Australian Prudential Regulation Authority

Answers to questions on notice following public hearing on 14 October 2016

(answers received 1 November 2016)

Question number	Member	Topic	Proof Hansard page number for hearing on 14/10/2016
1	Keogh	APRA's powers under the Banking Act 1959	13
2	Hogan	Superannuation trustee governance	16
3	Buchholz	Statistics on complaints to APRA	17
4	Kelly	Data on the loss of loans to small business	19
5	Kelly	Bank losses on residentially secured loans	19
6	Kelly	What percentage of banks are experiencing impaired asset losses	20
7	Conroy	Measuring and understanding the difference in risk weights	22
8	Coleman	Measurement of banking system comparable to other jurisdictions	23

House of Representatives Standing Committee on Economics Inquiry into Australian Prudential Regulation Authority annual report 2015

14 October 2016

Question One: APRA's use of its powers under the Banking Act and the potential impact of their use on confidence in the sector?

Mr KEOGH: Going to senior management and concern about making sure senior management is responsible, going right to the top, under section 11CA(2)(c), (d) and (e) of the Banking Act, you are permitted to remove a director, ensure that someone does not become a director or to even appoint a director to an ADI. Have any of those powers ever been used by APRA?

Mr Byres: Not that I am aware of.

Mr KEOGH: Have you ever considered using any of those powers, in respect of an ADI?

Mr Byres: No, not that I am aware of. I would have to—

Mr KEOGH: Could I ask you to take that on notice and come back to us to confirm if you have, in respect to any of those questions?

Mr Byres: Yes. For the purposes of today's discussion, I suspect the answer is no, for reasons that I talked to you about before, that largely those powers are designed for use when an organisation is failing. And there is a separate set of—section 20 or 21, which is the capacity to remove and disqualify individuals.

Mr KEOGH: Have you used those powers?

Mr Byres: On rare occasions, yes.

Mr KEOGH: Would you be able to provide us on notice details of each time that has been used?

Mr Byres: We could take it on notice, what we have done, yes.

Answer:

APRA's powers under the *Banking Act 1959* (Banking Act) can be adapted to a range of different circumstances, including distress and non-distress scenarios.

These powers include the ability to issue binding directions under s11CA. The directions power is a fundamental legislative tool that can be used in several ways, including the enforcement of prudential requirements and the implementation of financial distress management.

APRA is more likely to use its directions power in a distress situation, since institutions tend to cooperate with APRA in normal times. If APRA believed it was necessary to exercise formal powers in respect of a particular institution, it would use the powers most appropriate to the circumstances.

The 11CA directions power can be used to remove a director or senior manager of an ADI from office (s 11CA(2)). APRA also has powers under Division 3 of Part II of the Banking Act to apply to the Federal Court of Australia to have a person disqualified from being a director or senior manager (see s 21). Under that Division APRA may also direct an ADI to remove a director who is a disqualified person, or who fails to meet any of the criteria for fitness and propriety set out in the prudential standards (see s 23). The availability of these powers is particularly important in a distress scenario, where timely action may be needed to secure the ADI operations in the interests of depositors or financial stability.

APRA has had occasion to use the broad directions powers under the Banking Act in relation to ADIs, but has not had cause to use them in relation to ADI directors.



¹ This register can be found on APRA's website at http://www.apra.gov.au/CrossIndustry/Pages/Disqualification-Register2.aspx

House of Representatives Standing Committee on Economics Inquiry into Australian Prudential Regulation Authority annual report 2015

14 October 2016

Question Two: Superannuation trustee governance

Mr HOGAN: Thank you for those. We mentioned a couple of them last week to the banks, like the bankswitching account service. I have some concerns about that. It is supposed to take five days, I think, after you go into your bank and say, 'I want to switch banks.' The anecdotal evidence I am getting is that it takes over a month, and it is a delaying tactic, so we will certainly ask them to give us figures on that to make sure they are more accountable and transparent on that. We have raised as well the data thing that you mentioned. Chair, if I can, I just want to make one last line of questioning in relation to superannuation trustee governance. Obviously you have oversight of the prudential standards on governance conflict of interest. There have been ongoing reports about trustees not behaving that well, leading to poor outcomes most recently in relation to insurance. Can you inform the committee of the number of trustees currently being investigated by APRA?

