



THE UNIVERSITY OF  
MELBOURNE

# FINFUTURE

THE FUTURE OF PERSONAL  
FINANCE IN AUSTRALIA



## CONTENTS

Executive Summary	4
List of Propositions	8
Chapter One: A New Approach is Needed for Personal Finance	15
Chapter Two: FinFuture – Rethinking the Future of Personal Finance	20
Chapter Three: FinFuture Brought to Life	38
Chapter Four: The FinFuture Roadmap	46
Chapter Five: The Benefits of FinFuture	48
Chapter Six: Research and Teaching Agenda	52
Notes	56
Bibliography	64
List of Consulted Persons	69
About the Authors	70

### How to cite this document:

Breidbach, C, Culnane, C, Godwin, A, Murawski, C & Sear, C, *FinFuture: The Future of Personal Finance in Australia*, The University of Melbourne, Melbourne, 2019.

### Contact:

Professor Carsten Murawski  
The University of Melbourne  
Parkville 3010, VIC  
+61 3 8344 9077  
carstenm@unimelb.edu.au

# EXECUTIVE SUMMARY

*To improve the financial wellbeing of Australians, the finance sector needs to rediscover its purpose—serving the community*

Australia is a prosperous country. Yet many Australian households face formidable financial challenges, which include over-indebtedness, underfunding of retirement, under-insurance and financial exclusion. About two-thirds of Australians face some level of financial vulnerability and stress.

At the same time, seismic shifts in society – including cultural, economic, and technological and environmental changes – may exacerbate these financial challenges and add new ones.

Financial challenges are prominent in people’s minds. In Australia, financial concerns are the number one concern among young people and are the second biggest concern after climate change among older Australians.

Meanwhile, the Australian financial sector faces a number of institutional challenges. First, the sector has been plagued by widespread, systemic misconduct, as reported by the Royal Commission into Misconduct in the Banking, Superannuation and Financial Services Industry (Royal Commission). A nationally representative study commissioned by The University of Melbourne in the wake of the Royal Commission found that over half the population (54% of Australians) had been negatively affected by misconduct and other issues with financial service providers over the past five years.

In addition to misconduct issues, previous inquiries have also reported that the Australian financial system suffers from other inefficiencies. These include high fees for payments, high costs associated with the management of superannuation accounts and often low quality of financial advice. An even bigger concern is the allocation of certain major financial risks in the Australian economy. For example, Australian households effectively do not have access to long-term (5+ years) fixed-rate mortgages. Similarly, most Australians no longer have access to defined-benefit retirement savings products. This means that many major financial risks are being borne by individuals and households, the entities in the economy likely to be least capable of managing such risks. Again, the associated economic inefficiencies are likely substantial.

In the past, policymakers relied primarily on market forces to achieve welfare maximisation. The theoretical framework was one of rational actors operating in perfectly competitive and informationally efficient markets. Even though this framework often does not apply to today’s financial markets, it remains the basis of many public-policy initiatives and regulatory measures.

This is complicated by the fact that Australia has a highly complex and fragmented legal and regulatory system that imposes different obligations and requirements depending on the area of finance in question, often leading to confusion and inertia due to lack of legal clarity and coherence. Experience—and numerous inquiries (including the Royal Commission)—has revealed the limitations of the existing policy and regulatory approach to personal finance.

In this white paper, we propose an alternative approach for the Australian personal finance sector. We argue that in order to improve outcomes for Australians, the sector needs to rediscover its purpose—serving the community. Its core objective as it relates to personal finances ought to be the improvement of individual financial wellbeing, which in turn should be the guiding principle in government policy, regulation and technology. In order to fulfil its purpose, the financial sector needs to be effective, sustainable, inclusive, safe and ethical.

We consider financial wellbeing as a service outcome that is created by multiple actors, including customers, banks, regulators, professionals, superannuation funds and community organisations, interacting with each other. This means that financial wellbeing is co-created but also influenced by factors outside a person’s control. Improving financial wellbeing in a sustainable way therefore requires a holistic approach. It also needs to be evidence-based and grounded in science.

In order to align the sector with its core objective—improving individual financial wellbeing—five key steps will need to be taken. First, Australia needs to develop and widely adopt a National Financial Wellbeing Framework (the Framework) that defines the aspects of financial wellbeing and how they are measured. The Framework would serve a number of functions, including agreement amongst stakeholders on the financial wellbeing outcomes that matter. We also propose the establishment of a National Financial Wellbeing Agency (the Agency), which would be responsible for whole-of-system coordination and guiding of actions on financial wellbeing in Australia. This Agency would coordinate across sectors and institutions, including regulators, financial firms, technology firms, consumer groups and universities.

Second, the financial capabilities of Australians need to be developed and fostered. Individual financial capabilities are an important determinant of financial wellbeing. To build individual financial skills, we propose the introduction of compulsory, nationwide, evidence-based financial literacy training in schools. Financial literacy training should also be offered at TAFE and in universities.

It needs to be recognised, however, that there is a limit to the development of individual financial skills. Therefore, in addition to building individual skills, it is necessary to design the financial system such that it can work for people, given the complexities of the decisions they have to make. To this end, we propose the introduction of free basic financial health checks and advice for all Australians at critical points in a person’s life cycle. At the same time, free financial counselling should be readily available to all Australians when they need it.

In addition, research will need to be conducted on how existing and emerging technologies can be harnessed to improve financial capabilities on an ongoing basis. Technology needs to be better utilised to achieve interactive or ‘smart’ disclosure of information and to better support financial decision-making. However, it is important that the ethical consequences of innovation be considered and debated as technical solutions are developed and before they are deployed. Importantly, any policy measure regarding financial capability should be evidence-based and road-tested during the design stage, before implementation.

# *A key goal ought to be to re-establish people's trust in the Australian finance sector. Trust is the lifeblood of the financial system.*

Third, the financial sector needs to be realigned with its purpose and adopt a service-centric co-creation approach. We propose that customer contracts, and the rights and obligations of the parties under such contracts, should be fair, transparent and capable of being assessed by the individual as to whether a given contract is expected to enhance his or her financial wellbeing. Contractual documentation should be evidence-based and road-tested to ensure that it is effective and fit for purpose. We also propose that the Framework should become the basis for professional standards in financial services and regulation, including the provision of advice.

To address financial exclusion and predatory pricing, we propose that basic financial services be designated as essential services on a national basis and treated as such to ensure universal access and fair pricing. Furthermore, legal and regulatory requirements should ensure that similar services are priced on a similar basis.

Fourth, relevant laws and regulations need to be adapted and strengthened and be put to the service of improvements in financial wellbeing. More specifically, we propose that legislation, in particular Chapter 7 of the Corporations Act, should be simplified, and that exceptions and qualifications should be eliminated to the greatest possible extent. We also suggest that it is necessary to move beyond prescriptive, rules-based regulation towards principles-based, outcomes-focused regulation that is supported by regulatory guidance. Importantly, we propose that financial service providers should be subject to a duty to consider financial wellbeing in performing their functions and providing their services; in particular, they should be required to consider what impact a course of action would have, or would be reasonably likely to have, on the financial wellbeing of an individual.

And finally, technology must be employed so that it supports rather than hinders the advancement of financial wellbeing. We suggest that increases in data-sharing must be balanced by stronger privacy protection as has occurred in the EU and that Australia should adopt similar protections offered by the EU's General Data Protection Regulation. We also propose that financial institutions should be required to give access to a public application program interface for algorithms that determine the terms and conditions of financial services. Further, we propose that in the absence of a chartered body for data science, financial service companies should establish an industry code of conduct that requires customer data to be used only within a consent framework and in a manner that is not detrimental to the financial wellbeing of the customer.

For firms and others who provide financial advice and financial services, meeting regulatory duties such as acting in a customer's best interests – which we define as part of the process of co-creating financial wellbeing – will give rise to mutually beneficial outcomes. This is because it provides a shared purpose that goes beyond a profit-driven goal, which may provide short-term gains but does not lead to sustainable outcomes or the maintenance of a sustainable ecosystem.

Improving the effectiveness of the Australian personal finance sector – by putting it in the service of improving financial wellbeing and by helping Australians address the financial challenges they face – presents an enormous opportunity. A key goal ought to be to re-establish people's trust in the Australian finance sector. Trust is the lifeblood of the financial system. It must be earned through positive behaviour; for the finance sector, this means behaviour that is aligned with people's financial wellbeing.

The economic benefits alone of the approach proposed in this white paper would be substantial. But there would also be wider benefits for individuals and the community. Financial wellbeing is associated with both physical and mental wellbeing. Improving financial wellbeing of Australians can be expected to have positive effects on overall wellbeing, not only for individuals but also for their families, with follow-on effects on health, education and workplace productivity, among others.

Australia also has an opportunity to become a global leader in the finance sector. Implementation of the Framework would stipulate wide-ranging innovation in the sector, with the potential to make Australia a global leader in personal finance. New business models, technologies as well as legal and regulatory frameworks could be exported, strengthening the local finance sector, with potentially wide-ranging benefits for the Australian economy.

Government, industry, regulators, everyday Australians and other stakeholders will need to work together if we want to succeed in achieving lasting improvement of financial wellbeing and securing long-term prosperity for the sector and the Australian people.

# OVERVIEW OF PROPOSITIONS

## PURPOSE STATEMENT

**Proposition 1.** The purpose of the financial sector is to serve the community. Its core objective as it relates to personal finances ought to be the improvement of individual financial wellbeing, which in turn should be the guiding principle in government policy, regulation and technology in this regard. In order to fulfil its purpose, the financial sector needs to be effective, sustainable, inclusive, safe and ethical.

Read more on page 21.



## IMPLEMENTING A NATIONAL FINANCIAL WELLBEING FRAMEWORK

**Proposition 2.** Australia needs to develop and widely adopt a National Financial Wellbeing Framework (the Framework) that defines the aspects of financial wellbeing and how they are measured.

Read more on page 24.



**Proposition 3.** A National Financial Wellbeing Agency (the Agency) should be established with a mandate to improve financial wellbeing in the Australian population.

Read more on page 25.



**Proposition 4.** A government advisory group should be established to advise the government on its financial wellbeing strategy, representing all key stakeholder groups.

Read more on page 25.



## BUILDING FINANCIAL CAPABILITIES OF INDIVIDUALS AND HOUSEHOLDS

**Proposition 5.** The financial capabilities of Australians need to be developed and fostered.

Read more on page 26.



**Proposition 6.** Compulsory, nation-wide, evidence-based financial literacy training should be introduced in schools. Financial literacy training should also be offered at TAFE and in universities.

Read more on page 27.

**Proposition 7.** Free basic financial health checks and advice should be available to all Australians at critical points in a person's life-cycle.

Read more on page 27.

**Proposition 8.** Free financial counselling should be readily available to all Australians when they need it.

Read more on page 28.



**Proposition 9.** Research on how existing and emerging technologies can be used to improve financial capabilities should be conducted on an ongoing basis.

Read more on page 28.

**Proposition 10.** The ethical consequences of innovation should be considered and debated as technical solutions are developed and before they are deployed.

Read more on page 28.

**Proposition 11.** Technology needs to be utilised better to achieve interactive or “smarter” disclosure of information and better support financial decision-making.

Read more on page 28.



**Proposition 12.** Any policy measure regarding financial capability should be evidence-based and road-tested during the design stage, that is, before it is implemented.

Read more on page 28.

## REALIGNING THE STRUCTURE OF THE FINANCIAL SECTOR

**Proposition 13.** Customer contracts, and the rights and obligations of the parties under such contracts, should be fair, transparent and capable of being assessed by the individual by reference to his or her financial wellbeing. Contractual documentation should be evidence-based and road-tested to ensure that it is effective and fit for purpose.

Read more on page 31.

**Proposition 14.** One or more national research centres should be established to support the finance sector in service and technological innovation.

Read more on page 31.



**Proposition 15.** The Framework should become the basis for professional standards in financial services and regulation, including the provision of advice.

**Proposition 16.** Basic financial services (transaction accounts, basic forms of credit and insurance) should be designated as essential services on a national basis and be treated as such to ensure universal access and fair pricing (e.g. on a cost-recovery basis).

Read more on page 32.



**Proposition 17.** Legal and regulatory requirements should ensure that similar services (e.g. services with similar risk-return profiles that serve a similar purpose) are priced on a similar basis. There should be appropriate pricing constraints on credit and financial products to avoid predatory behaviour, excessive rent seeking, extortion and inequitable outcomes.

Read more on page 32.



## STRENGTHENING LAWS AND REGULATION

**Proposition 18.** Legislation should be simplified, and exceptions and qualifications should be eliminated to the greatest possible extent.

Read more on page 32.



**Proposition 19.** It is necessary to move beyond prescriptive, rules-based regulation towards principles-based, outcomes-focused regulation, which is supported by regulatory guidance.

Read more on page 32.

**Proposition 20.** Financial service providers should be subject to a duty to consider financial wellbeing in performing their functions and providing their services; in particular, they should be required to consider what impact a course of action would have, or would be reasonably likely to have, on the financial wellbeing of an individual.

Read more on page 34.



## MAKING TECHNOLOGY USEFUL AND SAFE

**Proposition 21.** Increases in data sharing must be balanced by stronger privacy protection, as has occurred in the EU. Australia should adopt similar protections offered by the GDPR, in particular a right to deletion and a more accurate definition of de-identification, one that recognises the possibility of re-identification by considering de-identified data as continuing to be personal data.

Read more on page 35.



**Proposition 22.** Financial institutions should be required to give access to a public Application Program Interface (API) for algorithms that determine the terms and conditions of financial services. This would allow for

- a. public and regulatory evaluations of fairness;
- b. commercial sensitivity (the exact algorithm would remain private);
- c. customers to analyse how changes in behaviours or holdings will affect their access to financial services.

A hierarchy of customer data variables should be defined to allow comparability and reproducibility of algorithmic results.

Read more on page 35.



**Proposition 23.** In the absence of a chartered body for data science, financial service companies should establish an industry code of conduct that requires greater transparency in relation to the use of algorithms and an industry code of conduct that requires customer data to be used only within a consent framework and in a manner that is not detrimental to the financial wellbeing of the customer. Both companies and their employees should be signatories of the code, with independent oversight and accreditation undertaken to provide public assurance of compliance.

Read more on page 36.







**Finance is an integral part of our lives and our society. It solves major personal and societal problems. Without access to basic financial services, such as a transaction account or basic forms of credit, people cannot fully participate in a modern economy. Finance has been and will continue to be a crucial cofactor in promoting human prosperity.<sup>1</sup>**

Australia is a prosperous country. We enjoy some of the highest living standards in the world. In 2018, following twenty-seven consecutive years of economic growth, Australia overtook Switzerland as the country with the highest median wealth.<sup>2</sup> Australia is estimated to have the eleventh highest gross domestic product per capita in the world and has been ranked ninth in the world in overall prosperity.<sup>3</sup> The Australian finance sector has played an important role in creating this prosperity. It is considered to be relatively resilient to stress and benefits from a robust regulatory framework.<sup>4</sup> Superannuation assets have grown to \$2.8 trillion,<sup>5</sup> making it one of the largest retirement income systems in the world and reportedly one of the most sustainable.<sup>6</sup> In short, on a number of financial measures, Australia is performing very well relative to the rest of the world.<sup>7</sup>

Yet, many Australians face major financial challenges. Australia has one of the highest levels of household indebtedness among OECD countries.<sup>8</sup> The level of household debt is considered to be one of the major threats to financial stability in Australia, making Australia one of the most financially vulnerable countries in the world.<sup>9</sup> It has been estimated that 95% of Australian families are currently underinsured<sup>10</sup> while facing many existing and emerging financial risks, such as

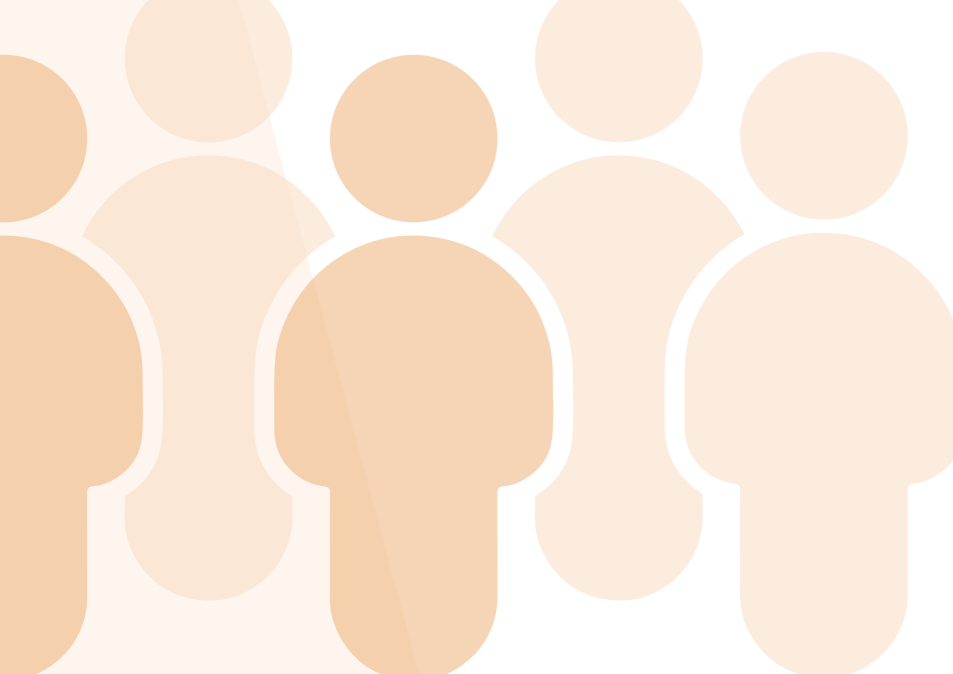
risks related to climate change.<sup>11</sup> Australia has the highest old-age poverty rate among OECD countries, about twice as high as the OECD average.<sup>12</sup> Most working Australians are considered to have inadequate retirement savings<sup>13</sup> and many have inadequate savings to deal with financial shocks.<sup>14</sup> Moreover, a significant proportion of Australians are fully or partially excluded from basic financial services, particularly basic forms of credit and insurance—preventing them from full participation in the economy and exposing them to exploitation and financial distress<sup>15</sup>—and many are ‘under-banked’.<sup>16</sup> About two-thirds of Australians face some level of financial vulnerability and stress.<sup>17</sup>

At the same time, society and the global economy are experiencing a major transition, sometimes referred to as a ‘revolution in humanity’,<sup>18</sup> which refers to a set of seismic shifts in society, including cultural trends, economic transitions and technological developments (see Box A – The Revolution in Humanity). It is believed that the revolution in humanity will change society as profoundly as the Industrial Revolution.<sup>19</sup> Indeed, it may exacerbate the financial challenges of households described above and add new ones.



### THE REVOLUTION IN HUMANITY

The term *revolution in humanity* refers to a set of seismic shifts, including: cultural trends, such as the trend towards a culture of immediacy and a quest for eternity<sup>20</sup>; economic trends, such as the changing nature of employment (e.g. the gig economy) and stagnant wage growth<sup>21</sup>; the transition from a resource-based towards a knowledge-based economy in Australia and the digital transformation of the economy; environmental trends, such as the increased occurrence and severity of extreme weather events due to climate change; technological trends, such as the development of AI and the Internet of Things; social trends, such as total global connectedness through the Internet<sup>22</sup> and the rise of political extremism<sup>23</sup>; demographic trends, such as the ageing of populations and mass-migration; and political trends, such as the power shift towards Asia.



