

The Financial System Inquiry:
Response to the Interim Report
by

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Executive Summary.

- 1) Higher levels of national governance quality can reinforce the risk reducing impact of prudential policy at the national level. Thus, maintaining and reinforcing regulatory quality generates national economic benefits.
- 2) Available empirical evidence supports the conclusion that the Australian banking system is competitive. There is a net benefit to the Australian economy from this competition. However, not all consumers benefit or benefit equally from this process.
- 3) Increased competition has brought with it increased complexity which introduces an increased range of risks.
- 4) The 'too big to fail' issue is a complex one which will not be easily addressed. Implementing overly-specified regulations are unlikely to resolve this problem. It is recommended that retaining some uncertainty as to the nature of the bank failure resolution process is more likely to reduce potential distortions.
- 5) Australian banks currently report low levels of market exposure. Implementing 'ring fencing' is unlikely to introduce net benefits, based on the current evidence.
- 6) The risk-reducing benefits of increased capital regulations are likely to be close to satiation. The current developments of the capital adequacy framework to include issues such as liquidity risk and market discipline represent the need to apply more complex risk control mechanisms to financial institutions of increased complexity.
- 7) Caution should be taken so that any modification to the current internal ratings approach for loan portfolios do not distort the impact of risk-return trade-offs.
- 8) The current policy of imposing efficiency dividends upon APRA is distortionary with no net benefit. APRA should be exempted from the efficiency dividend and funding to APRA increased to improve its long-run operational efficiency.
- 9) A process of cyclical external independent reviews of APRA and the Australian regulatory architecture should be adopted to replace the efficiency dividend.
- 10) Relative to the potential costs of a financial crisis, the level of funding for independent research into matters relevant to this Inquiry is small. It is suggested that a research grant system administered by APRA and funded by a small increase in the industry levy has the potential to assist in addressing a number of policy-relevant issues that are currently uncertain in the Australian context.

Dear Committee Members,

I appreciate the opportunity to make this submission in response to your interim report. The committee must grapple with a variety of complex issues, with a wide variety of perspectives and stakeholder groups presenting at times divergent views on the same topic. My submission will provide an overall summation of a number of empirical studies of Australian banking as well as some other germane research that addresses some of the issues that the inquiry is grappling with.

Growth and Consolidation.

The Inquiry has noted that the financial system is now both larger and more complex with an increased range and complexity of products. It was noted that the level of understanding of these increasingly complex processes has become increasingly concentrated. In this context the Inquiry expressed concerns about the potential for morally hazardous risky activity resulting from this level of information asymmetry. As was noted by the Inquiry, higher levels of information asymmetry in the securitised mortgage markets were at least a partial cause of the global financial crisis. Against this backdrop the prudential regulator acts as a representative agent (Dewatripont and Tirole, 1994) to reduce the economic costs of a large number of individual consumers self-educating themselves. In this context the financial system bears some correspondence with other aspects of the economy where specialisation generates widespread economic benefits and consumers rely upon the checks and balances provided by the appropriately configured regulatory framework. Thus, the role of the prudential regulator and the national governance system becomes more apparent in the face of increased complexity and this importance is reinforced by the impact of systematic shocks such as the global financial crisis.

Against this backdrop the recent work by Williams (2014a) is of potential value to the committee. Williams (2014a) studied bank risk in the Asian region, including Australia and New Zealand, and concluded that improved national governance in developed nations has the beneficial aspect of reducing morally hazardous risk seeking. Thus, attention to national regulatory design is an important aspect of reducing the negative externalities caused by information asymmetry. The impact of increased bank complexity in Australia was studied by Williams (2014b). It was found that banks with higher levels of non interest income, representing increased financial complexity, were riskier. However, specialised banks tended to be less risky, with the caveat that banks choosing to be specialised in the provision of non interest income based services are riskier than an equivalent bank specialised in more traditional interest based financial services. It should, however, be also noted that Williams (2014b) found certain types of non interest income, especially trading and investment income, could provide portfolio diversification benefits once specialisation effects are considered. This type of complexity indicates the importance of a specialised

regulatory body acting on behalf of the ordinary consumer of financial products. These issues will be expanded upon in the following sections of this submission.

Competition and Contestability.

The Inquiry noted in its interim report that the banking sector is competitive but concentrated. In a study prior to the GFC, Williams (2007) considered the net interest margins (NIMs) of Australian banks between 1989 and 2001 and concluded that NIMs had fallen over the study period, indicating bank competition. However, in this study some caution was raised regarding higher NIMs earned by the larger banks (possibly due to ‘too big to fail’ effects) and some evidence was found of risk being mispriced. A later study by Williams and Rajaguru (2013) applied a different empirical methodology to a longer and more recent time period (1988 to 2010) and confirmed that bank NIMs have fallen over the study period.