Mrs Rowell: I need to take that on notice. We are undertaking some enforcement related work, I would call it, in relation to some funds, but it is a very small number. In the broader supervision sense, we are actually engaging quite actively with a significant number of funds around improvements in governance. **Mr HOGAN:** Sure. Could you also then provide an overview of the areas of interest in relation to these issues?

Mrs Rowell: Yes.

Answer:

The term 'investigation' has a particular meaning for APRA, as APRA is empowered under industry Acts to conduct investigations of its regulated entities. APRA may only carry out such investigations in accordance with the requirements for that investigation, as set out in the particular industry Act. APRA is not currently investigating any trustees using such powers.

There are, however, three trustees that are under heightened scrutiny at the moment by APRA. APRA uses a structured assessment methodology and a range of supervisory powers and tools to identify entities which need heightened supervisory attention.

The areas of interest in relation to trustees under heightened supervisory attention are predominantly weaknesses in governance and risk management, in particular conflicts management and investment governance practices. Both of these have been focus areas for APRA since the introduction of prudential standards in 2013. APRA has undertaken thematic reviews and supervisory assessment work in these areas and communicated widely to trustees about expectations.

House of Representatives Standing Committee on Economics Inquiry into Australian Prudential Regulation Authority annual report 2015

14 October 2016

Question Three: Statistics on complaints to APRA.

Mr BUCHHOLZ: I have three lines of questioning this morning. The first line of questioning is that I want to understand how you handle your line of complaints, what the benefit to a complainant to make a complaint is and what the success rate is there in that space. The second line of questioning is around the stress testing that you underwent with the ADIs, the reason for that and what some of the results that you found were. Finally, the third line of questioning is that I just want to understand what some of the minor amendments to the prudential standards were to allow for those minor deviations of Basel III reforms that appeared in your annual report. Let's kick off with complaints—that just gives you some time to reflect. How many complaints would you receive annually as a regulator?

Mr Byres: I could not give you the number. I would say that compared with ASIC, though, a small fraction, because we are not a consumer protection, customer facing organisation. But there are people who come to us with complaints. We have an information line that people can call up on. It depends on the nature of the complaint. It could just be something that is misdirected and we direct it to ASIC because that is the right place to go. It may be a complaint that could be characterised as a whistleblower or some piece of intelligence that we find useful, in which case it would go to our supervision teams to follow up on and see whether there is anything there. We could send you some stats on how many there are in a given period.

Mr BUCHHOLZ: What would be a common complaint that you would deal with as a regulator? **Mr Byres:** I do not know what the most common ones would be. The ones that I see quite often are people wanting access to their superannuation money, and, for whatever reason, it has been denied. They are, in a sense, appealing to us to have the trustees reconsider that decision. Again, we could probably give you some statistics on—I think you asked ASIC for the top three categories?

Answer:

APRA does not separately classify enquiries as complaints. APRA received 11,550 enquiries by phone, email and letter during the 2015/16 financial year period. The majority of these enquiries were phone calls by nature. This figure is down from the 12,635 enquiries received during the previous financial year.

The most common enquiry related to superannuation, specifically pertaining to the early release of superannuation, disputes with superannuation funds or trustees, and questions in relation to APRA's prudential framework for the superannuation industry.

Calls concerning authorised deposit-taking institutions (ADIs) (bank, building society or credit union), involved questions on the operation of the Financial Claims Scheme (FCS) for ADIs, disputes with an ADI and queries on APRA's prudential framework for the banking industry.

House of Representatives Standing Committee on Economics Inquiry into Australian Prudential Regulation Authority annual report 2015

14 October 2016

Question Four: Data on the loss of loans to small business

Mr CRAIG KELLY: When you were answering some questions from Mr Evans you mentioned that you have some data on the loss of loans to small business. Firstly, can you provide us with that in some detail later? Secondly, what type of percentage are we talking about?

Mr Byres: I could not tell you off the top of my head. If you compare it to, say, residential mortgage lending to home borrowers it is many multiples, but we will provide you with whatever data we can give you on that, and a comparison between different sorts of lending.

Mr EVANS: Is that losses that the banks have totally written off, or just ones where they have had to actually engage in some recovery action?

Mr Byres: We tend to focus on the extent to which the bank is out of pocket after recovery action.

Mr CRAIG KELLY: Where the loans are residentially secured, have there been losses there—small business loans?

