



Australian Government
Productivity Commission

How to Assess the Competitiveness and Efficiency of the Superannuation System

Productivity Commission
Draft Report

August 2016

This draft report has been prepared for further public consultation and input. The Commission will finalise its report after these processes have taken place.

© Commonwealth of Australia 2016



Except for the Commonwealth Coat of Arms and content supplied by third parties, this copyright work is licensed under a Creative Commons Attribution 3.0 Australia licence. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/3.0/au>. In essence, you are free to copy, communicate and adapt the work, as long as you attribute the work to the Productivity Commission (but not in any way that suggests the Commission endorses you or your use) and abide by the other licence terms.

Use of the Commonwealth Coat of Arms

For terms of use of the Coat of Arms visit the 'It's an Honour' website: <http://www.itsanhonour.gov.au>

Third party copyright

Wherever a third party holds copyright in this material, the copyright remains with that party. Their permission may be required to use the material, please contact them directly.

Attribution

This work should be attributed as follows, *Source: Productivity Commission, How to Assess the Competitiveness and Efficiency of the Superannuation System, Draft Report.*

An appropriate reference for this publication is:

Productivity Commission 2016, *How to Assess the Competitiveness and Efficiency of the Superannuation System*, Draft Report, Canberra.

Publications enquiries

Media and Publications, phone: (03) 9653 2244 or email: maps@pc.gov.au

The Productivity Commission

The Productivity Commission is the Australian Government's independent research and advisory body on a range of economic, social and environmental issues affecting the welfare of Australians. Its role, expressed most simply, is to help governments make better policies, in the long term interest of the Australian community.

The Commission's independence is underpinned by an Act of Parliament. Its processes and outputs are open to public scrutiny and are driven by concern for the wellbeing of the community as a whole.

Further information on the Productivity Commission can be obtained from the Commission's website (www.pc.gov.au).

Opportunity for further comment

You are invited to examine this draft report and comment on it by written submission to the Productivity Commission by Friday 9 September 2016. Further information on how to provide a submission is included on the study website <http://www.pc.gov.au/inquiries/current/superannuation/make-submission>.

The final report will be prepared after further submissions have been received.

Commissioners

For the purposes of this study the Commissioners are:

Karen Chester

Deputy Chair

Angela MacRae

Commissioner

Terms of reference

EFFICIENCY AND COMPETITIVENESS OF THE SUPERANNUATION SYSTEM

I, Scott Morrison, Treasurer, pursuant to Parts 2, 3 and 4 of the Productivity Commission Act 1998, hereby request that the Productivity Commission conduct: a study to develop criteria to assess the efficiency and competitiveness of the superannuation system; and an inquiry to develop alternative models for a formal competitive process for allocating default fund members to products.

Background

An efficient superannuation system is critical to help Australia meet the economic and fiscal challenges of an ageing population. The superannuation system has accumulated over \$2 trillion in assets. Given the system's size and growth, the system is of central importance to funding the economy and delivering retirement incomes.

MySuper has been a strong step in the right direction but more needs to be done to reduce fees and improve after-fee returns for fund members. The Financial System Inquiry noted that fees have not fallen by as much as would be expected given the substantial increase in the scale of the superannuation system, a major reason for this being the absence of consumer-driven competition, particularly in the default fund market.

These Terms of Reference follow from the Government's response to Financial System Inquiry Recommendation 10 on efficiency in superannuation. The Government committed to tasking the Productivity Commission to develop and release criteria to assess the efficiency and competitiveness of the superannuation system, including the choice and default markets and to develop alternative models for allocating default fund members to products.

This work will inform a review of the efficiency and competitiveness of the superannuation system, which the Productivity Commission will be asked to undertake following the full implementation of the MySuper reforms (after 1 July 2017).

Process

The Productivity Commission is to develop criteria to assess the efficiency and competitiveness of the superannuation system and release the criteria within nine months of receiving these Terms of Reference. The release of these criteria is intended to provide

transparency and certainty to the superannuation industry about how it will be assessed ahead of the full implementation of MySuper.

The Productivity Commission is to develop alternative models for a formal competitive process for allocating default fund members to products. In developing alternative models, the Productivity Commission should be informed by the criteria it develops to assess the efficiency and competitiveness of the superannuation system. The Productivity Commission should report on alternative models within 18 months of receiving these Terms of Reference.

For both elements, the Productivity Commission should consult widely and undertake appropriate public consultation processes, including inviting public submissions and conducting industry roundtables. The Productivity Commission is to provide both draft and final reports and the reports will be published.

Scope of study: development of criteria to assess efficiency of super system

The Productivity Commission should develop criteria to assess whether and the extent to which the superannuation system is efficient and competitive and delivers the best outcomes for members and retirees, including optimising risk-adjusted after fee returns. In determining the criteria to assess the efficiency and competitiveness of the superannuation system, the Productivity Commission may have regard to:

- operational efficiency, where products and services are delivered in a way that minimises costs and maximises value, which can be enhanced by competition and innovation from new entrants and incumbents;
- allocative efficiency, where the system allocates resources to the most productive use and optimally allocates risks;
- dynamic efficiency, including services to members, where the system induces the optimal balance between consumption and saving over time; and
- the extent to which the system encourages optimal behaviour on the part of consumers, including consideration of the learnings from behavioural finance.

The Productivity Commission should consider the nature of competition in the superannuation industry, the effect of government policy and regulation on the competitiveness and efficiency of the system and relevant international experience.

Scope of inquiry: development of alternative models

The Productivity Commission is to examine alternative models for a formal competitive process for allocating default fund members in the superannuation system to products and to develop a workable model, or models, that could be implemented by Government if a new model for allocating default fund members to products is desirable. These model(s) would provide viable alternatives for the Government's consideration, depending on the

outcomes of the review of the efficiency and competitiveness of the superannuation system, which the Productivity Commission will be asked to undertake following the full implementation of the MySuper reforms.

The developed model(s) should enhance efficiency in the superannuation system in order to improve retirement incomes, including through optimising long-term net returns to members, and build trust and confidence in funds regulated by the Australian Prudential Regulation Authority (APRA). The models developed should consider default fund selection across the superannuation system as a whole.

The Productivity Commission may consider auction, tender and other types of competitive processes. The Productivity Commission should consider the merits of different approaches, the metrics for conducting them and their frequency. This should include consideration of:

- the strengths and weaknesses of competitive processes used internationally, such as Chile, New Zealand and Sweden, as well as those used in large corporate tenders by the Northern Territory Government and in other jurisdictions;
- the costs and benefits of different mechanisms, including:
 - optimising long-term after fee returns;
 - the administrative, fiscal, individual and complexity costs;
- and in examining different processes, consider:
 - the robustness of the process, including against gaming and collusion;
 - whether the structure achieves efficient outcomes and facilitates ongoing innovation over the long run;
 - the effect on system stability and market concentration;
 - who should run the process; and
 - the extent to which the process promotes the interests of consumers.
- regulatory impediments to optimal competition under the preferred model(s).

Principles for designing a model for a competitive process should include:

- **Best interests:** ensure incentive compatibility with meeting the best interests of members, encourage long-term investing, and encourage a focus on expected after-fee returns based on asset allocation and investment strategy.
- **Competition:** drive pressure on funds to be innovative and efficient, diversify asset allocation and optimise long-term after-fee returns by rewarding best performers. Facilitate new superannuation fund entrants to the market.
- **Feasibility:** ensure the process is low-cost and easy to administer and minimises regulatory costs on industry, including business and employers.

