparability. Even if banks use the common template required by APRA, such as for provision of information about capital instruments, there are considerable resource costs in collecting that information into a manageable form for analysis. Information is generally presented on banks' websites in a tabular form based on the common template provided by APRA. However, the coding or formatting of the information is such that it is not always possible to simply "cut and paste" the data into a spreadsheet or other data management software. A row of information copied from a table, generally pastes into software as something quite different. This is easy to fix, and could create the suspicion that many banks don't want to make it easy for analysts or researchers to study the data. It would

¹¹ These extra disclosure requirements include information on size, interconnectedness, substitutability, financial institution infrastructure, complexity and cross jurisdictional activity.

be easily fixed by APRA requiring the banks to provide the information to it and publishing it in an easy to access form on their website.

Capital and Risk Disclosures

Information extraction is even more complex when the Capital and Risk disclosures and Remuneration disclosures are considered. One reason for this is the flexibility which APRA provides to the Advanced banks to provide commentary and information reflecting their specific arrangements while providing some minimum required amount of information. One consequence is that the annual disclosure documents for capital adequacy and risk run, for the major banks, to around 100 pages, and the quarterly disclosures to around 15-20 pages. APRA specifies that certain types of information are to be provided consistent with a list of table templates given in the attachments to APS 330. And while Australian banks provide such information (and provide a guide to how tables in their disclosure match the APRA requirements) again it is virtually impossible to extract data easily into a spreadsheet for comparison purposes.

Frequency and Timeliness

A third complication lies in the frequency and timeliness of bank disclosures. Quarterly disclosures may be an acceptable frequency if more frequent compilation and publication of data imposes significant costs on banks, and if there is little public benefit in increased frequency. However, it would be surprising if bank managements did not provide data such as capital ratios as part of monthly reporting to the board – such that some level of monthly reporting was not feasible.

Also there are significant delays in publication of the quarterly disclosures: in general, the average reporting delay is around 39 days (compared to the APRA requirement of no more than 40 days)! It may be that it takes this long to compile such information, but “stale” information is not much use for analysis of current bank conditions.

Finding Basel 3 Disclosures

A final issue concerns ease of discovery of location of Basel disclosures. Generally, APS 330 disclosure documents are only a few clicks away from any given bank’s homepage. However while every bank is required by APS330 to have a “Regulatory Disclosures” section on its web page, it is not always easy to navigate to it. Finding the disclosures can be particularly frustrating, if one attempts to step through what would appear to be a logical sequence of web pages – rather than using the search button to look for “regulatory disclosures”. Table 3 shows the URLs of Basel 3 regulatory disclosures for the benefit of readers

TABLE 3: URLs FOR BANK BASEL 3 DISCLOSURES

https://www.commbank.com.au/about-us/shareholders/financial-information/regulatory/basel-iii-pillar-iii-disclosure.html
https://www.anz.com/shareholder/centre/reporting/regulatory-disclosure/
https://www.nab.com.au/about-us/shareholder-centre/regulatory-disclosures
https://www.westpac.com.au/about-westpac/investor-centre/financial-information/regulatory-disclosures/
http://www.macquarie.com/au/about/investors/regulatory-disclosures
http://www.suncorpgroup.com.au/ (search for “APS330” – not collated on website, released as announcements!)
http://www.bendigoadelaide.com.au/public/shareholders/announcements/aps_330.asp
https://www.boq.com.au/Shareholder-centre/financial-information/Regulatory-Disclosures
https://www.mebank.com.au/about-us/governance/disclosures/

6.9 Bank Valuation

To executives and boards of banks listed on the stock exchange, the behavior of the bank’s stock price is an important concern. There are, at least, four reasons. One is that the stock price is an indicator of the market’s perception of the performance and future prospects of the bank. A second is that the stock price will affect the cost of equity capital for the bank – raising a given amount of new equity when the share price is low means that more shares need to be issued, which dilutes the interests of existing shareholders. A third is that the requirement of management to act in the interests of shareholders is generally interpreted as consistent with undertaking policies which aim to maximize the bank share price. (Of course, since payment of dividends reduce the share price, this maximization should be interpreted as being prior to payment of dividends). Fourth, senior bank executives will generally have remuneration contracts which are structured to provide greater rewards when the bank share price increases.