Mr Byres: Yes, and they tend to be higher than for just a normal home loan, but obviously much less than for an unsecured loan.

Answer:

APRA does not routinely collect data on small business lending from smaller ADIs.

However, data collected from the four major banks indicates the loss rates for loans to Australian small businesses are higher than losses for loans for residential mortgages. For example, the observed loss rate for the four major banks' Australian small business lending, where the lending was secured by residential property, was 0.15 per cent of exposures for the calendar year 2014. The loss rate for other Australian small business lending was 0.40 percent. These are both higher than the loss rates for residential mortgages, just 0.02 per cent, as shown in Table 1.

Table 1: Major banks' loss rates by asset class

Year-end December 2014

	Loss rate (%)
Residential mortgages	0.02
Small business lending, secured by residential property	0.15
Other small business lending	0.40

Source: APRA estimates based on unpublished prudential data

The actual loss rates presented relate to recent default experience (for defaults occurring in 2014) and are broad averages estimated from Australian data provided by the major banks. The small business secured by residential property category contains all small business exposures that are partially or wholly secured by residential property. As these loans may be secured by more than one asset type, this category may also reflect other types of security.

The data represents an estimate of recent loss rates and may not be reflective of long term average loss rates or loss rates that might be observed in a significant economic downturn.

House of Representatives Standing Committee on Economics Inquiry into Australian Prudential Regulation Authority annual report 2015

14 October 2016

Question Five: Bank losses on residentially secured loans

Mr CRAIG KELLY: Where a small business borrows money from a bank and it is residentially secured, my understanding is that it is sort of like 80 per cent or something—they rarely loan 100 per cent of the equity in the house. How would it be in those circumstances that banks would incur any significant losses when they have recourse to residential real estate, when residential real estate prices have been increasing over a substantial period of time?

Mr Byres: There are still unfortunately a lot of work-out costs associated with those loans. We could try to give you some estimates of what they are. I am not quite sure how precise they would be, so they would probably come with some caveats around them. Yes, if you have been through a period where house prices have accelerated significantly then the losses may well be minimal. But not everywhere in Australia has had the sort of house price appreciation that has happened in Sydney and Melbourne.

Mr CRAIG KELLY: But my understanding—just on the back of an envelope—is that for a bank to incur a loss where they have got a loan residentially secured would require some type of deflation in the price of the house. They are not lending 100 per cent of the equity that the person has.

Mr Brennan: I think what that might be referring to is the loan that is made on day one when the borrower is perceived to be good. If the business is deteriorating, the actual loan-to-value ratio may deteriorate. So the amount outstanding at the point of failure may in fact be significantly higher than 80 per cent.

Mr CRAIG KELLY: But would that not then become classified as an unsecured loan, if the bank lent more money or extended the credit terms?

Mr Byres: The typical example might be the borrower who starts off with a loan that is fully secured. Then for whatever reason they encounter cashflow problems and they cannot make their payments. The interest on the debt continues to accrue, obviously, so the debt is growing. Depending on how long the bank gives the customer, it may in fact grow to more than the price of the security.

Mr CRAIG KELLY: But once it grows to more than the price of the security wouldn't that then be considered an unsecured loan? I am thinking of the terms of classification of these numbers. The banks tell us that in the past their loans were underpriced. So I am just trying to see where they are actually—to justify that amount. That justifies the increasing margin at the moment, but I am trying to justify it in the past to see where the losses actually were.

Mr Byres: Once the customer has defaulted, assuming it is not just 'I missed a payment and I made it up the next day'— they have defaulted on their loans—then in the classification we have it becomes an impaired asset. It is either fully secured; partially secured, which would be the case where the loan ticks over: we would call that partially secured; or unsecured, which is where you just have no security.

Mr CRAIG KELLY: And you can provide us with some detail on those classifications?

Mr Byres: Those are the way banks report to us. They may have different classifications internally but that is the data we have got.

Answer:

Banks incur losses on residential real estate lending, notwithstanding economy wide house price increases, from three factors. These factors can apply independently or, more commonly, in combination.

a) House price appreciation is not uniform across the country, nor is it uniform across time. At present, most residential real estate in Sydney and Melbourne has increased in value over the past few years. However outcomes in parts of Queensland and Western Australia are quite different. Furthermore, the real estate security for a loan originated in Sydney in 2010 for example, may well have fallen in value for a default occurring in 2012.