-
- **Credibility and transparency:** make relevant information public; avoid room for gaming the process; and ensure metrics are clear, simple, difficult to dispute and difficult to manipulate.
 - **Regular assessment and accountability:** regularly conduct a repeat process that requires default funds to earn their right to receive new default members, and ensure funds are accountable for the outcomes they deliver members.
 - **Fiscal implications:** the extent to which the process can reduce reliance on the Age Pension and/or give rise to other risks or costs to Government.

The Productivity Commission should draw on expertise in the field of competitive models.

S. MORRISON

Treasurer

[Received 17 February 2016]

Draft

DRAFT REPORT

This draft report is no longer open for consultation. For final outcomes of this project refer to the research report.

Draft

Contents

Opportunity for further comment	iii
Terms of reference	iv
Abbreviations	xii
Glossary	xiv
A guide to the report	1
1 Introduction	11
1.1 Background to the study	11
1.2 Evolution of the superannuation system	13
1.3 A guide to the rest of the report	20
2 Key characteristics of the superannuation system	23
2.1 What is the superannuation ‘system’?	24
2.2 Superannuation is a unique market	36
2.3 In sum	41
3 The Commission’s assessment framework	43
3.1 Why are efficiency and competitiveness important?	43
3.2 The Commission’s approach to assessment	45
3.3 The choice of performance indicators	51
4 What are the objectives of the superannuation system?	57
4.1 Why do we need to articulate objectives for this study?	58
4.2 Development of a high-level objective for superannuation	59
4.3 How are efficiency and competition defined for this study?	61
4.4 System-level objectives	66
5 Assessing competitiveness	73
5.1 Defining the market	74
5.2 Demand side conditions and barriers to competition	77
5.3 Supply-side conditions and barriers to competition	82

5.4	Assessment of market conduct and outcomes	92
6	Assessing efficiency	107
6.1	The system maximises net returns on member balances over the long term	108
6.2	The system meets member preferences and needs	129
6.3	The superannuation system complements a stable financial system	142
6.4	The system provides insurance that meets members' needs at least cost	144
7	Bringing it all together	153
7.1	The Commission's assessment methodology	154
7.2	What evidence is needed?	156
7.3	Competitiveness and efficiency of the superannuation system: proposed assessment framework	166
A	Public consultation	175
B	Member decision making	179
B.1	Superannuation is challenging for many Australians	180
B.2	What decisions do Australians make?	189
B.3	Limitations in the evidence base	196
C	Corporate tenders	201
C.1	What are corporate tenders?	201
C.2	The corporate tender process	203
C.3	Outcomes of corporate tenders	206
C.4	What lessons can be applied from corporate tenders?	208
D	Retirement income products	211
D.1	Overview of the market	212
D.2	Barriers to further product development	217
D.3	Implications for assessment	223
E	International approaches	225
E.1	Global trends	225
E.2	Lessons	228
E.3	Benchmarking and comparisons	232

F	Systemic stability and risk	239
F.1	What is systemic risk?	240
F.2	Where could stability issues emerge?	241
F.3	The nexus between competition and stability	246
F.4	Is the superannuation system a stabilising influence overall?	248
F.5	Summary	250
G	Self-managed superannuation funds	251
G.1	How do SMSFs differ from other types of funds?	252
G.2	What trends are evident?	254
G.3	What is the evidence base for SMSFs?	260
G.4	How will the Commission's assessment framework incorporate the SMSF sector?	264
G.5	Further developing the evidence base	267
H	The regulatory environment	269
H.1	A complex regulatory framework	270
H.2	Regulatory implications for the Commission's task	275
H.3	In sum	285
	References	287

Abbreviations

ABP	Account-based pension
ABS	Australian Bureau of Statistics
ACCC	Australian Competition and Consumer Commission
AFS	Australian financial services (ASIC)
APRA	Australian Prudential Regulation Authority
ASIC	Australian Securities and Investments Commission
ASX	Australian Securities Exchange
ATO	Australian Taxation Office
CAPM	Capital asset pricing model
CFR	Council of Financial Regulators
CIPR	Comprehensive income product for retirement
CPI	Consumer price index
DAA	Dynamic asset allocation
DB	Defined benefit
DC	Defined contribution (accumulation)
DEA	Data envelopment analysis
DHS	Department of Human Services (Australian Government)
EPSSS	Exempt Public Sector Superannuation Scheme
FSI	Financial System Inquiry
FUM	Funds under management
GDP	Gross domestic product
GFC	Global financial crisis
HHI	Herfindahl-Hirschman index
IMF	International Monetary Fund
MC	Marginal cost
MMGPI	Melbourne Mercer Global Pension Index
NBNI	Non bank, non insurer (entity)

OECD	Organisation for Economic Co-operation and Development
PAIRS	Probability and Impact Rating System (APRA)
PC	Productivity Commission
PDS	Product disclosure statement
PSI	Pension Sustainability Index (Allianz)
RAVA	Risk-adjusted value added
RBA	Reserve Bank of Australia
RG	Regulatory guide (ASIC)
ROA	Return on assets
RSE	Registrable superannuation entity (APRA)
SAA	Strategic asset allocation
SCT	Superannuation Complaints Tribunal
SG	Superannuation Guarantee
SIS Act	Superannuation Industry (Supervision) Act 1993 (Cwlth)
SMSF	Self-managed superannuation fund
SOARS	Supervisory Oversight and Response System (APRA)
SPS	Superannuation Prudential Standard (APRA)
SRM	Standard risk measure
SRS	Superannuation Reporting Standard (APRA)
TPD	Total and permanent disability

Glossary

Account-based pension	A regular retirement income stream, purchased with money an individual has accumulated in their superannuation after they have reached the preservation age.
Alpha	The ‘excess’ return of a fund relative to a benchmark index, usually attributed to the performance of the individual fund manager.
Annuity	A retirement income product that provides a guaranteed stream of fixed payments made at regular intervals.
APRA-regulated fund	Any large or small superannuation fund regulated by the Australian Prudential Regulation Authority (APRA), also known as a Registrable Superannuation Entity.
APRA-regulated institutional fund	Any large (more than four members) superannuation fund regulated by APRA.
Asset allocation	The distribution of funds in an investment portfolio (for a fund or individual member) between different asset classes.
Asset class	A category of assets that a superannuation fund can invest in, such as cash, fixed interest, equities, property or unlisted infrastructure.
Beta	A measure of the volatility of an asset price or portfolio value relative to the market as a whole.
Bulk transfer	The process whereby multiple member accounts are transferred to a different superannuation fund without the member’s consent. This process follows ‘successor fund transfer’ rules set out in legislation.
Concessional contributions	Contributions drawn from an individual’s pre-tax income that are made into a superannuation fund.
Condition of release	A prescribed event (such as retirement) a person must satisfy to be able to access superannuation payments.
Corporate fund	A superannuation fund sponsored by a single employer or group of usually related employers for the benefit of company employees.