Williams and Rajaguru (2013) found that banks have responded to falling net interest income by increasing non interest income. It was found that a one dollar decrease in net interest income was being compensated for by a less than one dollar increase in non interest income *associated* with the change in NIM. It was thus concluded that there was a net welfare transfer in favour of consumers of financial products. It was found that banks have adopted two strategies in response to falling NIMs, (i) increasing fees on products that were previously free from fees or low fee, and (ii) increasing the range of non interest income sources. The first source of increased non interest income did not fully compensate for falling NIMs, thus reducing the overall cost of financial services. This result supports the Inquiry’s conclusion that Australian banking has experienced ongoing competition. However, Williams and Rajaguru (2013) did point out that not all consumers of banking products will benefit or benefit equally from these changes. This accounts for divergent views of the nature of competition in Australian banking. The second source of increased non interest income for Australian banks represented the effects of bank conglomeration, in which banks (in Australia and globally) are becoming general providers of a wider range of financial services (such as insurance, fund management and investment banking services) rather than providing intermediation of debt products alone. The overall impact of this change is that the net loss of interest margin revenue is more than compensated for by increased revenue from other sources. This has the beneficial impact of ensuring ongoing bank profitability, which reduces the prospect of bank failure and the associated potential for system crisis.

As found in Australia by Williams (2014b) and globally¹, increased non interest income is associated with increased bank risk. As an example, Stiroh and Rumble (2006) document that increased non interest income is associated with a worsening risk–return trade-off in American banks. For technical reasons, Williams (2014b) did not explore the risk-return relationship in Australian banks within the context of non

¹ See for example Stiroh (2004), DeYoung and Rice (2004) and Lepetit, Nys, Rous and Tarazi (2008).

interest income. But Williams (2014b) did find increased bank non interest income and complexity are associated with increased bank risk. However, Williams (2014a) did consider the relationship between bank non interest income and loan risk for a wider sample of Asian nations, including Australia, to find some evidence that loan quality improves as non interest income increases, but the economic importance of this effect was found to be small. This issue is one that would benefit from further study to provide the necessary clarity to help inform policy formulation.

As noted by the inquiry, the Australian banking system has become increasingly dominated by fewer larger banks, which are also becoming increasingly complex. The issue of ‘too big to fail’ will be discussed in more detail below.

Stability and the Prudential Framework.

Too Big to Fail.

An important aspect of the post financial crisis Australian banking system is the increase in market concentration, primarily reflecting the acquisitions of St George Bank and BankWest by the major banks. It is notable that the concentration of the Australian banking system had remained relatively stable for some time prior to these two takeovers, with Williams (2007) reporting the four major banks controlling 67.8% of bank assets in 1988, 67.5% of bank assets in 1998, and the Inquiry reporting similar figures in 2007, increasing to 78.5% in March 2014. Such an increase in market concentration raises the issue of morally hazardous risk seeking due to implied government guarantees for large banks resulting from their status as ‘too big to fail’. The concept of ‘too big to fail’ has been a banking policy concern since the United States regulators decided to rescue both insured and uninsured liability holders of the Continental Illinois Bank in 1984.

This bailout of all liability holders has resulted in considerable academic attention, with for example Saunders, Strock and Travlos (1990) arguing that such a policy generates costs to taxpayers and other stakeholders. It encourages managers of larger banks to accept increasingly risky projects to maximise shareholders wealth, while also reducing incentives of uninsured liabilities to monitor the risk of banks. In the Australian context, Sturm and Williams (2004) found that the Australian banks were operating at a size that was resulting in diseconomies of scale. This increased scale was acting as a barrier to entry to new entrants, forcing new competitors (especially foreign banks) to use above optimal levels of inputs to produce the same level of outputs. The study by Sturm and Williams (2004) is somewhat older and increased use of technological substitutes for traditional delivery methods have most likely ameliorated this barrier to entry. However, more recently, Williams (2014b) found evidence of decreasing returns to scale for major Australian banks and some evidence of increased risk being associated size, supportive of ‘too

big to fail' effects. Further, Williams (2014a) also found evidence supportive of 'too big to fail' effects in Asian banks (including Australian banks). It should be noted, however, that larger banks are also more involved in the provision of non interest income which is itself more risky (Williams, 2014b), as well as being more complex institutions, which increases information asymmetry (Elyasiani and Wang, 2008), thus also increasing bank risk.