Financial challenges are also prominent in people's minds. In Australia, financial concerns are the number one concern among young people, and are the second biggest concern after climate change among older Australians.<sup>24</sup> A person's financial situation is a significant determinant of overall wellbeing,<sup>25</sup> including physical wellbeing, mental health, relationships and job performance.<sup>26</sup> Financial stress is associated with low immunity and insomnia as well as depression, anxiety and suicide.<sup>27</sup> In addition, financial stress has been named the most common reason for relationship breakdowns in Australia,<sup>28</sup> and has established links with domestic violence.<sup>29</sup> Overall, the influence of perceived financial wellbeing on overall wellbeing is similar in magnitude to the combined effect of other life domains.<sup>30</sup>

At the same time, the Australian financial sector faces a number of institutional challenges. First, the sector has been plagued by widespread, systemic misconduct, as reported by the Royal Commission into Misconduct in the Banking, Superannuation and Financial Services Industry (Royal Commission).<sup>31</sup> These issues include irresponsible lending, provision of conflicted advice and charging of fees for no service. A nationally representative study commissioned by The University of Melbourne in the wake of the Royal Commission found that over half the population (54% of Australians) had been negatively affected by misconduct and other issues with financial service providers over the past five years. The combined costs to Australian households of these issues is estimated at \$201 billion,<sup>32</sup> while remediation costs to industry as a result of the Royal Commission have been estimated at \$10 billion.<sup>33</sup>

The misconduct scandals have led to a substantial erosion of trust in Australian financial institutions. Only about one in five Australians believe that banks in general have their customers' interests at heart or that they behave ethically.<sup>34</sup> Only about one in four believe that banks in general will keep their promises.<sup>35</sup> This lack of trust negatively affects people's behaviour. The most common response when asked what was holding people back from improving their financial situation was 'I do not trust financial institutions or advisers'.<sup>36</sup> Since the financial sector is based on trust,<sup>37</sup> its erosion can be considered a systemic risk and may lead to financial instability.

In addition to misconduct issues, previous inquiries have also reported that the Australian financial system suffers from other inefficiencies. These include high fees for payments,<sup>38</sup> high costs associated with the management of superannuation accounts<sup>39</sup> and often low quality of financial advice.<sup>40</sup>

An even bigger concern is the allocation of certain major financial risks in the Australian economy. For example, Australian households effectively do not have access to long-term (5+ years) fixed-rate mortgages. Similarly, most Australians no longer have access to defined-benefit retirement savings products. This means that many major financial risks are being borne by individuals and households, the entities in the economy likely to be least capable of managing such risks.<sup>41</sup> Again, the associated economic inefficiencies are likely substantial.

In the past, policymakers relied primarily on market forces to achieve welfare maximisation. The theoretical framework was one of rational actors operating in perfectly competitive and informationally efficient markets. However, the financial sector in particular faces a number of critical challenges. First, financial markets experience often severe informational problems, in particular, information asymmetries and conflicts of interest. The market for financial products and services involves 'credence claims'; that is, claims the quality of which is hard to evaluate at the time of purchase.<sup>42</sup> The nature of financial products and services as credence claims, when combined with powerful conflicts of interest induced by a 'sales culture', can explain many of the misconduct issues reported by the Royal Commission.

Relatedly, many financial products and services—and hence the decisions around them—are highly complex.<sup>43</sup> At the same time, decision-makers have limited cognitive resources and exhibit so-called cognitive biases.<sup>44</sup> In practice, this often leaves a gap between the cognitive capacities people have, often combined with low levels of financial literacy, and the capacity required to make informed financial decisions.<sup>45</sup> Indeed, following 'I do not trust financial institutions or advisers', the second most cited reason stopping Australians from improving their financial situations was that 'Thinking about my finances is overwhelming'.<sup>46</sup>

In addition, financial markets often exhibit one or more market imperfections, such as substantial barriers to entry, economies of scale and scope as well as externalities, which can lead to non-competitive market structures and market failure. Indeed, many financial markets in Australia, including the market for mortgages, are considered oligopolistic, leading to rent extraction.<sup>47</sup>

All of this means that the traditional theoretical framework of rational actors operating in perfectly competitive and informationally efficient markets does not apply to today's financial markets. However, to this day, many public-policy initiatives and regulatory measures are still based on it.

This is complicated by the fact that Australia has a highly complex and fragmented legal and regulatory system that imposes different obligations and requirements depending on the area in question (e.g. financial advice, financial products, credit and life insurance), often leading to confusion and inertia due to lack of legal clarity and coherence.

Experience—and numerous inquiries (including the Royal Commission)—has revealed the limitations of the existing policy and regulatory approach to personal finance. This approach has typically involved a combination of four measures: (1) disclosure (which in theory should provide individuals with the information necessary to allow them to make an informed decision); (2) access to financial advice on a fee-paying basis; (3) efforts to improve the financial literacy and capabilities of individuals; and (4) regulation that imposes a 'best interests' duty on advisors who provide personal advice and a range of other obligations and requirements (e.g. responsible lending principles that impose a 'not unsuitable' test in relation to the provision of credit).

Both alone and in combination with the others, each of these measures has proven deficient in achieving the desired outcomes for individuals. A new approach is needed.

This white paper argues that in order to improve outcomes for Australians, the sector needs to rediscover its purpose—serving the community. The white paper is premised on the claim that the core objective of the sector as it relates to personal finance should be the improvement of individual financial wellbeing.

At The University of Melbourne, an interdisciplinary team of academics has been developing an alternative way forward based on this premise. In this white paper, we propose a preliminary road map with a number of propositions and key steps that are necessary to get the sector to best fulfil its purpose, given the challenges it faces and the environment in which it

operates. This vision was formed over the course of eighteen months. It was inspired by academic research in finance, economics, service science, decision science, law and regulation, and technology. It is outcome-focused and institution-agnostic; that is, agnostic with regards to the particular institutions that will deliver those outcomes. It was developed with a ten-year horizon in mind.

The vision was informed by stakeholder consultations with industry leaders, regulators, consumer advocates, legal and other professionals, consultants and academics. Consumer research was also conducted, which included focus groups and a nationally representative survey.<sup>42</sup>

We hope this white paper will generate lively debate and inspire action. Given that the sector encompasses many people and institutions, we take a whole-of-systems approach, which leads us to a whole-of-systems solution. One action or institution alone will not succeed in changing the course of the sector. Government, industry, regulators and everyday Australians will need to work together if we are to improve financial wellbeing and secure long-term prosperity for the sector and for the Australian people.

This white paper would not have been possible without the support of a large number of people. We would like to thank all the participants in the consultation sessions. We would also like to acknowledge the support of our colleagues at the University of Melbourne and elsewhere, for which we are very grateful. We would like to thank in particular Professor Mark Cassidy, Dean of the Melbourne School of Engineering, Professor Paul Kofman, Dean of the Faculty of Business and Economics, Professor Pip Nicholson, Dean of Melbourne Law School, as well as Fiona Bell, Radha Thomas, Professor Andrew Turpin and our colleagues in Advancement, External Relations and Research, Industry and Commercialisation who helped with various aspects of the project. Finally, we would like to thank Ken Roberts, Dr Jelena Dodic and Rebekah Antonucci from Forethought Research.

# FINFUTURE: RETHINKING [CHAPTER 2] THE FUTURE OF PERSONAL FINANCE

*A healthy economy requires a healthy financial sector that is at the service of people as they pursue better lives for themselves and their children.*

Christine Lagarde

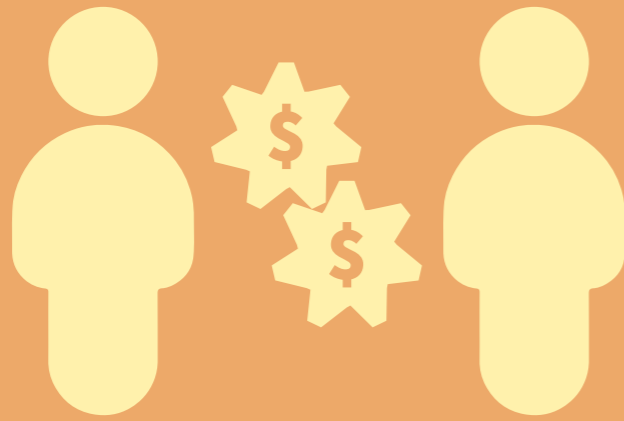


## Purpose

**Proposition 1. The purpose of the financial sector is to serve the community. Its core objective as it relates to personal finances ought to be the improvement of individual financial wellbeing, which in turn should be the guiding principle in government policy, regulation and technology in this regard. In order to fulfil its purpose, the financial sector needs to be effective, sustainable, inclusive, safe and ethical.**

## Co-creating financial wellbeing

For the purposes of this white paper, we define *financial wellbeing* as 'the extent to which people both perceive and have: (1) financial outcomes that meet their financial needs; (2) financial freedom to make choices that allow them to enjoy life; (3) control of their finances; and (4) financial security—now, in the future and under possible adverse circumstances'.<sup>49</sup> The definition takes into account people's motivations and needs for good financial outcomes. It incorporates elements of meeting financial obligations and responsibilities, having discretionary spending, being in control and establishing financial security. It also acknowledges the temporality of financial wellbeing as something that is not static but dynamic and related to ideas about the now as well as the future (see Box B – What is Financial Wellbeing?).



## WHAT IS FINANCIAL WELLBEING?

Despite the plethora of empirical research demonstrating the importance of financial wellbeing, there is no widely accepted measure, definition or framework. Attempts to calculate financial wellbeing have varied notably in terms of whether they prioritise objective measures, such as level of debt, savings and income, or subjective measures, such as how a person feels about their financial situation.<sup>50</sup> To this end, exclusively objective measures of financial wellbeing have proven to be limited.<sup>51</sup> This is largely because financial wellbeing is a multi-value concept that is influenced by a range of beliefs, attitudes and abilities, as well as behavioural, social and contextual factors. Because of its complexity, studies that only use objective measures fail to account for the way in which financial wellbeing is experienced. Indeed, two people with objectively similar financial situations may report markedly different assessments of their financial wellbeing. To understand and influence financial wellbeing, therefore, subjective measures are important.

Further considerations regarding definitions of *financial wellbeing* are temporal. *Wellbeing*, as opposed to *wellness* or *health*, implies an ongoing experience, rather than something static in time.<sup>52</sup> Therefore, how people are placed to address the financial situation of the present as well as the future must be reflected in definitions of *financial wellbeing*.

For this reason, Bruggen et al (2017) have defined *financial wellbeing* as ‘the perception of being able to sustain current and anticipated desired living standards and financial freedom’.<sup>53</sup> This perception in turn is dynamic and will change over time. These changes may be a result of personal, situational or external factors, such as the death of a partner, fluctuations in the economy or even as a result of subtle changes in an individual’s attitudes and beliefs.

Finally, frameworks to underpin such definitions should be country-specific. In a Norwegian study, considerations regarding long-term financial security were deemed secondary to three core elements of financial wellbeing: financial resilience, ability to meet financial commitments and comfort.<sup>54</sup> This was explained in terms of Norway’s world-leading retirement provisions.

In Australia, two recent studies of financial wellbeing represent significant contributions to this growing body of research: Muir et al (2017) and Comerton-Forde et al. (2018). The first study adopted an ‘ecological systems approach’, to take into account not only individual but household, community and societal factors.<sup>55</sup> This study defined financial wellbeing as ‘when a person is able to meet expenses and has some money left over, is in control of their finances and feels financially secure, now and in the future’.<sup>56</sup>

The second study integrated reported (subjective) measures of financial wellbeing (as captured by an online survey) with observed (objective) measures (derived from CBA customer financial records). In this study, financial wellbeing is defined as ‘the extent to which people both perceive and have: (1) financial outcomes in which they meet their financial needs; (2) financial freedom to make choices that allow them to enjoy life; (3) control of their finances; and (4) financial security – now, in the future, and under possible adverse circumstances’.<sup>57</sup> This conceptual framework, which also separates determinants from financial wellbeing outcomes, is the framework adopted in this white paper.

Importantly, observed (objective) and reported (subjective) financial wellbeing differ significantly between Australians.<sup>58</sup> Indeed, some Australians over-reported their financial wellbeing (relative to their observed financial wellbeing) while others gave low reported ratings on financial wellbeing measures that were in discord with their high observed financial wellbeing. This suggests that studies which rely solely on self-reported measures (or indeed, solely on observed measures) may be limited in terms of understanding financial wellbeing.

In conclusion, while significant and important work has been conducted to understand financial wellbeing, more work will need to be done. One key avenue of research is the identification and characterisation of the causal determinants of financial wellbeing. Other research should examine the relation between observed and reported financial wellbeing measures. Another important area is intervention design.



### Household Characteristics

- » Economic & material resources
- » Personal capabilities
- » Household needs
- » Preferences
- » Attitudes



### External Conditions

- » Economic conditions
- » Access to financial products/services
- » Social support & social capital
- » Social norms
- » Public programs & social insurance



### Financial Behaviour

- » Financial management
- » Spending habits
- » Saving habits
- » Borrowing habits
- » Financial discipline
- » Planning & budgeting



### Financial Wellbeing Outcomes

Perceiving and having

1. financial outcomes to meet financial obligations,
2. financial freedoms to make choices,
3. control of finances,
4. financial security now, in the future, & under possible adverse circumstances

Figure 1: CBA-MI, ‘The CBA-MI Conceptual Model of the Determinants of Financial Wellbeing Outcomes’

The above definition of *financial wellbeing* has been operationalised and applied to Australians’ financial data.<sup>59</sup> Only one in eight Australians reported that they were ‘doing great’ financially. Half of them reported they were ‘getting by’, about one in three were ‘just coping’ and about one in ten were ‘having trouble’.<sup>60</sup>

According to this definition, financial wellbeing is affected by: (1) personal and household characteristics, such as economic resources, personal capabilities and preferences; (2) external conditions, such as economic conditions, access to financial services, social support and social norms; and (3) financial behaviours, such as financial management, savings habits and investing (see Figure 1).<sup>61</sup>

In addition to this definition, we conceptualise financial wellbeing as an outcome which involves multiple actors including customers, banks, regulators, professionals, superannuation funds and community organisations, interacting with each other. Through this interaction, financial wellbeing is *co-created*.

This view of personal finance is in stark contrast to the model the financial service industry has been operating under over the past several decades, which has been product-centric and sales-focussed. In contrast, a co-creation approach argues that *service* forms the basis of all economic exchange where<sup>62</sup> service is defined as the ‘application of competencies (knowledge and skills) for the benefit of another’.<sup>63</sup> Economic exchange is consequently driven by the process of individuals

applying specialised competencies for their and others’ benefit.<sup>64</sup> Adopting a *service-centric* approach therefore sees financial wellbeing, a valuable outcome, as co-created, rather than something that is delivered from one actor (i.e. a bank) to another (i.e. a customer).

In order to align the sector with its core objective—improving individual financial wellbeing— five key steps will need to be taken. First, Australia needs to develop and widely adopt a national financial wellbeing framework that defines the aspects of financial wellbeing and how they are measured. Second, the financial capabilities of Australians need to be developed and fostered. Third, the financial sector needs to be realigned with its purpose and adopt a service-centric co-creation approach. Fourth, relevant laws and regulations need to be adapted and strengthened and be put to the service of improvements in financial wellbeing. And finally, technology must be employed so that it supports rather than hinders the advancement of financial wellbeing.

In the remainder of this chapter, we discuss each of the five steps in more detail.

## Implementing a national financial wellbeing framework

**Proposition 2. Australia needs to develop and adopt a National Financial Wellbeing Framework (the Framework) that defines the aspects of financial wellbeing and how they are measured.**

In order to realign the personal finance sector with its purpose—the improvement of individual financial wellbeing—all those affected need to agree on the outcomes that matter. This includes everyday Australians and all relevant institutions and organisations which play roles in the financial services sector. Improvement of Australian’s financial wellbeing is the core function of the Framework but it would also serve a number of more specific purposes.

First, by providing guidance around what the key dimensions of financial wellbeing are and how they are measured, the Framework would help Australians manage their finances. It would indicate which aspects of their finances matter and in what ways. As a planning tool, it would make it easier for people to assess their personal financial situation. Making it easier for people to assess their current financial situation and to plan their finances is an important step for improving individual financial capabilities.

One pertinent example is retirement funding. Since the introduction of compulsory superannuation in 1992, the degree of responsibility that individuals have to take with regards to retirement funding has been increasing. For example, individuals have to decide how to allocate their superannuation assets. They also have to determine an appropriate level of savings throughout their lifetime to ensure an adequate income during retirement. These decisions are complex financial decisions. One important aspect of the planning process is the projection, at any point in a person’s life, of the expected level of retirement income, given one’s financial status. The required calculations are complicated, particularly if one wants to take risk into account. At present, there is no agreed way of performing such calculations. Although a number of online calculators are available, for example, on the websites of superannuation funds and on the MoneySmart website, these calculators differ in the algorithms they use and the assumptions they make. Using different calculators therefore may lead to vastly different results. This is one example where a commonly agreed procedure (in the form of an industry standard) would greatly facilitate an important aspect of financial planning. The Framework would provide such a standard.

Second, the Framework would provide the basis for population-level measuring and monitoring of financial wellbeing. For the avoidance of doubt, any such measuring or monitoring would be performed on aggregate statistics representing the nation as a whole, and would not be performed on individuals. This would allow changes to be tracked over time and systemic problems to be identified. It would provide a basis for measuring the prevalence of financial issues and help to estimate the burden caused. It would also allow the early identification of issues so that they could be addressed immediately or (ideally)

prevented.<sup>65</sup> Thus, the framework would fulfil the same functions as similar frameworks in public health.<sup>66</sup> The data could be shared with other government agencies, such as the Australian Securities and Investments Commission (ASIC), the Australian Prudential Regulation Authority (APRA), the Reserve Bank of Australia (RBA) or the Department of Social Services, as well as research organisations.

Third, the Framework would provide the basis for creating a high-quality evidence base about the current state of financial wellbeing or the influence of various factors, such as household characteristics, on financial wellbeing. This evidence base could be used for intervention design, development of financial training, design of financial health checks and related advice, and regulation, among others.

Fourth, the Framework would become the basis for new laws and regulations in personal finance. It would give substance to, and allow the operationalisation of, concepts such as ‘best interests’ and ‘not unsuitable’, making them more effective. Without proper operationalisation, these concepts can be vacuous and lead to legal uncertainty. The Framework would also become the basis for the design of professional standards as well as new technologies.

We have started to see tentative moves in regulation towards such a framework with the adoption of the responsible lending obligations, which require credit providers to ensure that credit is ‘not unsuitable’ for the consumer.<sup>67</sup> Further moves are reflected in the design and distribution obligations, which require issuers and distributors to ensure that financial products are sold only to customers for whom the product is ‘appropriate’.<sup>68</sup> However, the focus of these requirements is on whether a product ‘would likely be consistent with the likely objectives, financial situation and needs of a retail client’<sup>69</sup> as a class and does not deal with the issue of appropriateness at an individual or household level. The Framework would enable these outcomes to be realised at the individual level.

The development of the Framework should build on existing work in this area. Several conceptualisations of financial wellbeing in the Australian context have been proposed (see ‘What Is Financial Wellbeing’ on page 22).<sup>70</sup>

However, existing frameworks will need to be refined in order to become more comprehensive and cover all relevant aspects of financial wellbeing in a robust way. Important future work will need to identify the determinants of financial wellbeing, and the relation of financial wellbeing to other aspects of wellbeing.

Importantly, the purpose of the Framework would be descriptive but not prescriptive. In particular, it would not prescribe levels of financial wellbeing for Australians. Instead, the intention of the Framework would be to help people prosper by helping them to make the right financial decisions in order to achieve the highest possible level of financial wellbeing for themselves, given their individual preferences. Put simply, it would help people achieve a good life but not prescribe what a good life looks like.<sup>71</sup>

**Figure 2: Functions of the proposed FinFuture Agency**



**Proposition 3. A National Financial Wellbeing Agency (the Agency) should be established with the mandate of improving financial wellbeing in the Australian population.**

The new agency would be responsible for whole-of-system coordination and guiding of actions on financial wellbeing in Australia. Experience to date<sup>72</sup> suggests that a whole-of-system approach is necessary in order to achieve good financial wellbeing for Australians. The Agency would coordinate across sectors and institutions, including regulators, financial firms, technology firms, consumer groups and universities.