Corporate tender	A tender for the right to become the default superannuation fund of a particular group of employees.
Default fund	A superannuation fund to which an employer's Superannuation Guarantee contributions are paid if the employee does not choose an alternative fund.
Deferred annuity	An annuity where payments commence after a nominated period.
Defined benefit fund	A superannuation fund where contributions are pooled rather than allocated to particular members, and where retirement benefits are determined by a formula based on factors such as salary and duration of employment.
Defined contribution fund	A superannuation fund where the value of the final retirement benefit payable is based on the contributions made plus investment returns less any fees and taxes.
Exempt public sector superannuation scheme	A superannuation fund providing benefits for government employees, or schemes established by Commonwealth, State or Territory law, that are not directly subject to the <i>Superannuation Industry (Supervision) Act 1993</i> (Cwlth) and APRA regulation.
Industry fund	Funds originally formed to provide access to superannuation for employees working within a particular industry.
Investment risk	One of a number of risks to the value of an investment, including market, interest rate, inflation, credit, liquidity and asset-specific risk.
Legacy product	A superannuation product (held by some members) that is no longer available for issue to new members.
Lifetime annuity	An annuity payable over a recipient's remaining lifetime.
Longevity risk	The risk of a person outliving their savings.
Money-weighted return	A measure of the rate of return for an asset or portfolio of assets calculated using the rate of return that equates the present values of all cash flows and terminal values to the value of the initial investment (internal rate of return).
MySuper product	A default defined contribution superannuation product. Superannuation funds must meet requirements set by APRA to be permitted to offer a MySuper product. All default products must be MySuper products from 1 July 2017.

Non-concessional contributions	Contributions drawn from an individual's post-tax income that are made into a superannuation fund.
Outsourcing	The process whereby a superannuation fund trustee contracts another entity to provide services to the fund, such as administration or investment management.
Pooled superannuation trust	A trust in which the assets of a number of superannuation funds, approved deposit funds or other pooled superannuation trusts are invested and managed by a professional manager.
Preservation age	The minimum age prescribed by law at which a member can withdraw their superannuation benefits from the superannuation system.
Product dashboard	Product and performance information (specified by APRA) regarding MySuper products that must be made available on superannuation fund websites.
Registrable superannuation entity	An APRA-regulated superannuation fund, an approved deposit fund or a pooled superannuation trust.
Retail fund	A superannuation fund that offers superannuation products on a commercial 'for profit' basis.
Retail level	The level of the superannuation market that provides services directly to members.
Self-managed superannuation fund	A superannuation fund with fewer than five members, all of whom are trustees or are directors of a corporate trustee.
Sequencing risk	The risk of experiencing poor investment returns just prior to drawing on funds in retirement.
Small APRA fund	Any APRA-regulated fund with fewer than five members.
Superannuation Guarantee	Compulsory superannuation contributions paid by employers on behalf of employees, and equal to a percentage (currently 9.5 per cent per annum) of each employee's ordinary time earnings.

Superannuation system	The collection of participants and activities involved in superannuation, including members, employers, funds, upstream suppliers, ancillary service providers (including insurers) and regulators.
SuperStream	An Australian Government package of measures designed to enhance administrative processes for superannuation, especially the way that Superannuation Guarantee payments are transferred from employers to funds.
Time-weighted return	A measure of the compound rate of growth in a portfolio. It is not directly influenced by contributions or withdrawals.
Trustee	A person or company holding property on behalf of another party with a fiduciary duty to beneficiaries.
Unlisted asset	An asset for which there is no public exchange for listing, quotation or trading.
Wholesale level	The level of the superannuation market that involves the interaction between trustees/funds and other service providers.

DRAFT REPORT

This draft report is no longer open for consultation. For final outcomes of this project refer to the research report.

Draft

A GUIDE TO THE REPORT

A guide to the report

The Australian superannuation system has grown rapidly since the introduction of the Superannuation Guarantee in 1992, both in terms of funds under management and coverage. Almost all employed Australians contribute to superannuation. Collectively, Australians currently have around \$2 trillion of assets in superannuation funds, comprising about 20 per cent of total household assets. Superannuation will continue to increase in relative importance as the system matures by the 2040s (chapter 1).

The sheer size of the superannuation system, combined with its compulsory and broad nature, makes the efficiency of the system paramount. Even small changes in efficiency can have significant impacts on the wealth and wellbeing of Australians. Competition is often a key way of promoting efficiency.

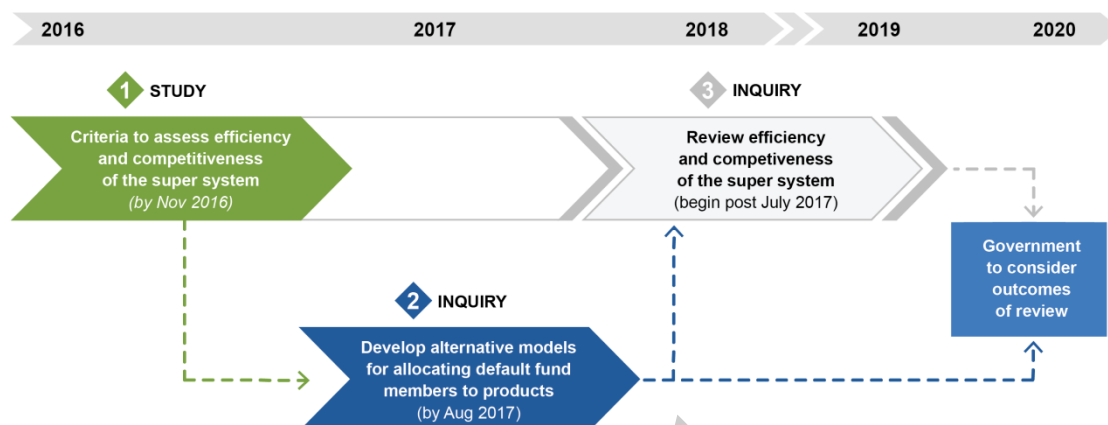
About this report

In this draft report, the Commission has proposed criteria to assess whether, and the extent to which, the superannuation system is efficient and competitive in delivering the best outcomes for members. The publication of these criteria is intended to provide transparency and certainty to the superannuation industry about how it will be assessed in the eventual review of the efficiency and competitiveness of the superannuation system. The Australian Government has stated that the Productivity Commission will be asked to undertake this system-wide review following the full implementation of the MySuper reforms (after 1 July 2017) (figure 1).

The Commission has proposed assessment criteria and corresponding indicators for the superannuation *system*. The system is bigger than just the superannuation funds (the industry). It encompasses many horizontal and vertical relationships on the supply side, decisions of members on the demand side, and actions of regulators on both the supply and demand sides. The unique features of this complex system are discussed in chapter 2.

There is little precedent (including internationally) for what this study is trying to do, or for the ultimate assessment itself. Most studies of the efficiency of the Australian superannuation system have focused on operational efficiency and matters that readily lend themselves to measurement (such as returns and fees). The system-wide perspective is unique and makes this a challenging task. The Commission encourages readers to keep this *system* perspective front and centre in their thinking as they consider the proposed assessment criteria and indicators.

Figure 1 Three-stage superannuation review



This draft report does not contain findings or recommendations. However, the Commission welcomes feedback on all aspects of its proposed assessment approach. The Commission is particularly keen to receive feedback on the draft criteria and indicators. The criteria are summarised in table 1; the full set of criteria and indicators are set out in chapter 7.

The Commission's approach

The Commission's approach in this study (stage 1) involves three steps (figure 2):

1. defining *system-level objectives* — what is the superannuation system trying to achieve?
2. formulating *assessment criteria* based on these objectives — that is, the performance standards by which to assess if the system-level objectives have been achieved.
3. identifying *indicators* and other evidence to facilitate the assessment.

What are the objectives of the superannuation system?

