

The Finsia Journal of Applied Finance

ISSUE 4 2015

JAFSA

6 Every aspect of a risky business affects its cost of capital

DAVID JOHNSTONE

12 Engagement with superannuation: Is there really a gender gap?

LAURA DE ZWAAN, MARK BRIMBLE, JENNY STEWART

19 The determinants of customer satisfaction in the financial planning industry

AKBAR ALI, YESSY PERANGINANGIN and MATTHEW WALSH

Papers from the Melbourne Money & Finance Conference 2015

28 Basel IV and Australian banking

KEVIN DAVIS SF FIN and K. MARK LAWRENCE F FIN

37 Closer financial integration between Australia and New Zealand? Lessons from the European Union

DAVID G MAYES SF FIN

44 Mutual recognition arrangements – Australia and Asia

CARLA HOORWEG

52 Some issues in cross-border bank regulation

IAN PATTERSON

59 New technology, personal data protection and implications for financial services regulation

CAMILLE BLACKBURN

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Caroline Falshaw A Fin
Head of Corporate Affairs and Policy, Finsia
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ISSN 0313-5934

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JASSA

The Finsia Journal of Applied Finance
ISSUE 4 2015

CONTENTS

ISSUE 4 2015

4

**From the
Managing Editor**

6

**Every aspect of a risky business affects its
cost of capital**

DAVID JOHNSTONE

This paper reveals some surprising implications of the capital asset pricing model (CAPM) which accord with common sense but not necessarily with finance textbooks. The key finding is that the cost of capital or discount rate applying to a given firm or business venture is affected by every aspect of that business, not just by its market risks or uncertainties. For example, if the firm changes its CEO, it will invariably attract a new cost of capital, either higher or lower than previously. Although this finding might seem to contradict finance theory, it can be traced back to a long-forgotten paper on CAPM by Eugene Fama.

12

**Engagement with superannuation: Is there
really a gender gap?**

LAURA DE ZWAAN, MARK BRIMBLE and
JENNY STEWART

Contrary to a 2012 report by Suncorp Bank and the Association of Superannuation Funds of Australia (ASFA), which identifies a gender gap in terms of superannuation engagement, we find that on most measures women are as engaged with their superannuation as men. Our findings indicate that the main determinants of engagement continue to be financial literacy, age and the value of superannuation. We also find that increasing financial literacy is the best way to increase engagement with superannuation.

19

**The determinants of customer satisfaction in
the financial planning industry**

AKBAR ALI, YESSY PERANGINANGIN and
MATTHEW WALSH

Given the recent well-publicised failings in the financial planning industry, it is increasingly important for financial planners to recognise and understand the determinants of customer satisfaction. We examine whether technical service quality (delivering service in the right way) is more important than functional service quality (delivering service nicely) in ensuring satisfied customers. Using longitudinal customer satisfaction data from the Lifeplan ICFS Advice Satisfaction Index, we find that both technical and functional service quality positively affect customer satisfaction but technical service quality has a greater impact in driving customer satisfaction. Our results suggest that increasing technical service quality would be an efficient way for planners to ensure they have a satisfied customer base.

PAPERS FROM THE MELBOURNE MONEY & FINANCE CONFERENCE 2015

Finsia acknowledges the contribution of the papers from the 20th Melbourne Money and Finance Conference to this issue of *JASSA*. The conference – The Australian Financial Sector and Global Integration – was held in July 2015 by the Australian Centre for Financial Studies.

28

Basel IV and Australian banking

KEVIN DAVIS SF FIN and
K. MARK LAWRENCE F FIN

International standard setters' approach to the appropriate design of regulatory bank capital requirements is currently in a state of flux. We examine the potential effects of recent Basel III and proposed Basel IV changes on the future role of risk sensitivity and internal models in capital requirements, competitive advantages from and incentives for banks to attain IRB status, and the implications for the Australian mortgage market.

37

Closer financial integration between Australia and New Zealand? Lessons from the European Union

DAVID G MAYES SF FIN

This paper considers possible lessons for Australia and New Zealand from the approach to financial integration taken by the European Union in relation to the banking industry, capital markets and more generally.

44

Mutual recognition arrangements – Australia and Asia

CARLA HOORWEG

This paper provides an overview of the various mechanisms by which cross-border financial services trade in investment management is being promoted in Asia, and Australia's engagement with these schemes. The paper examines the potential economic opportunities for Australia from increased trade in financial services, as well as specific mutual recognition and passporting schemes being developed within the Asia region. It also highlights key considerations for Australian investment managers looking to enter the Asian market through these schemes.

52

Some issues in cross-border bank regulation

IAN PATERSON

This paper examines three methods of cross-border banking and their treatment under Australian regulation. It also compares these different forms of cross-border banking in a situation in which the banking business is facing financial difficulty and resolution is required. Several reform proposals are also provided to address the challenges associated with banks contracting under foreign laws and through branches.

59

New technology, personal data protection and implications for financial services regulation

CAMILLE BLACKBURN

Information, Communication and Technology (ICT) developments present a challenge to public expectations about the collection, use, control and cross-border transmission of personal data, including financial data. This paper considers the data protection laws in Australia, and in Europe, which has the most comprehensive personal data protection laws globally. It also examines the impact of different regulatory approaches to data protection for three areas of technology-driven financial sector innovation.

FROM THE

Managing Editor

KEVIN DAVIS SF Fin, Professor of Finance, University of Melbourne
Research Director, Australian Centre for Financial Studies and Professor of Finance, Monash University

As financial markets grapple with increased uncertainty about the prospects for global economic recovery in 2016, this issue of *JASSA* includes a special section with several papers from the July 2015 20th Melbourne Money and Finance Conference on The Australian Financial Sector and Global Integration. These papers canvass a range of policy issues associated with global economic and financial integration. The conference was organised by the Australian Centre for Financial Studies and was sponsored by APRA, Finsia and the Reserve Bank of Australia. While not subject to the usual double-blind process, each of these papers was reviewed by a member of the Editorial Board and by me prior to inclusion.

The first paper in the submitted papers section of this issue, by David Johnstone, suggests that every aspect of a firm's operations, or of an individual investment project affects its forward-looking cost of capital or discount rate, and that contrary to conventional wisdom there is no such thing as 'unpriced' project risk. Johnstone notes that although this might not sound correct, it follows from the conventional capital asset pricing model (CAPM) and, perhaps surprisingly, this was demonstrated by one of the great founders of finance theory, Eugene Fama. The findings of Johnstone's paper provide some insight into what really goes on inside the CAPM and also highlight some interesting implications for corporate finance thinking and practice, particularly in capital budgeting.

Laura de Zwaan, Mark Brimble and Jenny Stewart examine the findings of a 2012 report by Suncorp Bank and the Association of Superannuation Funds of Australia (ASFA) which identifies a gender gap in terms of superannuation engagement. The authors find that on most measures women are as engaged with their superannuation as men. Their findings indicate that the main determinants of engagement continue to be financial literacy, age and the value of superannuation. They also suggest that financial literacy appears to be the strongest predictor of engagement with superannuation.

Using longitudinal survey data from the Lifeplan ICFS Advice Satisfaction Index, Akbar Ali, Yessy Peranginangin and Matthew Walsh examine the relative importance of technical service quality (delivering service in the right way) and functional service quality (delivering service nicely) in creating customer satisfaction. They note that it is increasingly important for financial planners to recognise and understand the determinants of customer satisfaction in view of the recent well-publicised failings in the financial planning industry. The authors find that both technical and functional service quality positively affect customer satisfaction but that technical service quality has a greater impact in driving customer satisfaction. These results indicate that increasing technical service quality would be an efficient way for planners to ensure they have a satisfied customer base. Also, in the situation where a high level of technical service has been delivered, planners can still enhance customer satisfaction through improving their functional service quality.

Turning to the special section of this issue, the paper by Kevin Davis SF Fin and K. Mark Lawrence F Fin examine the potential effects of recent Basel III and proposed Basel IV changes on the future role of risk sensitivity and internal models in capital requirements, competitive advantages from and incentives for banks to attain internal ratings-based status, and the implications for the Australian mortgage market. The paper has been updated since the conference to incorporate the implications of subsequent changes to the Basel framework. Davis and Lawrence argue that careful calibration of the proposed capital floors and leverage ratio requirement will be necessary to maintain appropriate risk sensitivity in regulatory capital requirements. The authors believe that there are real risks in setting the levels of the minimum leverage ratio and/or the proposed new capital floor too high, rendering the IRB approach for credit risk (and the advanced approaches for market and operational risks) largely meaningless, and reducing or eliminating the risk sensitivity of the Basel framework. They suggest that for banks which have already

achieved advanced Basel status (in particular, IRB status), the likely impact will be to shift capital away from, and increase pricing for, low risk assets and portfolios, including mortgages. Also, for standardised banks, the consequence will be to remove the capital incentive to pursue advanced Basel accreditation.

David Mayes SF Fin examines possible lessons for Australia and New Zealand from the approach to financial integration taken by the European Union (EU) in relation to the banking industry, capital markets and more generally. Mayes suggests that it is surprising that the authorities did not see the global financial crisis as an opportunity to take a leap forward in terms of closer integration along the lines of the EU, as 'closer economic relations' are part of the agenda for both countries. He notes that since the four main banks are the same in Australia and New Zealand there would be many advantages from having the same prudential regulatory framework. He adds that, *prima facie*, superannuation also looks to be an area where there could be considerable benefits from even closer integration, but in some respects the rules have moved in the other direction.

The paper by Carla Hoorweg examines the potential economic opportunities for Australia from increased trade in financial services, as well as specific mutual recognition and passporting schemes being developed within the Asian region. It also highlights key considerations for Australian investment managers looking to enter the Asian market through these schemes. Hoorweg notes that despite our large pool of domestic savings Australia is generally seen as punching below its weight in relation to the proportion and value of investment management services provided to offshore clients. She says China's mutual recognition agreement with Hong Kong augurs well for the region and the future actions of China and Japan in this area will be critical in determining the future structure of cross-border trade within the region.

On a related topic, Ian Paterson then examines three methods of cross-border banking and their treatment under Australian regulation. His paper also provides a number of reform proposals to address the challenges associated with banks contracting under foreign laws and through branches. Paterson notes that despite international cooperation, regulation is essentially territorial and lacks uniformity, with the result being that conflicts of laws are likely to arise. And, outside of legal systems which have adopted a common law, there is no general principle for the courts of one country to recognise comprehensively the resolution measures of another: the Model Law on Cross-Border Insolvency does not apply to banks. Paterson suggests that although it would seem an insurmountable task to harmonise bank insolvency laws, or produce accepted principles of recognition resolution measures affecting all banks, a more limited goal would be to establish a framework that permitted certain types of banks to operate on a cross-border branch basis with greater certainty than currently applies.

Finally, the paper by Camille Blackburn addresses the implications of big data for financial services regulation, focusing on the data protection laws in Australia, and in Europe, which has the most comprehensive personal data protection laws globally. Blackburn notes that big data challenges privacy because it facilitates the processing of aggregated information, or depersonalised information and matching with other information, enabling personal attributes to be derived. She says profiling and matching also give rise to important policy issues regarding discrimination and adverse selection, and this can be particularly harmful for the financial sector where those analytics are embedded in online or automated decision tools not transparent to the data subject. The paper concludes that Australia can learn from the depth of public policy thinking that has occurred and continues in Europe, as our approaches in this area are lagging or intentionally diverging from Europe, and cross-border economic consequences may well follow as a result.

I would like to extend my thanks to all of our contributors throughout 2015 and to the reviewers of submitted papers. As always, we are very keen to foster ongoing discussion about topical applied finance issues that are relevant to both practitioners and those in academia, and we look forward to many more of your contributions on these issues in 2016. I encourage anyone interested in contributing to the journal to contact us at membership@finsia.com.

EVERY ASPECT OF A RISKY BUSINESS

affects its cost of capital

DAVID JOHNSTONE, Professor of Finance, University of Sydney

This paper reveals some surprising implications of the capital asset pricing model (CAPM) which accord with common sense but not necessarily with finance textbooks. The key finding is that the cost of capital or discount rate applying to a given firm or business venture is affected by every aspect of that business, not just by its market risks or uncertainties. For example, if the firm changes its CEO, it will invariably attract a new cost of capital, either higher or lower than previously. Although this finding might seem to contradict finance theory, it can be traced back to a long-forgotten paper on CAPM by Eugene Fama.

Every aspect of a firm's operations, or of an individual investment project (e.g. a mine, factory or hotel) affects its forward-looking cost of capital or discount rate. Contrary to conventional wisdom, there is no such thing as 'unpriced' project risk. Although this might not sound correct, it follows immediately from the conventional capital asset pricing model and, perhaps surprisingly, was demonstrated by one of the great founders of finance theory, Eugene Fama.

The purpose of this paper is to explain this claim and its economic intuition. I also describe some interesting implications for corporate finance thinking and practice.

The proof

In simple terms, the discount rate applicable to a project or business depends on *both* its ex ante (forward-looking) mean or expected net cash payoff and its similarly subjective ex ante payoff covariance (i.e. covariance with the 'market' or sum of all assets in the market). Hence, any characteristic of a project or firm (e.g. scale of production, operating leverage, quality of management and governance) that alters market perceptions of either of these two subjective parameters must also affect its CAPM discount rate. In other words, the market imposes a discount rate driven by its view of *both* the mean and covariance parameters of the future cash flow.

Consider a simplified business venture that produces a random (i.e. risky) period-end cash payoff labelled V , and let the current market price (i.e. the ex ante CAPM valuation) of that payoff be represented by P . Now write the CAPM in its 'certainty equivalent' or payoffs form, as set out in well-known textbooks like Brealey et al. (2014). That is

$$P = \frac{E[V] - k \text{cov}(V, r_M)}{1 + r_f},$$

where r_M is the market return, r_f is the risk-free rate and k is a positive constant that captures the level of risk aversion in the market (larger k shows greater risk aversion).

The discount rate or expected return on the venture is therefore

$$E[r] = \frac{E[V]}{P} - 1,$$

Substituting for P from the first equation gives

$$E[R] = \frac{E[V] R_f}{E[V] - k \operatorname{cov}(V, r_M)} = R_f \left[1 - k \left(\frac{\operatorname{cov}(V, r_M)}{E[V]} \right) \right]^{-1}$$

where, for convenience in notation, $R \equiv (1 + r)$ and $R_f \equiv (1 + r_f)$. Hence, the CAPM discount rate applicable to a project or firm depends on the simple ratio of its payoff covariance to payoff mean

$$\frac{\operatorname{cov}(V, r_M)}{E[V]}.$$

I call this ratio ‘Fama’s ratio’ because it was first noted by Eugene Fama (1977). It was rediscovered by Lambert et al. (2007) and has also been given attention by Gao (2010), Christensen et al. (2010), Core et al. (2014), Johnstone (2015a, 2015b; 2016), Bertomeu and Cheynel (2015), Paugam and Ramond (2015) and Johnstone and Wagenhofer (2015).

There are several other ways to show the same point using simple equations derived easily from the CAPM. First, the conventional forward-looking returns beta of a project, that is $\beta = \operatorname{cov}(r, r_M) / \operatorname{var}(r_M)$, can be re-written algebraically as

$$\beta = \left[c \left(\frac{E[V]}{\operatorname{cov}(V, r_M)} \right) - c' \right]^{-1}$$

where c and c' are market-level constants that are immaterially affected by the properties of one relatively small business project or firm within the whole market set of firms or assets. See Johnstone (2016) for derivation. This equation reveals how the conventional CAPM ‘beta’ is affected by the project’s underlying attributes or fundamentals, and specifically by Fama’s ratio. Note again that in principle beta is a forward-looking estimate, and is essentially a summary of the more underlying estimates, namely the estimated mean payoff from the project and the estimated covariance of that payoff with the market return.

It is commonly mentioned in corporate finance theory that a project’s operating leverage affects its beta. The equation above shows a mechanism by which this happens. Put simply, if we change a project’s design (e.g. the factory set-up) we change its physical and statistical nature and hence also its CAPM cost of capital. For example, suppose we install new robotic machinery at the expense of workers. This will change the make-up of costs and the volume and efficiency of production, and must inevitably alter both the estimated mean cash payoff and the estimated covariance of that payoff with the market.

It is important to note at this point that the cost of capital is not the firm’s primary concern. Primarily, the firm attempts to maximise the CAPM value of the asset, P , which is determined by a trade-off between its payoff mean and covariance. In principle, the firm will settle on a production set-up that maximises $P = E[V] / E[R]$, where $E[R]$ itself is affected by the ratio of $E[V]$ to $\operatorname{cov}(V, r_M)$. This sounds circular, because that is exactly how the CAPM equilibrium mechanism works. A way of simplifying this is to say that when making decisions the firm imagines different production set-ups, each with a different forward-looking payoff mean and covariance, and searches for the parameter pairing $\{E[V], \operatorname{cov}(V, r_M)\}$ that gives maximum P . This is the pair with the best ratio of numerator $E[V]$ to denominator $E[R]$ where, interestingly, $E[V]$ affects both the numerator (obviously) and the denominator (much less obviously).

Another way to demonstrate the role of Fama’s ratio is to write the certainty equivalent expression of the CAPM in a very different way than usual. In textbooks, the certainty equivalent CE of random payoff V is written as its mean minus an absolute dollar-amount penalty for its payoff covariance, in the same way as occurs in the numerator of the first equation in this paper. Now, rather than subtracting an additive penalty for risk, it is equally valid to write an equivalent multiplicative penalty. We can define this penalty factor f simply by writing

$$CE = E[V] - k \operatorname{cov}(V, r_M) = E[V] \times f.$$

Hence, the multiplicative way to write the *penalty for risk* is

$$f = \left(1 - k \frac{\text{cov}(V, r_M)}{E[V]} \right).$$

The CAPM value P of a risky payoff is then its certainty equivalent CE , given by $f \times E[V]$, discounted as usual at the risk-free rate. This is a very elegant way to write the CAPM, and reveals neatly how Fama's ratio drives the penalty for risk.¹

Note that $\text{cov}(V, r_M) = 0$ implies $f = 1$, meaning that only risky projects are discounted for risk, of course. However, when $\text{cov}(V, r_M) \neq 0$, the multiplicative discount factor $f \neq 1$ is influenced not only by $\text{cov}(V, r_M)$ but by its amount relative to the mean payoff $E[V]$. This reveals the mistake in common thinking. Specifically, the fact that only risky cash payoffs are discounted does not imply that the risk-adjusted discount factor is affected only by payoff risk.

Interesting implications

The results above give insight into what really goes on inside the CAPM. It should be remembered that the CAPM is an ingenious equilibrium model, and has internal dynamics that are not always appreciated, or even mentioned. The fact that asset beta is influenced jointly by the mean payoff and payoff covariance is critically important to a proper understanding of the CAPM, especially in applications such as capital budgeting.

It should be remembered that the CAPM is an ingenious equilibrium model, and has internal dynamics that are not always appreciated, or even mentioned. The fact that asset beta is influenced jointly by the mean payoff and payoff covariance is critically important to a proper understanding of the CAPM, especially in applications such as capital budgeting.

The following points follow from what has been found and should become part of our knowledge of corporate finance.