Importantly, there is often a correlation (and feedback loop) between default rates and geographic regions where house prices have not risen strongly or indeed may have fallen. In essence, regions adversely

impacted by economic events will see increases in unemployment leading to increased default rates and falling house prices.

Another element, although of more marginal impact, is the observation that realised sale prices on defaulted real estate can be less than expected. Anecdotally, this effect may be due to defaulted borrowers being less able to maintain the property in the period leading up to default and/or potential buyers becoming aware of the less discretionary circumstances attached to the sale.

- b) Loan debt at the time of default may be higher than the loan amount at origination. Banks typically work with customers facing financial strain for a period, perhaps an extended period, rather than immediately moving to sale of the security. During this period, customers will not be making interest payments and these missed payments will be capitalised into the outstanding debt. In total, the period of relief followed by the time then taken to realise the security can amount to 9-12 months.
- c) Work out costs. APRA does not have data on these costs, but notes that total work out costs can be significant, anecdotally up to 10 per cent of the security value, as they include real estate agent fees, legal costs (which obviously escalate if the matter is challenged by the borrower), and unpaid rates/strata levies which must be paid before title can be transferred.

ADIs report quarterly to APRA on their impaired assets. This reporting distinguishes between:

- Non-accrual items with provisions
 - No performance
 - o Partial performance
 - o Full performance
- Non-accrual items without provisions
 - o No performance
 - o Partial performance
 - o Full performance
- Restructured items with provisions
- Restructured items without provisions
- Other real estate owned
- Other assets acquired through security enforcement.

ADIs also report the outstanding balance of impaired assets to the following groups of counterparties:

- Residents
 - o Households
 - of which: Owner-occupied housing
 - of which: Investor housing
 - of which: Credit cards
 - of which: Other personal
 - o Community service organisations
 - Non-financial corporations
 - of which: Private trading corporations
 - of which: Private unincorporated businesses
 - o Financial corporations
 - of which: ADIs
 - of which: Registered financial corporations
 - of which: Insurance corporations
 - *of which: Pension funds*
 - of which: Other financial institutions
 - o Other
- Non-residents.

ADIs also report the outstanding balance of 'past due' loans (loans where payments have been missed by 90 days) according to the above breakdown.

House of Representatives Standing Committee on Economics Inquiry into Australian Prudential Regulation Authority annual report 2015

14 October 2016

Question Six: What percentage of banks are experiencing impaired asset losses?

Mr CRAIG KELLY: As a percentage of total loans, do you have any idea what percentage the banks are incurring a loss on?

Mr Byres: Impaired assets as a percentage of total loans—is that the sort of thing you are looking at? **Mr CRAIG KELLY:** Yes. Just say if the banks had \$1 billion in loans to small business and residential secured within one year, what would the banks' losses be?

Mr Byres: We will give you the latest number, but impaired assets are roughly in the order of one per cent of total lending.

Mr CRAIG KELLY: Has that changed over time, over the last decade? Has there been any change in that? **Mr Byres:** It went up sharply in the 2009-10 period, in the aftermath of the GFC. It went up to about two per cent, then it came down, and more recently it has started to tick back up again.

Mr CRAIG KELLY: So it has been between the one and two per cent margins over the—

Mr Byres: We will send you a chart, because we have a chart on that I think is going to be in our annual report that is published in the next couple of weeks.

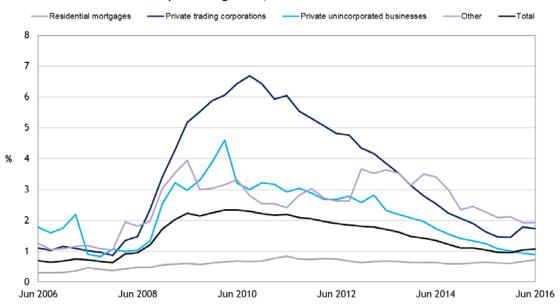
Answer:

APRA does not collect specific information on loans to small business. The information most relevant to loans to small business that APRA collects is that regarding loans to private trading corporations and private unincorporated businesses.

ADIs' total non-performing assets are 1.1 per cent of total gross loans and advances (GLA), as at 30 June 2016, increased from 1.0 per cent from 30 June 2015, as shown in Chart 1. The share of non-performing assets peaked in June 2010 at 2.3 per cent. Non-performing assets includes impaired assets and past-due items, and is presented as a proxy for losses.