The Agency would have several core functions. First, it would develop and have ownership within government of the government’s national financial wellbeing strategy. Second, it would develop and maintain the Framework (see Proposition 2). The agency would also be responsible for ongoing measurement and monitoring of financial wellbeing at a population level. Certain aspects of this function, such as retirement income modelling, are currently performed by other agencies and should be moved to the new Agency.

A third important function would be a research function to identify the determinants of financial wellbeing as well as interventions to improve financial wellbeing and prevent harm. This function could be performed in coordination with universities and other research organisations.

The fourth important function would be a prevention function. As part of this function, the Agency would be responsible for the development and deployment of measures to prevent harm. The identification and design of interventions would be enabled by the monitoring function described above. As part of the prevention function, the Agency would develop a national service that offers free basic financial health checks and advice to all Australians at critical points in their life cycle (see Proposition 7). The Agency would also assume responsibility for overseeing the Australia-wide provision of financial counselling (Proposition 8).

A fifth function would be ownership and implementation of the national financial capability strategy (see Proposition 5). This function should be delivered as part of a whole-of-system approach under the umbrella of the Agency.

Another function would be responsibility for fostering financial innovation in Australia through the design of effective policies and the funding of research projects in this area. Research on measuring financial wellbeing, intervention design and on financial innovation should be facilitated through the establishment of a new substantial targeted funding program (FinFuture Fund), similar in scale to the Medical Research Future Fund.

In addition, the Agency would oversee consumer protection in the area of personal finance. This would allow the coordination and integration of consumer protection functions currently distributed across multiple agencies, such as the Australian Competition and Consumer Commission (ACCC) and ASIC, which should improve the effectiveness of consumer protection in Australia.

Moreover, the Agency would oversee the development of, and monitor compliance with, professional standards in the personal finance sector (see Proposition 15).

Finally, the Agency would assume responsibility for the accreditation of individuals and organisations providing financial advice in Australia.

**Proposition 4. A government advisory group should be established to advise the government on its financial wellbeing strategy, representing all key stakeholder groups.**

Given that financial wellbeing is co-created by a large number of people and organisations and requires a whole-of-system approach, government will need to ensure that its actions reflect the needs of all those affected. A government advisory group on financial wellbeing would provide a mechanism to seek input from stakeholders on an ongoing basis.



*We are moving from reactive to proactive regulation, as seen in the design and distribution obligations. ... We need to be clear about personal responsibility.*

Consulted person

### **Building financial capabilities for individuals and households**

Individual financial capabilities are an important determinant of financial wellbeing. For the purposes of this white paper, we define financial capabilities as an individual's opportunity and ability to maintain and improve his or her financial wellbeing, taking into account relevant personal characteristics and external factors.<sup>73</sup> Importantly, we consider freedom of choice an important aspect of financial wellbeing and therefore define *financial capability* not purely in terms of outcomes.

It needs to be recognised that there is a limit to the development of individual financial capabilities—for example, we cannot train every Australian to the level of a finance professional. Therefore, in addition to building individual knowledge and skills, it is necessary to design the financial system such that it can be used well by people given their limited knowledge and skills by making choices easier.

Some financial choices, for example, choices in relation to certain aspects of retirement funding, will probably remain complicated. This underpins the proposition for a national service that offers free basic financial health checks and advice (see Proposition 7).

Moreover, in many cases, low levels of financial capability are primarily caused not by a person's own behaviour but by a lack of opportunities, in particular, a lack of income and wealth (e.g. intergenerational poverty and unpaid caring commitments). Therefore, improving individual financial capabilities needs to go beyond simply facilitating good financial behaviour.<sup>74</sup>

### **Proposition 5. The financial capabilities of Australians need to be developed and fostered.**

People should take responsibility for their decisions.<sup>75</sup> A key question is how much responsibility people can be expected to take when it comes to their financial decisions and their financial wellbeing.

Answering this question involves a better understanding of what is required to make good decisions, as well as the limits to individual decision-making capacities. Traditional economic frameworks—in particular, the rational actor model and its variants—and the current law either completely ignore or do not adequately take into account the complexities of decision-making on the one hand and the capabilities and limitations that most people face as regards financial decision-making on the other.<sup>76</sup> They are also largely blind to cognitive biases that people may exhibit in decision-making situations.<sup>77</sup> A lack of financial literacy is often another major obstacle for good financial decision-making.<sup>78</sup>

The degree of responsibility placed on individuals by the financial sector should take into account the limitations of decision-making capacities, which change over time.<sup>79</sup> Further, as noted in Chapter 1 above, financial decisions are often too complex for individuals to make 'rationally'<sup>80</sup> and individuals are vulnerable to behavioural biases that can be exploited.<sup>81</sup>

The appropriate degrees of responsibility and protection should also depend on individual factors, such as different consumers' degrees of experience and expertise.<sup>82</sup> Financial service providers 'should be expected to provide consumers with a level of care that is appropriate having regard to the degree of risk involved in relation to the investment or other transaction and the capabilities of the consumer in question'.<sup>83</sup>

In summary, we need a clearer understanding of the limits of people's capabilities as regards financial decision-making so that we can assign responsibilities more fairly. While we see building individual financial capabilities as an important step in improving financial wellbeing in Australia, we also believe that financial services need to be easier to use. In addition, a number of support services should be introduced.

### **Proposition 6. Compulsory, nationwide, evidence-based financial literacy training should be introduced in schools. Financial literacy training should also be offered at TAFE and in universities.**

The OECD defines *financial literacy* as 'a combination of awareness, knowledge, skill, attitude and the behaviour necessary to make sound financial decisions and ultimately achieve individual financial wellbeing'.<sup>84</sup> It should be viewed as a growing set of knowledge, skills and strategies that individuals build on throughout life.<sup>85</sup> Financial literacy is considered to benefit individuals and households by enabling them to make better financial decisions.<sup>86</sup> Higher financial literacy has been associated with higher stock market participation, better financial preparedness for retirement and lower debt burden, among others.<sup>87</sup>

The OECD recommends that financial education be provided at 'teachable moments' of people's lives when they are making long-term plans, when they need to make important (financial) decisions or when they are in an environment conducive to learning.<sup>88</sup> Schools should be the primary channel through which financial literacy training is provided to young Australians. Such a program could build on the resources developed by the ASIC MoneySmart program and similar efforts over the past few years.

However, financial education should not stop when people leave high school. It should continue in later stages of people's lives, ideally around points in time when people are about to make important financial decisions.

Importantly, any financial education program should be evidence-based. This means that proposed teaching programs should be evaluated with regards to achieving desired outcomes, including changes in financial attitudes, financial behaviours and, ultimately, financial wellbeing.

### **Proposition 7. Free basic financial health checks and advice should be available to all Australians at critical points in a person's life cycle.**

The fact that few people seek financial advice in Australia is both a challenge and an opportunity—financial wellbeing would improve if people had access to, and could be motivated to seek, financial advice.

The primary purpose of free basic financial health checks and advice would be the prevention of shocks to a person's or a household's financial wellbeing. In other words, its primary role would be preventative in nature.

Support for the provision of free basic financial health checks and advice can be found in the recent establishment in the UK of the Single Financial Guidance Body (SFGB), which is an ‘arm’s-length body, sponsored by the Department for Work and Pensions, with a joint commitment to ensuring that people throughout the UK have guidance and access to the information they need to make effective financial decisions over their lifetime’.<sup>89</sup> The SFGB is funded by levies on both the financial services industry and pension schemes. The new body will ‘deliver free and impartial financial guidance and a more streamlined service to members of the public providing easier access to the information and guidance’.<sup>90</sup>

In order to be effective, however, this initiative should go beyond the provision of basic financial guidance and information and provide all Australians with access to basic financial advice—namely, advice that is appropriately scaled to cover specific needs as distinct from comprehensive financial advice—on a cost-free basis. Similar to the approach in the UK, the system of free basic advice should be funded partly by government and partly by levies on the financial services industry and superannuation funds. Such a system would incentivise people to seek basic advice at critical points in their life cycle and would encourage them to pay for comprehensive personal financial advice as and when appropriate.

The provision of basic financial advice could be supported and scaled by the use of technology, such as robo-advice.

**Proposition 8. Free financial counselling should be readily available to all Australians when they need it.**

In Australia, *financial counselling* refers to free and independent advice for people in financial difficulty. These difficulties are typically caused by unemployment, illness, relationship breakdown and insufficient income. At present, financial counselling is usually provided by not-for-profit community organisations. Financial counsellors assist almost 250,000 Australians each year.<sup>91</sup> It is considered highly effective and hugely beneficial for the recipients.

However, demand for financial counselling in Australia by far exceeds supply, largely due to a lack of funding of financial counselling providers. Free, high-quality financial counselling should be available to all Australians when they need it. The service could be co-funded by government and an industry levy.<sup>92</sup>

Provision of financial counselling should be coordinated by the new Agency and possibly offered through it (Proposition 3).

**Proposition 9. Research on how existing and emerging technologies can be used to improve financial capabilities should be conducted on an ongoing basis.**

We believe that at present, technology is heavily under-utilised in the area of financial wellbeing, including the provision of advice. There is tremendous potential to harness existing and emerging technologies to augment financial capabilities, for example, to provide guidance in financial decision-making. The individual and community benefits of such technologies could be substantial. Therefore, the research effort exploring how technology can effectively be used to improve financial wellbeing should be stepped up substantially. Funding could be provided through a new government program, such as the FinFuture Fund proposed above (see Proposition 3).

**Proposition 10. The ethical consequences of innovation should be considered and debated as technical solutions are developed and before they are deployed.**

While technological innovation provides unprecedented opportunities to improve financial wellbeing, it also creates new potential threats to privacy and fairness. The consequences of collecting and processing data must be considered at the point of inception, not as an afterthought. To this day, many start-ups still live by the mantra of ‘move fast and break things’, despite warnings that it is no longer appropriate.<sup>93</sup> When privacy is at stake, there is no second chance. A break in privacy is perpetual; once someone’s data is released or lost, it cannot be easily recovered. Likewise, once an insight has been discovered, or a model built, it is difficult to forget it, or dismantle the model that delivered it.

A proactive approach to the evaluation of the ethical consequences of innovation should be adopted, one that requires the ethical risks to have been evaluated and mitigated prior to the system being implemented.

**Proposition 11. Technology needs to be better utilised to achieve interactive or ‘smart’ disclosure of information and to better support financial decision-making.**

Despite reforms to improve the readability of disclosure documents in the area of personal finance, there are well-known limitations to disclosure.<sup>94</sup> An emerging area is interactive or ‘smart’ disclosure, which has been defined as ‘the timely release of complex information and data in standardized, machine readable formats in ways that enable consumers to make informed decisions’.<sup>95</sup> Developments in this area have been supported by ASIC through Regulatory Guide 221 (‘Facilitating Digital Financial Services Disclosure’) and through legislative instruments that are designed to facilitate business providing disclosures through digital channels and to encourage innovative communication of information about financial products and services’.<sup>96</sup> More work is required to enable technology to generate and tailor information to the specific needs of individuals and better support their financial decision-making.

**Proposition 12. Any policy measure regarding financial capability should be evidence-based and road-tested during the design stage, that is, before implementation.**

We strongly advocate for a shift away from the current model-based approach prevalent in financial regulation towards an evidence-based approach (see ‘Moving Towards Evidence-Based Regulation’ on page 29). We recommend the establishment of formal protocols and institutions to guide financial wellbeing-enhancing innovation in the financial sector that take their inspiration from policymaking in other fields, such as medicine and aerospace engineering. Specifically, we advocate the use of randomised controlled trials to ensure that regulation stands up to the standards of rigorous scientific testing, analogous to clinical trials in medicine. Approval or licensing of any new financial service in Australia would be based on an evaluation of benefits and risks of the service relative to the Framework (see Proposition 2), which would be assessed using mandatory, randomised controlled trials where appropriate.



**MOVING TOWARDS EVIDENCE-BASED REGULATION**

At present, the predominant approach to regulation in finance is *model-based*. In this approach, the regulator designs rules based on a stylised representation of reality. The model is constructed from basic principles about how the phenomenon of interest, such as financial decision-making, works. Rules are designed to obtain certain goals in a way that is consistent with the model. Many past regulatory initiatives in finance in Australia and elsewhere have been model-based. Examples include the proliferation of choice of investment options in superannuation and the disclosure paradigm in financial regulation.

Taking the example of retirement savings, evidence suggests that people’s behaviour typically deviates dramatically from the standard economic models and differs significantly between individuals. Importantly, many of the factors that seem to be contributing to the variation in savings behaviour are being studied separately by academic disciplines other than economics or finance. Two important conclusions follow: (1) the current standard economic models do not capture the large variation observed in behaviour and markets, at least some of which seems to be driven by factors hitherto only studied by disciplines other than economics; and (2) we do not currently have a good understanding of causal relations between the various factors that have been identified, and financial behaviour or market outcomes. The former suggests an urgent need for a more comprehensive model of financial behaviour and markets, whereas the latter suggests the need for greater use of experimental techniques in research on financial behaviour and markets as well as in the design and testing of interventions. Both are necessary for effective development of more efficacious public policy.

A related issue is that financial regulation today relies too much on the premise that the knowledge (of how to do things right) already exists, and that existing knowledge is sufficient to effectively develop efficacious solutions to society’s financial challenges. In fields such as medicine and aerospace engineering, such a presumption that all is already known does not exist. These fields start with acknowledging the complexity of the problems being addressed, the incompleteness of existing knowledge as well as the fact that

there are many bright ideas out there, but that one needs the right incentive structure for them to be brought forward, and the infrastructure to ensure that ideas are tested properly before being implemented widely—because many ideas will turn out to have unpredicted and unintended consequences.

Based on the considerations above, we advocate the use of evidence-based regulation. This means that one starts from an analysis of data from the field. If not available, controlled experimentation is used to generate data. The data will allow the decision-maker to formulate the right hypotheses, which can then be tested with controlled experiments—either in the laboratory or in the field. This approach is widely used in other areas.

We recommend the establishment of formal protocols and institutions to guide financial wellbeing-enhancing innovation in the financial sector that take their inspiration from policymaking in other fields, such as medicine and aerospace engineering. Specifically, we advocate the use of randomised controlled trials to ensure that regulation stands up to the standards of rigorous scientific testing, analogous to clinical trials in medicine.

Approval of any new financial service in Australia would be based on an evaluation of benefits and risks of the service relative to the Framework, which would be assessed using mandatory, randomised controlled trials. These trials should be conducted at similar levels of rigour and transparency as trials in other fields, such as the ones mentioned above, and should be governed by a standard framework similar to the framework described in the Australian *Clinical Trial Handbook* for clinical trials in medicine.

Approved services would be registered in a central register, which would also hold trial data, both of which would be accessible to the public. Following initial approval of the service, ongoing monitoring would be conducted that can respond to any re-evaluations of the service’s benefits and risks as new information becomes available, for example from trials of other services. Administration of randomised controlled trials and, more generally, service approval and monitoring would be conducted by the new Agency.

### Realigning the structure of the financial sector

We believe that the structure of the financial sector as it relates to personal finance should be realigned with its core objective; namely, improving individual financial wellbeing.

A number of propositions are relevant in this regard: increasing the fairness and transparency of contractual documentation to ensure that it is effective and fit for purpose; supporting research in service and technological innovation; using the Framework as the basis for professional standards; designating basic financial services as essential services to ensure universal access and fair pricing and ensuring that similar services are priced on a similar basis to avoid predatory behaviour.

**Proposition 13. Customer contracts, and the rights and obligations of the parties under such contracts, should be fair, transparent and capable of being assessed by the individual by reference to his or her financial wellbeing. Contractual documentation should be evidence-based and road-tested to ensure that it is effective and fit for purpose.**

In the past, a high degree of information asymmetry, often exacerbated by a high degree of complexity of financial contracts, in combination with powerful conflicts of interests has led to undesired outcomes for customers. Financial products and services often involve 'credence claims', that is, claims the quality of which is hard to evaluate at the time of purchase and possibly later on. Many undesired outcomes, including misconduct issues, were a consequence of these kinds of financial contracts. A key challenge is to make the provision of financial products and services more beneficiary-oriented.

Provisions governing unfair contract terms are contained in the *Australian Consumer Law* and the *Australian Securities and Investments Commission Act 2001* (ASIC Act). Under the ASIC Act (section 12BF(1)), the provisions apply to a 'standard form' consumer contract, which is defined as a contract for a financial product, or the supply or possible supply of financial services. In deciding whether a term is unfair, a court must consider the extent to which the term is transparent, as well as the contract as a whole. A term in a standard form consumer contract is 'unfair' if: it would cause a significant imbalance in the parties' rights and obligations arising under the contract; the term is not reasonably necessary to protect the legitimate interests of the party that would benefit from its inclusion; or the term would cause financial or other detriment (e.g. delay) to a consumer if it were to be applied or relied on.

If a court finds that a term in a standard form contract is unfair, the term is void and is treated as if it never existed. However, the contract will continue to bind parties if it is capable of operating without the unfair term. The court can make a range of orders, including declaring all or part of a contract to be void, varying a contract and directing a party to refund money.

These provisions have gone some way towards improving the fairness and transparency of consumer contracts on a generic basis. As it relates to individual contracts, however, the legal framework involves an *ex post* (i.e. after the event) determination that a contract term is unfair and the imposition of remedies in the event that such a determination is made. It does not deal with the *ex ante* (i.e. before the event) steps that might be taken by an individual to assess a contract by reference to his or her financial wellbeing. It also does not deal directly with the challenges that individuals encounter in understanding contractual terms.<sup>97</sup>

To deal with the *ex ante* challenges, this white paper proposes that consumer contracts (e.g. credit contracts) be accompanied by key terms summaries so that individuals can consider the impact, effectiveness and fitness for purpose of the contract by reference to their own financial wellbeing. The functionality and interactivity of the key terms summaries could be enhanced through the use of technology. The design of the summaries and the contractual terms to which they relate would be evidence-based and the effectiveness of the documentation could be road-tested through the use of customer surveys and randomised controlled trials (see *Moving Towards Evidence-Based Regulation* on page 29).

**Proposition 14. One or more national research centres should be established to support the finance sector in service and technological innovation.**

Innovation in finance requires both fundamental and translational research. We propose the establishment of one or more dedicated research centres in Australia that focus on research in finance and technology to support the financial sector. Research areas could include research on financial decision-making, population-level research on financial wellbeing and artificial intelligence (AI)-augmented decision-making. The research centres would work closely with universities and the finance sector.

**Proposition 15. The Framework should become the basis for professional standards in financial services and regulation, including the provision of advice.**

An important step towards improving financial wellbeing of Australians is the further professionalisation of the finance sector. We advocate the establishment of professional standards in finance that become binding for anyone operating in the finance sector. They would regulate, for example, the processes and procedures used to provide financial advice, including how risk assessments are performed and how investment strategies are developed.

In addition to introducing minimum quality standards in the sector, professional standards would also introduce much needed transparency as well as training standards for sector professionals. Training providers, including universities, would be accredited to ensure compliance of training courses with the professional standards, analogous to other sectors, for example, the medical and legal sectors.