1. *Factors that don't seem to be risks in any sense can materially affect the CAPM market risk premium.* Any consideration that increases the payoff expectation from a project while not adding proportionately to payoff covariance should result in a reduced CAPM discount rate. Clearly, therefore, a simple improvement in profitability can lead to a lower discount rate. That seems a remarkable statement, but it is not hard to show. Imagine a cash payoff of $C+x$ where only x is random. As the constant C increases, the asset effectively becomes risk free, but its variance and covariance with the market are unchanged. Common sense and the CAPM both suggest that its discount rate will approach the risk-free rate as C gets larger. Critically, that increase in C reduces the CAPM discount rate — not by changing the payoff covariance, but by increasing the mean payoff. Ultimately, as $C \rightarrow \infty$, the asset becomes risk-free, its expected return approaches the risk-free rate and its returns covariance approaches zero.
2. *Risks that might seem to be idiosyncratic or 'unpriced' are really not.* For example, suppose the firm is considering a change in CEO. In textbooks that would be regarded as a firm-specific or idiosyncratic uncertainty or risk, because it seems to affect only the single firm and hence can be 'diversified away'. According to a naive understanding of the CAPM, the firm will not be penalised for such uncertainty, because it is a uniquely firm-specific variable. The obvious truth, however, is that a new CEO, or merely an increased probability of a new CEO, will influence both the expected cash payoff and the payoff covariance, in different proportions, and hence cannot be expected to leave their Fama ratio unchanged (e.g. suppose that it is known that any new CEO will almost certainly terminate a costly and unsuccessful venture that has been protected by the current CEO). This same argument holds for essentially every supposed 'idiosyncratic risk' (e.g. the risk that the new oil field is dry, the risk that the firm will suffer from a court decision or an industrial accident).

3. *Suppose that the firm buys into an oil well. That might seem to be risky, but not be a systematic risk.* First, it is a priced risk for the firm, because it does affect the Fama ratio. Second, and even more interestingly, if the increase in mean payoff outweighs any increase in firm payoff covariance then going into oil will actually drive the firm's rational CAPM cost of capital downwards. That seems paradoxical, but follows immediately from Fama's argument.

The very same point can be shown in the language of returns rather than payoffs. Specifically, going into oil can reduce the firm's returns covariance with the market. Suppose that the firm announces its decision and its stock price changes from P to P^{oil} , due to the market revising the firm's mean payoff, from $E[V]$ to $E[V|oil]$, and similarly its payoff covariance from $\text{cov}(V, r_M)$ to $\text{cov}(V, r_M|oil)$. By mathematical definition, its forward-looking returns covariance $\text{cov}(r, r_M)$ changes then from $\text{cov}(V, r_M)/P$ to $\text{cov}(V, r_M|oil)/P^{oil}$. Hence, its returns covariance is reduced if

$$\frac{\text{cov}(V, r_M|oil)}{P^{oil}} < \frac{\text{cov}(V, r_M)}{P}$$

which requires simply that any increase in payoff covariance brought by the new investment is outweighed by a simultaneous increase in the CAPM price of the firm. This can happen when the market perceives an increase in payoff covariance along with a more than commensurate increase in payoff mean, with the net effect that the stock price goes up enough to satisfy the stated condition.

Note that it is easily shown by substituting for P and P^{oil} , using the payoffs form of the CAPM above, that the necessary condition for the returns covariance to fall is

$$\frac{\text{cov}(V, r_M|oil)}{E[V|oil]} < \frac{\text{cov}(V, r_M)}{E[V]}$$

Thus, as we already know, the firm's discount rate falls if its Fama ratio falls. The beauty of writing this condition in terms of the Fama ratio, rather than in terms of the firm's returns, is that we go straight to the firm's business fundamentals, namely the forward-looking mean and covariance of its cash payoff.

4. *A change in activities can affect a firm's cost of capital, and yet have only a negligible effect on the overall market average cost of capital.* This indicates that single business ventures or even firms make up such a tiny part of the aggregate market that changes in their individual means and covariances have a negligible effect on the mean market payoff and variance of the market payoff. At the individual asset level, it seems reasonable to conclude that there is no possible change in business operations (e.g. new CEO, product mix, factory design) that will not affect the individual firm's CAPM cost of capital. Put another way, changes in business operations have no effect on the firm's forward-looking CAPM cost of capital or discount rate *if and only if* the Fama ratio is unchanged. In reality, that cannot ever occur since any change of substance will affect either or both the perceived payoff mean or covariance.
5. *A common mistake is to presume that firm-specific considerations that randomise out at the market aggregate level do not add to the individual firm's cost of capital (i.e. they are not 'priced' at the firm level).* For example, suppose that the firm invests heavily in a new product. If successful, the firm will take a bigger market share and some of its competitors will lose sales. In a textbook sense, this is a 'diversifiable' or firm-specific risk, and does not materially affect the market aggregate payoff mean or variance. That does not suggest, however, that the new product is irrelevant to the firm's discount rate. Rather, it may greatly alter the firm's forward-looking mean payoff and payoff covariance, and therefore have a significant effect on the firm's cost of capital.

Conclusion

This paper shows how much we can learn about the CAPM by examining its pricing or 'certainty equivalent' form, instead of its more conventional and less intuitive 'returns form'. The usual driver of the CAPM discount rate is taken to be 'beta' (i.e. the returns beta), and that still holds. But when we switch our thinking into the language of cash flows or payoffs, the driver of beta and of the CAPM cost of capital is revealed to be Fama's ratio, namely the ratio of mean payoff to payoff covariance. This finding is critically important in applications for which the payoffs CAPM is the natural way to think. These include capital budgeting and all of the firm's investment decisions under uncertainty.

The key proposition in this paper may seem to contradict the CAPM, but it really only clarifies the CAPM. A natural question is to ask which finance theorist told us that an increase in the expected payoff from a project can in and of itself warrant a decrease in its CAPM discount rate? The answer is that Fama (1977) did. Unfortunately, his analysis and explanation was not given the attention it deserved and, until recently, it has been forgotten.

This paper shows how much we can learn about the CAPM by examining its pricing or 'certainty equivalent' form, instead of its more conventional and less intuitive 'returns form'. The usual driver of the CAPM discount rate is taken to be 'beta' (i.e. the returns beta), and that still holds. But when we switch our thinking into the language of cash flows or payoffs, the driver of beta and of the CAPM cost of capital is revealed to be Fama's ratio, namely the ratio of mean payoff to payoff covariance. This finding is critically important in applications for which the payoffs CAPM is the natural way to think. These include capital budgeting and all of the firm's investment decisions under uncertainty.

Why that happened is a mystery. Part of the reason is that Fama's argument requires us to view the CAPM as an equilibrium mechanism, and it is relatively difficult to explain when compared to the simpler notion that a firm has a 'beta' which drives its risk premium. Undoubtedly, that complexity partly explains why our interpretation of the CAPM has been a little oversimplified. The other more obvious reason is that in all areas of finance where stock returns are effectively exogenous, being generated by a stock market rather than by a business venture (e.g. hotel) that we design and build ourselves, it seems obvious to think about the usual returns form of the CAPM, in which case the returns beta's determinants are a secondary concern. In effect, stock market returns are treated as outputs of an 'uncontrollable' exogenous stochastic process, much like the weather.

Fama's argument is most relevant to capital budgeting, where the payoffs form of the CAPM applies naturally, and is often held to be the correct way to work out CAPM asset values. In effect, Fama revealed that this form of the CAPM implies interesting and little-known principles about how to understand the discount rate applicable to a new venture. Methods that discount the expected payoff from a business at one constant rate (e.g. a firm hurdle rate or WACC), even when the amount of that expected payoff changes, are generally incorrect in terms of CAPM principle. Instead, a change in the numerator (expected cash payoff) demands a change in the denominator (discount rate). A related but less surprising argument is set out by Kruger et al. (2015).

Acknowledgement

The author thanks Doug Foster and Kevin Davis for comments and helpful discussion on this paper.

Note

1. This idea was suggested to me by Tony van Zijl, Professor of Accounting and Financial Management, Victoria University of Wellington.

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ENGAGEMENT WITH SUPERANNUATION:

Is there really a gender gap?

LAURA DE ZWAAN, Lecturer, School of Accountancy, QUT Business School, Queensland University of Technology
MARK BRIMBLE, Associate Professor, Griffith Business School, Griffith University
JENNY STEWART, Professor, Griffith Business School, Griffith University

Contrary to a 2012 report by Suncorp Bank and the Association of Superannuation Funds of Australia (ASFA), which identifies a gender gap in terms of superannuation engagement, we find that on most measures women are as engaged with their superannuation as men. Our findings indicate that the main determinants of engagement continue to be financial literacy, age and the value of superannuation. We also find that increasing financial literacy is the best way to increase engagement with superannuation.

It is well known that women generally have significantly less saved for their retirement than men and, under the current earnings-related savings systems, they will continue to be disadvantaged (Clare 2014; Olsberg 2005; Warren 2006). The primary discriminator is that women tend to spend less time in paid employment than men, mostly due to family or carer commitments, but also because they tend to retire earlier (Olsberg 1994). On average, women also earn significantly less than men, even when in similar positions, which means that if a woman works for the same period of time as a man she will accumulate lower savings (Basu and Drew 2009). Although the rate of women participating in the workforce has increased, it is often on a part-time or casual basis, and it is concentrated in lower-paid sectors (Olsberg 2005). A final issue is that individuals who earn less than \$450 per month are not entitled to superannuation guarantee contributions, and the majority of them are women (Clare 2012). Collectively, these factors result in women saving less over fewer years than their male counterparts.

Women generally have lower levels of financial literacy (Agnew et al. 2013; Worthington 2008), and several studies have concluded that women are more risk averse (Jianakoplos and Bernasek 1998; Palsson 1996) and less likely to select riskier investment options with their retirement savings (Gerrans and Clark-Murphy 2004). Thus, the smaller amounts saved are then invested conservatively, which further decreases their balance. The result is that the retirement savings of many women will be insufficient, and there will be less growth in those monies over their lifetime. A final concern is that women tend to live longer than men, so their smaller accumulated nest egg is then required to last a longer period of time. The current life expectancy at birth for females is 84.2 years compared to 79.7 for males (ABS 2013), and the additional years may well be accompanied by increased healthcare and lifestyle costs.

A 2012 report produced by Suncorp Bank and ASFA (2012) found that only 19 per cent of women are engaged with their superannuation. A gender gap in engagement would be troubling given that engagement is thought to result in better investment choices (Gallery et al. 2011). A lack of engagement would further disadvantage women under the compulsory superannuation regime.

Interestingly, there has been little discussion on the relationship between gender and engagement, with previous reports focusing on other drivers of engagement. For example, the Superannuation System Review, also known as the Cooper Review, identifies the drivers as increased age, increased value of superannuation, and ‘broader financial and life circumstances’ (Commonwealth of Australia 2010, p. 9). In 2013, the Financial Services Council released a report entitled *Superannuation – Australia’s View*, which identifies older individuals and individuals with retail funds and self-managed superannuation funds (SMSFs) as being more engaged.¹ With SMSFs more cost effective for higher balances, as noted by the Financial System Inquiry, this could indicate that the value of superannuation is an explanatory variable. Finally, a working paper by Chetty et al. (2012) finds that increased wealth, age, and financial education are significantly associated with ‘active’ savers, based on whether they adjust their savings in response to incentives.

The 2012 Suncorp Bank and ASFA report which identifies a gender gap in superannuation engagement is descriptive in nature, and while data were collected on the value of respondents’ superannuation, this was not tested as an explanatory variable. Earlier research by Embrey and Fox (1997) in the area of risk aversion found that, when analysing one-person households, the net worth of an individual is more significant than gender in determining risk aversion. Similarly, it is plausible that the value of superannuation is a stronger determinant of engagement than gender.

This study uses a variety of engagement measures to provide further evidence on the existence of a gender gap in superannuation engagement. We find that gender is not significant for most measures of engagement with superannuation. This extends our understanding of member attitudes to superannuation and should be of use to superannuation funds, financial educators, policy makers and personal finance researchers.

Data and method

Although we are attempting to measure engagement, this variable is not well defined in the literature. The Cooper Review (2010) implies that engagement involves a level of decision-making with regard to the investment strategy or administration of superannuation. Those members that take responsibility for both the investment decisions and the administration of their fund through a SMSF are considered the most engaged, while those who use default options and default funds are considered the least engaged. The review also highlights that using a default investment option, or not switching funds, should not be used as an indication of a lack of engagement, given that at least some of those members will be actively choosing those options (Brown et al. 2002). This study employs a survey approach and uses a range of questions to determine engagement, as shown in Table 1 (including the percentage of respondents that answered yes or no when asked whether they engage in that way).

TABLE 1: Measures of engagement

	Yes (%)	No (%)
1 I have changed my investments in the past	50.8	49.2
2 I have contacted a financial planner for help with superannuation	25.0	75.0
3 I read my member statement every year	77.8	22.2
4 I have called my superannuation fund within the last year	36.9	63.1
5 I have accessed my superannuation details online within the last year	56.8	43.2
6 I know how my fund has performed compared to others	36.7	63.3
7 I know how much superannuation I have	78.6	21.4
8 I have read the annual report from my superannuation fund	46.5	53.5
9 I have read the Product Disclosure Statement issued to me by my superannuation fund	39.7	60.3
10 I know how much in fees my superannuation fund charges	52.1	47.9

The explanatory variable is gender. We control for the value of superannuation and age, as these have been linked to engagement (Chetty et al. 2012; Financial Services Council 2013). Financial literacy is also controlled for as this has been shown to have an impact on engagement (Chetty et al. 2012). We measure financial literacy by the extent to which respondents agreed they understand the relationship between risk and return.²

Survey participants were sought from the general and academic staff of a large metropolitan university, from the general public via Facebook and from the websites of two superannuation funds. The survey was open for just over three-and-a-half months and received a total of 551 usable responses.³

General demographic and background questions were asked in order to establish whether the sample covered the full range of the population. Of the 551 respondents who provided their gender, 324 were female (58.8 per cent) and 227 were male (41.2 per cent). Figure 1 shows the distribution of age by gender and Figure 2 shows the distribution of value of superannuation by gender.

FIGURE 1: Age by gender

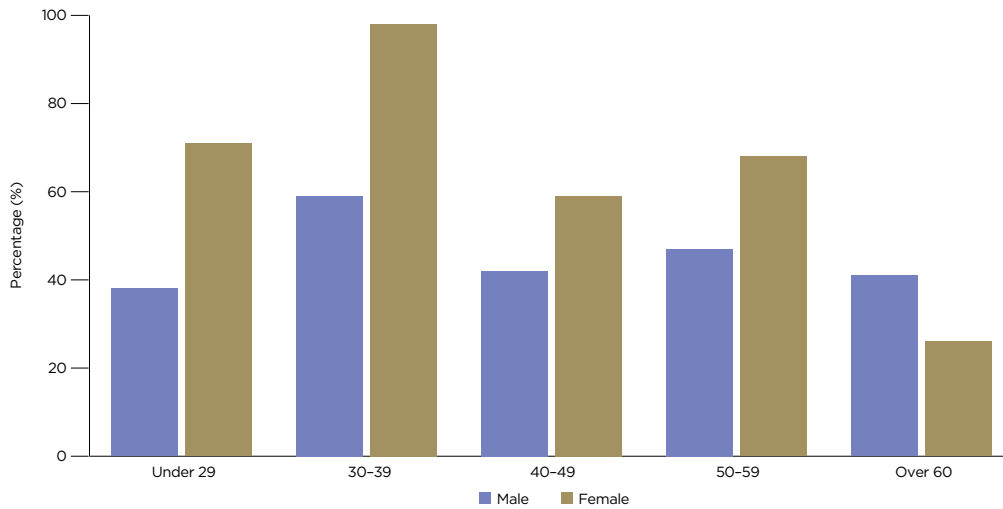


FIGURE 2: Gender and value of superannuation

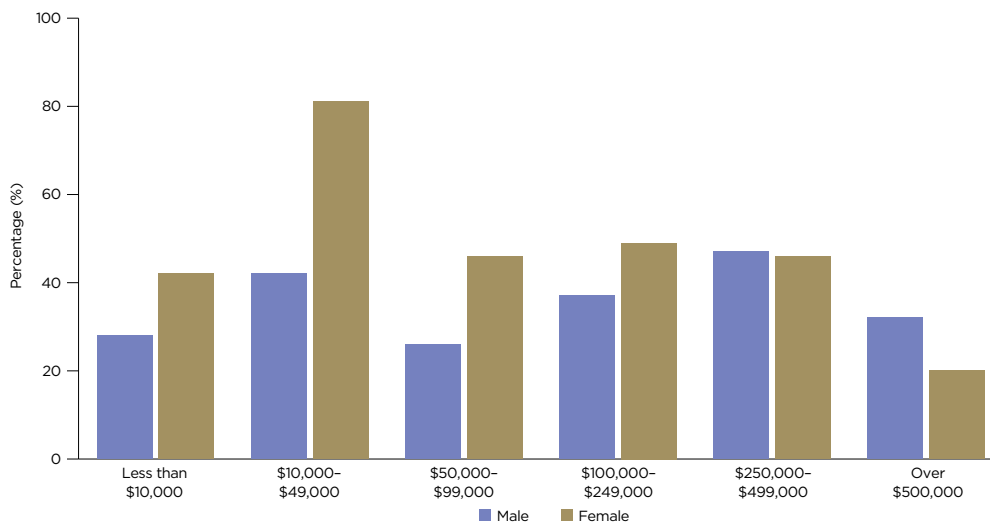
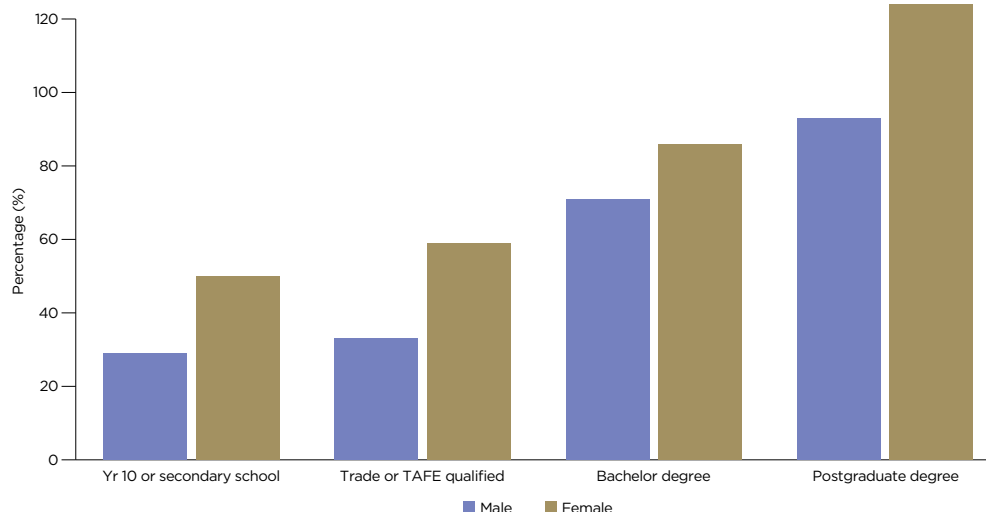


Figure 3 shows the distribution of education by gender. A large proportion held a postgraduate degree, mostly likely because the survey was distributed through a university. While this appears high, this distribution is not uncommon in the literature (for example, see Berry and Junkus 2013; Palm 2015).

FIGURE 3: Education by gender



The university distribution does raise the issue of whether the responses are generalisable to the wider population, especially given that Unisuper is a generous scheme. Using occupation descriptions, we coded each respondent as working at a university or not and ran chi-square tests comparing the responses to the engagement questions. Overall, 24.5 per cent of the sample were identified as working at a university. Significant differences were found as to whether the respondent had changed investment options, with non-university respondents less likely to have changed their investments ($p = .029$)⁴ than university respondents. Since Unisuper is the default fund for universities, this most likely refers to changing investment options rather than switching funds. Non-university respondents were also less likely to have called their super fund ($p = .022$). For all other measures of engagement there were no significant differences between those who work at a university and those who do not.

Results and discussion

To construct our model, we first conducted univariate analysis and found age, household income, value of superannuation, and financial literacy to be significant and positively associated with engagement. However, as income is already captured in the value of superannuation, we do not include this in the model for brevity. This analysis results in the following model:

$$\text{ENGAGE} = \alpha + \beta_1 \text{GENDER} + \beta_2 \text{AGE} + \beta_3 \text{VALUE} + \beta_4 \text{FINLIT} + \beta_5 \text{GENDER} * \text{AGE} + \beta_6 \text{GENDER} * \text{VALUE} + \beta_7 \text{GENDER} * \text{FINLIT} + e$$

Where: ENGAGE is the means of engagement; GENDER, the gender of the respondent; AGE, the age of the respondent; VALUE, the value of the respondent's superannuation; FINLIT, whether the respondent understands the relationship between risk and return.⁵

We ran a separate regression for each measure of engagement, and Table 2 shows the significant predictors for each of the measures.