Of note for the Inquiry is the result found by Williams (2014a), that improved national governance in developed nations can act to partially offset the risk increases associated with size ('too big to fail' risk seeking). It is notable that this is a *partial* effect, in that improved national regulatory governance can defer the impact of the 'too big to fail' effect, but that it could not be eliminated. This result suggests several possibilities; (i) that the current emphasis upon capital adequacy as a regulatory tool needs to be supplemented with additional regulatory tools to deal with 'too big to fail' effects; (ii) that 'too big to fail' effects are so strong that they can be reduced but not removed by high quality regulatory intervention; or (iii) that the relationship between size, revenue composition and information asymmetry has increased in complexity and this relationship needs further scrutiny.

'Too big to fail', Franchise value and Market discipline.

As is well known in the academic banking literature, a number of bank specific factors are known to reduce a bank's propensity to adopt higher risk profiles. Foremost amongst these are the bank holdings of capital, which will be addressed in more detail below. One outcome of the 'too big to fail' effect is reduced incentives for holders of uninsured (unguaranteed) bank liabilities to engage in costly monitoring and analysis of banks. As implemented by the various permutations of the capital adequacy process, bank issued subordinated debt is an important element of the prudential regulatory process. A change in the prices of this type of debt provides scope for an additional warning signal as to the general market consensus of either (i) an individual bank's risk or, (ii) a potential system crisis. Furthermore, Hoang, Faff and Haq (2013) document that increased market discipline is associated with reduced bank risk.

'Too big to fail' effects reduces and or removes the effectiveness of this market signal for those banks which are systemically most important. Such an effect exists against a backdrop of increasingly sophisticated design of financial instruments. As discussed by Mishkin and Eakins (2009) the process of regulatory arbitrage means that the regulated institutions will constantly seek avenues that maximise their benefits from being a regulated entity while at the same time minimising the cost of regulations. Instrument design is an important element of this process, with the increased complexity of mortgage backed instruments being a factor in global financial crisis. As also discussed by Mishkin and Eakins (2009) the process of regulatory dialectic means the regulatory processes will tend to lag industry innovations.

It is suggested the best manner in which to deal with this problem is to consider adopting a framework making it clear that the nature of any bank bailout will be dealt with on a case by case basis. The regulator should be given appropriate powers to decide the best outcome in each case, and holders of more junior debts should be given to understand that comprehensive bailouts of all liabilities is not certain, irrespective of bank size. Such uncertainty will result in some risk being attached to holding junior debt, with the beneficial result that the market signalling value of junior debt will not be lost. This framework should be established in such a manner that a deliberate lack of certainty reduces or removes any potential for regulatory arbitrage via instrument design.²

Bank franchise value is another attribute that links to the issues of ‘too big to fail’ and insured or guaranteed liability holders. Bank franchise or charter value is simply the value a bank derives from its ownership of a bank licence (or charter). This concept is often developed against the backdrop of deposit insurance or deposit guarantees (Craine, 1995). This asset is increased in value if banks choose to adopt a lower risk profile, thus increasing the present value of profits accrued from continuation of the bank charter (Besanko and Thakor, 1993). As found by Pathan, Haq and Williams (2014), low to medium levels of franchise values act to reduce bank risk seeking. However, as franchise value increases banks will seek to exploit the resulting increased market power with a resulting increase in bank risk. A relevant implication of Pathan, Haq and Williams (2014) is that once bank franchise values rise above median values increased regulatory surveillance is appropriate (especially when bank management have higher than average levels of bank shareholdings).

Complexity of Financial Institutions.

As noted above the increased complexity of large financial institutions poses additional regulatory challenges. It has been found that increased non interest income is riskier than traditional interest based income in Australia (Williams and Prather, 2010), Williams, 2014b), the United States (Stiroh, 2006), DeYoung and Rice, 2004) and Europe (Lepetit, Nys, Rous and Tarazi, 2008). Larger and more complex financial institutions are considered to be risky due to increased complexity and higher agency problems (Laeven and Levine, 2007). However, Williams (2014b) found evidence that trading and investment income is risk reducing for certain classes of banks in Australia.

The Inquiry has requested input to address the issue of ‘ring fencing’ banks operations to protect the traditional intermediation side of banks (the borrowing and lending activities) from the less traditional (market-based) activities. This concept has much in common with the Glass-Steagall Act that used to operate in the United States and the previous separation of Australian banks into Savings and Trading divisions. As suggested by the results above, those banks with increased non interest activities are found by

² Increased certainty in these matters increases the potential scope for regulatory arbitrage.

a number of empirical studies over a variety of banking markets to increase bank risk. However, further examination of the data may be worthwhile before a costly policy is implemented. Reports from the United Kingdom and United States indicate that the costs of creating and maintain a living will are high and such cost will inevitably be passed along to the consumers of financial products.