# Complexity in legislation is a problem, with inconsistencies in legislation.

Consulted person

**Proposition 16. Basic financial services (transaction accounts, basic forms of credit and insurance) should be designated as essential services on a national basis and be treated as such to ensure universal access and fair pricing (e.g. on cost-recovery basis).**

A significant proportion of Australians are fully or partially excluded from basic financial services, preventing them from full participation in the economy and exposing them to exploitation and financial distress.<sup>98</sup> The negative consequences on individuals and the economy are likely significant. We therefore advocate that certain basic financial services, including transactions and savings accounts, some types of uncollateralised consumer loans and home-contents insurance be deemed essential services on a national basis. This would mean that both the quality and universal access of those services are guaranteed and that they are offered on a cost-recovery basis.

**Proposition 17. Legal and regulatory requirements should ensure that similar services (e.g. services with similar risk-return profiles that serve a similar purpose) are priced on a similar basis. There should be appropriate pricing constraints on credit and financial products to avoid predatory behaviour, excessive rent seeking, extortion and inequitable outcomes.**

There has been a concern about rent extraction in the finance industry.<sup>99</sup> In Australia, similar financial products are sometimes offered at vastly different prices and those differences are hard to reconcile with differences in costs incurred by the provider. For example, effective interest rates<sup>100</sup> of uncollateralised consumer credit, which is offered in the form of consumer loans, car loans, credit cards and payday loans, among others, can range from about 10% per annum to several hundred percent per annum, despite the fact that from an economic perspective, it is effectively the same service being offered. In the area of uncollateralised consumer credit, for example, a pricing constraint could be introduced that sets the maximum effective interest rate at twice the average rate offered by the major banks for an uncollateralised consumer loan. At the moment, this would set the limit on the effective interest rate somewhere between 20% and 25% per annum.

## Strengthening law and regulation

**Proposition 18. Legislation should be simplified, and exceptions and qualifications should be eliminated to the greatest possible extent.**

Legislation governing financial products and financial services has become overly complex, prescriptive and layered with exceptions and qualifications. For example, the ‘best interests’ duty in respect of personal advice was originally intended to operate as a broad principle, but subsequently became subject to a safe harbour that sets out the steps for compliance.<sup>101</sup>

This has led to a tick-the-box approach to compliance that excludes the necessary exercise of professional judgment in relation to achieving financial wellbeing.<sup>102</sup> As noted by the *Royal Commission Final Report*:

*The more complicated the law, the harder it is to see unifying and informing principles and purposes. Exceptions and limitations encourage literal application and focusing on boundary marking and categorisation. Boundary marking and categorisation may promote uncertainty. Removing exceptions and limitations encourages understanding and application of the law in accordance with its purposes. That is, ‘its intent is met, rather than merely its terms complied with.’<sup>103</sup>*

Accordingly, Chapter 7 of the *Corporations Act 2001 (Cth)* should be reviewed and amended to reduce complexity and to align it more closely with a principles-based, outcomes-focused approach as outlined in the following proposition.

**Proposition 19. It is necessary to move beyond prescriptive, rules-based regulation towards principles-based, outcomes-focused regulation that is supported by regulatory guidance.**

Over-prescription imposes constraints on regulators and reduces the flexibility to engage in risk-based regulation under which the regulatory response to compliance issues is tailored by reference to ‘the severity and behavioural drivers of non-compliance’.<sup>104</sup> It also reduces the scope to design and adapt regulation and regulatory processes in an evidence-based manner.<sup>105</sup> The problems are compounded by a lack of coherence and consistency within the existing legislative framework. Under the existing framework, personal finance is governed by a multiplicity of laws and regulations, including Chapter 7 of the *Corporations Act 2001* (financial products and financial services), the *National Consumer Credit Protection Act 2009* and the *National Credit Code* (consumer credit).

We need to move away from the above regulatory framework towards a framework that recognises financial wellbeing as the core objective of the financial services system in relation to personal finances and as the guiding principle in the design and implementation of government policy, regulation and technology.

- Such a framework would encourage the relevant actors to collaborate in the process of co-creating financial wellbeing. Simply protecting people from harmful conduct is not enough, particularly as advancements in technology enable us to take a broader range of factors into account in achieving financial wellbeing at the individual level and to move beyond the current ‘one-size-fits-all’ approach as noted in Chapter 1.<sup>106</sup>
- It would be adaptive and flexible and would accommodate rapid changes brought about by technology and innovation.<sup>107</sup>
- Rules and regulations would be more easily amended and updated and could therefore be road-tested to ensure that they are fit for purpose.<sup>108</sup>

The call to move towards principles-based, outcomes-focused regulation is supported by the *Royal Commission Final Report*, which argues that ‘as far as possible, legislation governing financial services entities should identify expressly what fundamental norms of behaviour are being pursued when particular and detailed rules are made about a particular subject matter’.<sup>109</sup> It is also supported by Treasury, which notes that ‘[principles-based regulation] requires a commitment from policy-makers to the regulatory architecture’.<sup>110</sup> Such a commitment means that governments need to resist the temptation to make the legislative and regulatory framework more prescriptive in response to pressure from stakeholders.<sup>111</sup>

# There has been a tsunami of regulation over the past two decades.

Consulted person

A principles-based approach would mirror the approach in other legislation, including the *Australian Consumer Law*,<sup>112</sup> and in other jurisdictions, such as the UK, where a principles-based, outcome-focused framework has been adopted in the financial services legislation.<sup>113</sup> The *Financial Conduct Authority (FCA) Handbook* defines *principles* as ‘high level statements of the core obligations of firms, [which] act as an overarching framework to govern the actions of firms’. It provides that a ‘breach of one or more of the Principles for Businesses will make a firm liable to disciplinary action’ and, ‘[w]here appropriate, a firm can be disciplined on the basis of a breach of the Principles alone’.<sup>114</sup> The *FCA Handbook* defines *outcomes* as ‘[setting] the baseline of our expectations of how firms should treat consumers and ... [providing] the basis of what consumers can expect to see when firms are treating them fairly’.<sup>115</sup> For example,

## Principle

*Customers: relationships of trust – a firm must take reasonable care to ensure the suitability of its advice and discretionary decisions for any customer who is entitled to rely upon its judgment.*<sup>116</sup>

## Outcome

*Where consumers receive advice, the advice is suitable and takes account of their circumstances.*<sup>117</sup>

## Guidance for firms

*We expect firms to pay attention to indicators of potential vulnerability when they arise and to have policies in place to deal with consumers who may be at greater risk of harm.*<sup>118</sup>

This white paper goes one step further and argues that principles, outcomes and guidance should be tied more closely to financial wellbeing as it relates to the individual. As noted above, financial wellbeing should also serve as the basis for professional standards in financial services. Further, to support financial wellbeing as the core objective of the financial system in relation to personal finance, all conflicts of interest should be avoided.<sup>119</sup>

*Legislation is overly prescriptive. We should strip back legislation and focus on the six principles [of the Royal Commission]. We need to move towards principles-based legislation.*

Consulted person

**Proposition 20. Financial service providers should be subject to a duty to consider financial wellbeing in performing their functions and providing their services; in particular, they should be required to consider what impact a course of action would have, or would be reasonably likely to have, on the financial wellbeing of an individual.**

It is very difficult—if not impossible—to determine whether credit, financial advice or a financial product is fair, appropriate, suitable or in the best interests of an individual as the potential benefits can only be assessed over a period of time.<sup>120</sup> For this reason, taken alone, there is a limit to any benefits that would derive from strengthening the responsible lending obligation by converting the negative ‘not unsuitable’ obligation into a positive duty of care (which is the subject of current debate in the UK), or by strengthening the obligations on a financial services licensee to ‘do all things necessary to ensure that the financial services ... are provided efficiently, honestly and fairly’.<sup>121</sup>

This white paper argues that in order to give substance to the legal concepts referred to above, the legislative and regulatory framework for personal finance should be guided by financial wellbeing as it applies at the individual level. Financial service providers should be subject to a duty to consider financial wellbeing (as defined by the Framework outlined above) in performing their functions and providing their services. In particular, they should be required to consider what impact a course of action would have, or would be reasonably likely to have, on the financial wellbeing of an individual. A corollary to this is that financial service providers would be subject to a duty to notify customers of material risks (and ways to address them) where they had the information and technological means to do so.<sup>122</sup>

The imposition of a duty to consider financial wellbeing would require financial service providers to consider a broader range of factors in determining concepts such as ‘best interests’ and ‘suitability’. This would help them to apply their professional judgment—informed by standards of reasonableness—in place of the existing system, which often encourages a tick-the-box approach. It would also help to protect vulnerable people.<sup>123</sup>

### **Making technology useful and safe**

Advances in computing technology, in particular, machine learning and AI, offer a huge opportunity to improve financial wellbeing. However, those same technologies, left unchecked, also pose a significant threat to privacy, equity, and individual opportunity. Such technologies are dependent on access to customer data in order to build and evaluate models to predict future outcomes. Any increase in consumption of data by the financial services sector risks increasing the information asymmetries already present. Whilst this may have a short-term commercial benefit, it poses a longer-term threat to both trust and engagement. A lack of trust is already impacting on financial decision-making, with survey results indicating that 28% of Australians believe that a lack of trust in financial institutions or advisers is the number one reason stopping them from improving their financial situation.<sup>124</sup>

Addressing the trust deficit will require greater transparency, particularly in how data is being used by organisations.<sup>125</sup> This presents a particular challenge with the increased usage of AI, which currently suffers from a lack of transparency leading to examples of bias and discrimination.<sup>126</sup> Research continues into improving transparency and fairness, in particular in the area of Explainable AI. Such research may yield powerful results in the future, but the problem of a lack of transparency is being faced today. AI-based innovation can neither pause whilst a solution to the lack of transparency is found, nor be allowed to advance unconstrained. A middle ground that offers both the opportunity for innovation and greater transparency and individual control of data is required.

With greater transparency and control comes the requirement for improved methods and models of consent. Data-sharing will still need to occur; the difference will be that the customer will be empowered to control the scale and nature of the data that is shared. As a result, there will be an increased need to obtain meaningful informed consent from customers. How to best obtain such consent, in a manner that does not overwhelm the customer or create consent fatigue, remains an open and active area of research and discussion.

As Australia shifts to a data-driven economy, it is necessary for the privacy protections to keep pace, something that has not currently occurred. Attempts to replicate the open banking successes in the UK and Europe in an ecosystem that has significantly less privacy protection risk further undermining trust. Accordingly, the propositions below deal with stronger privacy protection, greater transparency in relation to the use of algorithms and an industry code of conduct that requires customer data to be used only within a consent framework and in a manner that is not detrimental to the financial wellbeing of the customer.

*I struggle to interpret ‘honestly, efficiently and fairly’ and other formulations in the law.*

Consulted person

**Proposition 21. Increases in data-sharing must be balanced by stronger privacy protection as has occurred in the EU. Australia should adopt similar protections offered by the General Data Protection Regulation, in particular a right to deletion and a more accurate definition of de-identification, one that recognises the possibility of re-identification by considering de-identified data as continuing to be personal data.**

Australia should take a lead from the EU’s General Data Protection Regulation (GDPR) and introduce a stronger right to delete data, which would continue the progress towards greater data autonomy than the current Consumer Data Right provides. Whilst progress has been made, there is still more to be done. First, a clearer, more accurate and nuanced definition of *de-identification* is required, one that recognises the frailties of *de-identification*<sup>127</sup> and incorporates a formal model of privacy, as opposed to relying on notions of reasonableness. Additionally, the usage of *de-identification* as a way to avoid deletion or consent must be eliminated. A privacy-protection technique should not result in a loss of rights or protections to the data subject, which is frequently the current result of *de-identification*.<sup>128</sup>

**Proposition 22. Financial institutions should be required to give access to a public application program interface for algorithms that determine the terms and conditions of financial services. This would allow for:**

- a. public and regulatory evaluations of fairness
- b. commercial sensitivity (the exact algorithm would remain private)
- c. customers to analyse how changes in behaviours or holdings will affect their access to financial services.

**A hierarchy of customer data variables should be defined to allow comparability and reproducibility of algorithmic results.**

The provision of a public application program interface (API) would constitute a suitable middle ground between innovation and transparency. Rather than attempting to explain the workings of the algorithm, transparency of inputs and outputs would permit sampling and an analysis of fairness.<sup>129</sup> The API should receive the necessary data input, process it, and return an outcome. Such an approach would not only provide transparency, but also comparability and incentivised outcomes.

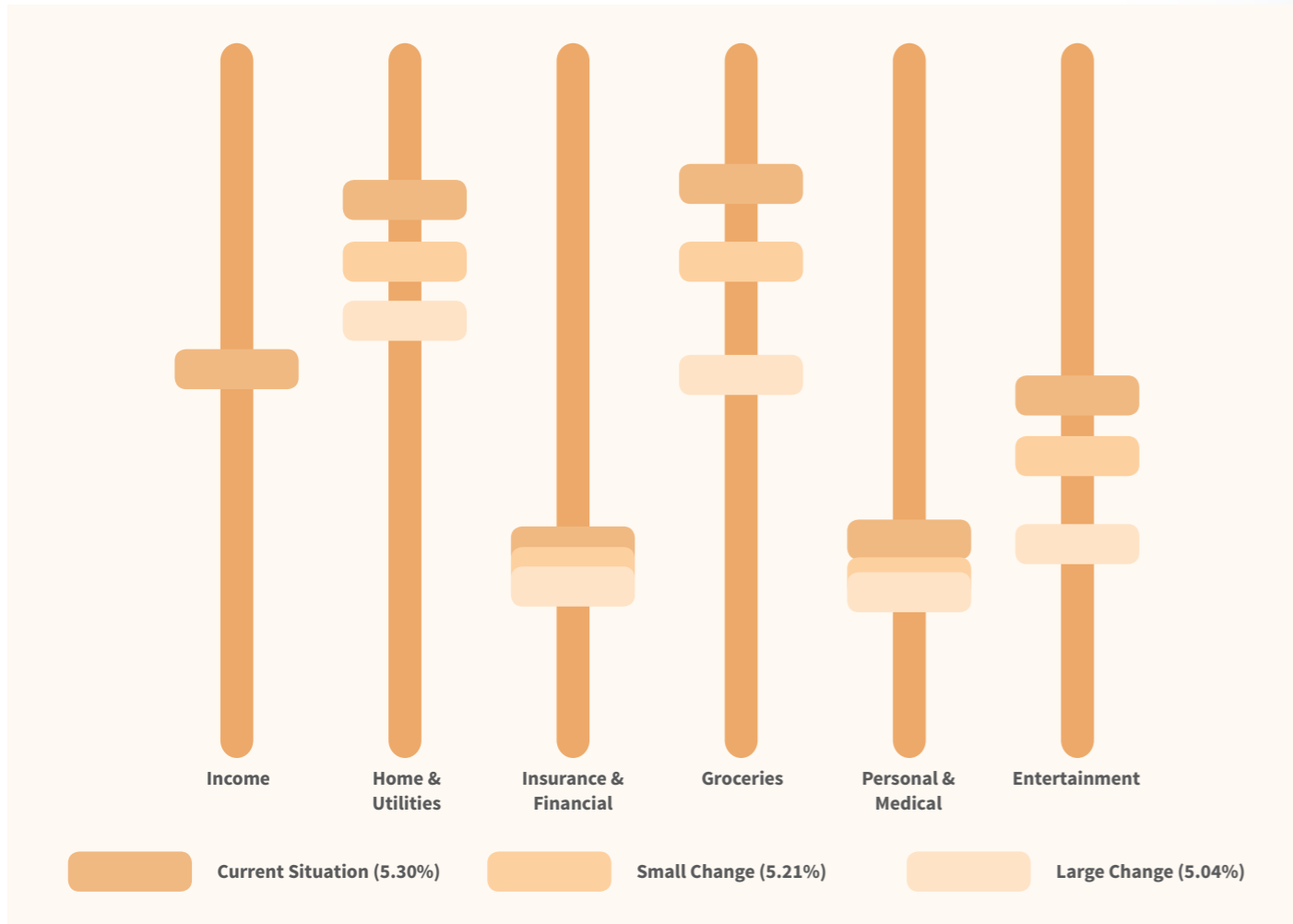
Regulators and consumer rights groups would be free to interrogate the API with synthetic data to uncover any latent bias or discrimination in the algorithm. This provides a stopgap between where we are now and the possible Explainable AI of the future.

The automated nature of the API would facilitate both individual comparability of providers and also the development of innovative products to perform real-time comparisons on behalf of customers, avoid vendor tie-ins and price discrimination. To further facilitate comparability, a set of standardised data fields should be jointly developed by regulators and industry. The specified fields would form a hierarchy permitting customers to decide the granularity of data they wish to share. Customers would be incentivised to share more granular data in order to obtain better offers. However, they would not be required to do so, empowering the customer to choose and evaluate how the provision of data at different levels of granularity impacts on the rate they are offered.

Such an approach would not only aid in meaningful comparisons, but would also provide essential transparency in what data is being used to make decisions, and provide an implicit constraint on using arbitrary data—for example, social media posts—in making financial decisions about customers. A number of financial service organisations<sup>130</sup> and advice bodies already have data classifications to start from. However, a lack of consistency between them prevents meaningful comparisons.

By providing both an open API and a defined set of fields, comparison services would no longer be limited to comparing products for the individual’s current financial situation. Multiple requests could be made to the individual on slightly modified data (as reflected in the financial graphics equaliser in Figure 3). The results would provide an incentivised outcome to the individual. For example, if the individual could see that they would receive a lower interest rate on a loan if they reduced their discretionary spending on leisure activities, it would provide implicit guidance on improving outcomes and financial wellbeing.

Figure 3: The financial wellbeing mixer



**Proposition 23.** In the absence of a chartered body for data science, financial service companies should establish an industry code of conduct that requires greater transparency in relation to the use of algorithms and an industry code of conduct that requires customer data to be used only within a consent framework and in a manner that is not detrimental to the financial wellbeing of the customer. Both companies and their employees should be signatories of the code, with independent oversight and accreditation undertaken to provide public assurance of compliance.

Organisations and individual employees should be required to be signatories of the code in order to bring to the forefront of their minds the responsibility that comes with having access to, and the processing of, customer data. With the addition of independent oversight, such a code can form a pillar in the rebuilding of trust in the financial services sector.

The code should be thought of as a digital Hippocratic oath for data, which enshrines ethical standards for how individuals and organisations interact with our digital selves.

# FINFUTURE BROUGHT TO LIFE [CHAPTER 3]

*Financial planning is a public policy issue. The private sector cannot do all of the heavy-lifting.*

Consulted person

### Pre-FinFuture

Joanne, a single 50-year-old worker in the hospitality sector, successfully applies to a dealer for a car loan to finance the acquisition of a new SUV for a price of \$55,000. The loan is financed by a bank. At the time that her loan is approved, Joanne's fortnightly repayments for her car loan represent approximately 27% of her disposable income. Despite the high proportion of loan repayments to income, the bank assesses Joanne as being capable of servicing the car loan on the basis that she has relatively few debts and has been in long-term, stable employment. The credit assessment undertaken by the bank complies with the 'not unsuitable' test under the National Credit Act. Joanne, however, has not accumulated much money in the form of savings and has no income or disability insurance. Further, she does not have any equity in a house and has been a renter all of her life.

After purchasing the car, Joanne loses her long-term employment and has to find casual work in order to generate sufficient income to cover her living costs. She suffers mental stress and financial hardship as she continues to attempt to make the car loan repayments. The car is ultimately repossessed and Joanne has to take out a personal loan to repay the outstanding balance of the car loan to the bank.

### Post-FinFuture

In the post-FinFuture environment, the lender would be subject to a duty to consider Joanne's financial wellbeing in determining whether to grant the car loan (see Proposition 20: Financial service providers should be subject to a duty to consider financial wellbeing in performing their functions and providing their services; in particular, they should be required to consider what impact a course of action would have, or would be reasonably likely to have, on the financial wellbeing of an individual). This would require a broader range of factors to be considered by the bank in determining whether the loan was unsuitable, including Joanne's low level of savings, her under-insured status and the need to make provision for contingencies, such as loss of employment.