TABLE 2: Significant predictors

Measure of engagement	Significant variables
I have changed my investments in the past	Financial literacy ($p = 0.001$)
I have contacted a financial planner for help with superannuation	Value of superannuation ($p = 0.000$) and financial literacy ($p = 0.003$)
I read my member statement every year	Age ($p = 0.033$) and financial literacy ($p = 0.042$)
I have called my superannuation fund within the last year	None
I have accessed my superannuation details online within the last year	Financial literacy ($p = 0.019$)
I know how my fund has performed compared to others	Gender ($p = 0.029$), financial literacy ($p = 0.000$) and gender*financial literacy ($p = 0.035$)
I know how much superannuation I have	Value of superannuation ($p = 0.001$)
I have read the annual report from my superannuation fund	Value of superannuation ($p = 0.002$) and financial literacy ($p = 0.019$)
I have read the PDS issued to me by my superannuation fund	Age ($p = 0.025$) and financial literacy ($p = 0.002$)
I know how much in fees my superannuation fund charges	Age ($p = 0.002$) and financial literacy ($p = 0.005$)

The table indicates that gender alone is a significant determinant only of whether a member knows how their fund has performed compared to others, with women less likely to know how their fund performed ($p = 0.029$). Financial literacy is also significant for this measure, with knowledge of fund performance increasing with the understanding of the relationship between risk and return. However, the interaction between financial literacy and gender is also significant. Women who agree that they understand the relationship between risk and return are still unaware of how their fund has performed compared to others ($p = 0.035$). This could indicate that women generally are less concerned with performance.

For the remaining measures of engagement, gender is not found to be significant. This clearly shows that for a variety of measures of superannuation fund member engagement there is no difference between the behaviour of men and women. Consistent with previous studies, we find that age, financial literacy, and value of superannuation are the main predictors of engagement behaviour.

Gender alone is a significant determinant only of whether a member knows how their fund has performed compared to others, with women less likely to know how their fund performed ($p = 0.029$). Financial literacy is also significant for this measure, with knowledge of fund performance increasing with the understanding of the relationship between risk and return. However, the interaction between financial literacy and gender is also significant. Women who agree that they understand the relationship between risk and return are still unaware of how their fund has performed compared to others.

Interestingly, age is not found to be a significant indicator of whether a member knows their balance. A possible explanation is that as the survey was distributed in a university setting, the sample may have more defined benefit members than the wider population and their benefit is determined by factors other than balance. Age is a significant determinant of whether a member reads their statement, the PDS, and knows the fees that are charged. Each of these activities can be linked with fees, so this could indicate fee sensitivity as fund members' age increases.

Value is a significant determinant of whether a member has contacted a financial planner, whether they know how much super they have, and if they read the annual report, i.e. those with higher superannuation balances are more likely to engage in these ways. Apart from reading the annual report, these methods of engagement are consistent with value being the driver. Reading the annual report may simply give members a sense of comfort with the super fund that they have chosen to manage their high balance.

Finally, financial literacy is a significant determinant of all measures of engagement, except for whether a member knows how much superannuation they have and whether they have called their fund in the past year. Thus, increased financial literacy appears to be the strongest predictor of engagement with superannuation. It is also the only variable that can be influenced by government or industry education strategies.

As a robustness test, we created an engagement score whereby each positive response to an engagement question was given a value of one and summed. We then used the score as the dependent variable in a linear regression model. Neither gender nor any of the interactions were found to be significant as a predictor of engagement. Age ($p = 0.000$), value of superannuation ($p = 0.007$) and financial literacy ($p = 0.000$) were all significant and positively associated with engagement.

Financial literacy is a significant determinant of all measures of engagement, except for whether a member knows how much superannuation they have and whether they have called their fund in the past year. Thus, increased financial literacy appears to be the strongest predictor of engagement with superannuation. It is also the only variable that can be influenced by government or industry education strategies.

Conclusion

Contrary to a 2012 report that women are less engaged with their superannuation, we find that gender is not a significant determinant of a range of different measures of engagement. We find financial literacy, age, and value of superannuation are the main determinants of engagement, and that gender is only found to be significant with respect to whether a member knows how their fund has performed compared to others, with women less likely to know this. These findings expand our understanding of member behaviours in relation to superannuation and should be of use to a variety of stakeholders.

Our findings also suggest that increasing financial literacy is the best way to increase engagement with superannuation. We therefore recommend that any strategy aimed at increasing engagement, especially for younger members, should include a literacy component.

Our findings also suggest that increasing financial literacy is the best way to increase engagement with superannuation. We therefore recommend that any strategy aimed at increasing engagement, especially for younger members, should include a literacy component.

Notes

1. Engagement is measured as whether individuals could name their fund, whether they check their superannuation balance, and whether they make contact with their fund.
2. Level of education was measured but was excluded from the model as we did not differentiate between financial education and other education.
3. SMSF members were excluded from the survey as it can be assumed that most SMSF members are engaged with their superannuation.
4. A p value of less than 0.05 is considered to provide enough evidence to conclude that there is a significant difference between the observed group, in this case women, and the whole population.
5. All variance inflation factors were measured and they were all under three.

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THE DETERMINANTS OF CUSTOMER SATISFACTION

in the financial planning industry

AKBAR ALI, Lecturer, School of Accounting and Finance, University of Adelaide School of Accounting and Finance
YESSY PERANGINANGIN, Research Associate, International Centre for Financial Services, University of Adelaide School of Accounting and Finance
MATTHEW WALSH, Head of Lifeplan and General Manager Specialised Products, Australian Unity Investments, Lifeplan Funds Management

Given the recent well-publicised failings in the financial planning industry, it is increasingly important for financial planners to recognise and understand the determinants of customer satisfaction. We examine whether technical service quality (delivering service in the right way) is more important than functional service quality (delivering service nicely) in ensuring satisfied customers. Using longitudinal customer satisfaction data from the Lifeplan ICFS Advice Satisfaction Index, we find that both technical and functional service quality positively affect customer satisfaction but technical service quality has a greater impact in driving customer satisfaction. Our results suggest that increasing technical service quality would be an efficient way for planners to ensure they have a satisfied customer base.

The Australian Government initiated the review of Future of Financial Advice (FOFA) to ensure the delivery of transparent and high-quality financial advice. High-quality advice is essential for the survival of financial planning firms but delivering high-quality advice alone is not sufficient to enhance firms' profitability (Newman and Cowling 1996). These authors suggest that financial planning firms can enhance their profitability by delivering high-quality advice that generates high levels of customer satisfaction. It is worth noting that high levels of customer satisfaction can also enhance life satisfaction of customers (Irving et al. 2011). Given the importance of customer satisfaction, in order to translate high service quality to profitability and to increase life satisfaction for customers, it is very important for financial planners to understand the drivers of customer satisfaction when delivering these services.

Using the service quality framework, Maddern et al. (2007) suggest that financial planners can create high levels of customer satisfaction through technical service quality (delivering their services 'in the right way') and/or through functional service quality (delivering their services 'nicely'). This paper aims to investigate whether technical service quality or functional service quality is more important in creating high levels of customer satisfaction within the financial planning sector. Our study benefits academia and industry in the following ways. First, by providing evidence on the relative importance of technical and functional service quality, our study extends Irving et al. (2011) in providing evidence on the mechanisms through which customer satisfaction is generated in the financial planning process. Our study also provides evidence on the relative importance of technical and functional service quality in the financial planning sector as documented by Lassar et al. (2000) and Newman (2001). Second, if technical service quality is more important than functional service quality in generating customer satisfaction, financial planners can enhance their customer satisfaction more efficiently through increasing their technical service quality.

Our data comes from joint work between Lifeplan Funds Management and the International Centre for Financial Services (ICFS) at the University of Adelaide in developing the Lifeplan ICFS Financial Advice Satisfaction Index. The index benefits from academic research in its development and is based on six-monthly (April and October) surveys administered by a third-party research company from April 2012 until April 2015. The survey is stratified by gender (55 per cent males and 45 per cent females), age (8 per cent below 30 years, 25 per cent between the ages of 30 and 44, 33 per cent between the ages of 45 and 59 years and 34 per cent above the age of 60 years inclusive) and is restricted to respondents who have been receiving financial advice for more than one year. The stratified sample ensures our survey reflects the Australian investing community in terms of gender and age.

Customer satisfaction framework

Maddern et al. (2007) suggest that there are three theoretical frameworks that can explain the drivers of customer satisfaction. First, the service profit-chain framework proposed by Heskett et al. (1994) suggests that satisfied staff leads to high levels of customer satisfaction. Second, the business process management framework, suggested by Roth and William (1995), asserts that good business process management would lead to high technical service quality and the combination of the two would generate satisfied customers. Third, the service quality framework, suggested by Parasuraman et al. (1985), argues that customer satisfaction can be achieved by delivering high service quality that exceeds customers' expectations. Under this framework, high service quality can be delivered through technical and/or functional service. Our study uses the third framework because this framework can provide the answer to our research question on the relative importance of technical and functional service quality in creating high levels of customer satisfaction.

Service quality framework

Parasuraman et al. (1985) argue that services are intangible and heterogeneous, and that the production and consumption of services are inseparable. Given these characteristics, evaluating the quality of services is more difficult than evaluating the quality of goods. Parasuraman et al. (1985) suggest 10 elements of service quality indicators, subsequently simplified into five in a later work by the same group of authors. The five elements are reliability, assurance, tangibles, empathy and responsiveness (Zeithaml et al. 2010). Reliability refers to the ability to deliver the promised service dependably, accurately and in a timely way. Assurance refers to the knowledge and skills of staff as well as the ability of staff to use their expertise to instil customer trust and confidence. Tangibles refer to the physical evidence of the service (e.g. office equipment, brochures, a statement of advice/financial plan etc.). Empathy refers to willingness of staff to provide care and attention to customers. Finally, responsiveness refers to staff's ability to provide a quick and high-quality service to customers.

The service quality framework suggests that customers are satisfied when their perception of the actual service quality exceeds their expectations of service quality (Parasuraman et al. 1985; Zeithaml et al. 2010). Conversely, customers are dissatisfied when their expectation of the service quality exceeds their perception of the actual service quality. Furthermore, Grönroos (1984) argues that the creation of high customer satisfaction levels in the service quality framework is not solely dependent on the technical quality of the service (i.e. whether the service has satisfied customer needs), it is also dependent on the functional quality of the service (i.e. how the service is delivered).

Service quality in finance: technical or functional quality?

Several studies investigate the relative importance of technical and functional factors in generating customer satisfaction in the financial services industry. Newman (2001) analyses the implementation of the service quality framework in a large bank in the UK and finds that technical service quality plays an important role in fulfilling the pre-condition of customer satisfaction. Newman (2001) suggests that excellent functional service quality or the 'people factor' (e.g. empathy) is not sufficient to compensate for low-quality technical service (e.g. reliability). Similar findings on the importance of technical service quality are documented by Lassar et al. (2000). The authors obtain data on private banking customers and find that technical service satisfaction is highly correlated with overall satisfaction and that technical quality variables have greater influence on overall customer satisfaction than functional quality variables. The findings in Lassar et al. (2000) are documented in private banking business where contact service between bankers and clients is very high and clients' well-being is affected by how well the service is delivered (technical service quality).

These findings are contrary to the long-held beliefs in service marketing literature suggesting that functional service quality should dominate technical service quality in creating customer satisfaction (Maddern et al. 2007). However, as Woodall (2001) explains, outstanding technical service quality would deliver high-quality service consistently. Thus, this would lead to customer satisfaction as well as reducing the likelihood of customers switching service providers.

Data and methodology

Data

In order to examine the contribution of technical and functional quality to customer satisfaction, we analyse survey data from April 2012 to April 2015. A third-party research company distributes the Lifeplan ICFS Financial Advice Satisfaction Index surveys every six months to customers who subscribe to financial planning services. To be included in the sample a respondent has to have engaged the services of a financial planner for at least one year. In total there are seven survey cohorts analysed in this paper with 2,830 valid respondents. While the survey asks a multitude of questions, those relevant to this study are listed in Table 1.

TABLE 1: List of questions to measure customer satisfaction, plus technical and functional service quality

-
1. On a scale of 1 to 11 please rate to what extent you agree or disagree with the following statements?
 - a. Overall, I am satisfied with my financial advisor.
 - b. My financial advisor is reliable.
 - c. My financial advisor has strong financial knowledge.
 - d. I am satisfied with the service experience provided by my financial advisor.
-
2. Approximately how often do you physically visit with your financial advisor?
-

Similar to Voss et al. (2004) and Maddern et al. (2007), Question 1.a. asks respondents to evaluate their satisfaction of their financial planners while Questions 1.b. to 1.d. ask respondents to evaluate their satisfaction of the technical and functional service quality provided by their planners. Response choices range from 1 (strongly disagree) to 11 (strongly agree). Question 2 asks respondents how frequently they physically meet with their planners. As with previous studies we construct our technical and functional service quality measures to align with the five elements of service quality proposed by (Parasuraman et al. 1985; Zeithaml et al. 2010). Newman (2001) and Maddern et al. (2007) suggest that technical service quality should include reliability and tangibility while functional service quality measures should represent responsiveness, empathy and assurance. Reliability is considered as part of technical service quality because 'getting it right the first time and all the time' is very important for customers, especially in providing recommendations, keeping customers informed, as well as keeping up with appointments and due dates (Newman 2001). Question 1.b. of Table 1 reveals customer perceptions on the reliability of their planner and Question 1.c. reflects how well planners can convey their expertise to customers. Questions 1.b. and 1.c. overlap with tangibility because in delivering their services to customers financial planners would have to produce prospectuses, advice documents, and newsletter updates that would be considered as tangibles for customers.

We capture functional service quality through Questions 1.d. and 2 of Table 1. These questions capture how well financial planners deliver their service, more specifically planners' responsiveness, empathy and assurance towards their clients. Question 1.d. asks respondents to reflect on the service experience that their planners provide in isolation from the planners' technical service quality. We expect that respondents' perceptions of service experience would capture planners' responsiveness to clients' needs and also indicate the level of empathy that planners provide when interacting with their clients. Question 2, frequency of a physical visit, would indicate accessibility to planners as well as demonstrate the level of assurance and empathy that planners provide to their clients. Frequency of physical visits may represent factors other than accessibility, assurance and empathy. However, (Irving et al. 2011) show that dissatisfied customers require better communication and a greater level of care and attention from their planners. These requirements can be fulfilled partially if not significantly by a face-to-face meeting. Table 2 presents the descriptive statistics for the variables listed in Table 1.

TABLE 2: Descriptive statistics of the variables

Variable name	Mean	Median	St. dev	Min	Max
Satisfaction	8.61	9.00	2.09	1	11
Reliability	8.66	9.00	1.90	1	11
Planners financial knowledge	8.85	9.00	1.76	1	11
Service experience	8.22	8.00	2.21	1	11
Frequency of physical visit	2.72	2.00	1.42	1	10

Table 2 shows that the majority of our respondents are satisfied with their financial planners. The average satisfaction is 8.61 in a 1 to 11 Likert scale. Our respondents ranked the reliability and financial knowledge of their planners, and their service experience, similarly. The average frequency of a physical visit by our respondents is 2.72, which suggests that our respondents visit their planners at least once a year, with the proportion of respondents who physically visit their planners once a year greater than those who physically visit their planners twice a year. Standard deviations across the five variables are relatively similar suggesting a high level of agreement across respondents.

Besides gender and age group, we collect additional demographic information regarding the level of education and the length of time a respondent has subscribed to their planner. Customers' perception of the service quality of planners can vary across different demographic groups and can affect the level of customer satisfaction. Age and gender information is important as different age groups have different requirements and expectations from a financial planner (Bae and Sandager 1997) and it has been documented that males and females behave differently when evaluating their financial satisfaction (Hira and Mugenda 2000). We collect information on the level of education of respondents because more educated customers may have higher expectations compared to less educated customers over similar services performed by financial planners. Finally, we also record how long a respondent has subscribed to the service of their current planner because the duration of service could be positively correlated with the level of customer satisfaction.

More than one-third (37 per cent) of our respondents have university level education holding Bachelor's qualifications or higher. The rest of the respondents hold trade/TAFE qualifications (27 per cent), have completed high school (32 per cent), or do not have formal education qualification (4 per cent). Around 47 per cent of our respondents have subscribed to a planner service for between one to five years, 26 per cent have subscribed for six to 10 years, 15 per cent for 11 to 15 years and 12 per cent of respondents for more than 15 years. Most respondents in our sample are in the accumulation phase, rather than in the pension payment phase as 66 per cent of respondents are below the age of 60.

Before conducting further analysis, we examine whether our customer satisfaction variable correlates with the demographic characteristics of our sample. We find that customer satisfaction is positively correlated with length of the adviser–client relationship and age of our respondents, but is negatively correlated with level of education and gender (male is coded as 1). Consequently, we find that respondents with longer subscription and those who are older have greater average customer satisfaction than respondents with shorter length of subscription and those who are younger. More educated respondents and males have lower average customer satisfaction than less educated respondents and females.¹ As a result of these findings we will include these demographic variables as control variables in our main model discussed in the methodology section.

Methodology

We use an ordered logistic regression model to examine the ability of technical and functional service quality in explaining customer satisfaction. This model is selected since it takes into account different degrees of customer satisfaction and can provide answers as to which aspect of service quality has a greater impact on customer satisfaction. The basic format of the model is as follows:

$$Q1_a = \alpha_0 + \alpha_1 Q1_b + \alpha_2 Q1_c + \alpha_3 Q1_d + \alpha_4 Q2 + Controls + \varepsilon \quad (\text{Equation 1})$$

where $Q1_a$ refers to overall customer satisfaction, $Q1_b$ and $Q1_c$ refer to our technical service quality variables, and $Q1_d$ and $Q2$ refer to our functional service quality variables. We estimate the above regression model using three methodologies to take into account the positive bias² in customer satisfaction that comes from respondents who participate more than once across the seven surveys. The first regression includes all respondents and the second one only includes respondents who participate once across the seven surveys. The first and second regression is estimated using pooled regression methodology to take into account different market conditions across the seven surveys. The third regression includes respondents who respond more than once and this is estimated using panel regression with survey period fixed effect. Positive bias is present in our sample if we draw different conclusions from the three regressions. We include the previously discussed demographic variables as controls when estimating the regressions.

Results

Table 3 presents the results of estimating the model. The second, fourth and sixth columns of Table 3 present the estimated coefficients for the first, second and third regression methodology, respectively. We also provide z-statistics in bracket. The second column results support our prediction that both technical and functional service quality contribute positively to customer satisfaction. Reliability ($Q1_b$), Financial Knowledge ($Q1_c$) and Service Experience ($Q1_d$) are highly significant and positively related to customer satisfaction while Physical Visit ($Q2$) is insignificant. The insignificance of Physical Visit can be attributed to an overlap that this measure has with Service Experience or this variable is not sufficient to capture the degree of care that planners provide to clients, which was documented as one quality that could satisfy clients in Australia (Irving et al. 2011). Supporting the former explanation, further analysis using a stepwise regression approach reveals that Physical Visit loses its significance in explaining customer satisfaction when Service Experience is added into the regression (results available upon request).