Non-performing residential mortgage assets were 0.7 per cent of residential mortgage GLA at 30 June 2016. Non-performing exposures to private unincorporated businesses were 0.9 per cent of private unincorporated businesses GLA. Non-performing assets to private trading corporations were 1.7 per cent of GLA, which includes both large and small incorporated private businesses.

Chart 1 ADIs' non-performing assets, as a share of loans and advances



Notes
Excludes 'Other ADIs'.
For banks, loans and advances are on a domestic books basis, while non-performing assets are on a licensed ADI basis.
For credit unions and building societies, data are on a licensed ADI basis.

Source: Unpublished APRA data.

House of Representatives Standing Committee on Economics Inquiry into Australian Prudential Regulation Authority annual report 2015

14 October 2016

Question Seven - Measuring and understanding the difference in risk weights

Mr CONROY: My final question returns to Mr Hogan's line of questioning around the IRB banks versus non-IRB banks. Has APRA estimated what the regulatory capital benefit is for IRB banks over non-IRB banks?

Mr Byres: We could measure it in a number of different ways, so I think that the answer to your question is: yes. I am not quite sure how you—

Mr CONROY: Let me give you a similar measurement. On the 'too big to fail' concept, which is obviously a separate issue, the RBA thought the implicit guarantee was worth around \$3.7 billion. We have statistics that show that the mortgage risk weights for the big four are, on average, 25 per cent. For the smaller banks they range between 35 and 45 per cent. Is there any way of measuring what that difference is in risk weights in a dollar figure—a similar measure to the \$3.7 billion measure for the too-big-to-fail concept? I am not judging. I just want to know what the benefit is.

Mr Byres: We will send you some workings, because what you are effectively need to do is essentially say, 'If I change the mix of debt and equity that a modelling bank has, and I converted that, how does that change their cost of funds and how does that flow through to the P&L and then to return on equity,' or something of that nature.

Mr CONROY: That is fine.

Mr Byres: I cannot do that on the back of an envelope.

Mr CONROY: No. We have had discussions with both you and the banks about how much increasing the ratio occurred—was it last year or this year?

Mr Byres: We announced it last year and they raised the capital last year, so they raised the prices last year.

Mr CONROY: Exactly. They have been whingeing about it, although as [inaudible] testified, they just passed it on to their customers to pay. But I interested in how much their current advantage is versus non-IRB banks. If you could take that on notice.

Mr Byres: Happy to do so.

Answer:

Australia's ADI capital framework allows two approaches to determining risk weights. The standardised approach uses a common set of risk weights that seek to reflect general risks of different asset classes. These are not tailored to a specific ADI and are set at a conservative level to ensure adequate capitalisation. The Internal Ratings Based (IRB) approach uses an ADI's internal models to assess risk at a granular level for the asset and institution. Achieving accreditation to use the IRB approach requires a strong and sophisticated risk management framework and capacity and includes some more stringent specific requirements that are different to the standardised approach. The two approaches are broadly but not directly comparable at a risk weight level. For residential mortgages, IRB ADIs are currently subject to arrangements that are expected to generate, on average, a risk weight of at least 25 per cent; for standardised ADIs, the average risk weight is in the order of 39 per cent.

The difference in risk weights most directly has an impact on the amount of capital required for a given portfolio of loans. Assuming a 25 per cent risk weight for IRB ADIs, a 39 per cent risk weight for standardised ADIs, and a target CET1 capital ratio of 9 per cent, the difference in risk weights between the standardised and IRB approaches equates to a reduction in CET1 capital requirements of approximately \$19 billion (14 per cent), in aggregate, for the four major banks' current Australian residential mortgage portfolios

The difference in capital requirements will also impact ADIs' profits and profitability. For a given portfolio of loans, an ADI with a higher risk weight will generate, all other things being equal, a *higher* profit in dollar terms, but a *lower* measure of profitability (eg return on equity).

The implications of this difference will depend on the impact on an ADI's overall cost of funding, which will in turn depend on the ADIs' cost of debt, cost of equity, required capital ratio, tax rate, and change in risk weight. A simple but conservative example suggests an impact of around 14 basis points.