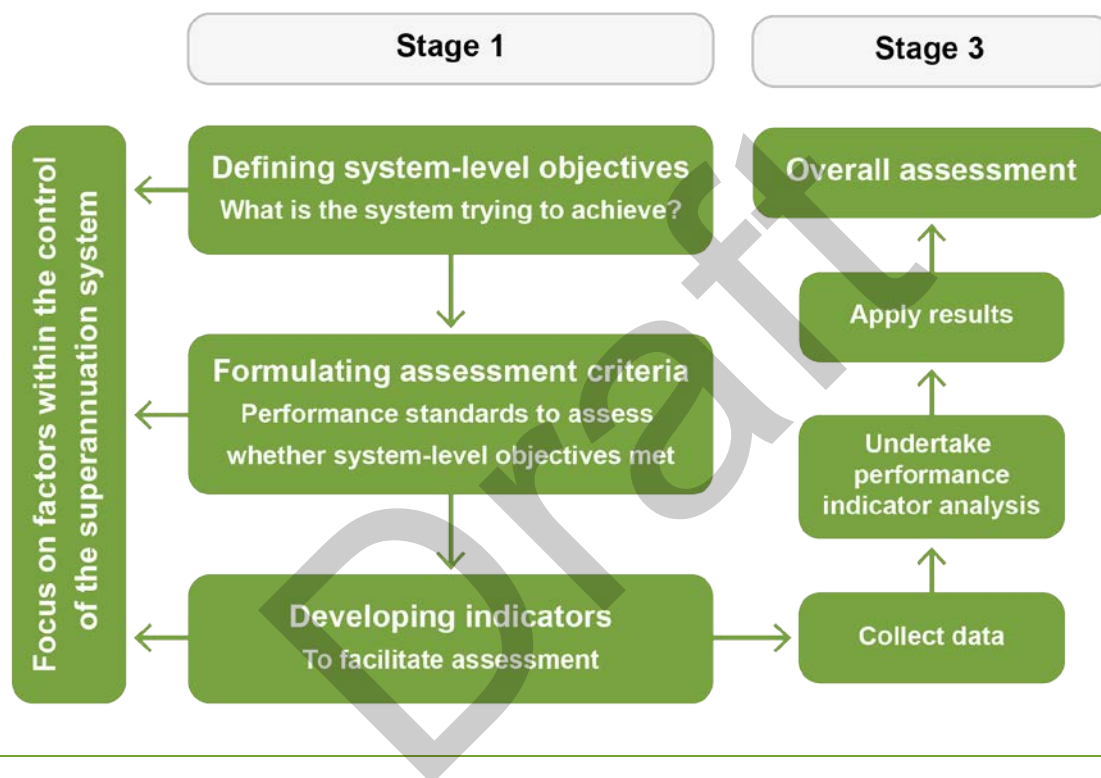
What is efficient ultimately depends on what you are trying to achieve: the objectives of the superannuation system (chapter 4). The Australian Government recently announced that the objective of superannuation is 'to provide income in retirement to substitute or supplement the Age Pension'.

The Government's objective is framed within the principles of fairness, adequacy and sustainability, and casts superannuation as only one part of the broader retirement income system. Retirement incomes are a function of many factors outside the influence of the superannuation system (such as government policy). The Commission has therefore developed system-level objectives that are *within the scope of influence* of the

superannuation system, are *specific to the principles of competitiveness and efficiency*, and link back to the overarching objective set by the Government.

Broadly speaking, the system-level objectives target the best interests of members. Competition in the superannuation system is not an end in itself, but an intermediate objective insofar as it drives more efficient outcomes for members.

Figure 2 **The Commission's approach to assessment**



PROPOSED SYSTEM-LEVEL OBJECTIVES

- The superannuation system maximises net returns on member contributions and balances over the long term.
- The superannuation system meets member preferences and needs, in relation to information, products and risk management, over the member's lifetime.
- The superannuation system provides insurance that meets members' needs at least cost.
- The superannuation system complements a stable financial system and does not impede long-term improvements in efficiency.
- Competition in the superannuation system that drives efficient outcomes for members.

Developing the assessment criteria and indicators

Formulating assessment criteria involves identifying attributes that a competitive and/or efficient superannuation system would be expected to have (chapter 3). As such, they are closely linked to the system-level objectives.

The Commission has taken current policy settings as given when developing the assessment criteria. This is done either by omission (the Commission is not proposing to assess the system on what is outside its influence, such as the overall adequacy of retirement incomes), or by recognising the influence of external factors when proposing criteria and in interpreting particular outcomes.

The Commission's proposed assessment approach relies heavily on benchmarking. The term 'benchmarking' is used broadly: performance will be benchmarked against others (for example, other funds or countries); against stipulated objectives (for example, an 'efficiency frontier' or a market benchmark); and over time. In some parts of the assessment, the Commission will complement its benchmarking exercise with a 'negative test' — an examination of the barriers that may be impeding the efficiency and competitiveness of the superannuation system (such as barriers to entry).

The Commission will rely on a large number of indicators to facilitate collective assessment, along with evidence-based interpretation and judgment. This will include input and process indicators, output indicators, behavioural indicators and outcome indicators. Some indicators will be quantitative while others will be qualitative.

Some of the proposed indicators may be ambiguous and cannot be interpreted in isolation. Robust evidence and judgment will be required to interpret the meaning of each indicator. In some cases, this meaning may only surface in the presence of other indicators. This means that the indicators need to be considered and interpreted collectively to inform the assessment. The interpretive narrative for the indicators is a role for the stage 3 review, although some elements will emerge in this study through the exercise of simply considering indicators.

The Commission has erred on the side of being as comprehensive and specific as possible with the indicators proposed in this draft report. The Commission welcomes feedback on whether the indicators are measurable and any material interpretation issues. Table 2 provides an example of the types of indicators proposed for two similar criteria.

Criteria to assess competition

The Commission is proposing two complementary approaches to assess the nature and extent of competition in the superannuation system:

- a 'structural' assessment of the market, which evaluates whether the conditions within the market are conducive to competition

-
- an ‘outcomes’ assessment, which focuses on actual conduct and outcomes, and tests whether these are consistent with what is expected in a competitive market.

The second element in particular is necessary to keep the focus of competition on improving outcomes for members.

Structural assessment of the market

The Commission proposes to assess whether the current market structure is conducive to rivalry between incumbent providers of services. Measures of market concentration are often used to assess the degree of rivalry. However, such measures can be ambiguous (for example, high concentration can be a consequence of economies of scale realised due to competition). Therefore, an indicator of market concentration needs to be accompanied by robust empirical evidence on how outcomes have changed following changes in market concentration.

The Commission plans to assess the contestability of the market by looking at barriers to entry and exit. There are two main barriers to entry that can give rise to incumbency advantages in superannuation: default fund status and vertical/horizontal integration.

- Defaults are an important policy feature of the superannuation system, and will be taken as given. The relevant assessment therefore is whether the *process* of selecting defaults is contestable and competitive.
- Vertically and horizontally integrated entities often benefit from access to well-developed distribution channels and economies of scope. While being a barrier to entry, this may not necessarily be inefficient. Concerns would arise, however, if this integration led to anticompetitive behaviour.

Traditional assessments of competition tend to end here (the supply side). However, the Commission’s assessment will extend to the demand side (the member side, including their intermediaries). The Commission considers that some level of member engagement is required to signal preferences, and to ensure that the benefits of wholesale-level competition flow through to the member. However, the quality of decision making is the ultimate goal. Measures of member engagement need to be accompanied by consideration of financial literacy and how (and what form of) member engagement relates to better outcomes. The Commission has proposed a number of criteria and indicators to assess the level of member-driven competitive pressure (chapter 5) and welcomes feedback on these.