Williams (2014b) was given access to considerable confidential bank data by APRA for analysis.³ One element of the data made available was the internal bank estimates of Value at Risk due to exposure to market movements. Exposure to market risk was found to be less than one percent of total equity. This would indicate that the current market exposure of Australian banks is unlikely, of itself, to imperil the stability of the Australian banking system. Further, as argued by Williams and Prather (2010), while noninterest income is riskier than net interest margin income it does offer scope for portfolio diversification. Further, Williams and Prather (2010) argue that the marginal impact of revenue product mix is of second order importance to the large negative diseconomies accruing to stakeholders as a result of poor quality asset portfolios. It is suggested that a cross border comparison of market exposures of banks in a variety of developed nations is implemented prior to implementing a ring fencing approach. It would be particularly valuable to have estimates of bank market exposure for those jurisdictions and banks most affected by global financial crisis to find if a critical value of market exposure is associated with bank failure at either a bank or system level.

Capital holdings.

The role of bank capital in reducing bank risk seeking has a long-standing regulatory and academic tradition. Authors such as Merton (1977), have argued that requiring banks to hold increased levels of capital in the presence of deposit insurance or deposit guarantees reduce risk seeking incentives for bank management. However, Koehn and Santomero (1980) and Blum (1999) have demonstrated that increased intensiveness of capital regulation can result in increases in bank risk. Requiring banks to hold increased levels of a costly input (bank capital) beyond a particular level creates risk seeking incentives for banks operating in a competitive market. Bank management must ensure that the asset portfolio can earn a sufficiently high rate of return to satisfy shareholder's expectations. Shrieves and Dahl (1992) demonstrate that unless increased bank capital stringency is accompanied by increased regulatory surveillance, bank risk seeking will eventuate. Williams (2014a) considered these issues empirically and found (i) bank capital has a U-shaped relationship with bank risk; and (ii) increased regulatory quality can partially offset the risk seeking incentives resulting from increased capital regulations. The U-shaped relationship between bank capital and risk found by Williams (2014a) indicates that as banks move from low to medium levels of bank capital holdings, bank risk will accordingly reduce. This is in accordance with the spirit of the current capital adequacy framework in place for banks in Australia and globally.

³ Subject to stringent confidentiality arrangements.

However, the U-shaped relationship found by Williams (2014a) also indicates that once capital holdings move above an inflexion point, bank risk-seeking will increase. Williams (2014a) argues that this inflexion point has been reached or is close to being reached and thus the risk reducing benefits of increased capital holdings are at, or close to, satiation. The national governance results of Williams (2014a) indicate that the impact of high quality regulators can interact with capital regulations to defer but not remove these risk seeking incentives for bank management. It is argued that as the complexity of the banking system increases, bank regulators must move to implement multiple regulatory tools to limit bank risk. The current capital adequacy mark III regulations which provide roles for reporting market risk, market discipline and liquidity holding were considered by Williams (2014a) to be an appropriate step in this context. However, the results of the studies surveyed above indicate that adopting a multifaceted series of warning signs or trip wires in addition to the capital adequacy ratio is warranted in the face of growing bank complexity.

IRB modelling.

The Inquiry expressed some concerns with respect to the competitive neutrality of the internal ratings based (IRB) risk weightings for mortgage lending. The Inquiry also noted that the larger banks using the IRB approach have larger and more diversified loan portfolios together with more sophisticated risk management systems. The members of the Inquiry panel do not need reminding that the concept of a risk and return trade-off in finance is a fundamental issue. Further, regulatory induced distortions to this key concept are in part an explanatory factor in the global financial crisis. Thus, regulatory intervention that distorts the fundamentals of risk and return should not be undertaken lightly.

The smaller deposit taking institution's disadvantages in developing an IRB model acceptable to APRA are in part due to their lacking economies of scale, which is again a fundamental element of any competitive marketplace. The Inquiry should consider if there are alternative mechanisms that allow the smaller DTIs to achieve the necessary scale economies and develop an IRB model that is acceptable to APRA, while not distorting the fundamental economic forces of risk and return. One possibility that the Inquiry may wish to consider is to determine if there are regulatory difficulties preventing the smaller DTIs from forming a joint venture to develop and maintain a joint IRB model.⁴ Such a joint venture would have to have in place sufficiently stringent confidentiality agreements to reduce the necessary concerns regarding commercially sensitive data. It is noted that the APRA act contains stringent clauses with respect to criminal sanctions for disclosure of data collected under the APRA Act. It may be legally and operationally possible for such a joint venture to be funded by the smaller DTIs and operated by APRA and thus managing potential concerns with respect to confidentiality. Such a process would need to be funded by the benefitting DTIs. APRA would benefit from having an expanded in house expertise available to audit and vet other IRB models,

⁴ The model adopted by credit unions in establishing CUSCAL is relevant to this concept.

while also being able to use the model to calibrate and cross check other IRB model results. Such an approach would not create a distortion to the risk-return process, as it remains possible that a smaller DTI by virtue of its small size and less-well diversified portfolio does not achieve a risk weight for its mortgage portfolio as low as that for the larger banks.⁵

Funding of APRA.