Assuming an ADI with:

- a pre-tax cost of debt of 3 per cent;
- a post-tax cost of equity of 10 per cent;
- a target CET1 capital ratio of 9 per cent;
- a tax rate of 30 per cent;
- a risk weight for IRB ADIs of 25 per cent; and
- a risk weight of 39 per cent for standardised ADIs,

then the IRB approach provides a pre-tax funding cost advantage of approximately 14 basis points. This is estimated as follows:

	IRB RWs (25%)	Standardised RWs (39%)
Loan portfolio	\$100	\$100
Funded by:		
Required capital	\$100 x 25% x 9% = \$2.25	\$100 x 39% x 9% = \$3.51
Debt funding	\$100 - \$2.25 = \$97.75	\$100 - \$3.51 = \$96.49
Funding cost:		
Pre-tax cost of equity	$($2.25 \times 10\%)/(1 - 30\%) = 0.321	$(\$3.51 \times 10\%)/(1 - 30\%) = \0.501
Cost of debt	$$97.75 \times 3\% = 2.933$	\$96.49 x 3% = \$2.895
Total funding cost	\$0.321 + \$2.933 = \$3.254	\$0.501 + \$2.895 = \$3.396
Funding cost difference		\$0.142

In practice, it is likely that the differential between the two approaches will be slightly narrower than the estimated 14 basis points. The analysis above, for example, does not take into account the capital requirement for interest rate risk in the banking book, which applies only to IRB ADIs. In addition, as a result of the decision to raise average risk weights for IRB ADIs to *at least* 25 per cent, the actual risk weight for individual IRB ADIs is likely to be slightly above this level. For each 1 per cent the actual IRB risk weight is above 25 per cent, the difference in funding cost is reduced by approximately 1 basis point.

In the case of the major banks, which are subject to an additional capital requirement as a result of being assessed as domestic systemically important banks (D-SIBs), the difference in funding cost is further narrowed. D-SIBs are required to hold an additional 1 per cent CET1 buffer over and above that held by other ADIs. Recalculating the funding cost estimates above, but assuming the IRB bank maintains a 1 per cent higher CET1 ratio (ie 10 per cent rather than 9 per cent), the funding cost differential is reduced from 14 basis to 11 basis points.

House of Representatives Standing Committee on Economics Inquiry into Australian Prudential Regulation Authority annual report 2015

14 October 2016

Ouestion Eight: Measurement of banking system comparable to other jurisdictions

CHAIR: On competition generally, you made quite a few remarks about competition today, but it is fair to say—especially in response to some of Dr Kelly's questions—that competition is not really what you do, is it? It is not really part of your focus.

Mr Byres: We have a statutory mandate that basically says 'Think about financial safety, and promote financial stability, but in doing that don't go to the ultimate extreme. Balance that with considerations of competition, efficiency, competitive neutrality and contestability.' The way we operationalise that is to say that it is not our job to set standards for competition, efficiency et cetera, but if we are faced with a policy choice that delivers prudential outcomes, which one is more likely to have a better competitive outcome? Or, how can we achieve prudential outcomes, first and foremost, without damaging any of those other considerations?

CHAIR: But in an environment with strong prudential outcomes—and this is not a criticism; it is just how the system is set up—that is your job, right?

Mr Byres: Yes.

CHAIR: You are focused on strong prudential outcomes. Last time I looked at this, and it was a few weeks ago so it may have changed, does it strike you in any way notable that first, second, third and fourth largest companies in Australia by market capitalisation are all banks?

Mr Byres: It is notable.

CHAIR: What do you put that down to? And does it suggest to you that there is a disproportionate degree of strength in these institutions, relative to other countries?

Mr Byres: Clearly, they are big and important and they dominate the financial system. I would say, though, that if you measure our banking system or our top four banks relative to GDP, as the measure, rather than looking at them relative to the stock market, our banking system is not noticeably larger than comparable jurisdictions. The fact that they have the largest four listed institutions is an interesting perspective but it is not necessarily that they are oversized, relative to the Australian economy, at least when we compare with some other jurisdictions.

CHAIR: My understanding was that our financial services sector actually was quite large as a proportion of GDP relative to other countries. Is that not correct?

Mr Byres: We have a large financial system partly because we have a very large superannuation system, and our pool of superannuation money relative to GDP is one of the largest in the world. So, if you take the total financial system, there is no doubt that it is sizeable, but my comment was particularly if you took the pure banking system and measured that relative to GDP.