Assessment of conduct and outcomes

Product proliferation, high advertising expenditure, competition on irrelevant non-price (non-fee) aspects and high search costs are potentially signs of unhealthy competition. In contrast, in a market where competition is facilitating efficiency, funds would compete on factors that are relevant to members, which are most often fees and returns.

The Commission plans to assess whether there is a high degree of competition on costs, and whether there is a decline in costs and subsequently fees charged to members over time. There is a need to consider fees in tandem with other features that members value (such as returns and service quality). But in the long run, and as other markets have consistently demonstrated, it is possible to achieve both lower prices (or in the case of superannuation, lower fees) and higher quality.

Economies of scale have been identified as a potential source of efficiency in the superannuation system, and competition is a key way to realise economies of scale. (Scale can also be achieved from exogenous growth in the system due to regulatory fiat.) The Commission will assess (in stage 3) the *magnitude of unrealised* scale economies and the *extent of pass-through* of benefits of economies of scale to members. Further details on the proposed measurement approach can be found in chapter 5.

Criteria to assess efficiency

The Commission is proposing criteria that span all three aspects of efficiency: operational, allocative and dynamic. They also cover the three phases of superannuation: accumulation, transition and retirement. Standalone criteria are proposed for insurance within superannuation. Further information on the efficiency criteria can be found in chapter 6.

The proposed assessment criteria rely heavily on quantitative benchmarking using historical data — an *ex post* assessment of efficiency. Assessments of current and expected efficiency are facilitated using qualitative indicators. The assessment of efficiency will sometimes draw on the same indicators used to assess competition (as can be seen in the example in table 2), as the two often go hand-in-hand.

Maximising net returns (after fees and taxes) is the most important way in which the superannuation system contributes to adequate and sustainable retirement incomes. The Commission will focus on assessing system-wide long-term net returns, and compare them to various benchmarks. The assessment will also be applied to particular segments (for example, institutional superannuation funds and self-managed superannuation funds), where it can provide insights about system-wide performance. The Commission plans to take a straightforward approach to risk adjustment by benchmarking net returns at the asset-class level and by comparing net returns among products with similar risk characteristics.

A related criterion is whether the system minimises costs and fees, since higher fees will reduce net returns, all else equal. The Commission also proposes to assess whether there are any institutional or market impediments to investment in upstream capital markets (for example, is fund size an impediment to investing in certain asset classes?) that may be leading to higher costs and/or lower returns.

Assessing whether the superannuation system achieves allocatively efficient outcomes is impossible, given the wide variation in individual members' circumstances and

preferences. However, the Commission will assess whether *inputs* and *behaviours* in the system are consistent with allocative efficiency. For example: are funds collecting information on their members and using it to design products that better meet member needs? Are funds using lessons from behavioural finance to help members make better decisions? The assessment will rely significantly on qualitative and case study information.

The Commission's assessment of efficiency will potentially have to consider trade-offs between short-run operational efficiency and long-run dynamic efficiency. For example, a high degree of competition and lean margins may increase the risk of entity failure that affects stability and confidence in the system. Therefore, the Commission also proposes to assess the extent of systemic risks in the superannuation system.

Transition and retirement phases

The transition and retirement phases have not received as much policy or market attention as the accumulation phase of superannuation. And yet this is when members typically have the largest balances and the efficiency of the system comes to the fore. While some in the system are now focusing more on these phases, the Commission plans to assess whether the system is meeting the needs of members during these phases, including via product innovation that addresses tax effectiveness, transition and longevity risks.

Insurance

The cost of insurance held through superannuation detracts from retirement balances and ultimately retirement incomes. However, policy dictates that life and total and permanent disability insurance are bundled with superannuation on an opt-out basis in default products. Given this constraint, the Commission plans to assess whether trustees are offering the most appropriate insurance for their members, and whether the costs of insurance are minimised for the type and level of cover provided.

Data needs

Assessing the efficiency and competitiveness of the superannuation system will be data intensive. Some data relating to the assessment criteria and indicators are already publicly available. Other data have been collected, but have not been made public. And in some areas, the data simply do not exist. Chapter 7 discusses data needs and availability in more detail.

The Commission's guiding principle for the ultimate assessment in stage 3 will be to draw on data that are already collected from the system as much as possible. This includes regulator data as well as data held by the private sector. New data will be sought only where it is feasible to collect within the short-to-medium term and the benefits of collection are likely to exceed the costs.

Table 1 Competitiveness and efficiency assessment criteria for the superannuation system

Competitiveness

Demand-side characteristics (members and member intermediaries)

Is there sufficient member engagement to exert competitive pressure?

Are members and member intermediaries able to make informed decisions?

Is there low market segmentation along member engagement lines?

Do active members and member intermediaries have sufficient countervailing power?

Are principal–agent problems being minimised?

Supply-side characteristics (through the supply chain)

Is there rivalry among incumbent providers?

Is the market contestable?

Are there material anticompetitive effects of vertical and horizontal integration?

Conduct and outcomes

Do funds compete on costs?

Are economies of scale utilised and the benefits passed through to members?

Do funds compete on relevant non-price dimensions?

Is there innovation and quality improvement in the system?

Are outcomes improving at the system level?

Efficiency

Net returns

Are net investment returns being maximised over the long term, taking account of service features provided to members?

Are costs incurred by funds and fees charged to members being minimised, taking account of service features provided to members?

Do all types of funds have opportunities to invest efficiently in upstream capital markets?

Is the system effectively managing tax for members, including in transition?

Member needs and preferences

Are member preferences and needs being met by:

- minimising unpaid contributions and lost accounts?
- funds collecting relevant information to ensure their product offerings are suitable for their diverse member bases?
- the system providing high-quality information and financial advice to members to help them make decisions?
- the system providing products and information to help members optimally consume their retirement incomes?
- member balances being allocated in line with their risk preferences and needs?

Is the system using lessons from behavioural finance to design products and 'lean' against well-known biases in how people make decisions?

Are trustees acting in the best interests of members?

System stability

Are there material systemic risks in the superannuation system?

Insurance

Do funds offer insurance products that meet members' needs?

Are the costs of insurance being minimised given the type and level of cover?

Table 2 Illustrative excerpt of indicators

Competition criterion: Do funds compete on costs?

- Costs relative to assets and member base: wholesale (by service) and retail (by segment)* (input)
- Margins: wholesale (by service) and retail (by segment)* (output)
- Investment management fees by asset class compared to other countries* (output)
- Alignment of the structure of member fees and underlying costs (output)
- Transparency and efficacy of fee disclosure by funds, including for distinct services (behaviour)

Efficiency criterion: Are costs incurred by funds and fees charged to members being minimised, taking account of service features provided to members?

- Costs relative to assets and member base: wholesale (by service) and retail (by segment)* (input)
- Margins: wholesale (by service) and retail (by segment)* (output)
- Investment management fees by asset class compared to other countries* (output)
- Pass through of benefits from scale economies (wholesale and retail) to members* (output)
- Investment costs and fees across equivalent products and between market segments (input, output)
- Relationship between investment fees and returns (output)
- Use and disclosure of performance attribution by funds (behaviour)
- Administrative costs and fees at system level and for market segments (input, output)
- Cost savings from SuperStream (output)
- Relationship between level of administrative fees and quality of member services (output)

* Indicators marked with an asterisk are common to both competition and efficiency.