While individual investors will focus on the share price, it is more useful to consider the total equity market capitalization of the bank, which equals the share price multiplied by the number of shares on issue. For example, the share price could be doubled by the simple accounting act of halving the number of shares on issue by consolidating every two shares into one – an act which would have no effect on the value of the shareholder’s wealth.

Bank analysts spend much time attempting to determine whether the current share price of a bank is justified by the underlying “fundamentals” of the bank. To do that, they attempt to incorporate all available relevant information into their private models of bank valuation. They may be able to better interpret the available information than other investors leading them to a view that the stock price is currently over- or under-valued. It is important to be aware

that bank valuation requires recognition of the special nature of bank balance sheet and income-expenditure characteristics, and thus requires adjustments to the normal methods of stock valuation.

The market capitalization (stock market value of shares on issue) of banks typically differs from the accounting (book) value of shares on issue – often substantially. In Australia, the shares of the major banks traded for a long time at market to book (M/B) ratios of close to two as shown in Figure 5. In recent years those ratios have fallen quite substantially. Other than CBA (which was higher), the M/B ratios were around unity in 2020, but have since bounce back in 2021, reflecting the strong rebound in bank share prices. In contrast, smaller listed banks have often had M/B ratios below unity.

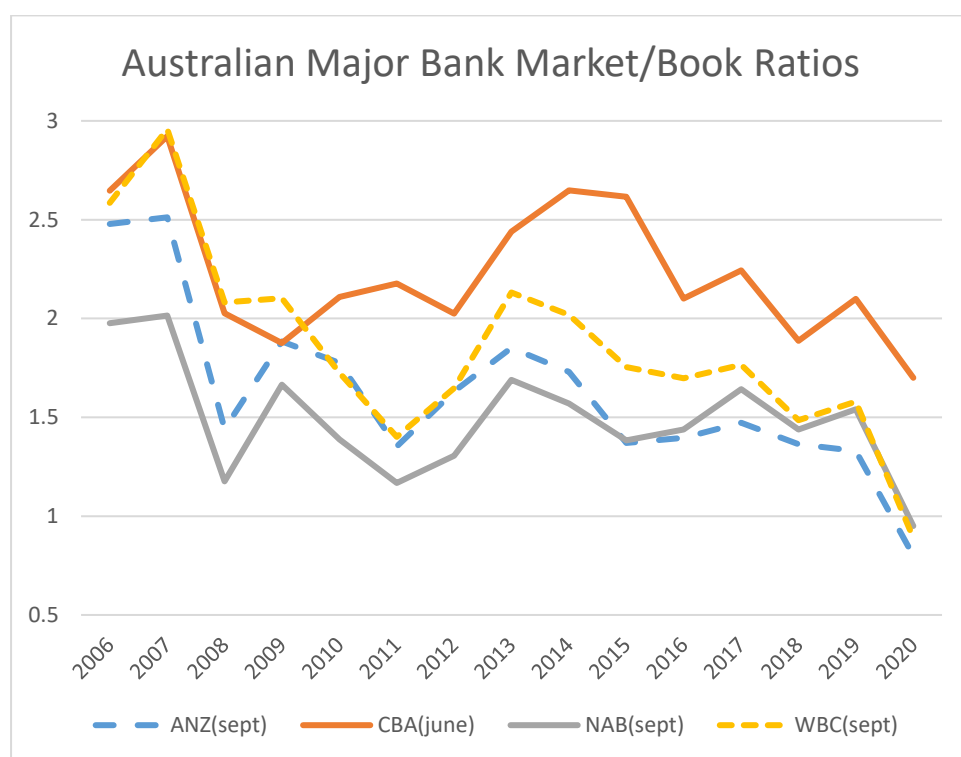


FIGURE 5: MAJOR BANK M/B RATIOS

An obvious question is what determines the share price of banks and causes the M/B ratios to deviate from unity. Bank analysts spend considerable time estimating what they think is the fundamental value of a bank and deriving their “target price” – which if higher or lower than the current share price leads them to recommend buying or selling respectively the shares of the bank.