TABLE 3: Regressions results

	Pooled regression with all sample		Pooled regression with unique sample		Panel regression with multiple responses	
	Regression results (2)	Marginal effects (3)	Regression results (4)	Marginal effects (5)	Regression results (6)	Marginal effects (7)
Q1_b	1.0984 (14.30) ^a	0.1206 (14.94) ^a	1.0738 (11.59) ^a	0.0911 (10.47) ^a	1.175 (9.86) ^a	0.1664 (10.69) ^a
Q1_c	0.5447 (17.35) ^a	0.0598 (10.11) ^a	0.5427 (9.71) ^a	0.046 (7.40) ^a	0.5543 (5.71) ^a	0.0785 (6.84) ^a
Q1_d	1.0635 (47.31) ^a	0.1167 (16.79) ^a	0.9815 (14.12) ^a	0.0832 (11.27) ^a	1.1585 (14.27) ^a	0.1641 (12.58) ^a
Q2	0.0273 (0.85)	0.0029 (0.96)	0.0109 (0.40)	0.0009 (0.31)	0.0374 (0.69)	0.0053 (0.77)
Gender	-0.0226 (-0.31)		-0.0711 (-0.72)		0.0663 (0.51)	
Education	-0.0925 (-2.98) ^a		-0.072 (-1.81) ^c		-0.1236 (-2.17) ^b	
Length of subscription	0.0226 (0.91)		0.0003 (0.01)		0.0572 (1.34)	
Age	0.0032 (0.06)		0.0222 (0.33)		-0.0187 (-0.23)	
Pseudo R ²	0.4901		0.4745		0.5129	
N	2,830		1,479		1,351	

Note: Table 3 presents the results of estimating Equation 1. The second, fourth and sixth columns present the estimated coefficients of equation 1. The results in Columns 2 and 4 are from pooled regressions that include all respondents and respondents who respond once across the surveys, respectively. The regression results in the sixth column include respondents with multiple responses across our surveys and are estimated using panel data regression methodology with the survey period fixed-effect. Marginal effect columns refer to the results of calculating the marginal contribution of each independent variable when a planner wants to receive a high score of customer satisfaction (i.e. customers provide a score of 10 in the customer satisfaction question) while holding other variables at their respective mean values. We present z-statistics in brackets and use robust standard errors. ^a, ^b and ^c indicate significance at the 1%, 5% and 10% level, respectively.

In terms of the control variables, only the level of education is significant and negative. This finding confirms our prediction that the level of education affects customer satisfaction. The negative relationship can be explained as more educated customers would have higher expectations of their planners and therefore an increased likelihood of dissatisfaction.

The estimated regression coefficients of the first regression are qualitatively similar to the estimated coefficients in the second and third regressions. The pseudo-R² suggests that the third regression has the highest 'goodness of fit' while the second regression has the lowest. These findings suggest that positive bias is present in our sample but the bias does not significantly change the conclusions drawn. Given the similarities across the regression methodologies, further discussion of the results will be based on the first regression.

Column three of Table 3 presents the calculation of the marginal effect of one independent variable to achieve high customer satisfaction scores (i.e. a score of 10 in the customer satisfaction question), while holding other variables at their respective mean values. Across the four variables of interest, Reliability (Q1_b) makes the greatest contribution to customer satisfaction, followed by Service Experience (Q1_d) and Financial Knowledge (Q1_c). A one unit increase in Reliability contributes to a 12 per cent rise in the probability of having a satisfied customer, while a one unit increase in Service Experience would increase the probability of satisfying customer by 11.7 per cent. This finding suggests that Reliability is as important as Service Experience in driving customer satisfaction and that Financial Knowledge has the least contribution to customer satisfaction.

A one unit increase in Reliability contributes to a 12 per cent rise in the probability of having a satisfied customer, while a one unit increase in Service Experience would increase the probability of satisfying customer by 11.7 per cent. This finding suggests that Reliability is as important as Service Experience in driving customer satisfaction and that Financial Knowledge has the least contribution to customer satisfaction.

To examine the relative importance of technical and functional service quality on customer satisfaction, we calculate the joint marginal effect of delivering the highest quality of technical service (Reliability and Financial Knowledge) and functional service (Service Experience and Physical Visit) on the probability of achieving full customer satisfaction. We find that perfect scores in Reliability and Financial Knowledge contribute to a 26 per cent increase in the probability of achieving full customer satisfaction. On the other hand, having perfect scores in Service Experience and high frequency of Physical Visit increase the probability of achieving full customer satisfaction by only 16 per cent. These findings clearly suggest that technical service quality is more important than functional service quality in the creation of customer satisfaction and this result aligns itself well with the findings of Lassar et al. (2000) and Newman (2001).

Conclusion

Using longitudinal survey data we examine the relative importance of technical service quality and functional service quality in creating customer satisfaction. We find that both technical and functional service quality have a positive impact on customer satisfaction. We also find that technical service quality has a greater impact on customer satisfaction than functional service quality. This finding is in line with previous literature in financial services industry. Lassar et al. (2000) and Newman (2001) find that technical service quality is more important than the functional component. The implication of our results for financial planners is that improving technical service quality would be a more efficient way than honing 'soft skills' to create greater customer satisfaction. In addition, in the situation where a high level of technical service has been delivered, planners can still enhance customer satisfaction through improving their functional service quality.

Our results are robust to various sets of respondent demographic factors, to variations in the data across time in the surveys, and to the positive bias that comes from respondents who participated in the survey more than once. However, a caveat exists in interpreting and generalising our results because of the less direct and simple measures of technical and functional service quality used in our analysis. More direct and complete measures of technical and functional service quality similar to Lassar et al. (2000) and Newman (2001) would provide results that are more robust and could be generalised. Also, this study does not include dissatisfied customers who may have stopped receiving professional financial advice, or those who have never engaged a financial planner. Nor does our sample include time periods when the Australian financial and property markets have not performed well. Future study to investigate the conditions in which clients report dissatisfaction would benefit planners as well as regulators and it would be interesting to investigate if the relative importance of technical and functional service quality on customer satisfaction changes during a sustained market downturn.

Acknowledgement

We would like to thank Kevin Davis (the Managing Editor), an anonymous referee, David White and Ralf Zurbruegg for valuable comments. All errors are our own.

Notes

1. The mean differences across the demographic variables are significant at 1 per cent using the Kruskal-Wallis test.
2. Respondents who participate more than once in our surveys would be likely to have high levels of customer satisfaction and also likely to have a clear preference for either technical or functional service quality, which has been fulfilled by the planner.

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PAPERS FROM THE MELBOURNE MONEY & FINANCE CONFERENCE 2015

Finsia acknowledges the contribution of the papers from the 20th Melbourne Money and Finance Conference to this issue of JASSA. The conference – The Australian Financial Sector and Global Integration – was held in July 2015 by the Australian Centre for Financial Studies.

BASEL IV

and Australian banking

KEVIN DAVIS SF FIN, Professor of Finance, University of Melbourne, Australian Centre for Financial Studies, and Monash University

K. MARK LAWRENCE F FIN, Managing Director, Mark Lawrence Group, and Adjunct Associate Professor of Mathematics, University of New South Wales

International standard setters' approach to the appropriate design of regulatory bank capital requirements is currently in a state of flux. We examine the potential effects of recent Basel III and proposed Basel IV changes on the future role of risk sensitivity and internal models in capital requirements, competitive advantages from and incentives for banks to attain IRB status, and the implications for the Australian mortgage market. This is an abridged and revised version of a paper presented at the 20th Melbourne Money and Finance Conference.

In December 2014, the Basel Committee (BCBS 2014b, 2014c) issued consultation papers proposing fundamental changes to minimum capital standards for banks. They involved changes to risk-weight calculations in the standardised approach for credit risk and the redesign of 'capital floors' for 'advanced Basel banks',² calculated by reference to proposed revised standardised capital requirements for credit, market and operational risks.³

These changes, plus final calibration of the Basel III leverage ratio, will reduce the large discrepancies between the minimum capital requirements calculated under the advanced and standardised approaches for many banks.

Also, in November 2014, the Basel Committee (BCBS 2014a) signalled a potential narrowing of allowable internal ratings-based (IRB) modelling approaches and a longer-term review of risk-sensitivity in the regulatory capital framework (including a potentially reduced role for banks' internal risk models).⁴

These and other proposed changes to the Basel regulatory framework (including a capital charge for interest rate risk in the banking book (IRRBB) are generally referred to (informally) as 'Basel IV'.⁵ The likely effects of such substantive changes are difficult to assess, particularly since the Basel III changes (including introduction of Total Loss Absorbing Capital requirements and additional capital charges for Systemically Important Banks) are being gradually implemented.

In this paper we argue that careful calibration of the proposed capital floors and leverage ratio requirement will be necessary to maintain appropriate risk sensitivity in regulatory capital requirements. These have become increasingly important in Australian bank capital allocation and planning since the Basel III changes to risk weights and required capital levels which have reduced the relevance of (now relatively smaller) bank 'economic capital' calculations. We emphasise, and examine, the potential effect of reducing bank incentives to improve risk management capabilities to achieve IRB accreditation within the regulatory framework. We identify potentially substantial changes to the supply and cost of mortgage credit in Australia, and conclude by commenting on the ongoing longer-term review of the Basel framework.

Risk sensitivity and capital requirements: The leverage ratio requirement

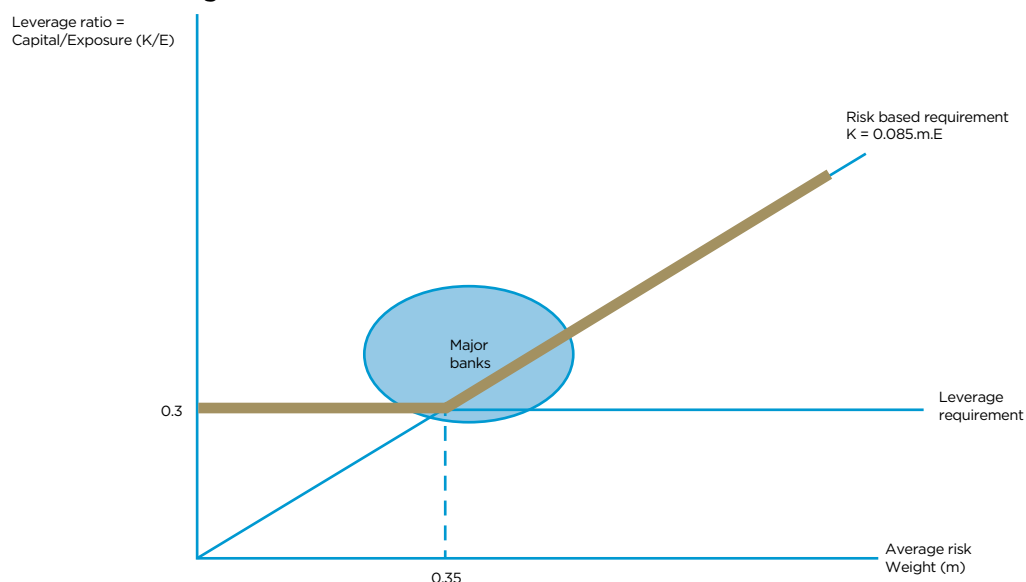
Risk-based, and risk-sensitive capital requirements have been a fundamental precept of the Basel approach to date. The Basel II changes sought to redress inadequate risk sensitivity in the Basel I framework which had prompted regulatory arbitrage and led to inadequate bank capital levels. However, excessive amounts of leverage by some banks prior to the financial crisis, together with post-crisis doubts about the reliability of banks' risk models for 'low-default' portfolios, led to the introduction in Basel III of a non-risk-weighted 'leverage ratio' requirement. This was initially intended primarily as a 'backstop' measure to risk-based capital requirements, to avoid bank capital levels falling below acceptable minimum levels.

At the time of writing, the final calibration of the minimum leverage ratio has not yet been announced by the Basel Committee; this will be determined by end-2016. However, the Committee has announced that the minimum leverage ratio will be based on a Tier 1 definition of capital and at least 3 per cent of 'exposures'⁶ which incorporate both on-balance sheet and off-balance sheet credit exposures (weighted by credit conversion factors).⁷

But even at 3 per cent, the leverage ratio could act to constrain certain low risk-weight activities such as residential mortgage lending. For example, under the risk-weighted assets (RWA) approach with a minimum Tier 1 capital requirement of 8.5 per cent of RWA, \$100 of exposures with an average risk weight of 30 per cent would require \$2.55 of Tier 1 capital. This is less than the \$3 which would be required under a minimum 3 per cent (average) leverage ratio requirement.

Similarly, at an effective average risk weight of 35 per cent or less, a leverage ratio of 3 per cent would become binding (Figure 1). Even if not binding overall, it creates an implicit additional capital cost for low risk-weight lending. For example, residential mortgage lending would, at the margin, effectively be subject to a Tier 1 capital requirement of at least \$3 per \$100 loan if the actual leverage ratio is not to be reduced. In contrast, \$2.125 is the effective minimum average capital charge applicable under APRA's 2015 decision to require a minimum average risk weight for mortgages for Australian IRB banks of 25 per cent from 1 July 2016.

FIGURE 1: Leverage ratio calibration



It is quite difficult to determine the precise calibration of the leverage ratio at which the current aggregate, effective 'average risk weights' of the major Australian banks would cause the leverage ratio to be binding. This is partly because operational and market risks are included in the calculation of minimum risk-weighted capital requirements, whereas the leverage ratio calculation compares total Tier 1 capital (including that which is held for market and operational risks) against an exposure figure which only incorporates on- and off-balance sheet credit exposures. Nevertheless, based on the Basel Pillar III disclosures of the major banks in November 2015,⁸ it appears that a minimum leverage ratio, even as high as 4.5 per cent, would not have been binding for the four major Australian banks as at 30 September 2015.⁹

We examine potential mortgage market consequences of the leverage ratio later.

A sufficiently high minimum leverage ratio requirement which becomes the 'binding' capital constraint could remove or diminish risk-sensitivity in the regulatory capital framework. This would be inconsistent with the Basel Committee's commitment to risk-sensitivity of capital requirements, as reflected in the proposed revisions to the standardised approach for credit risk and in the recently revised standardised approach for market risk.¹⁰

The future of the IRB approach

There have been numerous academic critics of the merits of the IRB approach (see, for example, Goodhart 2010; USSFRC 2013; Admati and Hellwig 2013). While regulators and the banking industry are generally supportive (for example, Byres 2014, 2015; IIF 2015a, 2015b), some (for example, Haldane and Madouros 2012; Tarullo 2014) have been critical.

At a practical level, depending on how they are designed, calculated and calibrated (together with the leverage ratio requirement), the Basel IV 'capital floors' could render the complex IRB calculations of risk-weighted assets and minimum capital requirements for credit risk essentially redundant. Such an outcome would effectively remove any material (capital) incentive for banks to expend the hundreds of millions of dollars required to strengthen risk management systems and processes to meet the standards required to achieve IRB accreditation from national regulators.

It is interesting to note that some regulators and commentators have lost confidence in banks' internal risk models, which underpin the IRB approach. One reason has been the demonstration (Basel 2013a, 2013b) that banks' internal risk models throw up wide disparities in risk weights (and consequent capital requirements) for specified exposures. However, as explained by the Bank of England (2014), there are valid reasons to expect such disparities. Perhaps more relevant is the global financial crisis (GFC) experience, when at the peak of the crisis in late 2008 many market participants lost faith in banks' reported, risk-based capital ratios derived using internal models and focused more on simple leverage measures. This is reflected in concerns about the (lack of) international comparability of measures of bank risk and capital strength.

At a practical level, depending on how they are designed, calculated and calibrated (together with the leverage ratio requirement), the Basel IV 'capital floors' could render the complex IRB calculations of risk-weighted assets and minimum capital requirements for credit risk essentially redundant. Such an outcome would effectively remove any material (capital) incentive for banks to expend the hundreds of millions of dollars required to strengthen risk management systems and processes to meet the standards required to achieve IRB accreditation from national regulators.

Also relevant has been the increasing technical and quantitative complexity of the IRB framework. This can create a disjuncture between technical modellers and relevant business decision-makers and risk managers, and also create difficulties for banks' senior management and board directors to participate meaningfully in discussions about these matters. This provides a significant challenge for effective risk governance – which requires the primary exercise of collective wisdom and judgment – and seems to us to be a more important critique than interbank differences in RWA assessments.

A further concern of some academic commentators (see, for example, Admati and Hellwig 2013, p. 184) is that while development and use of more sophisticated bank risk management systems is desirable, that should be a commercial decision by banks in the context of the activities they wish to pursue. These commentators argue that those systems do not necessarily provide a suitable basis for financial regulation where considerations of financial system stability are paramount, but are not a component of banks' commercial decisions about economic capital levels and allocation. In this view, the case for reliance upon bank internal models and alignment of regulatory requirements with commercial decisions about capital allocation has not been proven.

Recently, the industry has been arguing strenuously to the contrary, that it is essential to keep risk sensitivity, and the role of internal risk models, at the centre of the future regulatory capital framework. In a November 2015 letter to the Chairman of the Basel Committee, the Institute of International Finance (IIF 2015a) stated that the preservation of risk sensitivity is 'of vital importance for safety and soundness', and 'critical to banking':

The IIF strongly believes that it is critical to keep risk-sensitivity at the center of the capital framework. This belief is driven by the industry's judgment that risk sensitivity is the best way to minimize the misallocation of resources by instilling in banks' decision-making processes the primacy of aligning capital support with risk of loss. Long term divergence between regulatory capital frameworks and underlying economic risks is bound to have serious adverse consequences ...

The IIF letter concludes with the statement:

The preservation of risk sensitivity is so critical to banking that the industry and supervisors must collectively take up the challenge to improve models and restore the credibility of the IRB framework ...

A comprehensive discussion paper issued by the IIF in September 2015 (IIF 2015b) makes the industry case in greater depth. In November 2015 (Byres 2015) the APRA Chairman also expressed support for continuing the use of internal models within the regulatory framework, albeit subject to certain conditions, including a stronger set of modelling constraints and increased consistency in modelling practices.

Ultimately, the case for the merits of the IRB approach versus increased reliance on some form of simpler standardised approach involves three primary considerations:¹¹

- > the merits and priority attached to risk-sensitive regulatory capital requirements
- > the impact of regulatory requirements on the efficacy of bank internal risk management processes
- > whether the design of such requirements can provide adequate incentives for future improvements in bank risk management practices, and the importance that should be attached to such incentives.

Did the Basel II introduction of the IRB approach and associated capital incentives lead bank regulation up a blind alley? Arguably not. The capital concessions provided for IRB-accredited banks provided a material inducement for banks to spend vast sums to develop strengthened credit risk management processes. In that regard they were successful, and such inducements were arguably appropriate at that time of rapid financial innovation and increasing complexity. In practice, the capital concessions were typically essential in successfully making the business case to bank boards to make the very substantial necessary investments in risk systems and infrastructure.

In the future, the benefits for risk management and pricing for IRB-accredited banks could be expected to persist, regardless of whether the internal models approach survives in the regulatory capital framework. But whether the strong (albeit, very complex) 'guard rail' of the current, prescriptive Basel requirements, and associated detailed supervisory review, is necessary to drive ongoing improvements in the effectiveness of (both IRB and standardised) banks' internal credit risk management processes is an important consideration.

'Best practices' in credit risk management have improved substantially since the introduction of Basel II and information about such practices is more easily accessible to banks today. In tandem, supervisory requirements for risk management have evolved and become substantially more rigorous over the past decade.

In this context, it is reasonable to question whether we have now reached a point where competitive pressures are sufficiently powerful to drive risk future management improvements in banks without IRB capital incentives.

Current IRB banks are well-placed to adopt further improvements to their risk management practices at relatively small additional cost. However, we are not convinced that the boards of many standardised banks perceive the quantum leap and substantial cost of improvements to their risk management capabilities required for IRB status as a source of potential future competitive advantage or, indeed, necessary for maintaining competitiveness with sophisticated peers. Without the IRB capital incentives, few are likely to make the needed investments to achieve that status.¹²

Whether this provides a case for retention of substantial capital incentives within the credit risk framework, which apply across all business activities, is another question. Arguably, it may be possible to design and calibrate a 'standardised approach' which provides adequate risk sensitivity and appropriate prudential requirements, and which enables smaller banks to compete in markets where less sophisticated risk management approaches suffice (and avoid activities for which their risk management capabilities are inadequate).