1 Introduction

Key points

- Superannuation in Australia has a long history dating back to the mid-19th century. However, for much of its existence, superannuation was characterised by defined benefit schemes (with bundled insurance) and covered a small number of professions. The much broader defined contribution system operating today has only taken shape over recent decades.
- Since the advent of compulsory superannuation via the introduction of the Superannuation Guarantee in 1992, the system has undergone rapid growth. This is expected to continue to at least 2030 when the first wave of workers to make contributions over their entire working lives retire.
- Currently, there is about \$2 trillion in funds under management held by over 250 institutional funds and over 556 000 self-managed superannuation funds. The average account balance is just over \$67 000. But averages can be misleading, given the distribution of account balances.
- This study is stage 1 of a 3 stage process, and stems from the Australian Government's response to recommendations made in the 2014 Financial System Inquiry (FSI). Stage 1 involves developing criteria to assess the efficiency and competitiveness of the system.
- Many recent reviews, including the FSI, have made observations relating to perceived shortcomings in the system. The criteria developed in this study will provide a useful and enduring framework for any future assessments (including by regulators) and reforms.

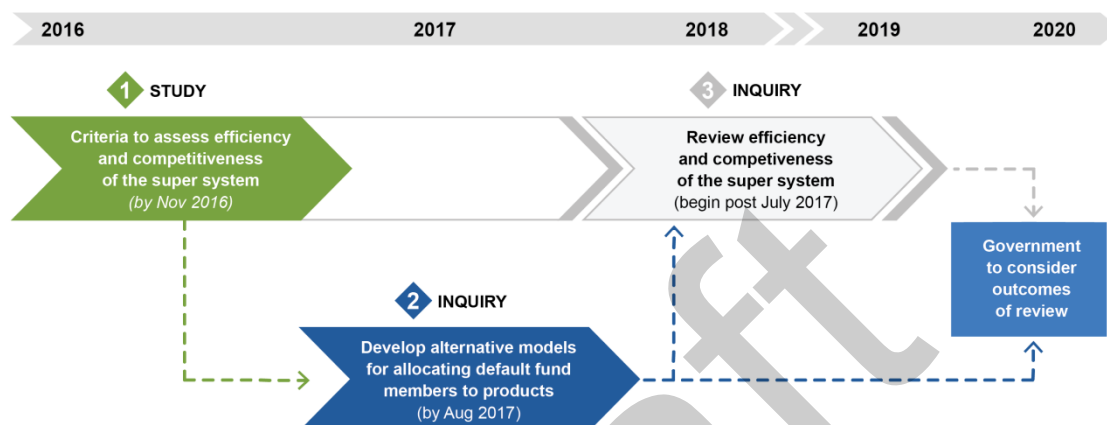
1.1 Background to the study

This study stems from the recommendations of the 2014 Financial Services Inquiry (FSI), which considered some of the issues in the superannuation system as part of a broader review of the performance of the Australian financial system. The FSI suggested a Productivity Commission inquiry into the efficiency and competitiveness of the superannuation system should occur by 2020.

In response, the Government tasked the Commission to develop and release criteria to assess the efficiency and competitiveness of the superannuation system (stage 1). These criteria will then be used to inform a review of the system following the full implementation of the MySuper reforms by mid-2017 (stage 3). While aspects of the Australian superannuation system have been reviewed in the past, stage 3 will be the first comprehensive review specifically assessing the efficiency and competitiveness of the entire system.

The Commission has also been tasked with examining alternative models for a formal competitive process for allocating default fund members to products (stage 2). The Commission will begin work on stage 2 in late September. Indicative timelines for the three stage process are outlined in figure 1.1.

Figure 1.1 Indicative timelines for Commission superannuation projects



What has the Commission been asked to do?

In this study, the Commission has been asked to develop criteria to assess whether, and the extent to which, the superannuation system is efficient and competitive and delivers the best outcomes for members. This includes assessing whether the system optimises risk-adjusted after-fee returns for members. In determining the criteria to assess the efficiency and competitiveness of the superannuation system, the Commission may have regard to:

- operational, allocative and dynamic efficiency
- the extent to which the system encourages optimal behaviour on the part of the consumer
- the nature of competition in the superannuation industry
- the effect of government policy and regulation on the competitiveness and efficiency of the system.

The Commission's approach

As required by the terms of reference, the study focuses on assessment criteria for the superannuation 'system'. The superannuation system is a broader concept than conventional definitions of the superannuation industry. It encompasses many horizontal

and vertical relationships on the supply side, the decisions of members on the demand side, and actions of regulators on both the supply and demand sides (chapter 2).

The study aims to develop the framework to assess the competitiveness and efficiency of the superannuation system in stage 3 of the review process. The assessment is ultimately dependent on the objectives of the system. In the 2016-17 Commonwealth Budget, the Government committed to legislating the following objective for superannuation:

... to provide income in retirement to substitute or supplement the Age Pension. (Commonwealth of Australia 2016).

This objective is framed within the principles of fairness, adequacy and sustainability, and acknowledges that superannuation is only one part of the retirement income system. The Commission has formulated more specific system-level objectives (chapter 4) and has used those to develop its assessment criteria and indicators. It has treated the broad policy settings that govern the superannuation system and other limbs of retirement income policy as given.

While the Commission has taken current policy settings as given when developing the assessment criteria, this does not preclude the Commission from assessing the effect of policy on competitiveness and efficiency of the system in the stage 3 review.

In keeping with the *Productivity Commission Act 1998* (Cwlth), the Commission has conducted this study using transparent and public processes, with an overarching concern for the wellbeing of the Australian community as a whole. The Commission published an issues paper in March 2016, and met with a range of interested parties including industry bodies and specialists, academics, and government officials. The Commission also held a technical roundtable on 28 June 2016. The full list of the study participants that the Commission consulted prior to the draft report is detailed in appendix A. The Commission also received 46 submissions. In developing the criteria, the Commission has given consideration to all submissions and considered the most relevant available evidence. The Commission invites additional comments and submissions on the draft report, and will be seeking further feedback via participant roundtables.

1.2 Evolution of the superannuation system

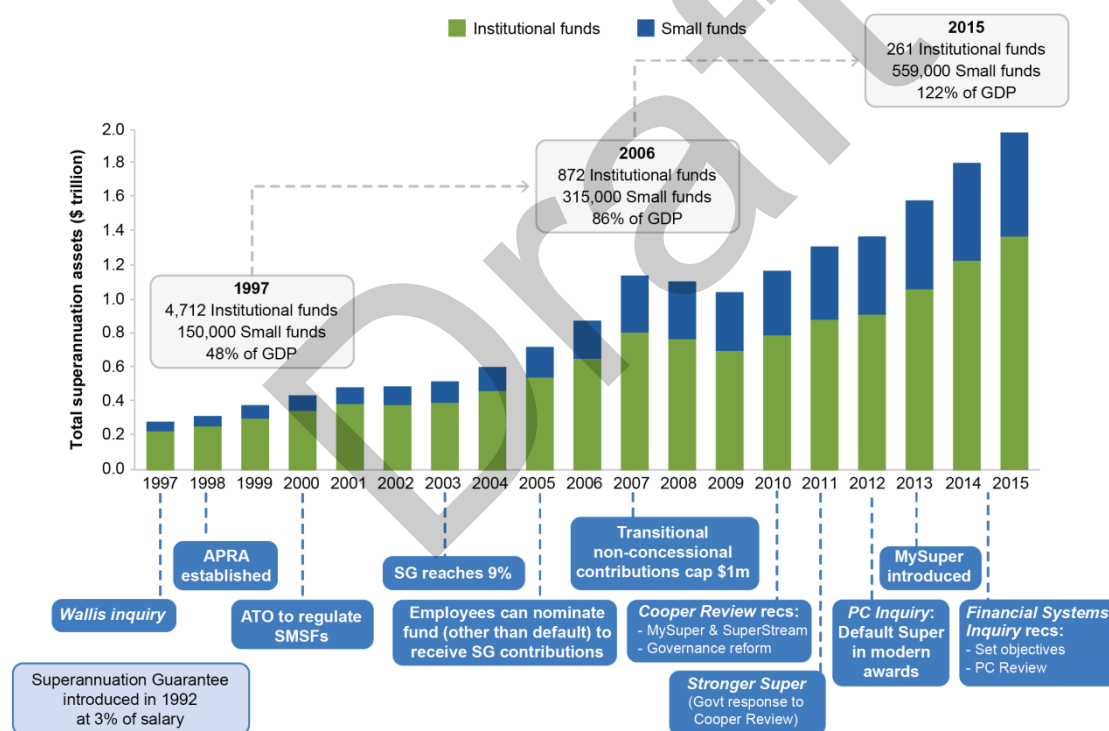
A young system that is continuing to develop