This would likely result in one of the following possible outcomes: (1) the grant of the loan in the original amount (if such a decision were consistent with the above duty notwithstanding the circumstances described); (2) the denial of the application in its entirety; (3) approval in respect of a loan in a lower amount. Although the first outcome would be no different from the outcome occurring in the pre-FinFuture environment, the existence of the second and third outcomes would represent options for consideration by both the bank and Joanne and might lead to a situation in which Joanne's financial wellbeing was not impaired.

In other words, the new framework would take into account the benefits and risks for Joanne's financial wellbeing along a range of dimensions, as determined by the Framework. It would identify any risks with regard to the dimensions of financial wellbeing and quantify them accordingly. This would allow the provider to compute an expected net financial wellbeing benefit for Joanne.





### Pre-FinFuture

John and Lisa are retired secondary school art teachers and approach a wealth management firm for advice on investing the proceeds from the sale of their family home on a temporary basis until they decide where they would like to live in their retirement. The family house, which John had previously inherited from his deceased mother, was a valuable property and was sold for a price of \$3 million.

The wealth management company informs John and Lisa that they can be classified as 'sophisticated investors' under Section 708(8)(c) of the Corporations Act 2001 (Cth) on the basis that they have more than \$2.5 million in net assets. As a result, they have a much broader range of options for their temporary investment than in the case of retail investors, who can only

invest in a public offer of securities in circumstances involving the issue of a prospectus. John expresses interest in speculative mining exploration ventures in Western Australia, which he has heard about from a friend. In response, the wealth management firm advises them to invest \$2.5 million of the funds in a mining venture, which promises high returns for investors. The balance of \$500,000 is invested in a term deposit with a bank.

Unfortunately, the mining venture turns out to be a failure and, after liquidation, returns only five cents on the dollar to investors. After transaction and advisor fees are deducted, John and Lisa are left with \$80,000 from the original investment. When combined with the term deposit, they end up with an amount of \$600,000 to pay for permanent accommodation and to support their retirement. As a result, John and Lisa postpone their retirement indefinitely.

### Post-FinFuture

In the post-FinFuture environment, the 'sophisticated investor' exception in the Corporations Act 2001 (Cth) would be removed (see Proposition 18: Legislation should be simplified, and exceptions and qualifications should be eliminated to the greatest possible extent). In addition, under the legislative framework (see Proposition 19: It is necessary to move beyond prescriptive, rules-based regulation towards principles-based, outcomes-focused regulation that is supported by regulatory guidance), the wealth management firm would be required to consider the suitability of their advice and the related investment to John and Lisa's circumstances, using

the Framework. For this purpose, the firm would need to consider John and Lisa's financial literacy and their ability to understand the nature and extent of the risks on any recommended investments. The firm would also need to compute the expected impact of the investment on all aspects of John and Lisa's financial wellbeing, which would include the computation of an expected net financial wellbeing benefit. In this case, this would likely result in a recommendation to place their funds in investments that carry a lower risk to avoid extreme outcomes that destroy a very large part of the family's assets. It would also mean that John and Lisa would be much more likely to be able to realise their retirement plans.

### Pre-FinFuture

Andrew and Kate are 28-year-old professionals looking to settle down and buy their first property. They both have well-paid and stable jobs and have accumulated some savings; but, having recently married, they only just have enough for a deposit on a property. Andrew and Kate do not have any existing loans. They both have active social lives and enjoy travelling, eating out, and attending major sporting events. Andrew is an active social media user, whilst Kate is not and keeps all her posts private. As they are looking to settle down and start a family, they have started to reduce their discretionary spending.

Andrew and Kate apply for a mortgage from the bank. Initially, everything looks to be going well: their combined salaries are sufficient for the loan and their savings meet the deposit requirement. As part of the loan application, a credit check is to be performed, which Andrew and Kate agree to, expecting it to be a formality without realising that they have agreed to the bank analysing their public social media posts and using that information to evaluate their credit risk.

Andrew and Kate receive a notification that their loan application has been denied. Whilst Kate passed the credit check, the bank determined that Andrew's social media posts indicated he had profligate spending habits and was therefore considered too high a risk. Andrew and Kate manage to get a loan from a different provider, but the higher interest rate means they have to borrow less. In order to get an equivalent property, Andrew and Kate are forced to buy further out from the city, increasing their daily commute. On moving out of the city, Andrew and Kate's lives quieten down as they focus on renovating their property and starting a family.

### Post-FinFuture

In a post-FinFuture environment, Andrew and Kate would be informed explicitly in advanced that the bank would want to use their social media posts to evaluate their credit worthiness. Both Andrew and Kate would have the option to deny consent for such information to be used, accepting that they would forgo any possible discount that could be obtained on the basis of having a 'desirable' social media profile (see Proposition 23: In the absence of a chartered body for data science, financial service companies should establish an industry code of conduct that requires customer data to be used only within a consent framework and in a manner that is not detrimental to the financial wellbeing of the customer).

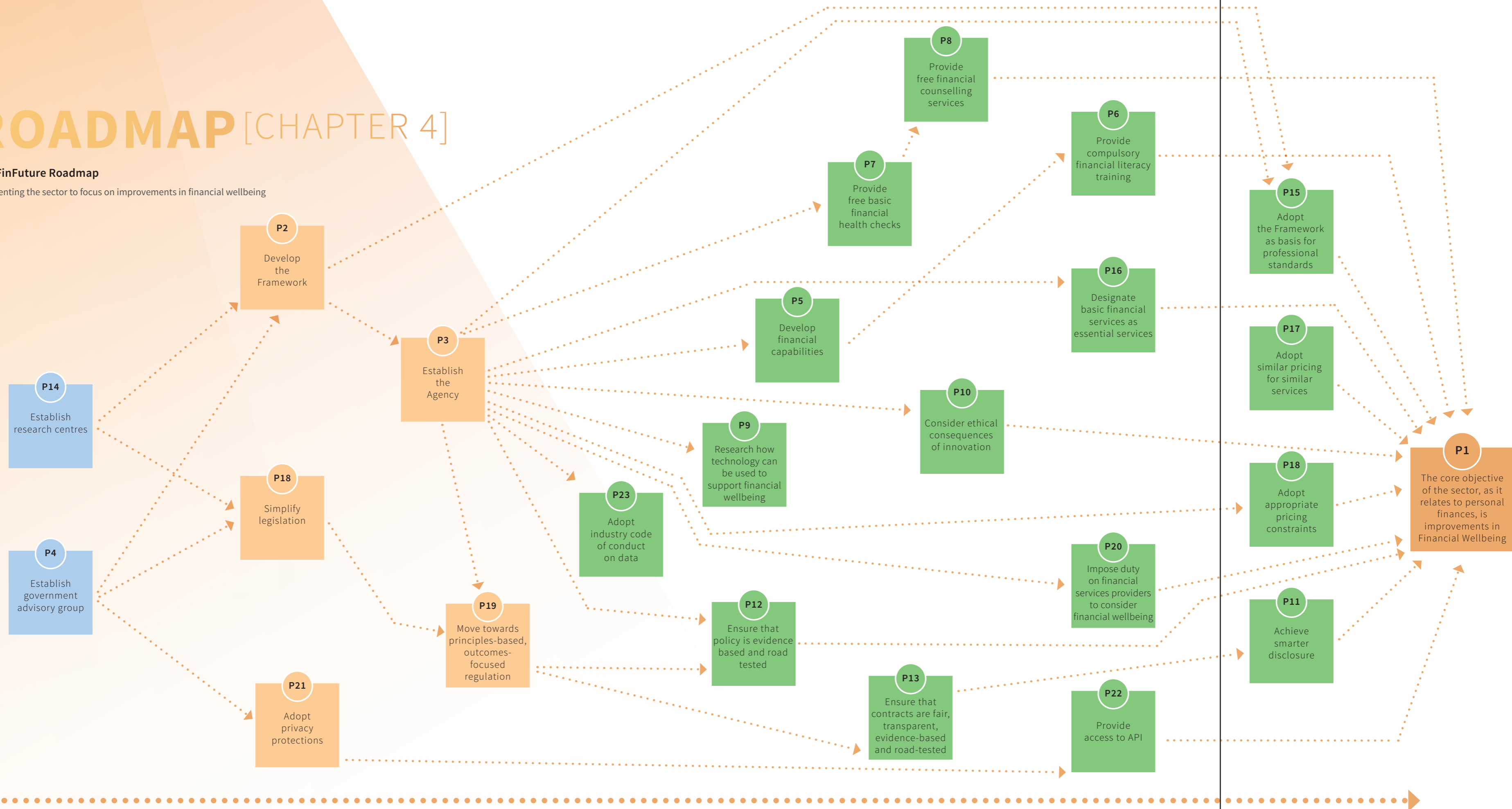
In advance of using the social media information, the bank would have to demonstrate why such analysis was ethical and how the algorithm that was developed to determine future risk from past social media posts was both fair and free of bias (see Proposition 10: The ethical consequences of innovation should be considered and debated as technical solutions are developed and before they are deployed).

Prior to deciding to try and buy a property, Andrew and Kate would be able to take their existing data and submit it via an open public API to determine what loan they could get and at what rate (see Proposition 22: Financial institutions should be required to give access to a public application program interface for algorithms that determine the terms and conditions of financial services). A range of options would be shown to them, indicating that if they could reduce their discretionary spending on leisure activities they would be able to get the loan that they need at a lower interest rate. As a result, Andrew and Kate would be able to know in advance what changes they would need to make to their lifestyle in order to get the outcome they want.

# ROADMAP [CHAPTER 4]

## The FinFuture Roadmap

Re-orienting the sector to focus on improvements in financial wellbeing



Stage one: Establish

Stage Two: Define

Stage Three: Implement

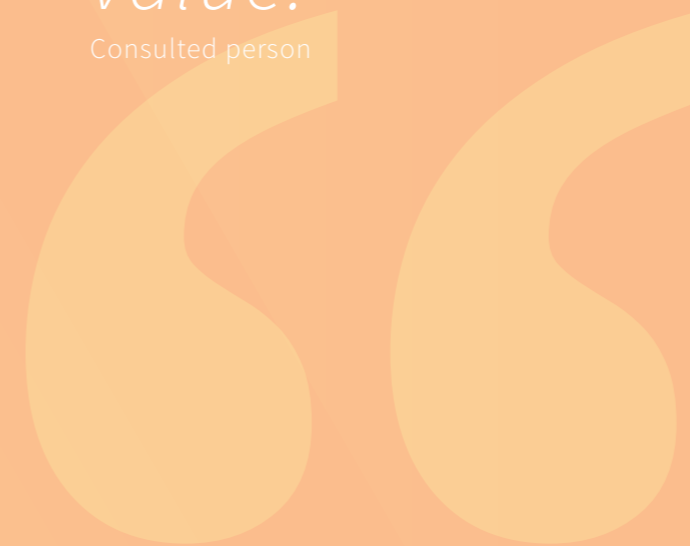


# THE BENEFITS OF FINFUTURE

[CHAPTER 5]

*We need to shift the debate from being backward-looking to being forward-looking and from counter-factuals (what we don't want) to what we do want. This will require a greater focus on financial wellbeing and value.*

Consulted person



We argue in this white paper that the primary purpose of the Australian finance sector, as it relates to personal finances, ought to be the improvement of the individual financial wellbeing of all Australians. For firms and others who provide financial advice and financial services, meeting regulatory duties such as acting in a customer's best interests – which we define as part of the process of co-creating financial wellbeing – will give rise to mutually beneficial outcomes. This is because it provides a shared purpose that goes beyond a profit-driven goal, which may provide short-term gains but does not lead to sustainable outcomes or the maintenance of a sustainable ecosystem.

At the moment, many Australians struggle with their financial situation, with adverse effects on education, labour market participation, relationship quality as well as mental and physical health. Therefore, improving the effectiveness of the Australian finance sector – by putting it in the service of improving financial wellbeing and by helping Australians address the financial challenges they face – presents an enormous opportunity.

A key goal ought to be to re-establish people's trust in the Australian finance sector. Trust is the lifeblood of the financial system. It must be earned through positive behaviour; for the finance sector, this means behaviour that is aligned with people's financial wellbeing.

*There is a shift from a transactional relationship to an outcomes-oriented approach in the relationship with the customer.*

Consulted person

As we have outlined in previous chapters, a whole-of-system approach needs to be taken to lift the level of financial wellbeing of Australians in a sustainable and fair way. This will require the development of individual financial capabilities. Re-aligning the sector with its purpose will require redevelopment of business processes and the development of professional standards. At the same time, the legal and regulatory framework needs to be adapted, and technology needs to be built that is both effective and safe.

Individual capabilities need to be developed in a way that preserve people's autonomy. Such capability building should include Australia-wide financial training. But it should also include measures to make the Australian financial system more inclusive and fair. The latter involves fairness of pricing; in particular, the prohibition of predatory services and extortion-type pricing. Meanwhile, innovation should be fostered that utilises new and emerging technologies to facilitate good financial decision-making.

Aligning the sector with its purpose of improving financial wellbeing will not only require the redesign of existing services. It will also involve the development of new products and services, and the reorganisation of business and legal structures. A primary goal should be the abolition of conflicts of interest in the sector, using the approach outlined in this white paper. Another important goal should be the reconsideration of the economy-wide allocation of risks in Australia, including interest-rate and longevity risk, with the goal of lifting current inefficiencies.

In order to achieve the core purpose as outlined above, regulation needs to be principles-based in terms of reflecting the norms of behaviour by which the participants in the financial sector should operate, and outcomes-focused in terms of identifying outcomes that are aligned with the financial wellbeing of individuals. To the extent possible, it needs to be simple to apply and it needs to avoid exceptions and qualifications that favour a formalistic, box-ticking approach. The factors that financial service providers consider in determining whether credit should be extended, whether insurance cover should be provided or what advice should be given to a customer should always include financial wellbeing and its constituent parts.

Technology presents both an opportunity and a threat. It is essential that we find ways of harnessing the technology in a way that enhances financial wellbeing and does not lead to greater exploitation or erosion of trust. The ever-increasing collection and processing of data will drive the development of such technologies, yet the methods and actions are regulated by legislation that has not kept pace with innovation. We need legislation and regulation of technology and data that is both fit for purpose and technologically relevant and sound. Privacy and security are starting to be seen not as hurdles or costs, but as opportunities for differentiation. Australia risks being left behind in the privacy race as a result of a failure to update regulation and legislation. We should not be looking merely to follow the European lead of the GDPR – we should be looking to exceed it and define new ways in which data and technology can be harnessed, regulated, and used for the benefit of all.

By establishing a regulatory framework that establishes privacy and security as essential functions and enforces the creation of trust through transparency and ethical behaviour, Australia can become a global leader in delivering technology and data in an ethical and safe manner that helps to enhance financial wellbeing.

The economic benefits alone of the approach proposed in this white paper would be substantial. As discussed in Chapter 1, the combined costs to Australian households over the past five years of misconduct and other issues is estimated at \$201 billion, while remediation costs to industry as a result of the Royal Commission have been estimated at \$10 billion. Inefficiencies arising from suboptimal allocation of capital and risk might be even more substantial.

There would also be wider benefits for individuals and the community. Financial wellbeing is associated with both physical and mental wellbeing. Improving financial wellbeing of Australians can be expected to have positive effects on overall wellbeing, not only for individuals but also for their families, with follow-on effects on health, education and workplace productivity, among others.

Australia also has an opportunity to become a global leader in the finance sector. Implementation of the Framework would stipulate wide-ranging innovation in the finance sector, with the potential to make Australia a global leader in personal finance. New business models, technologies as well as legal and regulatory frameworks could be exported, strengthening the local finance sector, with potentially wide-ranging benefits for the Australian economy.

As mentioned in the Introduction, one action or institution alone will not succeed in changing the course of the sector. Financial wellbeing is co-created and a whole-of-system approach is required in order to effect the required change. Government, industry, regulators, everyday Australians and other stakeholders will need to work together if we want to succeed in achieving lasting improvement of financial wellbeing and securing long-term prosperity for the sector and the Australian people.

*The big tech firms don't start with the product; instead, they start with the platform – namely, what the customer needs – and help customers achieve outcomes. This is 'output-based' instead of 'input-based'.*

Consulted person

# RESEARCH AND TEACHING AGENDA [CHAPTER 6]

This chapter describes some of the key proposals emerging from this white paper that are critical for the implementation of the FinFuture Framework but that require further research.

## Financial wellbeing

Build on existing research to create a nation-wide framework for defining and operationalising all relevant dimensions of financial wellbeing. Engage with relevant stakeholders (e.g. government, industry, consumer advocates) to ensure the framework is adopted on a national basis. Investigate the determinants of the various dimensions of financial wellbeing. Conduct research to determine clear pathways to improving financial wellbeing.

## Responsibilities in financial decisions and contracts

Develop a rigorous framework to guide the allocation of responsibilities in financial decisions and contracts. This will involve determining the cognitive and other capabilities of individuals on the one hand, and the capabilities required to make good decisions on the other. Develop a legal mechanism to assess the responsibilities of contractual parties and their fairness.

## Fairness of financial contracts and fitness for purpose

Define and operationalise fairness in relation to financial contracts, both at the individual and institutional level. Design a framework to enable individuals to assess the contractual terms and their fitness for purpose by reference to financial wellbeing and on the basis of key terms summaries.

## Complexity of decisions and rules

Develop a framework to measure complexity of financial decisions and rules. Based on this framework, determine the cognitive and other capacities required by decision-makers to make those decisions and to follow those rules. The ability to quantify the cognitive and other resource requirements in respect of decisions and rules is essential for the allocation of responsibilities in contracts and a determination of fairness.

## Financial capabilities development

Develop effective interventions to build individual financial capabilities. These interventions should be designed based on the Framework, using evidence-based methods. Capabilities development should include teaching as well as the use of technology in areas such as AI-assisted decision-making tools.

## Engaging people with their finances

Investigate how Australians are currently engaging (or not engaging) with their finances. Determine how to better engage Australians with their finances to improve their financial wellbeing. Develop programmes and technology to improve Australians' engagement with their finances.

## Bridging the gap between knowledge and action

Investigate where financial behaviours diverge from financial knowledge, i.e. when, how and why do people make suboptimal financial decisions despite financial literacy. Determine how technology or other tools could be used to bridge this gap and support (with consent and without compulsion) individual decision-making.

## Accounting for inequality

Leverage existing research and engage with relevant research and community partners to address inequities that are exacerbated as a result of the financial sector, e.g. the gender superannuation gap.

## Smart disclosure

Investigate how technology can be used to communicate information about – and provide advice on – financial products and services more effectively and how individuals can use technology to tailor disclosure to their specific circumstances and better support their financial decision-making.

## AI-assisted decision-making

Develop AI-based tools to support financial decision-making. Test those tools using evidence-based methods and the Framework.

## Ethics and data/AI

Establish and support research into digital ethics. Promote research into both explainable AI and methods for evaluating bias and fairness in algorithms. Define appropriate consent models that can be effectively deployed without overwhelming the public. Develop better models of privacy that recognise the inherent risk of collecting and analysing longitudinal data.

## Redesign the regulatory framework with financial wellbeing as the core objective

Investigate how a principles-based, outcomes-focused approach can be adopted with financial wellbeing as the core objective to revamp the regulatory framework for financial products and services. Develop rigorous protocols and processes for road-testing and updating the regulatory framework. Integrate, and achieve an appropriate balance between, technology and human involvement and the relevant standards that should be expected of each to maintain and enhance trust in the system.

## Incorporate topics such as financial literacy, financial wellbeing and financial technology (FinTech) into the teaching curricula at the relevant levels of education

Explore how – and at which level – financial literacy, financial wellbeing and financial technology can be incorporated into the teaching curricula. Design and deliver courses for these topics at the relevant level (e.g. FinTech courses at the university level).