Current IRB banks are well-placed to adopt further improvements to their risk management practices at relatively small additional cost. However, we are not convinced that the boards of many standardised banks perceive the quantum leap and substantial cost of improvements to their risk management capabilities required for IRB status as a source of potential future competitive advantage or, indeed, necessary for maintaining competitiveness with sophisticated peers. Without the IRB capital incentives, few are likely to make the needed investments to achieve that status.

In this context, it is interesting to note that substantial capital incentives have indeed been retained by the Basel Committee in the new, revised standards for minimum capital requirements for market risk issued in January 2016.¹³

Australian mortgage market implications

It is significant that, despite the original Basel focus on internationally-active banks, the banking markets in which the differences between IRB and standardised minimum capital requirements have arguably had most effect on competitive neutrality have been residential mortgage, SME and personal loan markets — which are largely segregated domestic markets. Even if capital requirement differences are reduced, if the IRB accreditation requirements did, in fact, lead to better credit risk assessment and improved pricing, the IRB banks would still retain a commercial competitive advantage.

The changes in residential mortgage risk weights for Australian IRB banks announced by APRA on 20 July 2015, which increase the average risk weight from around 16 per cent to a minimum of 25 per cent, have already had a significant effect on mortgage pricing. Even though the changes do not come into effect until July 2016, the four major banks chose to undertake large capital raisings in anticipation of the change, and increased residential mortgage interest rates by 15 to 20 basis points in October 2015, in consequence (several standardised banks also took advantage of those changes to increase their rates).

The proposed Basel IV changes could potentially have quite significant additional implications for Australian residential mortgage markets.

One important effect arises from the proposed specification of risk weights for the revised standardised approach. A greater range of risk weights is proposed, based on the (newly proposed) 'risk driver' of loan-to-valuation ratio (LVR). A minimum risk weight of 25 per cent is proposed for loans with LVR < 40 per cent. In contrast, a loan where the LVR is 80–90 per cent would attract a risk weight of 70 per cent (BCBS 2015b).¹⁴

This implies a potentially significant decline in the capital requirement for loans as they age over time, as the LVR ratio falls due to principal repayments and house price growth. Increased differentiation of pricing for old ('back book') loans and new loans and increased competition for the former (and increased switching behaviour by borrowers) could be one outcome.¹⁵ Because increases in property values after loan origination are not generally allowed in calculating the LVR for this regulatory purpose, that may also prompt switching behaviour if the new loan triggers a new higher valuation and improved pricing.

These proposed revisions to the capital requirements for banks contained within the standardised approach also increase their competitive ability in the low-risk end of the mortgage residential market, at the same time as the recent APRA changes have reduced the competitive advantage of IRB banks in that market. As noted earlier, while a minimum leverage ratio requirement of 4.5 per cent would not (with current balance sheet structures) be binding for the IRB banks, it implies a capital requirement of \$4.50 per \$100 of exposure for loans, including mortgage loans, at the margin. This may diminish the appetite of IRB banks for mortgage lending as they may seek to allocate scarce capital to higher-yielding assets including the higher-risk part of the mortgage market, where they will likely retain a competitive advantage compared to standardised banks under the proposed new standardised risk weights.

If the proposed Basel IV changes come to fruition, the ability of the IRB banks to pass any increased funding costs from higher capital requirements onto mortgage borrowers may be limited at the low-risk end of the market by the increased competitive ability of standardised banks, the re-emergence of securitisation based on low-risk, simpler structured arrangements, and the emergence of new disruptive loan business models based on new technology. With more risk-based pricing reflecting greater risk sensitivity of the proposed future standardised capital requirements, the potential exists for a substantial increase in the loan rates charged on higher-risk (high LVR) loans. To the extent that such borrowers are the marginal price-setting purchasers for average dwellings, such a change could have significant effects on the sustainability of current house price levels. More generally, the compression of the difference in capital requirements for mortgage loans relative to other lending could be expected to see a shift in the composition of overall loan supply away from mortgage lending (and/or relative interest rate adjustments, i.e. a relative increase in the cost of mortgage finance).

Conclusion: Basel and risk management

We have noted the crucial importance of the Basel IV calibration challenge for the Basel standard-setters. There are real risks in setting the levels of the minimum leverage ratio and/or the proposed new capital floor too high, rendering the IRB approach for credit risk (and the advanced approaches for market and operational risks) largely meaningless, and reducing or eliminating the risk sensitivity of the Basel framework. For banks which have already achieved advanced Basel status (in particular, IRB status), the likely impact will be to shift capital away from, and increase pricing for, low-risk assets and portfolios, including mortgages. For standardised banks, the consequence will be to remove the capital incentive to pursue advanced Basel accreditation.

This raises an important consideration in assessing the Basel agenda. While its initial focus was on 'microprudential' regulation, that has morphed over time into an equal emphasis, at least, on 'macroprudential' regulation. But also important has been its role in attempting to induce improvements in bank risk management processes, both via capital incentives (for the IRB approach) and strengthened supervisory arrangements. This last consideration suggests a view that competitive forces alone are inadequate to induce banks to devote sufficient resources to developing improved risk management systems — at least from a social perspective, where risk management failures can have significant adverse consequences. Since such social costs can be mitigated by either imposing higher capital requirements, and/or by improved risk management processes, recent strengthening of capital requirements (and the experience of the GFC) suggests that such a view remains current.

If that view is correct — that competition alone will not induce socially optimal improvements in, and the adoption of, ‘best practice’ risk management practices — it has clear implications for the Basel agenda. If correct in the context of large complex banks, there may still be a role for the current (albeit, very complex) prescriptive Basel requirements for the advanced approaches to credit, market and operational risks, including supervisory review and approval of banks’ internal models, according to the highly technical requirements.

In the context of simpler banks, engaged in simpler activities, the question is whether the standardised approach, and supervisory oversight, can ensure a sufficient quality of risk management practices and adequate risk sensitivity to limit regulatory arbitrage, while achieving some degree of regulatory competitive neutrality in those markets. Where ‘standardised’ banks enter into activities where IRB level risk management skills, systems and processes are needed, capital incentives for IRB accreditation in that activity would thus have merit.

That does, however, raise the question of whether advanced accreditation for credit risk should be largely an ‘all or nothing’ hurdle,¹⁶ or whether it is more appropriately required only for specified ‘sophisticated’ activities. Such a potential regulatory shift away from an ‘all or nothing’ accreditation hurdle (as has occurred recently within the new, revised market risk standards, which will allow for internal model accreditation at the individual trading desk level) would open up the possibility for standardised banks to apply for IRB accreditation only for certain products and portfolios initially. This could potentially enable a staged, progressive or partial implementation of IRB in the Australian regional banks, over time, and possibly reduce the substantial cost disincentive to such accreditation for those banks.

In this context, we note that APRA has recently made a small move in this direction, by offering Australian banks the option of staged IRB accreditation, subject to certain conditions, but stopping short of offering partial accreditation (APRA 2015). The conditions attached to APRA’s offer of staged IRB accreditation include the requirement for banks to present to APRA at the outset a credible plan to ultimately bring all material credit portfolios under the IRB approach within a reasonably short time after accreditation of the initial portfolios (not to exceed two years), and a holding back of a substantial portion of the IRB capital benefit until accreditation for all portfolios is complete. Additionally, a major difficulty for Australian banks to achieve IRB accreditation in the past has been the requirement that they must also achieve advanced accreditation for operational risk (AMA accreditation) at the same time — ie., both risk types must be accredited together. An additional element of APRA’s December 2015 proposals, is the dropping of this requirement, ie., the decoupling of these two accreditation processes. Through both of these changes, APRA is seeking to make it easier for Australian banks to receive IRB accreditation (in accordance with a suggestion of Financial System Inquiry (FSI, 2014)), while retaining both the high, overall standards that such accreditation requires, and also the substantial capital incentives available for complete IRB accreditation of all portfolios.

Such a potential regulatory shift away from an ‘all or nothing’ accreditation hurdle (as has occurred recently within the new, revised market risk standards, which will allow for internal model accreditation at the individual trading desk level) would open up the possibility for standardised banks to apply for IRB accreditation only for certain products and portfolios initially. This could potentially enable a staged, progressive or partial implementation of IRB in the Australian regional banks, over time, and possibly reduce the substantial cost disincentive to such accreditation for those banks.

Notes

1. The Basel Committee has also recently finalised significant revisions to the capital calculations for both the standardised and modelled approaches for market risk (in a 'fundamental review of the trading book', see BCBS (2016b)), and has proposed significant revisions to the capital calculations for the standardised approach to operational risk.
2. We use this term for banks (such as the four Australian majors) which have been accredited to use their internal risk models under the 'advanced approaches' within the Basel framework for credit risk (Internal Ratings-Based approach – IRB), market risk, and operational risk (Advanced Measurement Approach – AMA).
3. Basel II incorporated a 'transitional' capital floor expressed as a percentage of the minimum capital requirement that would have been required under Basel I. The proposed new capital floor would replace the transitional floor, with its design as yet unspecified.
4. In November 2015, the Basel Committee signalled abandonment of the internal models approach for operational risk (BCBS 2015a)
5. Technically, there isn't going to be a Basel IV document, in the same way that documents exist for Basel I, II, and III. Rather, 'Basel IV' is a collection of refinements to the existing Basel III regulatory framework.
6. See <http://www.bis.org/press/p160111.htm>
7. In the United Kingdom, an interim minimum leverage ratio requirement of 3% has been proposed with the numerator comprising Common Equity Tier 1 capital (CET1) plus some Additional Tier 1 (AT1) instruments (Bank of England 2014).
8. As required under APRA Prudential Standard APS 330.
9. The four major Australian banks reported leverage ratios as at 30 September 2015 (calculated in accordance with APRA's required methodology, specified in APS 110, attachment D) as follows: ANZ: 5.07%; CBA: 4.73%; NAB: 5.54%; WBC: 4.76%.
10. See BCBS (2016b).
11. These considerations are examined in detail in the [Appendix](#) to the longer conference paper on which this is based and also by Lawrence in Chapter 8 of Cowell and Levins (2015, pp. 174–9).
12. Indeed, even in the presence of such capital incentives, it is only very recently that the Australian regional banks have begun the accreditation process.
13. The result of the calibration of the final, revised minimum capital standards for market risk is that the market risk capital charges (for non-securitisation exposures) under the revised standardised approach are 1.4 times those of the revised internal models approach (i.e. 40 per cent higher) for the median bank in the Basel Committee's sample of 44 banks. See Table 2 of BCBS (2016a), p. 11.
14. An earlier proposal from the Basel Committee to also include the Debt Service Coverage ratio (DSC) as a risk driver was dropped in the December 2015 revision.
15. The ability of lenders to inhibit switching was reduced by legislation preventing charging of exit fees on new variable rate mortgage loans from July 2011.
16. Some specialised activities of advanced banks are subject to a form of standardised approach, and APRA's guidance on achieving advanced accreditation implies a strong preference for accreditation across all activities.

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CLOSER FINANCIAL INTEGRATION BETWEEN AUSTRALIA AND NEW ZEALAND?

Lessons from the European Union

DAVID G MAYES SF Fin, Professor of Banking and Financial Institutions, University of Auckland

This paper considers possible lessons for Australia and New Zealand from the approach to financial integration taken by the European Union in relation to the banking industry, capital markets and more generally.¹

An obvious lesson from the global financial crisis is that domestic financial institutions are more vulnerable to external shocks than was anticipated and, when large and multinational financial companies get into difficulty, the domestic regulatory authorities struggle to resolve these problems because of financial complexity and interconnectedness.

The European Union (EU) has responded to this issue by undertaking a major shift towards integrated regulation, supervision and resolution within the banking industry in what has been labelled 'banking union'.²

While New Zealand and Australia have taken the same approach to regulation and supervision as the US and UK, they seem to have adopted the opposite view with regard to resolution, i.e. separation, with each country coping independently with the problems within its own jurisdiction. This is a pragmatic approach which has a good chance of success. It is, however, rather surprising that the authorities did not see the crisis as an opportunity to take a leap forward in terms of closer integration along the lines of the EU, as 'closer economic relations' are part of the agenda for both countries.

The US and the UK have taken a different joint approach, arguing that the best way forward is to ensure that the home country of these large multinationals can resolve the problems of the financial group as a whole, without needing to get embroiled in all the difficulties of coordinating the resolution among the various countries in which the group operates (Federal Deposit Insurance Corporation and Bank of England 2012). They have left issues of regulation and supervision to the ongoing discussions taking place through the Financial Stability Board (FSB) and the Basel Committee.

While New Zealand and Australia have taken the same approach to regulation and supervision as the US and UK, they seem to have adopted the opposite view with regard to resolution, i.e. separation, with each country coping independently with the problems within its own jurisdiction. This is a pragmatic approach which has a good chance of success. It is, however, rather surprising that the authorities did not see the crisis as an opportunity to take a leap forward in terms of closer integration along the lines of the EU, as 'closer economic relations' are part of the agenda for both countries. In any case, pragmatism does not necessarily address the question of what structures minimise the losses, either for those directly involved or for the wider economy. Nor does it address the equity of the allocation of the losses.

This paper examines whether there are aspects of the EU approach which could inform a longer-term view of how financial integration in Australasia might progress. Given that the recent Financial System Inquiry (2014) in Australia focused on improved resolution as one of the areas where further policy action is needed, perhaps this offers an opportunity to look more closely at the linkages with Australia's closest partner.

Although 'banking union' is only one aspect of financial integration within the EU, the EU has issued a Green Paper on a capital markets union (European Commission 2015). In some respects, this is an overly grand term for what is planned, but it does beg the question of why there is not an equivalent concept under discussion between Australia and New Zealand given that in many ways the two countries are more integrated than most of their European counterparts.

One feature which confuses the discussion is the distinction between a monetary union and various aspects of financial union. Banking union is proceeding in the EU among countries with different currencies (and independent central banks and, hence, lenders of last resort). If the EU's approach is transferable, there is no prior requirement for a discussion of a currency union between New Zealand and Australia, even though the subject has been mentioned again following the momentary parity between the two currencies (Hawkesby 2015).

Pursuing financial union in the EU has involved the creation of new institutions and the adaptation of others. However, the way this has been undertaken reflects the political difficulties of getting agreement within the EU. Many changes that might make most sense from a practical point of view have been precluded because they would involve a change in the EU treaties. Not only would such a change take a long time but it would give the member states the opportunity to open up a whole range of difficult issues on other topics, quite possibly resulting in rejection of the package, as was the case with the Constitutional Treaty in 2004. In particular, the European Central Bank (ECB) has been given the role of overseeing supervision because that was permitted under article 127(6) of the existing Treaty on the Functioning of the European Union.³ This leads to some confusion because although the ECB is an EU institution covering all member states it only runs monetary policy for the euro area and only euro area countries are represented on its ultimate decision-making body, the Governing Council. Monetary union is not a prerequisite for close financial union.

Banking union

There are three closely related facets of banking union in the EU – harmonised regulation, a single supervisory mechanism (SSM) and a single resolution mechanism (SRM). Much of the need for a common regulatory framework stems from the perceived need to improve capital adequacy and reduce the fragility of banks, mainly within the Basel III framework. However, it also reflects worries about regulatory arbitrage which do not apply so readily in Australia and New Zealand. Branches of a bank registered in one member state can be opened in another but are subject to prudential regulation by the home country not the host. Hence, if home countries do not apply the same prudential rules, customers can shop for the regime they find most attractive and banks themselves will do the same to the extent that they can rearrange their structure.

Given that the four main banks are the same in Australia and New Zealand there would be many advantages from having the same prudential regulatory framework. If nothing else, there should be lower compliance costs. Ironically, the main difference would be felt outside the main four, principally because of the different treatment of non-bank depository institutions. However, even a fully harmonised system would need to be implemented within the context of the different legal systems. The existence of EU law means that a common scheme could be issued in the form of a regulation which applies in all countries. In the Australian and New Zealand prudential regulatory framework such a document would look more like a directive whereby a given set of rules would need to be transposed into national law. Such regulation is thus not likely to be identical in detail. Indeed, banking handbooks are large and very detailed documents and the EU has not got to the point of harmonising them, although the European Banking Authority (EBA) is working through a long list of detailed requirements for harmonisation in what is being called a 'single rulebook' (EBA 2015). Indeed the role of the EBA points to the need for some sort of joint institution. Perhaps, for Australia and New Zealand, this could be spawned from the Trans-Tasman Banking Council.

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There are also easy simple objections to harmonisation: it may not be needed at a detailed level; and some element of competition among regulatory regions may be helpful in developing the system. Such competition not only provides evidence of how other systems might work but it enables the banks themselves to indicate the different merits of alternative approaches through exercising regime shopping.

However, it is the supervisory and resolution areas where the gains are likely to be largest. It is generally seen as important for any agency that might have to bear a cost from the resolution of a failed bank to have a hand in the supervision of that bank although, in a national framework, the resolution agency sometimes relies on another agency to undertake the supervision, as is the case in Canada. A joint supervision framework would therefore seem to be necessary if Australia and New Zealand were to have joint resolution. Whereas, in the EU, a new institution has been required to run the supervisory mechanism (the ECB), the need for extra institutions is more limited in the case of Australia and New Zealand simply because it largely relates to the same four banks. Simply making APRA responsible for the New Zealand subsidiaries would ease APRA's task in supervising each bank as a whole. APRA would almost certainly wish to delegate the supervision of the smaller New Zealand institutions as it would be inefficient to try to run that from Sydney and considerable local knowledge would be required.

A problem would arise, however, if the Reserve Bank of New Zealand, as the New Zealand supervisor, were to disagree with APRA. In the EU, they have an elaborate means of resolving these differences but much of that complexity occurs simply because non-euro members are not represented on the Governing Council of the ECB and hence have no say in the decisions (Castañeda et al. 2015, ch. 3). An equivalent arrangement would have a Supervisory Board, composed of officials from the two agencies. The problem in the Australasian framework is simply that one country is so much larger than the other. Any supervisory arrangement that even vaguely represented the size of the two jurisdictions would mean that New Zealand could always be outvoted, whereas equal representation would be disproportionate to the problems. There would only need to be a board such as this relating to cross-border issues, as the bulk of Australian issues could be undertaken nationally, as it is now. A decision on any such board is thus going to be very difficult politically, even though the practicalities of trying to arrange coordinated supervision are much more straightforward.

Clearly, there is also a complication at the level of macroprudential regulation and not just at the microprudential regulative stage just discussed. Here, however, the European framework would be fairly easy to emulate. The European Systemic Risk Board, which contains representatives from each member state but is chaired by the President of the ECB, does not have executive powers. It is simply a watchdog searching for problems at the European level. It can offer recommendations and impose sanctions, naming and shaming those who do not follow the recommendation but, ultimately, the responsibility for action remains national. Such a framework, run jointly by the two Australasian central banks, could operate with very little bureaucratic burden but permit the exchange of information in a more formal way than at present. The question remaining is whether there are macroprudential issues at a regional level which are not necessarily covered by the countries acting independently.

Resolution is the main issue not simply because New Zealand has chosen to go its own way with Open Bank Resolution (OBR) but because this issue has not been firmly addressed in Australia despite this being one of the main recommendations of the recent Financial System Inquiry (FSI 2014, Rec. 5). The accepted paths to resolution that are likely to work well in the eyes of the Financial Stability Board (FSB 2014a) are the polar extremes of: resolving the banking group as a whole through the home country (single point of entry, SPE); and carving up the group's systemically important parts into separate entities that can be resolved by each country where they are located separately (multiple point of entry, MPE). However, MPE is usually necessary when the banking group is complex and a large portion is in other countries. In the case of Australia and New Zealand neither is true. The New Zealand operations are straightforward and the large majority of activity is in Australia. Other things being equal, this would imply that SPE is likely to be the better way to go and that this would minimise both the cost to the creditors and the knock-on cost to the wider economy in both countries.