The Inquiry sought views on the issue of the funding of APRA. As noted in APRA's submission to the Inquiry, and as discussed in APRA (2014), the cost of operating APRA is funded by an industry levy which has no impact upon the general government balance. The regulated entities benefit from the reputation capital of their regulator, which can ease their access to the global capital markets while at the same time lowering their costs associated with that access. In the wake of the global financial crisis, APRA's reputation capital is currently high. The imposition of the efficiency dividend upon APRA does not impact upon the government deficit but does reduce the operational capability of APRA. This has long run potential implications for APRA's ability to meet its objectives. It is suggested that removing the obligation of the efficiency dividend from APRA is sensible as it subtracts from operational capability without any benefits.

Pay and regulatory arbitrage.

As discussed above, the process of regulatory arbitrage and regulatory dialectic will frequently cast prudential regulators into a reactive rather than proactive mode. The imposition of an efficiency dividend upon APRA reduces its ability to pay market related salaries to its employees. Given that APRA has its primary center of operations in Sydney, an expensive city in which to live, the combined impact will inhibit the ability of APRA to attract well trained and qualified staff able to reduce the negative impacts of regulatory arbitrage. This has a longer run potentially negative impact on APRA's currently highly valuable reputation capital. As noted by the Inquiry, the costs of banking and financial system crises are large, and thus an increase in the regulatory levy is a relatively small insurance premium to pay to reduce the likelihood of these potential costs. It is suggested to the Inquiry that the current efficiency dividend approach is inappropriately applied to APRA.

⁵ It is noted that a benefit of an active mortgage securitisation market is the ability of smaller DTIs to diversify their mortgage portfolios.

Research capability.

As an outcome of the efficiency dividend process APRA ceased operations of its research department to focus on more pressing operational needs. This outcome reduces the longer run analysis capability of APRA. Operation of a well-regarded research department providing leading edge intellectual thought in an industry-relevant manner is a benchmark of the major prudential regulation bodies such as the Bank for International Settlements. Such a research group has the potential to keep regulatory policy updated with the current issues in academic research, as well as interfacing this research effectively into policy formulation.

Further, as part of its prudential role APRA collects and maintains a large database of confidential data relating to a wide section of the financial system. As already indicated by this submission, there are a number of prudential policy issues that are as yet unexplored by objective research. Loss of a research department is a loss of the potential to apply analysis of this rich source of data to address policy questions. In addition, APRA briefly operated a research grant funding system which allowed APRA to sponsor independent research into issues of current concern. Despite the importance of the financial system to the overall well-being of the economy, the funding of independent research by well-trained researchers is sparse relative to the economic costs of financial system crises.⁶ Further, increased funding will encourage researchers to take an active part in the development of Australia's intellectual capital in this area. It is recommended to the committee that the regulatory levy should be increased in such a manner as to increase both the in-house research capability of APRA as well as allowing it to fund independent research into relevant issues that impact upon current regulatory policy. Such research can also be seen as a relatively small insurance premium to pay to reduce the potential for a future financial crisis with its large costs.

It is suggested to the Inquiry that the current efficiency dividend policy is inappropriately applied to APRA and should be abolished. Instead the regulatory levy should be increased to allow APRA to improve the high level of service it currently provides. A cyclical process of independent reviews of APRA's operations as well as the Australian regulatory architecture would appear to be a more appropriate mechanism to ensure APRA meets its policy obligations.

⁶ As an example, in 2014 (2013) the Australian Research Council funded grants worth a total of \$670,959.305 (\$681,117,498), of which \$830,253 (\$2,045,537) was allocated to research in Finance, Banking and Investment (Field of Research code 1502). This was 0.119% (0.300%) of the total allocated. Over the last 12 years funds allocated to Field of Research (FOR) Code 1502 has been below the average for all FOR codes with the exception of 2004. It should be further noted that this allocation of funding encompassed all aspects of finance, including those not directly germane to the terms of reference of this Inquiry.

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