To examine alternative valuation methods we will consider the simple case of *Hypothetical Bank* which at the end of 2021 presents the following financial statements. A number of

important features need to be noted. The risk weights of Cash, Mortgage, Personal and Business Loans are assumed to be 0, 0.5, 1, and 1 respectively, giving total RWA = 13. The bank has a target Equity/RWA = 10% which it currently just meets. Its loan loss provisions are currently (and planned to be maintained at) 0.2% of total assets. NII/Assets = 2%, NonII/NII = 20%, OC/(NII+NONII) = 60%. In the year just completed, it has experienced higher than usual loan losses and the CIC was \$0.01 billion. It pays a tax rate of 30 per cent. (Because it leases buildings and equipment, these costs are included in operating costs (OC) and there is no depreciation cost). It anticipates real growth in assets of 2 per cent p.a.. While it paid a reduced dividend this year of \$0.1 billion, it expects to be able to pay a dividend next year of \$0.19 while maintaining its equity/RWA at the target level. It plans to finance required increases in its capital base from retained earnings.

Hypothetical Bank Financial Statements (2021: \$ Bill)

<i>Balance Sheet</i>			
	Assets	Liabilities	
Cash	2	18.7	Deposits
Mortgage Loans	10		
Personal Loans	1		
Business Loans	7	1.3	Equity
Total Assets	20	20	Total Liabilities

* Loan Loss Provisions = 0.04

Income Statement

NII	0.4
NONII	0.08
OC	0.29
Earnings pre CIC	0.192
CIC	0.01
PBT	0.182
Tax	9.055
PAT	0.127

Valuation Methods

There are three commonly used approaches to valuing company share prices – and these are also used in the case of banks (albeit with some modifications).

Dividend Discount Model

The first is the dividend discount model (DDM) which is based on the assumption that the share price should be equal to the present value of expected future dividends. This requires both a forecast of future dividends and an estimate of an appropriate required return on equity to derive the discount rate. Denoting $E_0(D_t)$ as the date zero expectation of the future dividend at date t , and r as the discount rate, the current (date zero) share price (S_0) is given by:

$$S_0 = \sum_{t=1}^{\infty} \frac{E_0(D_t)}{(1+r)^t}$$

A simplified version of the DDM (often referred to as the Gordon growth model) is derived from assuming that dividends will grow at a constant rate forever, leading (after some algebra) to an estimate of the share value S_0 given in the simplest case by:

$$S_0 = D_1/(r-g)$$

where D_1 is the dividend to be paid at the end of the current period, r is the required return on equity per period, and g is the growth rate per period of dividends. If dividends are paid half-yearly (as is typical in Australia) the required return and growth rate are rates per half-year (approximately half the annual rates)¹². If the date of valuation is partway through a period, the valuation can be done by calculating the share value as at date 1 (using $D_2/(r-g)$) and discounting the sum of that value plus D_1 back to the current date.

One complication in using the dividend growth model in the case of banks arises from the requirement for the bank to maintain its desired capital ratio. Dividend payments may be constrained by the need to retain earnings to accumulate capital if the bank is growing rapidly. More detailed modelling of earnings prospects and capital needs is warranted for forecasting expected future dividends.

Hypothetical Bank Example

Hypothetical expects to pay a dividend in one year of $D_1 = \$0.085$ billion and for that dividend to grow at $g = 4$ per cent p.a. (reflecting inflation of 2 per cent and real growth of 2 per cent). The assumed required return on equity is $r = 10$ per cent p.a. Then, $S_0 = \$0.085/(0.10-0.04) = \$0.085/0.06 = \$1.417$ billion. (This compares with a book value of equity of \$1.3 billion).

Dividends in any period are equal to earnings (E) for that period multiplied by the dividend payout ratio (d). Thus, an alternative (equivalent) approach is to forecast future earnings and make some assumption about future payout ratios. Dividends tend to be “sticky” in dollar terms, which suggests a higher payout ratio in periods of low earnings, But as the Australian banking experience during the Covid crisis demonstrates, when the major banks were advised by APRA to limit dividends, leading some to suspend dividends, this is not always so.