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The main outstanding issue would be fairness both in burden-sharing and in decision-making. Clearly, the creditors are different under the two models. The exact distribution would depend on how the loss absorbing capacity is organised.⁴ The non-deposit funding of the New Zealand subsidiaries has a strong Australian element, 100 per cent for the equity, although losses there would ultimately be borne by the Australian parent and its shareholders who are more international. The main beneficiaries of SPE would be the New Zealand depositors, except in the case where it is only the New Zealand subsidiary that is in difficulty. Under OBR, New Zealand depositors have neither preference nor insurance and hence as junior unsecured creditors are quite likely to be bailed-in should OBR be triggered (Hoskin and Woolford 2011). Under SPE, neither the New Zealand nor Australian depositors are likely to be much affected, the former because it is the parent that is being bailed-in and the latter because of priority. In the Australian case, even if guaranteed depositors are bailed-in, it would be the taxpayer who bears the interim loss until the guarantee scheme is paid back by more junior creditors under the resolution.

Here the EU has little new to offer. Mutualisation of deposit insurance is not planned. The difficult governance arrangement, whereby the Single Resolution Board (SRB) proposes a form of resolution (normally following a request from the ECB that such action is needed), and the Commission and then the Council has the opportunity to object, is again a function of the Treaty arrangements. Under the Meroni doctrine, the Commission cannot delegate the decision to the SRB, it needs to approve it itself (Chamon 2014).⁵ And, if the technical decision is rejected then the Council of Ministers will need to be involved. Such an objection is not very plausible in the SRM as there would then be insufficient time for the resolution to be completed before markets can reopen, thereby generating a default (Castañeda et al. 2015, ch. 3). In the Australasian case, a problem would arise if New Zealand felt that the resolution arrangement was in some sense unfair and that their portion of the costs was too high.

It is not practical to handle such an objection while the resolution is being put in place and trying to provide any restitution once the losses have been allocated would be very difficult to achieve and cannot realistically involve the creditors/shareholders. It would be a political matter for the two governments to sort out, as it was in the case of Fortis (Wiggins et al. 2015).

One area where there is less of a problem is lender of last resort. Assuming each central bank follows the normal Bagehotian precepts and is prepared to lend in unlimited amounts to solvent institutions against good collateral (at above market rates to prevent it becoming lender of first resort) then each can address the stability issues in their own country. The difficulty emerges in the grey area of emergency liquidity assistance where solvency may also be in question – Charles Goodhart argues that this will normally be in question (Goodhart and Schoenmaker 2014). But, otherwise, lending would be undertaken in the domestic currency of the market where there was a liquidity problem. A coordination issue would arise if the banks were raising liquidity in one market in order to resolve a problem in the other market.

Capital markets union

The Commission has now issued a Green Paper on ‘capital markets union’ (European Commission 2015). In part, this is a reaction to the limited development of capital markets in some member states and the consequential over-reliance on bank lending – something which resonates in New Zealand. But it also reflects a wish to develop cross-border markets and assist both savers and investors, thereby contributing to improving the prospects for economic growth and increasing efficiency. The issues that it raises, relating to unnecessary differences in tax provisions (especially withholding tax), regulations, the nature of instruments etc., are readily applicable in the Australia-New Zealand context. An interesting question in the comments on the Green Paper is the extent to which harmonisation should be viewed from the perspective of the investor or from that of the borrower.

Other aspects of financial integration

From a regulatory perspective, the EU divides the financial sector into three segments: banking; securities markets; and insurance and occupational pensions. The last of these has received little attention in the follow-up to the global financial crisis but issues relating to the portability of pension entitlements and other benefits have featured highly in the attempt to have a more integrated system. In many respects, this is even more pertinent in the case of Australia and New Zealand, with the New Zealand population in particular being more mobile than most of its European counterparts. While some action has been taken on aspects of superannuation, allowing funds accumulated in Australia to be transferred to New Zealand, in some respects the rules have moved in the other direction. For example, KiwiSavers are no longer able to use their funds to buy a first home in Australia; it is now restricted to New Zealand.⁶ Even if we ignore many of the opportunities for learning from each other’s experiences, prima facie this looks to be an area where there could be considerable benefits from even closer integration.

The EU has imposed a whole raft of problems on itself through Economic and Monetary Union (EMU) which entered its third phase at the start of 1999 when the euro was launched. By not having a fiscal union or a political union with a full federal level it has encountered a set of difficulties that would tend to discourage other countries that do not closely meet the Optimum Currency Area criteria from forming a union of their own. Given the lopsided nature of the relationship between Australia and New Zealand this would be entirely a problem for New Zealand, which would not only give up its own monetary policy but would have to undertake real adjustment if monetary conditions in Australia were inappropriate.

While some action has been taken on aspects of superannuation, allowing funds accumulated in Australia to be transferred to New Zealand, in some respects the rules have moved in the other direction. For example, KiwiSavers are no longer able to use their funds to buy a first home in Australia; it is now restricted to New Zealand. Even if we ignore many of the opportunities for learning from each other’s experiences, prima facie this looks to be an area where there could be considerable benefits from even closer integration.

In particular, New Zealand has been more inflation prone than Australia and has run higher interest rates as a result. Thus, if nothing changed, it would run exactly the risks of relative inflation that have bedevilled Greece, Ireland et al.

It is difficult to see why closer financial integration should not appeal to Australia as it would imply very little in the way of change and the possibility of worthwhile gains from reduced costs and better coordination. The attractiveness for New Zealand is less obvious, as the changes would be greater, although gains are normally also greater for the smaller country accessing the larger market.

Having a system dominated by another 'country' sounds unappealing but this is exactly what the smaller EU countries have been prepared to sign up to, even the EEA members (Iceland, Liechtenstein and Norway), who do not even have a seat at the table in the discussion of new regulations. Of course, membership of the EEA/EU is a total package of which financial integration is a small part. However, on this occasion much of banking union is different. While the regulatory harmonisation and the resolution directive are EEA/EU-wide, the SSM and SRM are voluntary for all countries outside the euro area (although it is not clear that the EEA countries can join). The UK and Sweden have made it very clear that they are not interested in joining and, as important home countries, that is understandable. Host countries such as Bulgaria and Romania have expressed an interest. If several others also decide to join — without joining the euro — this will be an interesting indicator for New Zealand.

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Notes

1. I am grateful for the help of Giannoula Karamichailidou in preparing this paper. The research was supported financially by the European Union through a grant on the topic 'The Outlook for Monetary and Financial Integration in the EU'. The views expressed are those of the author.
2. See Castañeda et al. (2015) for an exposition and critique.
3. [Treaty on the Functioning of the European Union \(TFEU\)](#).
4. The FSB also has recommendations on this: Financial Stability Board 2014b, [Adequacy of Loss-Absorbing Capacity of Global Systemically Important Banks in Resolution, Consultative Document](#).
5. This is one of the reasons for what may seem an odd dichotomy of structure where the SSM is run by the ECB in Frankfurt yet the SRB as the resolution agency is an offshoot of the Commission and is in Brussels.
6. Further details on this are provided in Office of the Minister of Consumer Affairs 2015, [Opportunity to clarify KiwiSaver first home withdrawal](#).

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MUTUAL RECOGNITION ARRANGEMENTS —

Australia and Asia

CARLA HOORWEG, Senior Policy Manager, Investment, Global Markets and Tax, Financial Services Council

This paper provides an overview of the various mechanisms by which cross-border financial services trade in investment management is being promoted in Asia, and Australia's engagement with these schemes. The paper examines the potential economic opportunities for Australia from increased trade in financial services, as well as specific mutual recognition and passporting schemes being developed within the Asian region. It also highlights key considerations for Australian investment managers looking to enter the Asian market through these schemes.

Australia's funds management capabilities

The financial services sector is a significant part of the Australian economy, contributing 9.3 per cent of the country's gross domestic product, second only to mining which contributes 9.4 per cent.¹ A key element of the sector is the management of investments for retail and wholesale investors and, as at 30 June 2015, the total funds under management in Australia topped \$2.6 trillion.² These funds are invested in managed investment schemes, which allow multiple investors to pool their money into a portfolio of assets managed by a professional manager.

Australia has developed a comparative advantage in investment management according to the report *Australia as a Financial Centre — Building on our Strengths (Johnson Report)* which was delivered to the government by the Australian Financial Centre Taskforce in 2009. The taskforce was charged with investigating whether changes to current policy settings could be made to improve Australia's competitiveness as an international financial services centre.

Despite this large pool of domestic savings, Australia is generally seen as punching below its weight when compared to London, Singapore and Hong Kong in relation to the proportion and value of investment management services provided to offshore clients.

The *Johnson Report* concluded that Australia has developed a significant skill base in investment management and also has 'one of the largest and most sophisticated funds management sectors globally'.³ This expertise has developed as a direct result of Australia's compulsory superannuation system which requires 9.5 per cent of employee wages to be contributed to a superannuation account. Currently the retirement savings system has over \$2 trillion in assets.⁴

Despite this large pool of domestic savings, Australia is generally seen as punching below its weight when compared to London, Singapore and Hong Kong in relation to the proportion and value of investment management services provided to offshore clients.

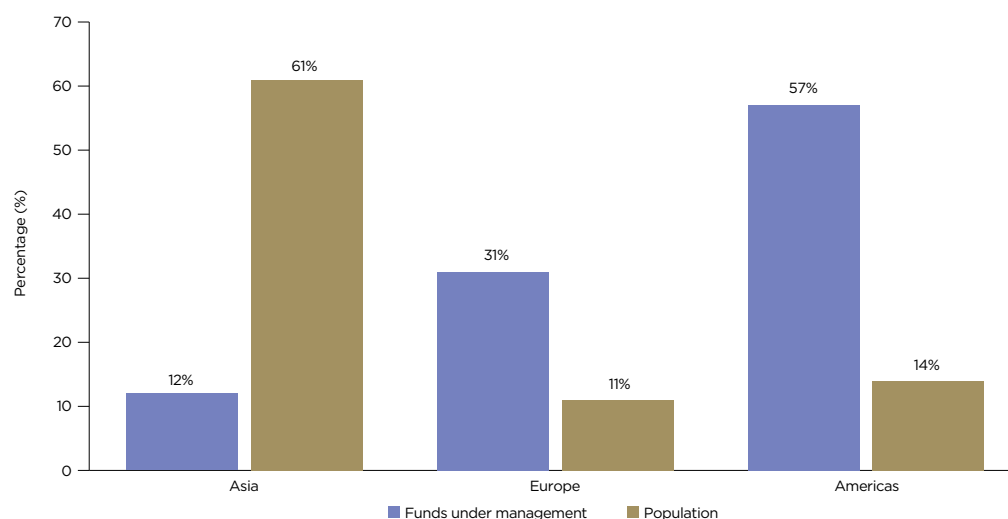
The opportunity

Improving Australia's competitiveness in this area could result in significant benefits to the economy over the medium term. In the case of funds management, money sourced from offshore clients and managed by Australian fund managers is considered to be an export for trade purposes, despite nothing tangible leaving Australian shores. The fees charged by Australian fund managers are then subject to corporate income tax in Australia.

Research by Deloitte Access Economics shows that fees generated from managing foreign fund flows contributed \$434 million in total value added to the Australian economy in 2012–13 and that a doubling of annual funds management export revenue could result in an increase in GDP of approximately \$330 million per annum by 2029–30.⁵ The proportion of funds sourced from overseas represents only 3.6 per cent of the total \$2.6 trillion invested in Australian managed investment schemes.⁶

At a regional level, the proportion of funds under management in Asia is low compared to the region's share of world population. As shown in Figure 1, Asia has only 12 per cent of global funds under management yet the region has over 60 per cent of the world's population. By contrast, the Americas have slightly below 60 per cent of global funds under management, despite having only 14 per cent of the world's population.

FIGURE 1: Regional share of global funds under management versus population⁷



Moreover, by 2030, Asia will represent 66 per cent of the global middle-class population and 59 per cent of middle-class consumption, compared to 28 per cent and 23 per cent, respectively, in 2009.⁸ There is clearly scope for a greater proportion of global funds to be both invested in and managed from Asia. Australia's existing expertise makes it well placed to capitalise on this future growth.

Government support

There is bipartisan government support for growing the amount of foreign-sourced funds managed in Australia. The *Johnson Report* was commissioned by the former Labor Government and many of the recommendations were accepted,⁹ however, there are key recommendations relating to increasing funds management exports which remain outstanding.

The Coalition Government appears to have a strong focus on increasing financial services exports.¹⁰ Free trade agreements were concluded in 2014 with Japan¹¹ and Korea¹² with both agreements containing strong financial services chapters,¹³ and on 20 December 2015 the China-Australia Free Trade Agreement came into force.¹⁴ The scene appears to be set for Australia to leverage its comparative advantage and manage more foreign sourced money from its Asian neighbours.

In a heavily regulated industry such as financial services, however, it is not merely enough to sign a trade agreement. Operating rules are complex, with industry participants required to have licences and approvals. Providers also need a translation of trade agreement rules and market access provisions to ensure they fully understand what they are permitted to do in a new market. Mutual recognition agreements form a key element of trade facilitation in financial services.

What is mutual recognition?

Mutual recognition of investment funds removes the need for an investment fund operator to obtain a licence from the regulator in a new market that it intends to access. It provides an avenue for understanding what activities are permitted in a new market, based on the operator's existing licencing arrangements in its current market.

A mutual recognition framework is facilitated by regulators from both jurisdictions reaching agreement on the acceptability of each other's regulatory structures and systems. Regulators then agree to allow operators to access their market without additional licencing requirements. Without a mutual recognition agreement fund operators would usually be required to set up a physical presence in the new jurisdiction and meet all relevant local licencing and capital requirements.

Conceptually mutual recognition is often described in terms of 'home' and 'host' jurisdictions. For example, in a mutual recognition agreement between Australia and China, the home regulator for Australian funds would be the Australian Securities and Investment Commission (ASIC) with the host regulator being China Securities Regulatory Commission (CSRC). The reverse would be the case for Chinese funds managers with CSRC being the home regulator and ASIC being the host.

Passporting

Mutual recognition usually refers to bilateral agreement between two countries, however, the concept of 'passporting' has recently become popular in the Asian region. Similar to mutual recognition, passporting schemes are designed to increase exports of investment funds between the participating economies.

Passporting operates under a slightly different model to mutual recognition, with participating regulators initially undertaking due diligence on each other's regulatory frameworks to ensure that they are each satisfied with the level of regulation in the other jurisdictions. Once agreement is reached, a common set of rules is agreed. This prevents the opportunity for regulatory arbitrage that might arise due to differences in levels of qualification or experience between each of the jurisdictions' 'home' rules.

The agreed rules for passporting arrangements cover the threshold licence requirements for fund operators and the allowable product features for a passportable fund. A 'passport' is issued by the home regulator on the understanding that all participating regulators agree to accept the operator with only very minimal approval in the host markets. The home regulator is responsible for licencing the provider and products comply both with the provider's home rules and the agreed passporting rules. Once passport approval is received from the home regulator, the provider is free to operate in the other participating jurisdiction with only a streamlined or minimal approval process required by each host regulator.

Australian examples of mutual recognition

New Zealand

Australia and New Zealand established mutual recognition of fund product offer documentation in 2008 under the 'Trans-Tasman mutual recognition scheme'.¹⁵ The aim of the scheme is

... to remove unnecessary regulatory barriers to trans-Tasman financial product offerings and reduce costs of capital raising in both Australia and New Zealand. At the same time the scheme maintains investor protection through appropriate disclosure and supervision of offerings.¹⁶

This arrangement has been largely facilitated by the regulatory similarities between Australia and New Zealand. It provides for a wide variety of products to be offered with only minimal entry and ongoing requirements in the host jurisdiction. While the regime has been successful,¹⁷ it is difficult to extrapolate from this example to mutual recognition agreements between Australia and other Asian jurisdictions, due to the regulatory similarities that exist between New Zealand and Australia, and existing close economic ties.

Hong Kong

Australia and Hong Kong established a mutual recognition agreement to overcome regulatory incompatibility issues in 2008.¹⁸ It is based on broad equivalence between the Australian and Hong Kong regulatory regimes.

Despite this agreement covering retail fund offerings, little cross-border activity appears to have occurred between Hong Kong and Australia through the arrangement.

It is unclear why this regime has not been successful. Hong Kong's positioning predominantly as a fund distribution centre into China may mean it is not an attractive retail market in and of itself for Australian fund manufacturers. Alternatively, the lack of a tax treaty with Hong Kong may mean that investors do not have sufficient certainty to be able to invest into Australian domiciled funds. There may be additional factors but this failure certainly warrants further investigation.

Regulatory equivalence

ASIC has established a general 'regulatory equivalence' program that allows foreign managers to apply for recognition of the licence they hold in their home jurisdiction.¹⁹ ASIC has also developed principles for cross-border financial services regulation which provide guidance for operators seeking to gain regulatory equivalence between their home jurisdiction and Australia's regulatory regime.²⁰

This approach is different from mutual recognition as it does not require involvement of the host regulator. If ASIC deems the manager's home regulations to have a requisite level of regulatory equivalence then it will recognise the home licence and allow the licensee to provide services to Australian wholesale investors, regardless of whether Australian operators have been granted reciprocal access to investors in that market.

Mutual recognition between China and Hong Kong

Arrangements for the mutual recognition of investment funds between China and Hong Kong commenced on 1 July 2015.²¹ Under the regime, a Hong Kong domiciled fund that is authorised by the Hong Kong Securities and Futures Commission (SFC) will be able to benefit from a streamlined approval program by the CSRC.²² While there is still a level of sign-off or authorisation required by the host jurisdiction, mutual recognition will remove the need for Hong Kong operators to establish a duplicate business in China. This regime is expected to have a significant impact on the take-up of investment fund products by Chinese investors due to their ability to access a wider range of fund products coming out of the well-established Hong Kong market.

The importance of the China and Hong Kong mutual recognition scheme should not be underestimated, despite the apparent absence of an immediate or direct benefit to Australia. China's track record with existing schemes (Qualified Foreign Institutional Investor, Renminbi-Qualified Foreign Institutional Investor and Renminbi convertibility) shows a genuine appetite to experiment and expand successful programs. If the China and Hong Kong mutual recognition plans are well received there is clear potential for other countries to seek to participate, or to have similar bilateral arrangements established.

Australia and China's relationship has been further strengthened through the recent China-Australia Free Trade Agreement (ChAFTA) agreement. As described earlier, this agreement provides a starting point for liberalisation of financial services trade between the two countries. Australia could be well placed if China begins to expand the Hong Kong mutual recognition agreement to other countries and regulators should begin discussions on this topic through the ChAFTA framework.

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Fund passporting in the Asia region

There are two passporting regimes currently being developed in the Asia region.

The passporting schemes have been modelled on the European Union's Undertaking for Collective Investment in Transferrable Securities (UCITS) directive that was first established in the EU in 1985.²³ UCITS offers a similar structure whereby funds licenced in one country can be marketed to investors in any other country in Europe.

Importantly, the rules for passporting under both regimes only extend to the production of investment funds (manufacture), they do not extend to distribution of these products. Depending on the host country requirements it may still be necessary for the operator to either become licenced to sell fund products in the host jurisdiction or to establish a commercial relationship with another entity that does. Further, under both regimes it is expected that a fund offered into a host jurisdiction will meet that host's relevant local consumer protection and product disclosure rules.

ASEAN Collective Investment Scheme passport

An ASEAN passport scheme was initiated between Singapore, Malaysia and Thailand and has been operational since the *Handbook for CIS Operators of ASEAN CISs* was published on 25 August 2014.²⁴ The *Standards of Qualifying ASEAN CIS* prescribes the standards for fund operators and product specifications for funds.²⁵ Only a small number of funds have been registered to date.

The ASEAN regime operates on the basis of a mutually agreed framework of rules applying to both the fund operator and the product. The rules are highly prescriptive and, in areas of regulation such as 'years of experience', they create a higher threshold level than that of participating jurisdictions.