The history of superannuation spans more than 150 years. It began as a collection of defined benefit funds for professional workers until the introduction of ‘award superannuation’ in 1986. The mandated 3 per cent employer contribution led to the extension of superannuation coverage to most employees covered by awards. However, the catalyst for the modern system was the introduction of the Superannuation Guarantee (SG) in 1992, which covered almost all employees (Liu 2013a; Swoboda 2014; Treasury 2001).

The SG was originally also set at 3 per cent and has increased gradually from its inception. It is currently set at 9.5 per cent, and is scheduled to rise to 12 per cent by 2026. At last count, about 70 per cent of individuals over the age of 15 and 90 per cent of employed persons are covered by the system (ABS 2013, 2016).

The SG led to rapid growth of the superannuation system in both size (pool of funds) and coverage, as well as importance in the economic and policy landscape. Despite the system not yet reaching maturity, the pool of funds already represents the largest source of long-term savings in Australia, and the second largest form of wealth for many Australians after the family home (PC 2012; Treasury 2010). As at December 2015, there were about \$2 trillion worth of assets under management, up from \$321 billion in 1997 (figure 1.2), and amounting to over 100 per cent of GDP.

Figure 1.2 Key developments in the modern superannuation system^a



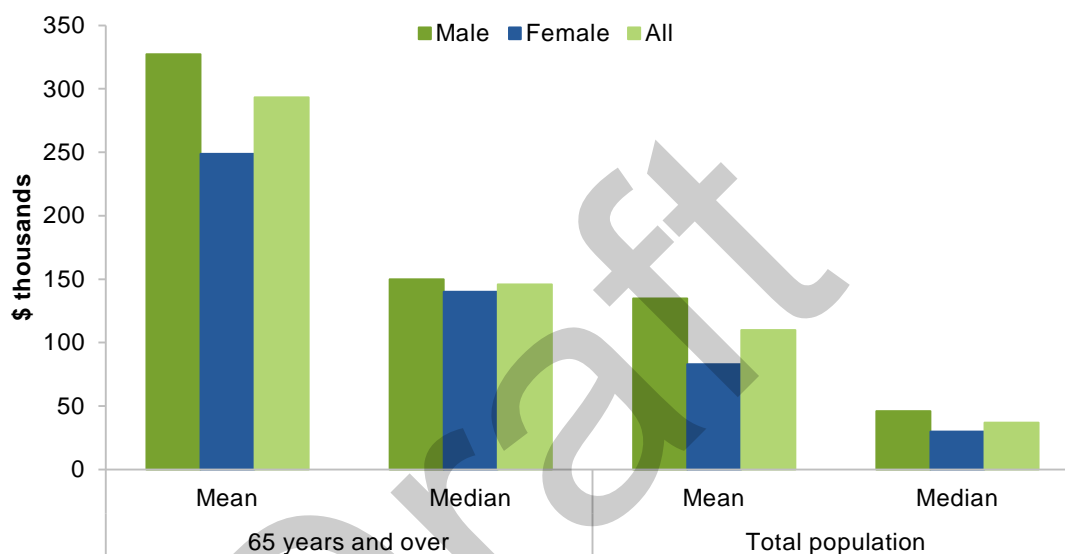
^a 'Institutional funds' comprise corporate, industry, public sector and retail funds. 'Small funds' comprise small APRA funds, single-member approved deposit funds and SMSFs

Data sources: ABS (Australian National Accounts: National Income, Expenditure and Product, Australia, March 2016, Cat. no. 5206.0); APRA (2007, 2014a, 2016c).

From 1997 to 2015, the average account balance has increased in real terms from \$30 000 to \$67 500, in 2015 dollars. The particularly strong growth from 2009 is attributable mainly to sustained contributions and account consolidation. The number of accounts peaked at about 32 million in 2009-10, and is now down to just under 30 million

(APRA 2014a, 2016c). However, data collected for the *ABS Survey of Household Income and Wealth* (2016) suggest a higher average balance per member of \$109 900 after duplicate accounts are factored in (figure 1.3). The survey also found a median balance of \$37 000 — demonstrative of the high number of positive outliers — as well as substantial differences between males and females.

Figure 1.3 Mean and median superannuation balances^a
2013-14



^a Only includes accounts with a balance above zero.

Data source: ABS (Survey of Household Income and Wealth, Australia, March 2016, Cat. no. 6523.0).

The large reduction in the number of institutional funds (figure 1.2) reflects the consolidation that has occurred, as well as the demise of non-public offer, defined benefit corporate funds that characterised the earlier era of superannuation (chapter 2). In an accompanying trend, the growth in the number of small funds¹ has been driven by the increasing popularity of SMSFs. In 2001, there were about 210 000 SMSFs, but this had more than doubled to over 550 000 by June 2015.

There have been several reviews and ongoing reform, but concerns remain

The growing importance of superannuation has meant the system has been subject to a high level of scrutiny, and concerns that the system has not performed to its full potential have lingered. This has led to a large number of reviews and policy changes over recent

¹ SMSFs and small APRA-regulated funds combined. The latter are funds with less than five members that are regulated by APRA because the trustee is not a member. See chapter 2 for more details.

decades. The earlier reforms focused on enhancing demand-driven competition and reforming tax arrangements (box 1.1).

Box 1.1 Earlier superannuation reviews and reforms

Wallis Financial System Inquiry

In 1997, the Wallis Financial System Inquiry found that there was scope to improve efficiency in the superannuation industry, arguing that:

‘Choice should be maximised in superannuation and other steps taken to increase competitive pressures, including by simplifying regulatory arrangements’. (Wallis 1997)

Despite the relevant recommendations being gradually implemented by government, concerns regarding competition remained. A common observation made was that the potential for demand-driven competition in superannuation is limited due to purchase compulsion, product complexity and behavioural biases. Some parties have suggested that the inquiry’s treatment of superannuation members as rational and informed consumers was misguided (Cooper et al. 2010a; ISA 2015). Other reforms initiated around this time included lifting the maximum age for contributions from 65 to 70, and increasing the preservation age from 55 to 60.

Productivity Commission Legislation Inquiry

In 2001, the Commission completed an inquiry into legislation relevant to the superannuation industry. While the Commission found the *Superannuation Industry (Supervision) Act 1993* (Cwlth) to be ‘voluminous, complex and in some respects overly prescriptive’, it found no major impediments to competition embedded within the Act (PC 2002).