¹² In theory, since compounding applies the half yearly rate (r_{sa}) should be calculated from the annual rate (r_a) using $(1+r_{sa})^2 = (1+r_a)$. Generally, using half the annual rate should not matter a great deal, particularly given the uncertainty over what is the appropriate values of r_a and the growth rate.

“Multiples” Approaches

One of the most commonly used valuation techniques is to apply an industry-wide price earnings (PE) multiple to expected (annual) earnings of the bank. Thus, for example, if banks normally trade on a PE multiple of 10, then a bank with expected earnings for the coming year of \$2 billion will have a valuation of \$20 billion.

The PE approach can be linked back to the DDM in the following way, using the Gordon growth model. Letting d represent the payout ratio, $D = dE$, and then $P = D/(r-g) = dE/(r-g)$ giving $P/E = d/(r-g)$. If, for example, the bank has a payout ratio of unity ($d=1$) and dividend growth of zero then $P/E = 1/r$, ie the inverse of the discount rate. A higher growth rate will lead to a higher PE ratio. Note that if the dividend payout ratio is lower this should lead to a higher growth rate as retained earnings augment the capital ratio and can be used to generate higher future earnings.

Hypothetical Bank Example

Hypothetical has expected after tax earnings for the coming year likely to be in the order of \$0.14 billion (which is around \$0.01 billion higher than 2021's figure which was affected by the unusually high CIC in that year). If the current P/E multiple for the banking sector was, say, ten, this would lead to a valuation of \$1.4 billion.

An alternative multiples approach is to use “market/book” (MV/BV) multiples. If the average listed company in the sector (in this case banks) has an MV/BV multiple of say 1.25, then the implied market value of the bank under consideration is easily calculated. In the case of Hypothetical with a BV = \$1.3 billion, this would give MV = \$1.625 billion. Of course such a simplistic approach assumes that the bank is an “average” bank – and the strength of any analyst in undertaking a valuation should hopefully be in identifying why and by how much the bank is different from the average.

Net Present Value (NPV) Modelling

Typically company valuation will proceed by estimating the present value of future operating cash flows of the company using a weighted average cost of capital approach. This gives the value of debt plus equity, and the value of equity is then derived by subtracting the market value (or book value) of debt outstanding. Given the very high leverage of banks and the problems of estimating the true total cost of non-equity funds (deposits) because of associated operating costs, it is preferable to estimate the present value of cash flows available to equity directly using the cost of equity capital as the discount rate.

Since banks have relatively little in the way of physical assets/ total assets and thus depreciation expenses are relatively low, earnings (profits) can be used as a proxy for cash

flows (with care!). Expected earnings can be calculated for future periods using the relationship:

$$\text{Profit} = \text{Net Interest Income} + \text{Fee Income} - \text{Non Interest Expense}$$

and making forecasts of those variables (or their components for a more detailed analysis).

Because the focus of the valuation is upon cash flows to equity and banks must meet certain minimum capital requirements, it is important to recognise that all earnings will not be available for distribution to shareholders if growth is assumed and a target capital ratio is to be maintained. Over the forecast period, cash flows available to shareholders will be earnings less the required increase in capital.

It is obviously impractical to make forecasts out to infinity, so a common approach is to make annual estimates of cash flows for a specified number (eg 10) of years and then estimate a “terminal value” which is the assumed value of the entity at that time (ie 10 years hence). That substitutes for the present value of all cash flows from that time on, and hence is discounted along with cash flows up till that time to obtain the present value. In estimating a terminal value, subsequent earnings are generally assumed to be a perpetuity (or a growing perpetuity) enabling the use of the perpetuity formula. It is important to make consistent assumptions in calculating the terminal value. If future earnings are modelled in real (ie year 10 price) terms, a real cost of equity should be used in the perpetuity formula. If nominal earnings are modelled, the nominal cost of equity should be used. Some analysts will argue that it is preferable to assume that over such a long horizon, the forces of competition mean that it is best to assume that the firm will only be able to earn its required rate of return. Then the book value of equity at that date could be used as the terminal value of the stock price. That argument essentially implies that the firm can make above normal profits over some moderate horizon, giving a current market value above book value, but will eventually transition back to just earning normal profits.