Asia Region Funds Passport

There is also an Asia Region Funds Passport currently being developed by the APEC Finance Ministers that is expected to be implemented in early 2017.²⁶ Parties to this scheme are Australia, New Zealand, Japan, South Korea, the Philippines and Thailand. Singapore has been heavily involved in the scheme's development but is yet to sign on.

Like the ASEAN regime, the APEC passport will have an agreed set of rules to set a base level which is higher than that of individual jurisdictions. Draft APEC passport rules show the concept to be largely similar to the ASEAN regime in approach and level of prescription for fund operators.

For investors from participating jurisdictions the APEC passport would create relatively instant access to a wide range of investment products, resulting in more options to diversify investment exposure and greater competition to drive down investment management fees. Australian investors would likewise have access to more offshore investment options, which is essential for a growing pool of investment funds that has already outstripped its domestic stock market.

Research conducted by the APEC policy unit in relation to the APEC passport notes that increasing access to a broader range of investment funds could result in significant savings for investors in the Asian region.²⁷ For investors from participating jurisdictions the APEC passport would create relatively instant access to a wide range of investment products, resulting in more options to diversify investment exposure and greater competition to drive down investment management fees. Australian investors would likewise have access to more offshore investment options, which is essential for a growing pool of investment funds that has already outstripped its domestic stock market.²⁸

Although Australia cannot participate in the ASEAN scheme, it is interesting to note the potential crossover of both Singapore and Thailand in both passporting regimes. Questions clearly emerge regarding the long-term viability of two similar passporting regimes with similar participants, and the potential for schemes to merge over time. Until the APEC passport is operational it is not possible to speculate with any certainty about the coexistence of these schemes in the future. However, the increasing trend of passporting shows a strong desire in the region for greater access to a broader range of products and a higher level of integration.

Conclusions

A key question for fund operators entering into passporting or mutual recognition arrangements will be how to successfully distribute products into a new market. While part of the benefit from both these mechanisms will be alleviating the need for a fully licensed local presence, it remains to be seen whether products can be successfully marketed without a presence in the local market. The large banks' dominance of distribution channels in most jurisdictions means that careful planning is needed for distribution to be successful. Distribution agreements with providers on the ground in new markets will be critical in reaching customers.

Australia has a strong funds management capability and there is likely to be some resistance or concern from foreign asset managers at the prospect of experienced competitors being allowed access to their market. From a regulatory perspective this needs to be balanced against the needs of consumers and the flow-on benefits of greater competition. These include lower fees and a more diverse range of product offerings which would benefit consumers of fund products in the region.

The product features desired by foreign investors may be different from those currently on offer in the Australian market, and vice versa. Fund operators will need to understand the demands of investors both in terms of risk-reward trade off and other product features. The decision on whether to pay commissions also has the potential to influence product design and pricing. Remaining competitive on price, yet offering an attractive investment product, will be a key success factor.

The social and cultural issues arising from operating in foreign markets also cannot be overlooked and may potentially be more challenging than the construction of an effective mutual recognition or passporting agreement. A fundamental understanding of the potential pitfalls of litigation and the different approach to legislative interpretation adopted by foreign courts is critical.

Digital technology is an area where potential cost savings and increased efficiency could result. If mutual recognition and passporting arrangements within the region are to fully prosper they must be implemented so that advances in digital technology can be leveraged. Smartphone technology such as fingerprint identification has the potential to solve customer identification issues that are currently plaguing a wider use of technology in funds management. Consumer protection against fraud and online 'scams' must remain paramount, however, and achieving an appropriate balance between protection and facilitation could enable increased access to a wider range of products. This would benefit customers and assist in further increasing competition between providers.

There are risks but, on balance, mutual recognition and passporting represent a considerable opportunity for Australian fund managers and their peers within the region. The growing pool of funds under management in Australia will be attractive to foreign managers with the requisite expertise to compete. The growth projections for Asia's middle class represent an opportunity that every investment management market in the world will be trying to access.

Over time it is likely that opportunities for convergence among these schemes will emerge. China's track record with existing schemes suggests that if the mutual recognition agreement progresses well, it may not limit itself to an agreement with Hong Kong. Further, Japan has not yet entered a regime and remains a significant market with the potential to generate interest from other jurisdictions if it does choose to engage. The actions of these two key economies will be critical in determining the future structure of cross-border trade within the region.

To be successful and prosper Australian funds management businesses will need to have an excellent understanding of the regulatory structure and cultural environment in which they will be operating. The winners will be those businesses able to translate this understanding into effective and efficient business practices that provide investors access to attractive investment products.

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SOME ISSUES IN CROSS-BORDER *bank regulation*

IAN PATERSON, Partner, King & Wood Mallesons

This paper examines three methods of cross-border banking and their treatment under Australian regulation. It also compares these different forms of cross-border banking in a situation in which the banking business is facing financial difficulty and resolution is required. Several reform proposals are also provided to address the challenges associated with banks contracting under foreign laws and through branches.

Cross-border banking

Banking is a commercial activity that often takes place across borders. Although we may think of this as a recent phenomenon arising from the deregulated financial system that arose from the late 1980s and reached its zenith in 2007, it is much older. Think of the old Anglo chartered banks, incorporated in England, with English capital, but with most of their business in Australia, New Zealand, South Africa and other colonies. The predecessors of ANZ (the Banking Australasia and the Union Bank) were examples of this,¹ and Standard Chartered Bank is another. Much earlier, there were great banking families, Medici, Fuggers and Rothschilds, handling payments, bullion and raising loans across the cities, principalities and states of Europe.

In modern times, banking is also a regulated activity since, if left entirely to a free market, it is prone to bouts of instability and loss.² So most jurisdictions now require a bank to obtain a licence to conduct business and impose upon it some measure of ongoing prudential requirements and supervision, such as requirements to hold a certain quality of capital or liquid assets and have sound management and supply the authorities with copious data about its financial position.

Regulation is essentially territorial. It is also not uniform and, despite the best effects of international cooperation through organisations such as the Financial Stability Board (FSB) and the Bank Committee on Banking Supervision (BCBS), it is unlikely that it ever will be. Regulators may agree among themselves to share information and to cooperate but this does not mean that they are free to depart from the direction of their local laws.³ To apply regulation to cross-border banking frequently involves a decision as to the point of nexus between the activity and the jurisdiction. The nexus may be formed by incorporation, by business presence or in some cases by the use of the law of the jurisdiction in contracts. Jurisdictions may see the points of nexus in different ways and have different substantive rules. Conflicts of laws are likely to arise.

Of course, these conflicts could be avoided if banks did not venture beyond the borders of their home jurisdictions. In the aftermath of the financial crisis that began in 2008 some might think that would be a good thing. The overseas forays of financial behemoths have ended in disappointment at best, and outright disaster at worst. Some say such institutions are unmanageable, others that they are dangerous conduits for the transmission of malpractice and risk to otherwise safer quarters of the globe. Let us put an end to this by law, they say. This equation of domestication and security is, in my view, an error.

Regulation is essentially territorial. It is also not uniform and, despite the best effects of international cooperation through organisations such as the Financial Stability Board (FSB) and the Bank Committee on Banking Supervision (BCBS), it is unlikely that it ever will be. Regulators may agree among themselves to share information and to cooperate but this does not mean that they are free to depart from the direction of their local laws. To apply regulation to cross-border banking frequently involves a decision as to the point of nexus between the activity and the jurisdiction. The nexus may be formed by incorporation, by business presence or in some cases by the use of the law of the jurisdiction in contracts. Jurisdictions may see the points of nexus in different ways and have different substantive rules. Conflicts of laws are likely to arise.

If we ask which is more secure, an international or a domestic banking system, the answer is that it depends upon the nature of the economic difficulties to which it is subject. It is true that an internationally active bank may transmit an overseas crisis to a healthy domestic economy. But, on the other hand, it may protect the domestic financial system from the worst effects of a domestic slump. This is one lesson of the Australian crisis of the 1890s. The slump was most acute in Australia. Australian financial institutions failed. The cross-border 'Anglo' banks with their foreign capital resources remained open, and their deposits secure. Further, a purely domesticated banking system relies on a balanced economy where domestic banks are financed from domestic savings and finance domestic loans. In an open economy with persistent current account deficits some element of cross-border banking activity is unavoidable. The question is rather: what is the best approach to conducting this activity and, in particular, what is the best structure for allowing an institution to be resolved, should it fall into difficulty?

The conduct of cross-border banking

I will discuss three methods of cross-border banking, and illustrate how they are treated in Australian regulation.

These are:

- > subsidiary banking
- > branch banking
- > cross-border banking by contract.

Subsidiary banking: This is straightforward: a separate legal entity is incorporated in the domestic (or 'host') jurisdiction. It is owned by a foreign banking parent, and may rely to a greater or lesser degree on the foreign parent's brand and know-how. It is unlikely to be guaranteed by the foreign parent, and it is separately capitalised.

Branch banking: A company may carry on business in more than one place.⁴ That physical place is a branch. The branch is not at law an entity separate from the parent, although particular laws may treat activities at a branch in one jurisdiction differently from activities at another branch.⁵ As it is the same legal entity, there is no legal obligation between branches⁶ and an obligation incurred through a dealing at the branch is a liability of the legal entity, not merely of the branch, unless the creditor agrees to limit its recourse to the assets of the branch. The capital of the banking business is the capital of the legal entity, not the branch.

Cross-border banking by contract: Banks may deal with people in a jurisdiction from a place of business outside the jurisdiction and without having a place of business inside it. Examples of this practice are where a bank raises funds in the international bond markets⁷ or where it participates in wholesale lending activities, e.g. syndicated loans, without having a place of business in the jurisdictions where the borrower is a resident. Activities of this nature are likely to increase with the growth in electronic commerce.

Which forms of cross-border business a bank chooses to engage in is a product of many factors, including its business model and what is permitted by local regulation.⁸ In a jurisdiction which permits foreign banks to operate either as a branch or through a subsidiary, if the model is for a purely domestic operation, borrowing from domestic deposits and lending to a domestic business, a subsidiary may be more likely to be the chosen legal vehicle. Where, on the other hand, the model contemplates cross-border business in wholesale markets, a branch may be preferred on the basis that counterparties will want to have the credit of the foreign institution securing their claims. Branch banking is likely to require marginally less capital and hence is less costly, since it is easier to allocate capital within a legal entity than when there are separate capital requirements for separate subsidiaries. The contractual structure may be convenient if the nature of the business can be prosecuted without a physical presence.

For an example of how the different forms are tolerated by a regulatory system, we may turn to Australian law. The starting point is territorial and is applied on the basis of physical presence. Under the *Banking Act 1959* (Cth) ('Banking Act'), a person carrying on banking business in Australia, whether incorporated in Australia or not, must have an authorisation from the Australian Prudential Regulation Authority (APRA).⁹ Licences may be granted to Australian or to foreign incorporated companies, but there are restrictions on the latter. First, they must be licensed deposit-taking institutions in their jurisdiction of incorporation. In practice, this needs to be a jurisdiction with a supervising regime that APRA regards as adequate.¹⁰ Second, their activities are limited to dealing with customers who are broadly 'wholesale'.¹¹

Australian law also regulates contracting from abroad with Australians. Such activity may require the consent of APRA. This is because, without APRA's consent, the Banking Act prohibits the use of the term 'bank' and cognate expressions in Australia by a person carrying on a financial business, whether or not that business is carried on in Australia.¹² Unless the entity has, with APRA's approval, established a branch or a representative office in Australia,¹³ this may confine the entity's activities to those permitted by other class orders, for instance, wholesale fundraising by certain foreign financial institutions, subject to conditions,¹⁴ or require specific consent.

The *Corporations Act 2001* (Cth) ('Corporations Act') overlays additional restrictions. Offers of 'financial products' aimed at Australian investors may require the issuer to have an Australian financial services licence.¹⁵ The issue of debentures to retail investors is deemed to constitute carrying on business in Australia.¹⁶ Any bank doing this would be forced to register as a foreign corporation with ASIC and would require a specific consent from APRA.

Legislation in many other jurisdictions follows a broadly similar pattern.

Resolving cross-border banks

Suppose then that a cross-border banking business is in financial difficulty and needs to be resolved. How do the different forms of cross-border banking compare?

As a first step it is necessary to appreciate some of the techniques of a modern system of resolution. By resolution I mean a formal procedure, short of winding up, for keeping the banking business 'viable', so that it's a going concern. These include the following actions by direction of the prudential regulator:

- > a merger or transfer of business to a sound institution or to a 'bridge bank';
- > a recapitalisation, in particular by cancelling debt or converting certain existing liabilities to equity;
- > a transfer of ownership, where the existing share capital is temporarily seized by regulator, and redistributed among creditors in exchange for the cancellation of their debts.

It is envisaged that these methods are implemented at great speed, e.g. over a weekend.¹⁷

Now let us consider the application of these resolution measures to the different forms of business, starting with subsidiaries.

Subsidiaries

Since the subsidiary is a separate legal entity incorporated in the domestic or host jurisdiction, it should be most susceptible to the powers of the host regulator. Its corporate existence, its shareholdings, and likely most of its assets are shaped by the law of the host jurisdiction. There should be little conflict with the rules of the foreign regulator, at least so long as the foreign regulator agrees to let the resolution of the subsidiary be a matter for the host regulator. Yet there may be practical problems. Both subsidiary and foreign parent may be in difficulty. One may be dependent on the other for services or access to capital. Foreign and host regulator may have different judgments, different plans or inconsistent duties under their national laws.

Branches

This method throws up greater challenges. Two regulators and national laws are seeking to deal with the one legal entity. Outside legal systems which have adopted a common law,¹⁸ there is no general principle for the courts of one country to recognise comprehensively the resolution measures of another. In particular, the Model Law on Cross-Border Insolvency¹⁹ does not apply to banks.²⁰ The effective transfer of shares or other property pursuant to a resolution measure may be frustrated by rules of private international law that do not recognise a foreign regulator's action where it purports to affect title to property in the jurisdiction.²¹ The common law is a patchwork of remedies and jurisdictions, always liable to be trumped by mandatory laws of the jurisdictions where the case is being heard.²²

Outside legal systems which have adopted a common law, there is no general principle for the courts of one country to recognise comprehensively the resolution measures of another. In particular, the Model Law on Cross-Border Insolvency does not apply to banks. The effective transfer of shares or other property pursuant to a resolution measure may be frustrated by rules of private international law that do not recognise a foreign regulator's action where it purports to affect title to property in the jurisdiction. The common law is a patchwork of remedies and jurisdictions, always liable to be trumped by mandatory laws of the jurisdictions where the case is being heard.

Moreover, in the winding up of banks and their branches there are widespread departures from the usual insolvency principle that available assets be distributed among creditors equally and rateably. Examples of these departures are:

- *Local depositor preferences*: where depositors in the supervised jurisdiction are liable to be paid out of assets, or assets within the jurisdiction, in preference to other creditors. In some jurisdictions the preference is limited to the extent that the deposits are covered by a guarantee or insurance scheme,²³ in others, such as Australia, where it applies to Australian incorporated banks, they are unlimited in amount.²⁴
- *Local creditor preference*: where local creditors (depositors or not) of a branch of a foreign bank are given a prior claim on assets of the bank in the jurisdiction over other creditors or the assets are otherwise 'ring-fenced' for the benefit of local creditors.²⁵
- *Set-off*: in some jurisdictions, a creditor of an insolvent bank may set-off claims they owe to the bank against the claims it has against the bank. In others, the creditor must pay what it owes to the bank and prove for its claims in the insolvency of the bank. Where the bank operates as a branch, and is being wound up in its home jurisdiction and in the place of the branch, and the home jurisdiction does not allow set-off, will the branch winding up proceed on the same basis? No, said the court in *Re Bank of Credit and Commerce International SA (No.10)*,²⁶ the English rules for set-off are mandatory.

There are further complications. Suppose a creditor of a branch is given a priority claim by local law. Notwithstanding that preference, he does not recover in full. He goes to prove the balance of his claim in proceedings in the foreign jurisdiction. The foreign court may not allow his claim, to the extent the creditor has received a preference under local laws over what it would have recovered had he been treated *pari passu* with creditors in the jurisdiction of the foreign court. To be allowed to claim in the foreign proceedings, the creditor must first give up its preference.²⁷ As well as this common law rule, there are signs of jurisdictions proposing to legislate against jurisdictions which provide a preference to home depositors.²⁸

Contracts

This is legally less complex but no less convenient. The outcome will turn on the law chosen by the parties to govern the contract and the rules of private international laws that govern the effect of statutes and regulatory action on contracts.

Suppose a German bank issues bonds governed by New South Wales law in the Australian wholesale capital market. Under German law resolution measures purport to discharge or vary the bank's liabilities. Are those measures effective if the matter is before a New South Wales court? No, because under New South Wales law discharge and variation of contracts is determined by the governing law of the contract and that is New South Wales law, not German law.²⁹

Suppose, on the other hand, an Australian bank borrows in the US markets under New York law. As part of a process of resolution APRA directs the bank not to repay the borrowing.³⁰ The Banking Act purports expressly to present the consequences, notwithstanding the choice of foreign law,³¹ but it is doubtful that this would be effective in New York proceedings.³²

Proposals for reform

How could the difficulties with banks contracting under foreign laws and through branches best be addressed?

A blunt rule requiring a bank to contract only by instruments governed by the law of its home jurisdiction would resolve the problems of the recognition of home state resolution measures. Already we are seeing some moves to require this by certain regulators in relation to borrowings by their banks.³³ The implications of adopting rules of this kind merit careful consideration. In bond markets, choice of the investors' law, or an internationally accepted law (e.g. English law or New York law) is customary to protect the investor from the risk of foreign state action to relieve the debtor from its obligations.³⁴ Requiring the use of the bank borrower's law moves that risk to investors. It is likely that a price will be charged for that risk. It may at least be more prudent to create a framework where parties are free to allocate that risk. Where it lies with investors, the bank may receive recognition in the issuer's capital structure as a bond susceptible to bail in, or counting towards 'total loss absorbing capital' but bonds could still be issued on traditional terms to investors who do not wish to take that risk.³⁵

The problems that may arise between parent and its subsidiaries might be mitigated by agreements between regulators to act in a coordinated fashion, coupled with laws empowering them to act in that way. An example is the Memorandum of Understanding between the Federal Deposit Insurance Corporation in the United States and the Bank of England, under which the regulators propose that in many cases it would be appropriate for a cross-border globally significant group to be resolved by the resolution of the ultimate holding company under the direction of the regulator in that country's jurisdiction. Such a regime requires a high level of trust between the regulators and how appropriate it is may vary according to the structure of the group, the nature of its business and the size and location of its losses and, in some cases, these may favour resolution action by both regulators.³⁶ Australia is yet to adopt this approach.

The problems of branches could be dealt with by a blunt requirement that business be carried on through a subsidiary. That too would come at a price, as having separate capital in each subsidiary is likely to be more costly than operating on a branch basis.³⁷ A more efficient alternative may be to reform the law relating to banks that engage in significant cross-border business on a branch basis.

While it would seem an insurmountable task to harmonise bank insolvency laws, or produce accepted principles of recognition resolution measures affecting all banks, a more limited goal would be to establish a framework that permitted certain types of banks to operate on a cross-border branch basis with greater certainty than currently applies. The banks in question could be identified by their systemic importance and the percentage of their business conducted on a branch basis. It is likely that the banks would be institutions dealing with wholesale customers (as regards both their assets and liabilities). The framework would proceed on internationally agreed principles that treated creditors as far as possible on a *pari passu* basis i.e. there would be no depositor preference, no branch ring-fencing or priority.

Wholesale investors should not need these protections. The single legal entity lends itself to the principles governing the winding up in the jurisdiction of incorporation being applied. For instance, principles of set-off should be decided by that law. Different capital requirements could be used to encourage banks to organise their affairs so that relevant operations become subject to this framework.