# NOTES

<sup>1</sup> See, for example, W Goetzmann, *Money changes everything: how finance made civilization possible*, Princeton University Press, Princeton, 2017.

<sup>2</sup> Department of Foreign Affairs and Trade, *Australia is a top 20 country*, DFAT, Canberra, 2018, viewed 30 June 2019, <<https://dfat.gov.au/trade/resources/Documents/australia-is-a-top-20-country.pdf>>.

<sup>3</sup> *ibid.*

<sup>4</sup> International Monetary Fund, *Australia: Financial system stability assessment, IMF Country Report No. 19/54*, IMF, Washington, DC, 2019.

<sup>5</sup> As of March 2019; see Association of Superannuation Funds of Australia, *Superannuation Statistics*, ASFA, Sydney, 2019, viewed 29 June 2019, <<https://www.superannuation.asn.au/resources/superannuation-statistics>>.

<sup>6</sup> Mercer Australia, *Melbourne Mercer Global Pension Index 2018*, Mercer Australia, Melbourne, 2018, viewed 30 June 2019, <<https://www.mercer.com.au/our-thinking/mmgpi.html>>.

<sup>7</sup> E Tang, *Australia has the fourth largest pension fund assets in the world*, Austrade, Canberra, 2019, viewed 30 June 2019, <<https://www.austrade.gov.au/news/economic-analysis/australia-has-the-fourth-largest-pension-fund-assets-in-the-world>>.

<sup>8</sup> In 2018, the household debt of Australians was on average 218% of household disposable income, the fourth highest level in the OECD. See OECD, *Household debt (indicator)*, OECD, Paris, 2019, viewed 1 July 2019, <<https://doi.org/10.1787/f03b6469-en>>. It has doubled over the past two decades.

<sup>9</sup> See, for example, M Bullock, 'Property, debt and financial stability', speech delivered at Urban Development Institute of Australia (WA), Perth, 20 March 2019, Reserve Bank of Australia, Sydney, 2019, <<https://www.rba.gov.au/speeches/2019/sp-ag-2019-03-20.html>>. Morgan Stanley, *Australia's dangerous dance with debt*, Morgan Stanley, Sydney, 2019, viewed 1 July 2019, <<https://www.morganstanley.com.au/ideas/household-debt>>.

<sup>10</sup> S Kelly and Q N Vu, *The Lifewise/NATSEM Underinsurance Report: Understanding the social and economic cost of underinsurance*, Lifewise, Canberra, 2010, viewed 1 July 2019, <[http://www.lifewise.org.au/downloads/file/aboutthelifewisecampaign/2010\\_0203\\_LifewiseNATSEMSummaryA4FINAL.pdf](http://www.lifewise.org.au/downloads/file/aboutthelifewisecampaign/2010_0203_LifewiseNATSEMSummaryA4FINAL.pdf)>.

<sup>11</sup> J Fernyhough, 'Australian insurers say "act now" on climate change', *Australian Financial Review*, 24 March 2019, viewed 1 July 2019, <<https://www.afr.com/business/insurance/australian-insurers-say-act-now-on-climate-change-20190221-h1bjck>>.

<sup>12</sup> About one-quarter of Australians aged 66 years and over have incomes less than 50% of median household disposable income; see OECD, *Pensions at a glance 2017: OECD and G20 indicators*, OECD, Paris, 2017, viewed 30 June 2019, <[https://doi.org/10.1787/pension\\_glance-2017-27-en](https://doi.org/10.1787/pension_glance-2017-27-en)>.

<sup>13</sup> J Burnett, K Davis, C Murawski, R Wilkins & N Wilkinson, 'Measuring the adequacy of retirement savings', *Review of Income and Wealth*, vol. 64, no. 4, 2018, 900–927.

<sup>14</sup> About one in eight Australians report having no savings at all. See K Muir, R Reeve, C Connolly, A Marjolin, F Salignac & K Ho, *Financial resilience in Australia 2015*, Centre for Social Impact, University of New South Wales, Sydney, 2018.

<sup>15</sup> In 2013, 16.9% of adult Australians were 'either fully or severely excluded from financial services', C Connolly, *Measuring financial exclusion in Australia*, Centre for Social Impact, University of New South Wales, Sydney, for National Australia Bank, 2014, 5.

<sup>16</sup> The term 'under-banked' refers to a situation in which a person has a bank account and basic forms of credit but continues to rely on alternative financial services, such as predatory lenders. See L Servon, *The unbanking of America*, Houghton Mifflin Harcourt, Boston, 2017.

<sup>17</sup> See K Muir, R Reeve, C Connolly, A Marjolin, F Salignac & K Ho, *Financial resilience in Australia 2015*, Centre for Social Impact, University of New South Wales, Sydney, for National Australia Bank, 2016.

<sup>18</sup> Y N Harari, *Homo Deus: A brief history of tomorrow*, Harper Perennial, New York, 2018; C Skinner, *Digital human: The fourth revolution of humanity includes everyone*, Wiley, Chichester, 2018.

<sup>19</sup> C Skinner, *Digital Human: The fourth revolution of humanity includes everyone*, Wiley, Chichester, 2018.

<sup>20</sup> *ibid.*

<sup>21</sup> J Healy, D Nicholson & A Pekarek. 'Should we take the gig economy seriously', *Labour & Industry*, vol. 27, 2017, pp. 232-248.

<sup>22</sup> See e.g. C Skinner, *Digital Human*, 2018.

<sup>23</sup> See e.g. Y N Harari, *Homo Deus*, 2018.

<sup>24</sup> Real Insurance, *The Real Concerns Index May 2019*, Greenstone Financial Services Pty Ltd and Hollard Insurance Company Pty Ltd, Real Insurance, 2019, viewed 26 June 2019, <<https://www.realinsurance.com.au/RealInsurance/media/documents/resources/the-real-concerns-index-2019.pdf>>.

<sup>25</sup> RG Netemeyer, D Warmath, D Fernandes & JG Lynch Jr, 'How am I doing? Perceived financial well-being, its potential antecedents, and its relation to overall well-being', *Journal of Consumer Research*, vol. 45, no. 1, 2018, 68–89.

<sup>26</sup> EC Bruggen, J Hogreve, M Holmlund, S Kabadayi & M Löfgren, 'Financial well-being: A conceptualization and research agenda', *Journal of Business Research*, vol. 79, 2017, 228–237.

<sup>27</sup> CG Davis & J Mantler, *The consequences of financial stress for individuals, families, and society*, Centre for Research on Stress, Coping and Well-being, Carleton University, Ottawa, 2004.

<sup>28</sup> Relationships Australia, *Relationships Indicator Survey 2011*, Relationships Australia, Canberra, 2011, viewed 30 June 2019, <<http://www.relationships.org.au/what-we-do/research/australian-relationships-indicators/relationships-indicator-2011/view>>.

<sup>29</sup> See C Renzetti, 'Economic Stress and Domestic Violence', CRVAW Faculty Research Reports and Papers, 1, 2009, view 2 July 2019, <[https://uknowledge.uky.edu/cgi/viewcontent.cgi?article=1000&context=crvaw\\_reports](https://uknowledge.uky.edu/cgi/viewcontent.cgi?article=1000&context=crvaw_reports)>.

<sup>30</sup> Other life domains include physical health assessment, job satisfaction and relationship support satisfaction; see RG Netemeyer, D Warmath, D Fernandes & JG Lynch Jr, 'How am I doing? Perceived financial well-being, its potential antecedents, and its relation to overall well-being', *Journal of Consumer Research*, vol. 45, no. 1, 2018.

<sup>31</sup> Commonwealth Government of Australia, *Final report: Royal Commission into Misconduct in the Banking, Superannuation and Financial Services Industry*, Commonwealth Government of Australia, Canberra, 2019, viewed 1 July 2019, <<https://treasury.gov.au/sites/default/files/2019-03/fsrc-volume1.pdf>>.

<sup>32</sup> C Breidbach, C Culnane, A Godwin, C Murawski & C Sear, 'How Australians feel about their finances and financial service providers', The University of Melbourne, Melbourne, 2019, viewed 1 August 2019, <<https://unimelb.edu.au/finfuture/consumer-research/>>.

<sup>33</sup> At the time of writing. See J Eyers, 'Bank compensation costs could hit \$10b', *Australian Financial Review*, 14 May 2019, viewed 1 July 2019, <<https://www.afr.com/business/banking-and-finance/bank-compensation-costs-could-hit-10b-20190513-p51mt6>>.

<sup>34</sup> Deloitte, *Deloitte Trust Index: Banking 2018*, Deloitte Touche Tohmatsu Limited, New York, 2018, viewed 1 July 2019, <<https://www2.deloitte.com/au/en/pages/financial-services/articles/deloitte-trust-index-banking-survey.html>>.

<sup>35</sup> *ibid.*

<sup>36</sup> C Breidbach et al. 'How Australians feel about their finances and financial service providers', The University of Melbourne, Melbourne, 2019.

<sup>37</sup> See, for example, C Lagarde, 'The financial sector: Redefining a broader sense of purpose', 32nd World Traders' Tacitus Lecture, International Monetary Fund, London, 2019, viewed 30 June 2019, <<https://www.imf.org/en/News/Articles/2019/02/21/sp022819-md-the-financial-sector-redefining-a-broader-sense-of-purpose>>.

<sup>38</sup> Financial System Inquiry, 'Interim report', Commonwealth Government of Australia, Canberra, 2014. There has been a more general concern about rent extraction by the financial sector. In the United States, income from financial activities has risen and fallen with the value of financial assets while the unit cost of financial intermediation has remained largely unchanged over the last century. This suggests that there has been a significant amount of rent extraction. See A Haldane, 'Finance Version 2.0', speech delivered at the Joint Bank of England/London Business School Conference on "Is there an industrial revolution in financial services?", London, 2016, viewed on 6 July 2019; T Philippon, 'Has the U.S. finance industry become less efficient? On the theory and measurement of financial intermediation', *American Economic Review*, vol. 105, 2015, 1408-1438.

<sup>39</sup> See, for example, Commonwealth Government of Australia, *Final report: Financial System Inquiry*, Commonwealth Government of Australia, Canberra, 2014, viewed 30 June 2019, <<http://fsi.gov.au/publications/final-report>>.

<sup>40</sup> *ibid.*

<sup>41</sup> See, for example, Commonwealth Government of Australia, *Final report: Financial System Inquiry*, Commonwealth Government of Australia, Canberra, 2014, viewed 30 June 2019, <<http://fsi.gov.au/publications/final-report>>. Some argue that this shift of economic and financial risks to households and the resulting increase in financial insecurity is a global trend; see, for example, J Hacker, *The great risk shift*, Oxford University Press, Oxford, 2019.

<sup>42</sup> See MR Darby & E Karni, ‘Free competition and the optimal amount of fraud’, *Journal of Law and Economics*, vol. 16, no. 1 1973, 67–88; U Dulleck, R Kerschbamer & M Sutter, ‘The economics of credence goods: an experiment on the role of liability, verifiability, reputation, and competition’, *American Economic Review*, vol. 101, 2011, 526–555.

<sup>43</sup> See, for example, S Arora, B Barak, M Brunnermeier, R Ge, *Computational complexity and information asymmetry in financial products*, working paper, Princeton University, Princeton, 2009.

<sup>44</sup> See, for example, H Simon, *Models of man: social and rational*, Oxford University Press, Oxford, 1957; G Gigerenzer & R Selten, *Bounded rationality*, MIT Press, Cambridge, 2002; Daniel Kahneman, *Thinking, fast and slow*, Macmillan, London, 2011.

<sup>45</sup> See, for example, P Bossaerts & C Murawski, ‘Computational complexity and human decision-making’, *Trends in Cognitive Science*, vol. 21, 2017, 917–929.

<sup>46</sup> C Breidbach et al. ‘How Australians feel about their finances and financial service providers’, The University of Melbourne, Melbourne, 2019.

<sup>47</sup> Commonwealth Government of Australia, *Productivity Commission Inquiry Report No. 89: Competition in the Australian Financial System*, Commonwealth Government of Australia, Canberra, 2018, viewed 6 July 2019, <<https://www.pc.gov.au/inquiries/completed/financial-system/report/financial-system.pdf>>.

<sup>48</sup> For more detail regarding methodology, see C Breidbach et al. ‘How Australians feel about their finances and financial service providers’, The University of Melbourne, Melbourne, 2019.

<sup>49</sup> Our definition is adopted from C Comerton-Forde, E Ip, DC Ribar, J Ross, N Salamanca & S Tsiaplias, *Using survey and banking data to measure financial wellbeing: Financial Wellbeing Scales Technical Report No. 1*, Commonwealth Bank of Australia and Melbourne Institute, Melbourne, 2018. Various other definitions of *financial wellbeing* have been proposed that differ primarily in scope and whether they are based on objective or subjective measures. See E C Bruggen, J Hogleve, M Holmlund, S Kabadayi & M Löfgren, ‘Financial Wellbeing: A conceptualisation and research agenda.’ *Journal of Business Research*, 79, 2017: 228-237; E Kempson, A Finney, & C Poppe, ‘Financial Well-Being: A Conceptual Model and Preliminary Analysis’. SIFO Project Note no. 3-2017, SIFO Consumer Research Agency, 2017; Consumer Financial Protection Bureau, ‘Measuring financial well-being: A guide to using the CSFB financial well-being scale’. Consumer Financial Protection Bureau, 2015; K Muir, M Hamilton, JH Noone, A Marjolin, F Salignac & P Saunders. *Exploring Financial Wellbeing in the Australian Context*. Centre for Social Impact & Social Policy Research Centre – University of New South Wales, 2017. We consider the definition proposed by Comerton-Forde et al. to be the most advanced at the time of writing, certainly in the Australian context. See Box B for further information.

<sup>50</sup> E C Bruggen et al. ‘Financial Wellbeing: a conceptualization and research agenda’, 2017.

<sup>51</sup> *ibid.*

<sup>52</sup> *ibid.* See also, C Comerton-Forde et al. ‘Using survey and banking data to measure wellbeing’, 2018.

<sup>53</sup> Bruggen et al. ‘Financial Wellbeing: a conceptualization and research agenda’, 2017.

<sup>54</sup> Kempson et al. ‘Financial Well-being: A Conceptual Model and Preliminary Analysis’, 2017.

<sup>55</sup> Muir et al. ‘Exploring Financial Wellbeing in the Australian Context’, 2017.

<sup>56</sup> *ibid.*

<sup>57</sup> Comerton-Forde et al. ‘Using Survey and Banking Data to Measure Financial Wellbeing’, 2018.

<sup>58</sup> J Haisek-DeNew, D Ribar, N Salamanca & A Nicastro ‘Using Survey and Banking Data to Understand Australians’ *Financial Wellbeing: Financial Wellbeing Scales Technical Report No.2*. Commonwealth Bank of Australia and Melbourne Institute, Melbourne, 2018,

<sup>59</sup> See Comerton-Forde et al.; J Haisken-DeNew, D C Ribar, N Salamanca & A Nicastro, *Using survey and banking data to understand Australians’ financial wellbeing: Financial Wellbeing Scales Technical Report No. 2*, Commonwealth Bank of Australia and Melbourne Institute, Melbourne, 2018.

<sup>60</sup> See Haisken-DeNew et al.

<sup>61</sup> *ibid.*

<sup>62</sup> See S L Vargo & R Lusch, ‘Institutions and axioms: an extension and update of service-dominant logic’, *Journal of the Academy of Marketing Science*, vol. 44, 2016, 5–23.

<sup>63</sup> S L Vargo & R Lusch, ‘Service-dominant logic: continuing the evolution’, *Journal of the Academy of Marketing Science*, vol. 36, 2008, 1–10.

<sup>64</sup> *ibid.*

<sup>65</sup> See, for example, C H Livingstone, E Bruce, E Kotnik & S T King, *Comparing Australian and International Systems to Address Consumer Financial Stress*, Monash University Press, 2009.

<sup>66</sup> See, for example, the Global Burden of Disease Project, *Lancet*, 2019, viewed 2 July 2019, <<https://www.thelancet.com/gbd>>.

<sup>67</sup> See Chapter 3 of the *National Consumer Credit Protection Act 2009 (Cth)*, which defines situations where a contract will be unsuitable to include where the consumer is unable to meet the repayments or can only comply with substantial hardship, or the contract does not meet the consumer’s requirements and objective. However, the legislation does not define *substantial hardship*. ASIC has stated that ‘[w]e do not propose to give any definitive formulation of what substantial hardship means. The law about the meaning of ‘substantial hardship’ will develop and become clearer as cases come before the courts and judgments are handed down’. ASIC Regulatory Guide 209 at paragraph 209.97, viewed on 6 July 2019, <<https://download.asic.gov.au/media/2243019/rg209-published-5-november-2014.pdf>>.

<sup>68</sup> See *Treasury Laws Amendment (Design and Distribution Obligations and Product Intervention Powers) Act 2019 (Cth)* subsection 994A(1) (definition of *appropriate*) and subsection 994B(8), viewed on 6 July 2019, <<https://www.legislation.gov.au/Details/C2019A00050>>.

<sup>69</sup> *Treasury Laws Amendment (Design and Distribution Obligations and Product Intervention Powers) Act 2019 (Cth)* subsection 994B(8).

<sup>70</sup> See, for example, C Comerton-Forde et al.; Muir et al., 2018; JR Bray, J Chesters & J Homel, *Financial capabilities, financial stress—resources, behaviours and well-being: an approach to measurement*, Australian National University, Canberra, 2011; E Kempson, A Finney, & C Poppe (2017). ‘Financial Well-Being: A Conceptual Model and Preliminary Analysis’. SIFO Project Note no.3-2017, SIFO Consumer Research Agency, 2017. Financial wellbeing frameworks should be country-specific.

<sup>71</sup> ‘[O]ne key element of the good life is deciding for yourself what it means’ Financial Times Editorial Board, ‘The secret of measuring national wellbeing’, *Financial Times*, 19 June 2019. Viewed on 1 July 2019, <<https://www.ft.com/content/da90a694-8e99-11e9-a1c1-51bf8f989972>>.

<sup>72</sup> See Chapter 1 of this document: “A New Approach Is Needed For Personal Finance”.

<sup>73</sup> See A Sen, *Inequality reexamined*, Harvard University Press, Cambridge, 1992.

<sup>74</sup> A good example is the use of income maximisation frameworks. See, for example, K Landvogt, *Financial capability: a view from the margins of the ‘money system’*, Good Shepherd Youth and Family Service Seminar, Brotherhood of St Laurence, 2008.

<sup>75</sup> See Principle 4 of the eight principles of good regulation that the UK Financial Conduct Authority (FCA) is required to have regard to under Section 3B of the *Financial Services and Markets Act 2000 (UK)* when exercising its general functions: ‘Consumers should take responsibility for their decisions’.

<sup>76</sup> See, for example, J Paterson, ‘The Australian Unfair Contract Terms Law: the rise of substantive unfairness as a ground for review of standard form consumer contracts’, *Melbourne University Law Review*, vol. 33, 2009, 935–956; A Capuano & I Ramsay, ‘What causes suboptimal financial behaviour? An exploration of financial literacy, social influences and behavioural economics’, University of Melbourne Legal Studies Research Paper no. 540, 2011; Bossaerts & Murawski.

<sup>77</sup> See, for example, R H Thaler & C R Sunstein, *Nudge: improving decisions about health, wealth and happiness*, Penguin, London, 2009.

<sup>78</sup> See, for example, A Lusardi & OS Mitchell, ‘Baby boomer retirement security: The roles of planning, financial literacy, and housing wealth’, *Journal of Monetary Economics*, vol. 54, 2007, 205–224; A Capuano & I Ramsay.