The attached spreadsheet outputs provide an indication of the approach for Hypothetical Bank. Key assumptions are:

Bank Valuation: Hypothetical
Bank

Assumptions

Cost of Equity	10%	NII/Assets	2%
Fee Income/NII	20%	OC/OI	60%
Inflation Rate	2%	Loan Risk Weights	
Company Tax Rate	30%	Mortgages	0.5

Real asset growth rate till 2028	2%	Personal	1
Real asset growth rate after 2028	2%	Business	1
Equity/RWA target	0.1		
Provision/Loans	0.002		

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
NII / Assets	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Assets (\$ Bill)	20.00	20.81	21.65	22.52	23.43	24.38	25.36	26.39	27.46	28.56	29.72
Loans (\$Bill)	18.00	18.73	19.48	20.27	21.09	21.94	22.83	23.75	24.71	25.71	26.75
Mortgage loans	10	10	11	11	12	12	13	13	14	14	15
Personal Loans	1	1	2	2	2	2	2	2	2	2	2
Business Loans	7	7	7	8	8	8	8	9	9	10	10
Non-int expense/Operating Income	0.29	0.30	0.31	0.32	0.34	0.35	0.37	0.38	0.40	0.41	0.43
NII (\$ Bill)	0.400	0.416	0.433	0.450	0.469	0.488	0.507	0.528	0.549	0.571	0.594
Fee & Other Income	0.080	0.083	0.087	0.090	0.094	0.098	0.101	0.106	0.110	0.114	0.119
Operating Income	0.480	0.499	0.520	0.541	0.562	0.585	0.609	0.633	0.659	0.686	0.713
OC	0.288	0.300	0.312	0.324	0.337	0.351	0.365	0.380	0.395	0.411	0.428
Underlying Earnings	0.192	0.200	0.208	0.216	0.225	0.234	0.244	0.253	0.264	0.274	0.285
Credit Impairment Charge	0.010	0.001	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002
Operating Profit	0.182	0.198	0.206	0.215	0.223	0.232	0.242	0.251	0.262	0.272	0.283
Income Tax	0.055	0.059	0.062	0.064	0.067	0.070	0.073	0.075	0.078	0.082	0.085
Net Profit after tax	0.127	0.139	0.144	0.150	0.156	0.163	0.169	0.176	0.183	0.191	0.198
Terminal Value											2.4782158
PV of Terminal Value	0.95546										
RWA Capital Target	1.305	1.358	1.413	1.470	1.529	1.591	1.655	1.722	1.791	1.864	1.939
Dividends Payable	0.050	0.086	0.090	0.093	0.097	0.101	0.105	0.109	0.114	0.118	0.123
PV of Dividends Payable		0.078	0.074	0.070	0.066	0.063	0.059	0.056	0.053	0.050	0.047
Sum of PV of Dividends Payable	0.617										
PV of Terminal Value	0.955										
Total PV	1.572										

One of the key elements of this approach is to note that the bank will have a capital target each year (reflected in its ICAAP) and that dividends are constrained by the need to retain sufficient earnings to meet that target.

The assumptions built into this valuation lead to a value for Hypothetical Bank of \$1.572 billion. It is also worth noting (as shown in the spreadsheet itself in Figure 6 which can be opened) - that the terminal value, which is calculated under the assumption that the year 10 real earnings are maintained in perpetuity and discounted at a real cost of equity of 8 per cent, is 1.28 times the book value at that time (which is given by the capital target for that year). Using the book value as the terminal value would clearly have a significant negative effect on the current valuation – showing how sensitive the valuation estimates are to the assumptions made.



FIGURE 6: HYPOTHETICAL BANK VALUATION SPREADSHEET

Triangulation

Even though the Hypothetical Bank example is purely fictitious, the different results derived from alternative modelling approaches lead to an important point. If the different approaches give substantially different results, it is important to revisit the assumptions in the models to identify determinants of the discrepancies. If the assumptions of each are correct (ie we have perfect foresight) then each approach should generate the same valuation. In reality, we should check if the assumptions are consistent across the alternative approaches, and if not adjust assumptions as appropriate to get a better convergence of valuations.