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Notes

1. The Bank of Australasia and Union Bank were merged into the Australia and New Zealand Bank in 1951. It was not until 1977 that the merged entity was re-domiciled to become an Australian company: *Australia and New Zealand Banking Group Act 1977* (Vic).
2. For examples of banking crises in liberal market conditions, see the Australian crisis of 1893: SJ Butlin 1961, *Australia and New Zealand Bank: The Bank of Australasia and the Union Bank of Australia Limited 1828–1951*, London. See also the New York panic of 1907: Robert F Bruner and Sean D Carr 2007, *The Panic of 1907 Lessons Learned from the Market's Perfect Storm*, John Wiley & Sons.
3. For a survey of the arrangements for cooperation see Calvin Doan, Veronica Glanville, Adrian Russell and Damien White 2006, [Greater international links in banking – challenges for banking regulation](#). For more recent proposals for global systemically important institutions, see note 36 below.
4. *De Beers Consolidated Mines v Howe* [1906] AC 455; *Koitaki Para Rubber Estates Ltd v FCT* (1940) 64 CLR 15.
5. For instance, the company may be considered resident for tax purposes where it has its place of central management and control, but have a 'permanent establishment' in other countries where it carries on business and income derived at the foreign permanent establishment treated differently. Or for certain purposes, e.g. dealings under letter of credit branches in different countries are treated as if they were separate banks: *Uniform Customs and Practice for Documentary Credits*, Article 3.
6. *Max Factor v FCT* (1984) 15 ATR 231.
7. In Australia, much of the major banks' wholesale funding is raised offshore. For medium-term notes this is approximately 73%. See Australian Bureau of Statistics 2014, *Financial Accounts*, March Quarter, p. 35, where the amount of Australian issued bonds and offshore issued bonds is \$110.7 billion and \$303.4 billion, respectively.
8. For a useful survey, see Jonathan Fiechter, Inci Otker-Robe, Anna Ilyina, Michael Hsu, Andre Santos and Jay Surti 2011, *Subsidiaries or branches: Does one size fit all?*, International Monetary Fund, 7 March.
9. Section 9 *Banking Act 1959*.
10. Australian Prudential Regulation Authority 2008, [ADI Authorisation Guidelines](#).
11. The APRA test is that they not take deposits for less than A\$250,000. It does not align with the test of a wholesale client in section 761G of the Corporations Act.
12. Section 66 *Banking Act*.
13. See the *ADI Authorisation Guidelines*.

14. *Banking (Exemption) Order No. 82*. The securities must have a face value of A\$500,000.
15. Section 911D Corporations Act.
16. Section 601CD Corporations Act.
17. Australian regulation contains examples of the first two measures described but in neither a comprehensive nor coherent code, see Part 4 of the *Financial Sector (Business Transfer and Group Restructure Act 1999)* (Cth) and APRA *Prudential Standard APS111 Attachment J* for the forced conversion or write-off of regulatory capital instruments and also section 14AA Banking Act. A more comprehensive approach is found in EU countries e.g. *Banking Act 2009* UK and *Banking Recovery and Resolution Directive (2014/54/EU)*. For the need for speed see Prudential Regulation Authority 2014, *Implementing the Bank Recovery and Resolution Directive*, Consultation Paper 13/14, July.
18. As with the European Union pursuant to the *Banking Recovery and Resolution Directive*.
19. Published by the United Nations Commission on International Trade Law and adopted into Australian law by the *Cross-Border Insolvency Act 2008* (Cth).
20. *Model Law on Cross Border Insolvency* art 1–2; see *Cross-Border Insolvency Regulations 2008* (Cth) reg 3.
21. *Williams & Humbert Ltd v W & H Trade Marks (Jersey) Ltd* [1986] AC 368.
22. A bank acting in Australia by means of a branch could be subject to at least five different forms of insolvency proceedings: a letter of request under section 581(3) of the Corporations Act; an ancillary liquidation under section 601CL(14); a winding up under Part 5.7 of the Corporations Act; an order recognising a foreign liquidation order; or a scheme of arrangement under Part 5.1 of the Corporations Act.
23. See Grant Turner 2011, 'Depositor protection in Australia', *RBA Bulletin*, December quarter, pp. 45–55, p. 54.
24. Section 13A(3) Banking Act.
25. In Australia, see section 11F of the Banking Act. In the US, see section 4(j)(2) of the *International Banking Act of 1978* (codified to 12 USC 3102(j)(2)).
26. [1997] 2 WLR 172. Subsequently considered in *In re HIH Casualty and General Insurance Ltd* [2008] 1 WLR 852.
27. This is the so-called 'hotchpot' principle: see *Re HIH Casualty and General Insurance Ltd* (2005) 215 ALR 562; *In re HIH Casualty and General Insurance Ltd* [2008] 1 WLR 852.
28. See for the UK, Financial Services Authority 2012, 'Addressing the implications of non-EEA national preference regimes', *FSA Consultation Papers*, vol. 12, no. 23, September.
29. *Gibbs v Societe Industrielle de Metaux* (1890) 25 QBD 399; *New Zealand Loan & Mercantile Agency Co v Morrison* [1898] A.C. 349 (P.C.); *Adams v National Bank of Greece* [1961] AC 255.
30. Section 11CA Banking Act.
31. Section 11CD Banking Act, contrast *Barcelo v Electrolytic Zinc* (1932) 48 CLR 391.
32. *NML Capital Ltd v Republic of Argentina* 699 F 3d 246, 250 (2d Cir. 2012).
33. For example, the Dutch regulator. Other regulators require this only in relation to particular provisions agreeing to the application of resolution measures, or in particular classes of instruments, e.g. regulatory capital as in APS III. See APRA 2013, *Prudential Standard APS 111*, Attachments E (para 14) and H (para 13).
34. *Adams v National Bank of Greece* [1961] AC 255.
35. Commonwealth of Australia 2014, *Financial System Inquiry Final Report*, p 70. See also FSB 2014, *Adequacy of Loss-absorbing Capacity of Global Systematically Important Banks in Resolution, Consultative Document*, 10 November; Andrew Gracie 2014, '[Total Loss-Absorbing Capacity – The thinking behind the FSB Term Sheet](#)', Bank of England speech, 4 December.
36. Federal Deposit Insurance Corporation and Bank of England 2012, *Resolving Globally Active, Systemically Important, Financial Institutions*, joint paper, 10 December. See also Financial Stability Board 2012, *Recovery and Resolution Planning: Making the Key Attributes Requirements Operational*, November, p 15.
37. Jonathan Fiechter et al., op. cit.

NEW TECHNOLOGY, PERSONAL DATA PROTECTION AND IMPLICATIONS

for financial services regulation

CAMILLE BLACKBURN, Director and Advisor, Regulation and Financial Systems

Information, Communication and Technology (ICT) developments present a challenge to public expectations about the collection, use, control and cross-border transmission of personal data, including financial data. This paper considers the data protection laws in Australia, and in Europe, which has the most comprehensive personal data protection laws globally. It also examines the impact of different regulatory approaches to data protection for three areas of technology-driven financial sector innovation.

Though policy settings are not yet stable or consistent globally, substantial regulatory activity continues in the field of data protection.¹ Most data protection regimes globally, including Australia's, have two major policy drivers:

- > *human rights*: to protect the fundamental rights and freedoms of natural persons and, in particular, the right to privacy with respect to the processing of personal data
- > *economic*: not to restrict the free flow of personal data between states for reasons connected with human rights to personal data protection.

A global approach to these policy considerations is hampered by an absence of consensus on the benefits and potential harms arising from ICT innovation and, consequently, the useful role for regulation. Private sector responses or 'privacy-enhancing innovation' also contribute to uncertainty about the need for regulation.

Personal data protection in Europe and Australia

Australia's personal data protection regime is contained in the *Privacy Act 1988* (Cth) ('Privacy Act') that mandates 13 Australian Privacy Principles (APPs). While the Office of the Information Commissioner provides administrative interpretation of the law, Australian privacy and data protection concepts do not have much depth of jurisprudence arising from the application of the statute or common law concepts.

The Australian position also contrasts with the deep human rights jurisprudence that supports the EU data protection architecture. Personal data protection is recognised as a fundamental right in EU member states under the *Charter of Fundamental Rights* ('European Charter'), although the exact content of the new additional protection afforded by a human right to personal data protection over the established right to privacy is still an open question.² Public policy debate in Europe is also fanned by the imminent replacement of the existing EU *Data Protection Directive* ('Directive') with the more expansive *General Data Protection Regulation* ('Regulation'). Data protection issues have media prominence and feature regularly in public policy forums.

Digital innovation in financial services

Technology-driven innovation is transformative for the financial services sector, which revolves around recording, analysing and interpreting transactions, and managing associated information flows. With no physical products to manage, these processes readily lend themselves to improvement through the application of digital technologies.³

In this paper we discuss three categories of innovation: big data and profiling; cloud, and trans border data flows; and data portability, robo advice and credit provision.

Big data and profiling

Many financial services firms have always had access to big data. Their business depends on access to personal identity and financial data about customers.

Much of that information arises from service provision itself. Other information is solicited to meet legislative requirements for risk assessment or to tailor product offerings. International standards require all customers to provide details about their identity prior to services being provided. Clients seeking credit need to provide information to inform credit assessments. Advisors require information about personal circumstances and needs in order to provide a reasonable basis for advice. Legislation increasingly requires information to inform tax authorities and international market trading obligations.

In addition to these data sets, an explosion of sensors, smart devices and social collaboration technologies is supplementing data from traditional sources. Additional data is also being collected by centralised bodies: international clearing houses for financial market trading, central credit reporting databases, and new payment platforms overseen by central banks are a few examples of this.⁴ National governments are encouraging these trends with open data policies and academic institutions are increasingly publishing useable data.⁵ Data generated by all sources is also increasingly connected.

For financial services firms, the benefits of big data make it a commercial imperative. Studies point to enhanced algorithmic and market research capabilities, better risk management and regulatory reporting benefits, increased customer loyalty from better anticipation of customer needs and other forms of data monetisation. The benefits to customers are also self-evident – less friction in product and service choice because of more targeted product offerings and, often, lower cost.

However, the proliferation and use of data cause a general sense of unease increasingly being described as a loss of ‘informational self-determination’ – a lack of control of how one presents oneself to others. The retention of information alone is sufficient to give rise to these concerns – the German Constitutional Court has referred to a ‘diffusely threatening feeling of being watched’.

Big data challenges privacy because it facilitates the processing of aggregated information, or depersonalised (‘pseudonymous’) information and matching with other information, enabling personal attributes to be derived. Most data protection laws use a concept of ‘personal’ data or information as the threshold for substantive protections. That concept is increasingly challenged by the fact that general data can be personalised without the data subject’s knowledge or consent.

At a more granular level, there are two more micro sets of policy concerns: privacy and discrimination.⁶

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The Australian and European regimes have approached this issue differently. Both regimes use the concept of 'personal information' (Australia) and 'personal data' (EU) as a definitional threshold for the protections they provide. However, in addition the European regime defines their term more widely and specifies threshold grounds for use of personal data. The most common ground is:

- (a) the data subject has unambiguously given his consent ...
- (f) processing is necessary for the purposes of the legitimate interests pursued by the controller or by the third party or parties to whom the data are disclosed, except where such interests are overridden by the interests for fundamental rights and freedoms of the data subject.⁷

Where consent is not obtained, the interests of the data controller and data subject need to be weighed against each another. For example, creation of pre-built profiles on non-social network sites though the aggregation of data independently contributed by social network users lacks a legal basis and is not permitted.

Profiling and matching also give rise to important policy issues regarding discrimination and adverse selection. For the financial sector that can be particularly harmful where those analytics are embedded in online or automated decision tools not transparent to the data subject.

The Australian regime does not have a legal grounds concept limiting personal data use.

Profiling and matching also give rise to important policy issues regarding discrimination and adverse selection. For the financial sector that can be particularly harmful where those analytics are embedded in online or automated decision tools not transparent to the data subject.

Increasing accuracy in analytics reduces the market for financial products that pool risks across a group or society. Risk pooling operates so that in an uncertain future the more fortunate underwrite the misadventure of the less fortunate. Accurate predictive analytics decrease the size of the 'uncertain future'. Persons with attributes that suggest an unacceptably high probability of future risk are either priced out of the market or not offered financial products at all.

This policy concern of adverse selection was first recognised for genetic information. In Europe restrictions prohibit the use of genetic information in insurance assessments.⁸ In Australia the Privacy Act applies to genetic information collected by insurers and a comprehensive report in 2003 into genetic practices recommended strengthening of industry practice in this regard.⁹ While some steps have been taken, the issue is still the subject of industry guidance rather than tailored legislative protection for individuals.¹⁰

A recent report commissioned by the UK government into the commercial use of personal information has also considered adverse selection for motor vehicle insurance.¹¹ It notes the increasing use of big data in assessment of risk, including a rising incidence of 'black box' insurance policies requiring installation of telematics in a person's car to monitor driver behaviour. Other information such as a good credit rating might also be used as a proxy in risk assessments for evidence of responsible behaviour.¹²

It is well-recognised in Europe that big data and automated decision making present a new frontier for policy. Article 15 of the Directive provides a right not to be subject to a decision based on automated processing: such a decision is defined as 'a measure that produces legal effects concerning this natural person or significantly affects this natural person'. This right allows a data subject to require human intervention in any significant decision that affects them. Proposed Article 20 of the Regulation extends these protections.¹³

None of these issues is explicitly addressed in Australia's regulatory settings.

Cloud and trans-border data flows (TBDFs)

Since the 1990s there has been broad acceptance that free flow of data was crucial to international integration of trade and commerce. What may not have been anticipated was the speed and level of disaggregation of financial service value chains. Offshore data processing is reliant upon data being provided to facilitate the activity — a trans-border data flow (TBDF).

The movement of data internationally provides complexity for policy formulation. It introduces the risks of:

- > avoidance of tight data protection requirements (particularly in Europe)
- > enforcement difficulties in foreign jurisdictions
- > protecting home citizens against inadequate data protection or intrusive government surveillance practices.

Cloud computing highlights these issues although they arise for any internationally outsourced financial service function, and particularly where the financial product or service is dependent on distributed ledger innovations.

In financial services, there are significant efficiency benefits that result from reliance on cloud services. By using cloud, Australia's largest bank has reduced its storage, application testing, and development costs by 50 per cent. Previously, 75 per cent of the bank's IT expenditure was on infrastructure but cloud usage has reduced this to 26 per cent.¹⁴ While the Australian Prudential Regulation Authority has issued some guidance on risks, there is no detailed guidance on the level of regulatory tolerance of the use of cloud services by the financial services sector.¹⁵

In Australia APP 8 allows disclosure of personal information to a recipient outside Australia if the entity 'reasonably believes the overseas recipient is subject to a law or binding scheme that, overall, is at least substantially similar to the way in which the APPs protect the information' and enforcement mechanisms in place. The provisions do not apply where the data stays within the same entity globally.

To facilitate the forming of a reasonable belief with regard to data flows within Asia, Australia agreed to the APEC Cross-Border Privacy Rules (CBPRs). If adopted in an entity's privacy policy, the CPBRs facilitate the free flow of information inside a corporate group within Asia as well as to other entities that meet those standards.

EU authorities have some doubts over the adequacy of the CBPR framework itself and that prevents free flow of personal data from EU member states into Australia. New Zealand has made the necessary adjustments and was recognised as adequate in December 2013.¹⁶

Legitimate questions have been raised about effective enforcement of rules relating to TBDF where cloud technologies provide a dynamic jurisdictional environment not transparent to the user (or regulator). That concern is one reason for the rise of regional clouds, as in Europe, such that information within the cloud could be passed from service provider to service provider without concern for the legality of that TBDF within the EU.

Data portability, robo advice and credit provision

In the EU, the draft Data Protection Regulation introduces a right to data portability ('RDP') giving a data subject the right to obtain (in a suitable format) and transfer data from one electronic processing system to another.

The proposed new right has its policy foundation in competition law. Lack of data portability has long been recognised as a potential switching cost, and a friction in the free operation of competitive forces.¹⁷ The proposed right has large implications for emerging business models in financial services.

Robo advice is the provision of advice about financial products generated by algorithms that match potential investors with products that suit the investor's financial attributes and needs.¹⁸ Online tools matching the investor to appropriate financial products may ultimately result in disintermediation of the human financial advisor.¹⁹ Initial steps toward this future state already exist in most countries.

In the UK, lack of mobility in switching between deposit accounts has been identified an impediment to competition in retail banking.²⁰ A Current Account Switching Service (CASS) was introduced that required banks to provide details of the customer's services in a standard format to facilitate the switching of services to new providers in less than seven days. A recent review of the scheme has noted its limited success.²¹ Another option mooted to facilitate bank account switching — Bank Account Number Portability (allowing the customer to 'own' their bank account number when switching akin to mobile number portability) — is considered too expensive and the Midata initiative (discussed below) may supersede CASS.

Lenders that refuse to extend credit to a small or medium-sized business are now subject to obligations that promote data mobility. The *Small and Medium Sized Business (Finance Platforms) Regulation 2015* requires lenders to share standardised data attributes of SMEs and their financing needs which can then be assessed by alternative lenders.

More broadly the UK 'Midata' initiative is a public/private program in the UK working toward standardising how personal information held by service providers can be provided to data subjects in machine readable form to allow greater consumer mobility, including for financial services. The US equivalent program is 'Smart Disclosure'.

These international developments have been noted and the Australian Government is considering the recommendation of the 2014 Financial System Inquiry to consider 'how financial product information is reported so third parties could use automated processes to create market wide datasets of available products ... supporting consumers in making more informed online choices and enhancing competition'.²²

Implications for Australian financial services

Australian financial services flows are predominantly to and from Europe and the US.²³ While the Asian region is Australia's most significant trading partner for physical goods, financial flows do not mirror that. A discrepancy between data protection standards of Australia and Europe will cause increasing friction for the provision and receipt of financial services with Europe.

The significance of that discrepancy is yet to result in serious regulatory impositions or disciplinary action for Australian financial service providers. There are indications, however, that personal data protection is rapidly increasing as a regulatory focus. In the EU, the proposed Data Protection Regulation includes stronger sanctions, with data protection agencies able to impose fines of up to 1 million euro or 2 per cent of an enterprise's annual global turnover for personal data breaches — including for transferring data to prohibited jurisdictions where protections are not equivalent. There are also strengthened requirements to notify Data Protection Agencies and data subjects of personal data breaches.

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Higher standards may also be 'imported' to Australia through international trade negotiations. Traditionally issues relating to personal data have been outside the scope of trade negotiations under the GATT and GATS frameworks, because of a carve-out from the scope of those treaties of measures 'to protect personal data, personal privacy and the confidentiality of individual records and accounts'.²⁴ However, a number of the largest bilateral treaties currently being negotiated include '21st century issues' ensuring the appropriate balance between the free flow of information and the right of governments to regulate data flows, and between protecting personal data and permitting access to that data for enforcement purposes.²⁵

Other developments that may affect the regulatory landscape are private sector responses to policy concerns. Some of those innovations (briefly) include:

- > *UK G-Cloud initiative*: an initiative to streamline procurement of cloud services by the public service by pre-approving procurement and making details public. This is intended to reduce due diligence costs across the economy for the private sector by providing confidence that the service provider meets UK government's criteria, including for personal data protection.
- > *Personal privacy vaults and personal data services*: services available in Europe and the US that store an individual's personal data, and encrypt search history and so-called rich personal data (such as location, age or other info mined by website cookies) in a personal cloud inaccessible to data brokers. Services are emerging where one can allow particular companies access to particular data about oneself in exchange for monetary compensation — a 'sharing the wealth' strategy.
- > *Information markets*: markets where personal information such as mobile phone information giving location information can be offered for a price.

In Australia we can learn from the depth of public policy thinking that has occurred and continues in Europe. The solutions that have been reached in Europe will not necessarily suit our circumstances but will provide a useful reference point to better articulate the benefits and costs in data protection. Our approaches are lagging or intentionally diverging from Europe and cross-border economic consequences may well follow.

Commercial incentives to increase data collection, mining, aggregation, profiling and analytics mean that policy settings for personal data protection will need to be considered by independent policy thinkers including academics, the courts and the public service.

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