<sup>79</sup> See FCA, *Approach to consumers*, FCA, London, 2018, viewed 1 July 2019, <<https://www.fca.org.uk/publication/corporate/approach-to-consumers.pdf>>, p. 9. For example, cognitive capacities deteriorate in the elderly, which can have dramatic consequences on financial decisions and outcomes. See, for example, S Agarwal, J C Driscoll, X Gabaix & D Laibson, *The age of reason: financial decisions over the lifecycle*, *NBER Working Paper No. 13191*, 2007.

<sup>80</sup> See, for example, Bossaerts & Murawski.

<sup>81</sup> FCA, *Approach to consumers*, 11.

<sup>82</sup> See *Financial Services and Markets Act 2000 (UK)*, Section 11C(2)(b).

<sup>83</sup> See *Financial Services and Markets Act 2000 (UK)*, Section 11C(2)(e).

<sup>84</sup> OECD INFE, *Measuring financial literacy: Questionnaire and guidance notes for conducting an internationally comparable survey of financial literacy*, OECD, 2011.

<sup>85</sup> J Valant, *Improving the financial literacy of European consumers*, European Parliamentary Research Service Briefing PE 557.020, 2015, viewed on 6 July 2019, <[http://www.europarl.europa.eu/thinktank/en/document.html?reference=EPRS\\_BRI\(2015\)557020](http://www.europarl.europa.eu/thinktank/en/document.html?reference=EPRS_BRI(2015)557020)>.

<sup>86</sup> *ibid.*

<sup>87</sup> *ibid.*

<sup>88</sup> OECD, *OECD INFE high-level principles on national strategies for financial education*, OECD/INFE, 2012, viewed on 6 July 2019, <<https://www.oecd.org/finance/financial-education/OECD-INFE-Principles-National-Strategies-Financial-Education.pdf>>.

<sup>89</sup> See FinCap, 'New Single Financial Guidance Body (SFGB) gets down to work' (1 January 2019), viewed on 6 July 2019, <<https://www.fincap.org.uk/en/news/new-single-financial-guidance-body-sfgb-gets-down-to-work>>.

<sup>90</sup> UK Government, viewed 6 July 2019, <<https://www.gov.uk/government/organisations/single-financial-guidance-body>>.

<sup>91</sup> Financial Counselling Australia, *Financial counselling: it makes a difference*, Financial Counselling Australia, Melbourne, 2016. Viewed on 7 July 2019, <<https://www.financialcounsellingaustralia.org.au/docs/financial-counselling-it-makes-a-difference/>>.

<sup>92</sup> Financial Counselling Australia & National Association of Community Legal Centres, *Royal Commission into Misconduct in the Banking, Superannuation and Financial Services Industry: a proposal for the industry levy to fund community financial counselling and consumer legal services—joint submission*. Joint submission by Financial Counselling Australia and the National Association of Community Legal Centres to the Royal Commission into Misconduct in the Banking, Superannuation and Financial Services Industry, 2019, viewed on 30 June 2019, <<https://www.financialcounsellingaustralia.org.au/docs/submission-to-the-royal-commission-into-misconduct-in-the-banking-superannuation-and-financial-services-industry-a-proposal-for-the-industry-levy-to-fund-community-financial-counselling-and-consumer/>>.

<sup>93</sup> See H Taneja, 'The era of 'move fast and break things' is over', *Harvard Business Review*, 22 January 2019, viewed 30 June 2019, <<https://hbr.org/2019/01/the-era-of-move-fast-and-break-things-is-over>>.

<sup>94</sup> A Godwin, 'Brave New World: Digital Disclosure of Financial Products and Services', *Capital Markets Law Journal*, vol. 11, no. 3, 2016, 442.

<sup>95</sup> C R Sunstein, *Memorandum for the heads of executive departments and agencies: informing consumers through smart disclosure* (2011), as quoted in Godwin, 445.

<sup>96</sup> See ASIC, Corporations (Facilitating Electronic Delivery of Financial Services Disclosure) Instrument 2015 (15-647), viewed 6 July 2019, <<https://www.legislation.gov.au/Details/F2016C00298>>.

<sup>97</sup> For a discussion about the legislative framework and the challenges of classical contract theory, which is based on a model of highly competent and rational contracting parties, see Paterson.

<sup>98</sup> See C Connolly, *Measuring Financial Exclusion in Australia*, 2014.

<sup>99</sup> See A Haldane, 'Finance Version 2.0', 2016; T Philippon, 'Has the U.S. finance industry become less efficient? On the theory and measurement of financial intermediation', 2015.

<sup>100</sup> By *effective interest rate* we mean the implied interest rate that reflects all costs borne by the customer in relation to the credit product, including charged interest, fees and any other costs.

<sup>101</sup> *Corporations Act 2001 (Cth)*, Section 961B(2). See Commonwealth Government of Australia, *Final Report: Royal Commission* (Royal Commission Final Report): 'But sometimes the requests for prescription and detail seek to shift responsibility from the regulated to the regulator, by urging the creation of "safe-harbour" provisions that leave the regulated entity with little more than a box-ticking task', 495–496.

<sup>102</sup> See Australian Government Treasury, Submission to the Royal Commission Interim Report (Treasury Interim Report Submission), viewed 9 July 2019, <<https://financialservices.royalcommission.gov.au/Submissions/Documents/interim-report-submissions/POL.9100.0001.1059.pdf>>.

<sup>103</sup> Note Royal Commission Recommendation 7.3: 'As far as possible, exceptions and qualifications to generally applicable norms of conduct in legislation governing financial services entities should be eliminated'. Royal Commission Final Report, 43.

<sup>104</sup> New South Wales Department of Finance, Services and Innovation, *Guidance for regulators to implement outcomes and risk-based regulation* (2016), 9, viewed on 6 July 2019, <[http://productivity.nsw.gov.au/sites/default/files/2018-05/Guidance\\_for\\_regulators\\_to\\_implement\\_outcomes\\_and\\_risk-based\\_regulation-October\\_2016.pdf](http://productivity.nsw.gov.au/sites/default/files/2018-05/Guidance_for_regulators_to_implement_outcomes_and_risk-based_regulation-October_2016.pdf)>.

<sup>105</sup> *Evidence-informed regulation* has been defined as 'regulatory processes that are informed by high quality evidence from a wide range of sources'. Australian Communications and Media Authority, *Evidence-informed regulation – The ACMA approach*, 2010, 2, viewed on 6 July 2019, <<https://www.acma.gov.au/-/media/Office-of-the-Chair/Information/pdf/ACMA-EvidenceInformed-Regulation-The-ACMA-Approach.PDF>>.

<sup>106</sup> As noted by Treasury, '[a] principles-based approach] promotes simplicity and efficiency by stating the outcomes sought or obligations imposed, but leaves the regulated population free to find the most efficient way of achieving that outcome'. Treasury Interim Report Submission, 6.

<sup>107</sup> As noted by Treasury, 'principles are adaptive. They do not require frequent changes to the overarching statute. When a principle is correctly distilled there is little need for ongoing legislative amendments, particularly when contrasted with more prescriptive granular approaches'. Treasury Interim Report Submission, 7.

<sup>108</sup> As noted by Treasury, '[a]n improved financial services law would see the primary law being used — where possible — to set the enduring framework and principles, with rules and regulations that are more easily amended and updated being used to provide more detail where necessary'. Treasury Interim Report Submission, 2.

<sup>109</sup> Recommendation 7.4: 'By drawing explicit connections in the legislation between the particular rules that are made and the fundamental norms to which those rules give effect, the regulated community and the public more generally will better understand what the rules are directed to achieving', Royal Commission Final Report, 44.

<sup>110</sup> Treasury Interim Report Submission, 7.

<sup>111</sup> Treasury Interim Report Submission, 2. 'Over time, as particular issues have emerged, the policy response has taken into consideration the requests by financial firms for greater clarity and certainty of their obligations – leading to additional layers of prescription in the legal framework'.

<sup>112</sup> See *Intergovernmental Agreement for the Australian Consumer Law*, 8, which provides that the legislation is subject to an ongoing review process; viewed on 6 July 2019, <[http://consumerlaw.gov.au/files/2015/06/acl\\_iga.pdf](http://consumerlaw.gov.au/files/2015/06/acl_iga.pdf)>.

<sup>113</sup> *Financial Services and Markets Act 2000*. See FCA, *Approach to consumers*: 'Our regulation is outcomes-focused and is based on a combination of the Principles, other high-level rules and, where necessary, detailed rules and guidance', 12–13, viewed on 6 July 2019, <<https://www.fca.org.uk/publication/corporate/approach-to-consumers.pdf>>.

<sup>114</sup> FCA, *Approach to consumers*, 13.

<sup>115</sup> FCA, *Approach to consumers*, 13. See also New South Wales Department of Finance, Services and Innovation, *Guidance for regulators to implement outcomes and risk-based regulation*, New South Wales Department of Finance, Services and Innovation, Sydney (2016): 'Regulatory outcomes that are clearly defined and achievable are critical to effective outcomes and risk-based regulation. It requires regulators to consider: their legislative mandate; their core purpose to regulated entities, regulation beneficiaries, and the broader strategic context; and the options available to implement regulatory initiatives', 8. See also the UK Solicitors Regulation Authority *Code of Conduct*: 'Outcomes-focused regulation concentrates on providing positive outcomes which when achieved will benefit and protect clients and the public'.

<sup>116</sup> FCA [UK Financial Conduct Authority] Handbook, Principle 9, viewed on 6 July 2019, <<https://www.handbook.fca.org.uk/handbook>>.

<sup>117</sup> FCA Handbook, Outcome 4.

<sup>118</sup> FCA Handbook, 25.

<sup>119</sup> See Royal Commission Final Report, 45.

<sup>120</sup> As noted in Chapter 1, financial products are credence claims, the quality of which is hard to evaluate at the time of purchase.

<sup>121</sup> *Corporations Act 2001 (Cth)*, section 912A.

<sup>122</sup> A simple example is the use of pop-up warnings on phones in respect of forthcoming payments due on credit cards.

<sup>123</sup> See, for example, the recent High Court decision in *Australian Securities and Investments Commission v Kobelt* [2019] HCA 18 and the complexities surrounding the interpretation of 'unconscionable conduct'.

<sup>124</sup> C Breidbach, C Culnane, A Godwin, C Murawski & C Sear, 'How Australians feel about their finances and financial service providers', The University of Melbourne, Melbourne, 2019, viewed 1 August 2019, <[unimelb.edu.au/finfuture/consumer-research/](http://unimelb.edu.au/finfuture/consumer-research/)>.

<sup>125</sup> S Zuboff, *The age of surveillance capitalism: the fight for the future at the new frontier of power*. Profile Books, London, 2019.

<sup>126</sup> See D Cossins, 'Discriminating algorithms: 5 times AI showed prejudice', *New Scientist*, 2018, viewed on 6 July 2019 <<https://www.newscientist.com/article/2166207-discriminating-algorithms-5-times-ai-showed-prejudice/>>.

<sup>127</sup> See P Ohm, 'Broken promises of privacy: responding to the surprising failure of anonymization', *UCLA Law Review*, vol. 57, 2009, 1701.

<sup>128</sup> See B Richmond, 'A Day in the Life of Data', Consumer Policy Research Centre, 2019, viewed on 6 July 2019, <<https://cprc.org.au/publication/research-report-a-day-in-the-life-of-data/>>.

<sup>129</sup> See G Nott, 'Google's research chief questions value of 'Explainable AI'', *Computer World*, 2017, viewed on 6th July 2019, <<https://www.computerworld.com.au/article/621059/google-research-chief-questions-value-explainable-ai/>>.

<sup>130</sup> See Australian Securities & Investments Commission, 'Budget Planner', *MoneySmart*, 2018, viewed on 6<sup>th</sup> July 2019 <<https://www.moneysmart.gov.au/tools-and-resources/calculators-and-apps/budget-planner>>; ANZ, 'ANZ Budget Planner', viewed on 6<sup>th</sup> July 2019, <<http://www.anz.com/personal/bank-accounts/calculators-tools/budget-planner-calculator/>>; Commonwealth Bank of Australia, 'Spend Tracker and Insights', viewed on 6th July 2019, <<https://www.commbank.com.au/digital-banking/spend-tracker-insights.html>>.



# BIBLIOGRAPHY

Association of Superannuation Funds of Australia, *Superannuation Statistics*, ASFA, Sydney, 2019, viewed 29 June 2019, <<https://www.superannuation.asn.au/resources/superannuation-statistics>>.

Agarwal, S, Driscoll, J C, Gabaix, X & Laibson, D, *The age of reason: financial decisions over the lifecycle*, NBER Working Paper No. 13191, 2007.

Arora, S, Barak, B, Brunnermeier, M & Ge, R *Computational complexity and information asymmetry in financial products*, working paper, Princeton University, Princeton, 2009.

Australian Communications and Media Authority, *Evidence-informed regulation – The ACMA approach*, 2010, 2, viewed on 6 July 2019, <<https://www.acma.gov.au/-/media/Office-of-the-Chair/Information/pdf/ACMA-EvidenceInformed-Regulation-The-ACMA-Approach.PDF>>.

Australian Securities & Investments Commission, ‘Budget Planner’, MoneySmart, 2018, viewed on 6<sup>th</sup> July 2019 <<https://www.moneysmart.gov.au/tools-and-resources/calculators-and-apps/budget-planner>>.

ANZ, ‘ANZ Budget Planner’, viewed on 6<sup>th</sup> July 2019, <<http://www.anz.com/personal/bank-accounts/calculators-tools/budget-planner-calculator/>>.

ASIC, Corporations (Facilitating Electronic Delivery of Financial Services Disclosure) Instrument 2015 (15-647), viewed 6 July 2019, <<https://www.legislation.gov.au/Details/F2016C00298>>.

Bullock, M, ‘Property, debt and financial stability’, speech delivered at Urban Development Institute of Australia (WA), Perth, 20 March 2019, Reserve Bank of Australia, Sydney, 2019, viewed 1 July 2019, <<https://www.rba.gov.au/speeches/2019/sp-ag-2019-03-20.html>>.

Bray, J R, Chesters, J & Homel, J, *Financial capabilities, financial stress—resources, behaviours and well-being: an approach to measurement*, Australian National University, Canberra, 2011.

Bossaerts, P & Murawski, C, ‘Computational complexity and human decision-making’, *Trends in Cognitive Science*, vol. 21, 2017, 917–929.

Breidbach, C & Maglio, PP, ‘Technology-enabled value co-creation: An empirical analysis of actors, resources, and practices’, *Industrial Marketing Management*, 56, 2016, 73-85.

Breidbach, C, Culnane, C, Godwin, A, Murawski, C & Sear, C, ‘How Australians feel about their finances and financial service providers’, The University of Melbourne, Melbourne, 2019, viewed 1 August 2019, <[unimelb.edu.au/finfuture/consumer-research/](http://unimelb.edu.au/finfuture/consumer-research/)>.

Bruggen, EC, Hogreve, J, Holmlund, M, Kabadayi, S & Löfgren, M, ‘Financial well-being: A conceptualization and research agenda’, *Journal of Business Research*, vol. 79, 2017, 228–237.

Burnett, J, Davis, K, Murawski, C, Wilkins, R, & Wilkinson, N, ‘Measuring the adequacy of retirement savings’, *Review of Income and Wealth*, vol. 64, no. 4, 2018, 900–927.

Capuano, A & Ramsay, I, ‘What causes suboptimal financial behaviour? An exploration of financial literacy, social influences and behavioural economics’, University of Melbourne Legal Studies Research Paper no. 540, 2011.

CBA-MI, *Improving the Financial Wellbeing of Australians*, April 2019, viewed on 7 July 2019 <[https://www.commbank.com.au/content/dam/commbank-assets/banking/guidance/2018-06/using-survey-banking-data-to-measure-financial-wellbeing.pdf?ei=what\\_UniMelbPDF](https://www.commbank.com.au/content/dam/commbank-assets/banking/guidance/2018-06/using-survey-banking-data-to-measure-financial-wellbeing.pdf?ei=what_UniMelbPDF)>.

Comerton-Forde, C, Ip, E, Ribar, D C, Ross, J, Salamanca, N & Tsiaplias, S, *Using survey and banking data to measure financial wellbeing: Financial Wellbeing Scales Technical Report No. 1*, Commonwealth Bank of Australia and Melbourne Institute, Melbourne, 2018.

Commonwealth Bank of Australia, ‘Spend Tracker and Insights’, viewed on 6<sup>th</sup> July 2019, <<https://www.commbank.com.au/digital-banking/spend-tracker-insights.html>>.

Commonwealth Government of Australia, *Productivity Commission Inquiry Report No. 89: Competition in the Australian Financial System*, Commonwealth Government of Australia, Canberra, 2018, viewed 6 July 2019, <<https://www.pc.gov.au/inquiries/completed/financial-system/report/financial-system.pdf>>.

Commonwealth Government of Australia, *Final report: Financial System Inquiry*, Commonwealth Government of Australia, Canberra, 2014, viewed 30 June 2019, <<http://fsi.gov.au/publications/final-report>>.

Commonwealth Government of Australia, *Final report: Royal Commission into Misconduct in the Banking, Superannuation and Financial Services Industry*, Commonwealth Government of Australia, Canberra, 2019, viewed 1 July 2019, <<https://treasury.gov.au/sites/default/files/2019-03/frsc-volume1.pdf>>.

Connolly, C, *Measuring financial exclusion in Australia*, Centre for Social Impact, University of New South Wales, Sydney, for National Australia Bank, 2014.

Consumer Financial Protection Bureau, ‘Measuring financial well-being: A guide to using the CSFB financial well-being scale’. Consumer Financial Protection Bureau, 2015.

*Corporations Act 2001* (Cth)

Cossins, D, ‘Discriminating algorithms: 5 times AI showed prejudice’, *New Scientist*, 2018, viewed on 6 July 2019 <<https://www.newscientist.com/article/2166207-discriminating-algorithms-5-times-ai-showed-prejudice/>>.

Darby, MR & Karni, E, ‘Free competition and the optimal amount of fraud’, *Journal of Law and Economics*, vol. 16, no. 1 1973, 67–88.

Davis, CG & Mantler, J, *The consequences of financial stress for individuals, families, and society*, Centre for Research on Stress, Coping and Well-being, Carleton University, Ottawa, 2004.

Deloitte, *Deloitte Trust Index: Banking 2018*, Deloitte Touche Tohmatsu Limited, New York, 2018, viewed 2 July 2019, <<https://www2.deloitte.com/au/en/pages/financial-services/articles/deloitte-trust-index-banking-survey.html>>.

Department of Foreign Affairs and Trade, *Australia is a top 20 country*, DFAT, Canberra, 2018, viewed 30 June 2019, <<https://dfat.gov.au/trade/resources/Documents/australia-is-a-top-20-country.pdf>>.

Dulleck, U, Kerschbamer, R & Sutter, M, ‘The economics of credence goods: an experiment on the role of liability, verifiability, reputation, and competition’, *American Economic Review*, vol. 101, 2011, 526–555.

Eyers, J, ‘Bank compensation costs could hit \$10b’, *Australian Financial Review*, 14 May 2019, viewed 1 July 2019, <<https://www.afr.com/business/banking-and-finance/bank-compensation-costs-could-hit-10b-20190513-p51mt6>>.

FCA, *Approach to consumers*, viewed on 6 July 2019, <<https://www.fca.org.uk/publication/corporate/approach-to-consumers.pdf>>.

FCA [UK Financial Conduct Authority] Handbook, viewed on 6 July 2019, <<https://www.handbook.fca.org.uk/handbook>>.

Financial Counselling Australia, *Financial counselling: it makes a difference*, Financial Counselling Australia, Melbourne, 2016. Viewed on 7 July 2019, <<https://www.financialcounsellingaustralia.org.au/docs/financial-counselling-it-makes-a-difference/>>.