In the case of Hypothetical, the NPV approach gave a value of \$1.57 billion, the earnings multiple approach suggested \$1.4 billion, the market/book multiple indicated \$1.625 billion, and the dividend discount model generated a \$1.417 billion valuation. If that range of valuations was felt to be too great (and it may not be given that the uncertainty of the future can be expected to generate uncertainty about current value) then various assumptions (such as lowering the M/B ratio used, or replacing the terminal value in the NPV approach with the book value at that date) could be adjusted. Of course, these should not be arbitrary adjustments, but based on careful analysis of the merits of those assumptions.

Recent Bank Sale Price Valuations

While bank analysts are regularly providing valuations of banks, a critical test of a bank's value is what a purchaser is willing to pay for it. Unfortunately, there have been very few public sales of Australian banks in recent decades which provide such information.

The most recent has been the purchase of ME Bank by the Bank of Queensland in 2021. The purchase price was \$1.325 billion which was 1.05 times book value and implied a P/E multiple of 11.9 times. Since ME Bank was not listed on the ASX (being owned by institutional super funds) there was no prior market price to compare the acquisition price with.

St George Bank "merged" with Westpac in December 2008, with St George shareholders receiving 1.31 Westpac shares for each share they had held, implying a purchase price of approximately 2.7 times book value. The Independent Expert's report is available [here](#) and illustrates the use of the various methods of valuation (and role of assumptions about future scenarios) discussed earlier. BankWest was bought by CBA in October 2008 for \$2.8 billion which was around 80 per cent of the book value (reflecting the "distressed sale" nature of the transaction).

In November 1995, Westpac bought Challenge Bank and then the Victorian banking business of Challenge Bank (not the whole bank) were purchased by Bank of Melbourne from Westpac. The [deal](#) involving a \$69 million goodwill component (ie in excess of shareholders funds) and a total price of around 1.7 – 2.0 times book value. (The final purchase price could be adjusted dependent on future deposit growth).

Westpac subsequently purchased the Bank of Melbourne in 1997 for \$1.43 billion (see [here](#)) which was a premium of approximately 20 per cent on the current share market value. The purchase price was almost twice the book value of the bank's equity .

The "good" assets of Bank of South Australia were purchased by Advance Bank in June 1995 and Advance Bank was subsequently purchased by St George Bank in November 1996.

Appendix 1 Bank Licensing, Regulation, and Prudential Standards

Main Australian Legislative/Regulatory Requirements

Legislative

- Corporations Act
 - Requirement for Australian Financial Services Licence (AFSL) to provide financial products and services
- National Credit Code
 - Australian Credit Licence required to supply credit or give advice re credit (Note: credit not a financial product under Corps Act)

Regulatory requirements

- ASIC: market conduct, financial consumer protection
 - Manages AFSL and ACL licensing
 - Produces regulatory guides
- APRA: prudential regulator
 - issues ADI and other licences
 - Produces &enforces prudential standards

Financial entities also need to consider:

- ALM/CFT obligations – AUSTRAC
 - CBA experience of \$700 mill fine in 2018!
- Cartel/Competition regulation – ACCC
 - ANZ \$2.5 bill equity issue in 2015 leading to criminal cartel charges laid in 2018 against ANZ, Citigroup and Deutsche Bank and senior executives. (Also civil proceedings by ASIC regarding breach of continuous disclosure obligations)
- External dispute resolution – AFCA
 - If internal dispute resolution process (required for AFSL or ACL) fails. (AFCA a merger of FOS, COSL, SCT)

- Foreign jurisdiction legislation/regulations

Appendix 2 APRA Standards for ADIs

In recent decades, with the progression of the Basel Accord from Basel 1 to Basel 3, there has been a virtual explosion in the number (and detail) of prudential (and other) standards produced by APRA with which ADIs must conform. They cover the following areas – with the various standards grouped by the following categories with numbering as indicated below:

- Capital (1xx)
- Economic and Financial Statistics (7xx)
- Financial Statements (3xx)
- Governance (3xx and 5xx)
- Other Requirements (a range of numberings)
- Risk Management (2xx)

As well as the prudential standards applying to ADIs (labelled as APSxxx) there are Consolidated standards applying to a wider range of institutions (labelled as CPSxxx). These have legislative backing (and can be found at www.legislation.gov.au by following the links from the APRA website). In addition, there are:

- Prudential Practice Guides (APGxxx and CPGxxx)
- Reporting Standards (ARSxxx)
- Reporting Forms (ARFxxx and CRFxxx)

While this labelling system is consistent, such that (for example) the Capital Adequacy Standard is APS110 and the Liquidity Practice Guide is APG210, there are some unusual cases such as the Aggregate Risk Exposures prudential standard which is labelled 3PS221. The use of “3” as the starting number reflects the fact that these documents apply to institutions at the consolidated level - known as “level 3” in APRA terminology.

The complete list of standards for ADIs, as at January 2021, are shown in the screen shots from the APRA website on the following pages. Note that revisions are made to standards and new standards introduced from time to time.

Many of the standards are voluminous and complex and it is easy to understand why smaller ADIs complain of the costs of compliance with regulation – which many argue is one cause of mergers and the decline in the numbers of smaller ADIs. Offsetting these costs somewhat, Industry Associations, Law Firms, and consultants provide services helping Boards and Senior Management to understand compliance

requirements (and “good (or best) practice” – which naturally goes beyond compliance). At the same time, the emergence of a number of new small banks in recent years indicates that the cost of compliance is not prohibitive to new entrants.

The process for becoming licensed as a bank (or ADI) is set out on APRA’s [website](#). Authorisation under section 9 of the Banking Act is required, and use of certain words such as “bank” and “ADI” is [restricted](#) to authorised ADIs. (Thus use of the term “investment bank” is restricted). In 2018 APRA allowed a new category of *restricted licence* (explained [here](#)) enabling small institutions to undertake a restricted range and scale of banking activities prior to applying for a full licence within two years. Prior to that APRA allowed mutual ADIs above a certain size (\$50 million capital) to rebrand themselves as mutual banks, and subsequently removed the minimum size restriction.

It should also be noted, that as well as APRA regulations, ADIs, as registered companies, must meet various requirements imposed by ASIC. As well as the usual requirements applying to any company, there are others such as those associated with having an Australian Financial Services Licence (AFSL) and an Australian Credit Licence (ACL).

Capital

- 110** Capital Adequacy
APS 110 APG 110 ARS 110.0
- 110** Internal Capital Adequacy Assessment Process and Supervisory Review
CPG 110
- 111** Capital Adequacy: Measurement of Capital
APS 111 ARS 111.0
- 112** Capital Adequacy: Standardised Approach to Credit Risk
APS 112 APG 112 ARS 112.1 ARS 112.2
- 113** Capital Adequacy: Internal Ratings-based Approach to Credit Risk
APS 113 APG 113 ARS 113 ARS 113.1 ARS 113.2 ARS 113.3 ARS 113.4
- 114** Capital Adequacy: Standardised Approach to Operational Risk
APS 114 APG 114 ARS 114
- 115** Capital Adequacy: Advanced Measurement Approaches to Operational Risk
APS 115 APS 115 APG 115 ARS 115
- 116** Capital Adequacy: Market Risk
APS 116 APG 116 ARS 116
- 117** Capital Adequacy: Interest Rate Risk in the Banking Book (Advanced ADIs)
APS 117 APG 117 ARS 117.0 ARS 117.1 ARS 117.1
- 118** Off-balance Sheet Business
ARS 118 ARS 118.1
- 120** Securitisation
APS 120 APS 120 APG 120 ARS 120.1 ARS 120.2
- 121** Covered Bonds
APS 121
- 180** Capital Adequacy: Counterparty Credit Risk
APS 180 ARS 180