CHAIR: If you could just take that on notice that would be an interesting analysis to see if you could provide that to the committee.

Mr Byres: I am happy to do so.

Answer:

The global consolidated assets of Australian ADIs are 281 per cent of Australia's Gross Domestic Product (GDP) for the year end June 2016, as shown in Table 1. This includes Australian ADIs' non-bank subsidiaries and offshore assets. For example, the assets of insurance and fund management subsidiaries and banking subsidiaries in another jurisdiction are included. The combined consolidated assets of Australia's top four banks (the major banks) are 218 per cent of Australia's GDP.

Table 1: Australian banking system assets as a proportion of GDP			
Year end 30 June 2016, Australian dollars			
Gross domestic product ¹ (\$bn)	1,650		
	Total assets ² (\$bn)	Total assets to GDP (%)	
Global consolidated group assets			
All ADIs	4,643	281	
Major banks	3,597	218	
Australian domestic book assets			
All ADIs	3,544	215	
Major banks	2,779	168	

The global consolidated assets of Australian ADIs are 281 per cent of the total market capitalisation of Australian listed companies as at December 2015, as shown in Table 2. The combined total assets of Australia's top major banks are 220 per cent of the total market capitalisation.

Table 2: Australian banking system assets as a proportion of the market capitalisation of listed domestic companies

As a	t 31 December 2015, Australian dollars	
Market capitalisation of listed compani	es ³ (\$bn)	1,625
	Total assets (\$bn)	Total assets to mkt cap (%)
Global consolidated group assets		
All ADIs	4,574	281
Major banks	3,578	220
Australian domestic book assets		
All ADIs	3,431	211
Major banks	2,694	166

² Data are sourced from APRA *Quarterly ADI Performance* (QADIP) June 2016 and *Monthly Banking Statistics* August 2016

¹ GDP data are nominal, seasonally adjusted. Data are sourced from the Bank for International Settlements (BIS) *Macro Economic Series*.

³ Market capitalisation data for each country (excluding United Kingdom) are sourced from the World Bank *World Development Indicators*. Data for the United Kingdom are sourced from *the FTSE All-Share Indices Factsheet* December 2015 (London Stock Exchange Group). The figure provided is the FTSE All-Share net market capitalisation. The FTSE All-Share Index captures approximately 98 per cent of the UK's market capitalisation.

Australia's total banking assets are not noticeably larger, relative to GDP, than comparable jurisdictions, as shown in Table 3. This ratio for Australia is lower than the ratio for the United Kingdom and a number of other European nations.

Table 3: Banking system assets as a proportion of GDP for selected jurisdictions

Year end 30 June 2016, Australian dollars

	GDP	Total assets ⁴	Total assets to
	(\$bn)	(\$bn)	GDP (%)
Australia	1,650	4,042	245
Major banks		3,597	218
Belgium	629	707	112
Canada	2,072	5,051	244
France	3,340	10,296	308
Netherlands	1,038	3,690	356
Switzerland	900	3,922	436
United Kingdom	3,729	10,734	288
United States	24,810	18,991	77

Australia's total banking assets are not noticeably larger, relative to the market capitalisation of share markets, than comparable jurisdictions, as shown in Table 4. As with GDP, this ratio for Australia is lower than the ratio for the United Kingdom and a number of other European nations.

Table 4: Banking system assets as a proportion of the market capitalisation of listed domestic companies for selected jurisdictions

As at 31 December 2015, Australian dollars

	Market capitalisation of listed companies (\$bn)	Total assets (\$bn)	Total assets to market capitalisation (%)
Australia	1,625	4,008	247
Major banks		3,578	220
Belgium	567	669	118
Canada	2,181	4,716	216
France	2,858	9,606	336
Netherlands	997	3,496	351
Switzerland	2,080	3,836	184
United Kingdom	4,124	10,491	254
United States	34,311	18,620	54

⁴ Total banking assets data for each country (excluding Australia) have been sourced from the BIS *Consolidated Banking Statistics*, and excludes foreign subsidiary banks and foreign branch banks to prevent double-counting across jurisdictions. Data for Australia are sourced from QADIP, excludes foreign subsidiary banks and foreign branch banks and are comparable to BIS data.