Financial Counselling Australia & National Association of Community Legal Centres, *Royal Commission into Misconduct in the Banking, Superannuation and Financial Services Industry: a proposal for the industry levy to fund community financial counselling and consumer legal services—joint submission*. Joint submission by Financial Counselling Australia and the National Association of Community Legal Centres to the Royal Commission into Misconduct in the Banking, Superannuation and Financial Services Industry, 2019, viewed on 30 June 2019, <<https://www.financialcounsellingaustralia.org.au/docs/submission-to-the-royal-commission-into-misconduct-in-the-banking-superannuation-and-financial-services-industry-a-proposal-for-the-industry-levy-to-fund-community-financial-counselling-and-consumer/>>.

Fernyhough, J, ‘Australian insurers say “act now” on climate change’, *Australian Financial Review*, 24 March 2019, viewed 1 July 2019, <<https://www.afr.com/business/insurance/australian-insurers-say-act-now-on-climate-change-20190221-h1bjck>>.

*Financial Services and Markets Act 2000* (UK)

Financial System Inquiry, ‘Interim report’, Commonwealth Government of Australia, Canberra, 2014.

Financial Times Editorial Board, ‘The secret of measuring national wellbeing’, *Financial Times*, 19 June 2019. Viewed on 1 July 2019, <<https://www.ft.com/content/da90a694-8e99-11e9-a1c1-51bf8f989972>>.

FinCap, ‘New Single Financial Guidance Body (SFGB) gets down to work’ (1 January 2019), viewed on 6 July 2019, <<https://www.fincap.org.uk/en/news/new-single-financial-guidance-body-sfgb-gets-down-to-work>>.

Gigerenzer, G & Selten, R, *Bounded rationality*, MIT Press, Cambridge, 2002; Daniel Kahneman, *Thinking, fast and slow*, Macmillan, London, 2011.

Godwin, A, ‘Brave New World: Digital Disclosure of Financial Products and Services’, *Capital Markets Law Journal*, vol. 11, no. 3, 2016, 442.

Goetzmann, W, *Money changes everything: how finance made civilization possible*, Princeton University Press, Princeton, 2017.

Guo L, Arnould EJ, Gruen TW, Tang, C, ‘Socializing to co-produce: pathways to consumers’ financial well-being’ *Journal of Service Research*, Vol. 16, No.4, 2013, 549-63.

Hacker, J, *The great risk shift*, Oxford University Press, Oxford, 2019.

Haisken-DeNew, J, Ribar, D C Salamanca, N & Nicastró, A *Using survey and banking data to understand Australians' financial wellbeing: Financial Wellbeing Scales Technical Report No. 2*, Commonwealth Bank of Australia and Melbourne Institute, Melbourne, 2018.

Haldane, 'A Finance Version 2.0', speech delivered at the Joint Bank of England/London Business School Conference on "Is there an industrial revolution in financial services?", London, 2016, viewed on 6 July 2019; <<https://www.bankofengland.co.uk/-/media/boe/files/speech/2016/andy-haldanes-opening-remarks-at-london-business-school-centre-for-corporate>>.

Harari, Y N, *Homo deus: A brief history of tomorrow*, Harper Perennial, New York, 2018.

Healy, J, Nicholson, D & Pekarek, A, 'Should we take the gig economy seriously', *Labour & Industry*, vol. 27, 2017, pp. 232-248.

*Intergovernmental Agreement for the Australian Consumer Law*, 8, viewed on 6 July 2019, <[http://consumerlaw.gov.au/files/2015/06/acl\\_iga.pdf](http://consumerlaw.gov.au/files/2015/06/acl_iga.pdf)>.

International Monetary Fund, *Australia: Financial system stability assessment, IMF Country Report No. 19/54*, IMF, Washington, DC, 2019.

Kelly, S and Vu, Q N, *The Lifewise/NATSEM Underinsurance Report: Understanding the social and economic cost of underinsurance*, Lifewise, Canberra, 2010, viewed 1 July 2019, <[http://www.lifewise.org.au/downloads/file/aboutthelifewisecampaign/2010\\_0203\\_LifewiseNATSEMSummaryA4FINAL.pdf](http://www.lifewise.org.au/downloads/file/aboutthelifewisecampaign/2010_0203_LifewiseNATSEMSummaryA4FINAL.pdf)>.

Kempson, E, A Finney, A, & Poppe, C, 'Financial Well-Being: A Conceptual Model and Preliminary Analysis'. *SIFO Project Note no. 3-2017*, SIFO Consumer Research Agency, 2017.

Lagarde, C, 'The financial sector: Redefining a broader sense of purpose', 32nd World Traders' Tacitus Lecture, International Monetary Fund, London, 2019, viewed 30 June 2019, <<https://www.imf.org/en/News/Articles/2019/02/21/sp022819-md-the-financial-sector-redefining-a-broader-sense-of-purpose>>.

Landvogt, K, *Financial capability: a view from the margins of the 'money system'*, Good Shepherd Youth and Family Service Seminar, Brotherhood of St Laurence, 2008.

Livingstone, C H, Bruce, E, Kotnik, E & King, S T, *Comparing Australian and International Systems to Address Consumer Financial Stress*, Monash University Press, 2009.

Lusardi, A & Mitchell, O S, 'Baby boomer retirement security: The roles of planning, financial literacy, and housing wealth', *Journal of Monetary Economics*, vol. 54, 2007, 205-224.

Maglio, PP, & Breidbach C, 'Service science: toward systematic service system innovation', *Bridging Data and Decisions*, INFORMS, 2014, 161-170.

Mauss, M, *The Gift: The Form and Reason for Exchange in Archaic Societies*, Routledge, London, 1990 [1925].

Mayer, C, *Prosperity: Better Business Makes the Greater Good*, Oxford University Press, Oxford, 2018.

Mercer Australia, *Melbourne Mercer Global Pension Index 2018*, Mercer Australia, Melbourne, 2018, viewed 30 June 2019, <<https://www.mercer.com.au/our-thinking/mmgpi.html>>.

Morgan Stanley, *Australia's dangerous dance with debt*, Morgan Stanley, Sydney, 2019, viewed 1 July 2019, <<https://www.morganstanley.com.au/ideas/household-debt>>.

Muir, K, Hamilton, M, Noone, JH, Marjolin, A, Salignac, F & Saunders, P, *Exploring Financial Wellbeing in the Australian Context*. Centre for Social Impact & Social Policy Research Centre – University of New South Wales, 2017.

Muir, K, Reeve, R, Connolly, C, Marjolin, A, Salignac, F & Ho, K, *Financial resilience in Australia 2015*, Centre for Social Impact, University of New South Wales, Sydney, 2018.

*National Consumer Credit Protection Act 2009 (Cth)* ASIC Regulatory Guide 209 at paragraph 209.97, viewed on 6 July 2019, <<https://download.asic.gov.au/media/2243019/rg209-published-5-november-2014.pdf>>.

See *Treasury Laws Amendment (Design and Distribution Obligations and Product Intervention Powers) Act 2019 (Cth)* subsection 994A(1) (definition of *appropriate*) and subsection 994B(8), viewed on 6 July 2019, <<https://www.legislation.gov.au/Details/C2019A00050>>.

Netemeyer, RG, Warmath, D, Fernandes D & Lynch Jr, JG, 'How am I doing? Perceived financial well-being, its potential antecedents, and its relation to overall well-being', *Journal of Consumer Research*, vol. 45, no. 1, 2018, 68-89.

New South Wales Department of Finance, Services and Innovation, *Guidance for regulators to implement outcomes and risk-based regulation* (2016), 9, viewed on 6 July 2019, <[http://productivity.nsw.gov.au/sites/default/files/2018-05/Guidance\\_for\\_regulators\\_to\\_implement\\_outcomes\\_and\\_risk-based\\_regulation-October\\_2016.pdf](http://productivity.nsw.gov.au/sites/default/files/2018-05/Guidance_for_regulators_to_implement_outcomes_and_risk-based_regulation-October_2016.pdf)>.

Nott, G, 'Google's research chief questions value of 'Explainable AI'', *Computer World*, 2017, viewed on 6th July 2019, <<https://www.computerworld.com.au/article/621059/google-research-chief-questions-value-explainable-ai/>>.

OECD, *Household debt (indicator)*, OECD, Paris, 2019, viewed 1 July 2019, <<https://doi.org/10.1787/f03b6469-en>>.

OECD INFE, *Measuring financial literacy: Questionnaire and guidance notes for conducting an internationally comparable survey of financial literacy*, OECD, 2011.

OECD, *OECD INFE high-level principles on national strategies for financial education*, OECD/INFE, 2012, viewed on 6 July 2019, <<https://www.oecd.org/finance/financial-education/OECD-INFE-Principles-National-Strategies-Financial-Education.pdf>>.

OECD, *Pensions at a glance 2017: OECD and G20 indicators*, OECD, Paris, 2017, viewed 30 June 2019, <[https://doi.org/10.1787/pension\\_glance-2017-27-en](https://doi.org/10.1787/pension_glance-2017-27-en)>.

Ohm, P, 'Broken promises of privacy: responding to the surprising failure of anonymization', *UCLA Law Review*, vol. 57, 2009, 1701.

Paterson, J, 'The Australian Unfair Contract Terms Law: the rise of substantive unfairness as a ground for review of standard form consumer contracts', *Melbourne University Law Review*, vol. 33, 2009, 935-956.

Philippon, T, 'Has the U.S. finance industry become less efficient? On the theory and measurement of financial intermediation', *American Economic Review*, vol. 105, 2015, 1408-1438.

Real Insurance, *The Real Concerns Index May 2019*, Greenstone Financial Services Pty Ltd and Hollard Insurance Company Pty Ltd, Real Insurance, 2019, viewed 26 June 2019, <<https://www.realinsurance.com.au/RealInsurance/media/documents/resources/the-real-concerns-index-2019.pdf>>.

Relationships Australia, *Relationships Indicator Survey 2011*, Relationships Australia, Canberra, 2011, viewed 30 June 2019, <<http://www.relationships.org.au/what-we-do/research/australian-relationships-indicators/relationships-indicator-2011/view>>.

Renzetti, C, 'Economic Stress and Domestic Violence', *CRVAW Faculty Research Reports and Papers*, 1, 2009, view 2 July 2019, <[https://uknowledge.uky.edu/cgi/viewcontent.cgi?article=1000&context=crvaw\\_reports](https://uknowledge.uky.edu/cgi/viewcontent.cgi?article=1000&context=crvaw_reports)>.

Richmond, B, 'A Day in the Life of Data', Consumer Policy Research Centre, 2019, viewed on 6 July 2019, <<https://cprc.org.au/publication/research-report-a-day-in-the-life-of-data/>>.

Sen, A, *Inequality reexamined*, Harvard University Press, Cambridge, 1992.

Servon, L, *The unbanking of America*, Houghton Mifflin Harcourt, Boston, 2017.

Simon, H, *Models of man: social and rational*, Oxford University Press, Oxford, 1957.

Simmel, G, *The Philosophy of Money* Routledge, London, 1978 [1900].

Skinner, C, *Digital human: The fourth revolution of humanity includes everyone*, Wiley, Chichester, 2018.

Stout, L, *The Shareholder Value Myth*, Berrett-Koehler Publishers, San Francisco, 2012.

Tang, E, *Australia has the fourth largest pension fund assets in the world*, Austrade, Canberra, 2019, viewed 30 June 2019, <<https://www.austrade.gov.au/news/economic-analysis/australia-has-the-fourth-largest-pension-fund-assets-in-the-world>>.

Taneja, H, 'The era of 'move fast and break things' is over', *Harvard Business Review*, 22 January 2019, viewed 1 July 2019, <<https://hbr.org/2019/01/the-era-of-move-fast-and-break-things-is-over>>.

Thaler, R H & Sunstein, C R, *Nudge: improving decisions about health, wealth and happiness*, Penguin, London, 2009.

The Global Burden of Disease Project, *Lancet*, 2019, viewed 2 July 2019, <<https://www.thelancet.com/gbd>>.

*Treasury Laws Amendment (Design and Distribution Obligations and Product Intervention Powers) Act 2019 (Cth)* subsection 994B(8).

Australian Government Treasury, Submission to the Royal Commission Interim Report (Treasury Interim Report Submission), viewed 9 July 2019, <<https://financialservices.royalcommission.gov.au/Submissions/Documents/interim-report-submissions/POL.9100.0001.1059.pdf>>.

UK Government, viewed 6 July 2019, <<https://www.gov.uk/government/organisations/single-financial-guidance-body>>.

UK Solicitors Regulation Authority *Code of Conduct*: 'Outcomes-focused regulation concentrates on providing positive outcomes which when achieved will benefit and protect clients and the public'.

Valant, J, *Improving the financial literacy of European consumers*, European Parliamentary Research Service Briefing PE 557.020, 2015, viewed on 6 July 2019, <[http://www.europarl.europa.eu/thinktank/en/document.html?reference=EPRS\\_BRI\(2015\)557020](http://www.europarl.europa.eu/thinktank/en/document.html?reference=EPRS_BRI(2015)557020)>.

Vargo S L & Lusch, R, 'Institutions and axioms: an extension and update of service-dominant logic', *Journal of the Academy of Marketing Science*, vol. 44, 2016, 5–23.

Vargo S L & R Lusch, R, 'Service-dominant logic: continuing the evolution', *Journal of the Academy of Marketing Science*, vol. 36, 2008, 1–10.

Zuboff, S, *The age of surveillance capitalism: the fight for the future at the new frontier of power*. Profile Books, London, 2019.

#### LIST OF FIGURES

Figure 1: CBA-MI, 'The CBA-MI Conceptual Model of the Determinants of Financial Wellbeing Outcomes', in CBA-MI, *Improving the Financial Wellbeing of Australians*, April 2019, viewed on 7 July 2019 < [https://www.commbank.com.au/content/dam/commbank-assets/banking/guidance/2018-06/using-survey-banking-data-to-measure-financial-wellbeing.pdf?ei=what\\_UniMelbPDF](https://www.commbank.com.au/content/dam/commbank-assets/banking/guidance/2018-06/using-survey-banking-data-to-measure-financial-wellbeing.pdf?ei=what_UniMelbPDF)>.

Figure 2: List of functions of FinFuture Agency.

Figure 3: Illustration of an Equaliser.

## CONSULTED PERSONS

We invited senior representatives from the finance sector, including senior executives from banks, superannuation funds, technology firms, law firms, consulting firms, community organisations and the Australian Public Service, as well as academics to participate in the consultations. We are grateful to all who consulted with us during the development of this document, in particular, the following persons, who gave their consent to be named in this document. All consultations were conducted under Chatham House rule.

Dr Greg Adamson, Enterprise Fellow for Cyber Security, University of Melbourne

Mr Yechiel Belfer, Special Counsel, Baker McKenzie

Ms Angela Budai, National Women's Officer and National Industrial Officer, Finance Sector Union (FSU)

Mr Gerard Brody, Chief Executive Officer, Consumer Action Law Centre

Ms Emily Chen, Product Executive Wealth Management, IRESS

Mr Alec Christi, Partner, EY Law

Dr Jim Christodouleas, Director, Banking & Capital Markets, PwC

Mr Sean Colvin, Customer Experience Strategy and Performance, IAG

Mr David Court, Partner, Holley Nethercote Law

Professor Kevin Davis, Faculty of Business and Economics, The University of Melbourne

Professor Andrew Dawson, School of Social and Political Sciences, University of Melbourne

Mr Peter Deans, Chief Risk Officer, Bank of Queensland

Ms Katia D'Hulster, Lead Financial Sector Specialist, World Bank

Mr Craig Dunn, Non-executive Director, Westpac

Mr Shayne Elliot, Chief Executive Officer, Australia and New Zealand Banking Group (ANZ)

Dr Vinita Godinho, General Manager, Advisory, Good Shepherd Microfinance

Ms Helen Gordon, Chief Executive Officer, Australian Finance Industry Australia (AFIA)

Ms Fiona Guthrie AM, Chief Executive Officer, Financial Counselling Australia

Mr Tom Halbertal, Impact Manager, SparkBeyond

Professor Ian Harper, Melbourne Business School, The University of Melbourne

Mr Colin Heath, Partner, Banking & Capital Markets, PwC

Mr Anthony James, Partner, Financial Services, PwC

Mr Robert Johanson, Chairman, Bendigo and Adelaide Bank

Mr Alan Kirkland, Chief Executive Officer, CHOICE

Mr Daniel Knight, Partner, K&L Gates

Ms Daniela Marconi, Director Customer Behaviour (Behavioural and Social Sciences), IAG

Dr Fabio Mattioli, School of Social and Political Sciences, University of Melbourne

Mr Mark Miller, Head of Legal Strategy, Bendigo and Adelaide Bank

Associate Professor Timothy Miller, School of Computing and Information Services, University of Melbourne

Mr Harry New, Partner, Hall and Wilcox

## ABOUT THE AUTHORS

Ms Carolyn Nikoloski, Head of Stakeholder Engagement, Good Shepherd Microfinance

Mr Tony Ohlsson, Chief Analytics Officer, Volt Bank

Mr Jan-Willem Ophof, Financial Services Global Program Manager, Microsoft

Professor Jeannie Paterson, Melbourne Law School, The University of Melbourne

Mr Keerthi Prasad, Director, Excelebrate Consulting

Mr John Price, Lead Ombudsman, Insurance, Australian Financial Complaints Authority (AFCA)

Mr Erik Protzman, Founder, Excelebrate Consulting

Professor David Ribar, Faculty of Business and Economics, The University of Melbourne

Professor Ian Ramsay, Melbourne Law School, University of Melbourne

Ms Delia Rickard, Deputy Commissioner, Australian Competition and Consumer Commission (ACCC)

Mr Euan Robertson, General Manager Government & Industry Affairs, Commonwealth Bank of Australia (CBA)

Ms Jennifer Scott, Founder, Human Meets Digital

Mr Alan Tsen, General Manager, Stone and Chalk Melbourne & Chair, Fintech Australia

Mr Andrew Walsh, Chief Executive Officer, IRESS



**Professor Carsten Murawski** – Academic lead Finance and Decision Science

Carsten Murawski is a Professor in the Department of Finance and Co-Director of the Brain, Mind & Markets Laboratory at The University of Melbourne. He specialises in experimental research on decision-making, in particular its neurobiological basis.



**Associate Professor Andrew Godwin** – Academic lead Law and Regulation

Andrew Godwin is an Associate Professor at Melbourne Law School, The University of Melbourne, where he is Director of Studies for Banking and Finance and Director of Transactional Law. He specialises in financial regulation and financial services law.



**Dr Christoph Breidbach** – Academic lead Service Science

Dr Christoph Breidbach is Senior Lecturer in Business Information Systems and Co-Lead of the Service Innovation Alliance at The University of Queensland. His research addresses how information technology transforms service ecosystems and is positioned at the intersection of the Business Information Systems and Service Science disciplines.



**Dr Chris Culnane** – Academic lead Technology and Privacy

Chris Culnane is a Lecturer in the School of Computing and Information Systems at the University of Melbourne. His research focus is in cyber security and privacy.



**Cynthia Sear** – Researcher

Cynthia Sear is a Researcher and PhD Candidate (Anthropology) in the School of Social and Political Sciences at the University of Melbourne. Her research focuses on the relationship between corporations and consumers and how this relates to the wider socio-cultural environment.

[unimelb.edu.au/finfuture](http://unimelb.edu.au/finfuture)



CRICOS provider code: 00116K

**Intellectual property:** Copyright in this publication is owned by the University and no part of it may be reproduced without the permission of the University.

**Disclaimer:** The University endeavours to ensure that information contained in the publication is current and correct at the time of publication (Aug 2019).