Source: <https://www.apra.gov.au/industries/1/standards#category-1>

Economic and Financial Statistics

701	Financial Sector (Collection of Data)	APG 701.0	ARS 701						
720	Financial Sector (Collection of Data)	ARS 720	ARS 720.1	ARS 720.2	ARS 720.3	ARS 720.4	ARS 720.5	ARS 720.6	ARS 720.7
721	ABS/RBA Repurchase Agreements and Securities Lending	ARS 721							
723	ABS/RBA Margin Lending	ARS 723							
730	Financial Sector (Collection of Data)	ARS 730	ARS 730.1						
741	ABS/RBA Business Finance	ARS 741							
742	ABS/RBA Business Credit Stocks, Flows and Interest Rates	ARS 742							
743	ABS/RBA Housing Finance	ARS 743							
744	ABS/RBA Housing Credit Stocks, Flows and Interest Rates	ARS 744							
745	ABS/RBA Personal Finance	ARS 745							
746	ABS/RBA Personal Credit Stocks, Flows and Interest Rates	ARS 746							
747	ABS/RBA Deposit Stocks, Flows and Interest Rates	ARS 747							
748	ABS/RBA Wholesale Funding Stocks, Flows and Interest Rates	ARS 748							

Source: <https://www.apra.gov.au/industries/1/standards#category-6>

Financial statements

322 Statement of Financial Position (Consolidated)

ARS 322

323 Statement of Financial Position (Licensed ADI)

ARS 323

325 International Operations

ARS 325

330 Financial Sector (Collection of Data)

ARS 330 ARS 330.1 ARS 330.2 ARS 330.3

332 Statement of Economic Activity

ARS 332

731 International Banking Statistics

ARS 731.1 ARS 731.3 ARS 731.3 ARS 731.4

796 Points of Presence

ARS 796

Source: <https://www.apra.gov.au/industries/1/standards#category-5>

Governance

310 Audit and Related Matters
3PS 310

310 Audit and related matters
APS 310

510 Governance
CPS 510

511 Remuneration
CPG 511

520 Fit and Proper
CPS 520 CRF 520

520 Fit and Proper
APG 520

Source: <https://www.apra.gov.au/industries/1/standards#category-2>

Other requirements

001	Definitions	APS 1
001	Definitions	3PS 1
330	Public Disclosure	APS 330
610	Prudential Requirements for Providers of Purchased Payment Facilities	APS 610
750	DAWR Agricultural Lending	ARS 750
760	ATO collection for Major Bank Levy Act 2017	ARS 760.0
910	Financial Claims Scheme	APS 910 ARS 910
920	Australian Government Small and Medium Enterprise (SME) Guarantee Scheme	ARS 920.0 ARS 920.2 ARS 920.4
923	Repayment Deferrals	ARS 923.2

Source: <https://www.apra.gov.au/industries/1/standards#category-4>

Risk management

<p>210 Liquidity</p> <p>APS 210 APG 210 ARS 210 ARF 210.5 ARF 210.5</p>	<p>226 Margining and Risk Mitigation for Non-centrally Cleared Derivatives</p> <p>CPS 226</p>
<p>220 Credit Quality</p> <p>APS 220 ARS 220 ARS 220.3 ARS 220.5</p>	<p>230 Commercial Property</p> <p>ARS 230</p>
<p>220 Risk Management</p> <p>CPS 220 CPG 220</p>	<p>231 Outsourcing</p> <p>CPS 231 CPG 231</p>
<p>221 Large Exposures</p> <p>APS 221 APS 221 ARS 221.0 ARS 221.0</p>	<p>232 Business Continuity Management</p> <p>CPS 232</p>
<p>221 Aggregate Risk Exposures</p> <p>3PS 221 3PG 221</p>	<p>233 Pandemic Planning</p> <p>CPG 233</p>
<p>222 Associations with Related Entities</p> <p>APS 222 APS 222 ARS 222 ARS 222.0 ARS 222.2</p>	<p>234 Information Security</p> <p>CPS 234 CPG 234</p>
<p>222 Intra-group Transactions and Exposures</p> <p>3PS 222 3PG 222</p>	<p>235 Managing Data Risk</p> <p>CPG 235</p>
<p>223 Residential Mortgage Lending</p> <p>APG 223 ARS 223</p>	

Source:

<https://www.apra.gov.au/industries/1/standards#category-3>