‘Simpler Super’ reforms

In 2006, a raft of reforms called ‘Simpler Super’ was announced. The changes mainly related to tax, with the introduction of tax free status on the earnings of members over the age of 65 among the most important. Other reforms included the removal of taxes on lump sums and superannuation pensions, the abolition of reasonable benefit limits (caps on the amount of benefits receivable at concessional tax rates), and easier means of transferring balances between funds (Swoboda 2014; Treasury 2006).

In 2009, as part of the *Future Tax System Inquiry* (widely known as the Henry tax review), the *Report on Strategic Issues for the Retirement Income System* was released. It concluded that the superannuation system did not manage longevity risk well, and the level of awareness and engagement by members remained suboptimal. It recommended maintaining the SG at 9 per cent (whereas the then Government made the decision to gradually increase the SG to 12 per cent). It also recommended not extending the SG to the self-employed, retaining the \$450/month threshold, and gradually aligning the preservation age to the Age Pension age (Treasury 2009b).

In 2010, a review into the governance, efficiency, structure and operation of Australia’s superannuation system chaired by Jeremy Cooper was completed. It identified the recurring problems surrounding agency, information and efficiency. The review acknowledged that many members were disengaged, but argued that the system should

produce quality outcomes for them regardless. The Government responded positively to recommendations for the creation of low-cost default products called ‘MySuper’ and improved administrative processes with the ‘SuperStream’ reforms. Other recommendations adopted included heightened trustee duties and the power for APRA to set prudential standards (Cooper et al. 2010a).

In 2012, the Commission was tasked with designing criteria for the selection and assessment of default superannuation funds in modern awards. The Commission found the arrangements could be improved to ensure selection was based on merit rather than precedent, and to encourage improved performance through competition (PC 2012). The then Government legislated some changes to the system for choosing default superannuation funds, but these changes have not been implemented (Ross 2014).

Most recently, and acting as the catalyst for this study, the FSI argued that the superannuation system is not operationally efficient due to a lack of price-based competition, symptomatic of weak demand drivers. Further, the Inquiry had reservations about the potential for MySuper to be effective in driving greater competition, and therefore contended that further measures needed to be taken to improve competition and ultimately outcomes for members (Murray et al. 2014a).

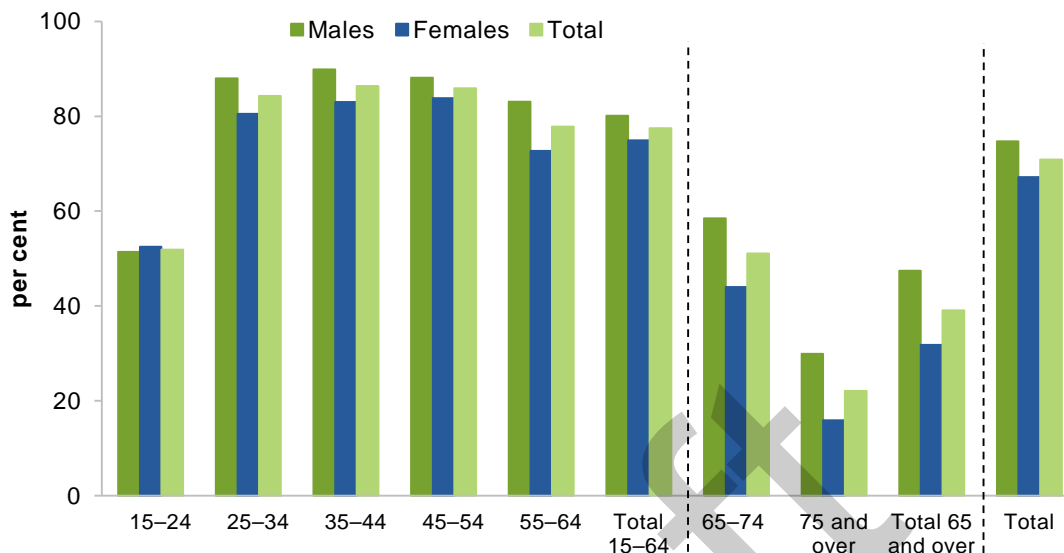
Super is still an evolving component of the retirement income system

Despite ongoing concerns regarding the system’s ability to efficiently maximise retirement incomes for members, the outcomes for lifetime participants are yet to be seen. While there is a high level of participation for the current working age population, the relative youth of the system means that fewer than half of today’s retirees are currently covered (figure 1.4).

For those current retirees who are covered by the system, the median income from superannuation is \$358 per week, but this is inflated by retirees who received defined benefit pensions. The figure drops to \$256 for the 70 per cent of superannuants receiving a typical account-based pension (ABS 2016). Given the youth of the system, superannuation tends to make up a small portion of retirement income relative to other sources (figure 1.5).

Figure 1.4 Superannuation coverage^a

By age group and gender, 2013-14

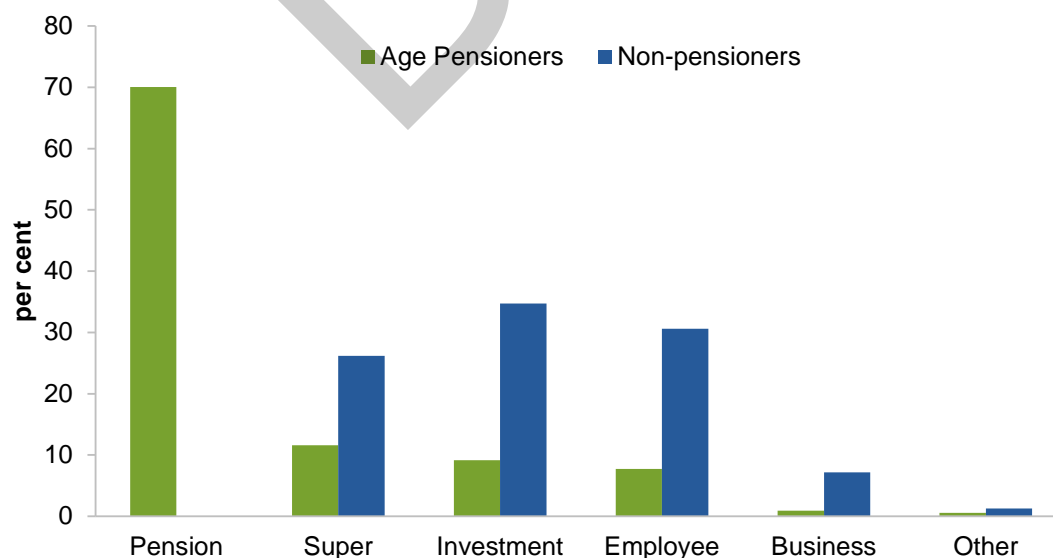


^a Includes persons with a superannuation account balance above zero and/or receiving regular income from superannuation and/or who received a lump-sum superannuation payment in the past two years.

Data source: ABS (Survey of Household Income and Wealth, Australia, March 2016, Cat. no. 6523.0).

Figure 1.5 Average income shares for older Australians^a

For individuals aged over 65, 2011-12



^a 'Age Pension' refers to any government pension, including both Age and Service Pensions. Those on a part pension are included in the Age Pensioners group.

Source: PC (2015b).

The system will continue to evolve

Any shortcomings in the superannuation system will be amplified as the system matures and the population ages. This will manifest both in fiscal pressures for governments and in suboptimal financial outcomes for retirees.

Over coming years, there will be relatively fewer people working to support relatively more in retirement. The dependency ratio — the proportion of working age people to non-working age people — is projected to decrease from 4.5 to 2.7 between 2014-15 and 2054-55 with corresponding fiscal effects for the retirement income system as a whole (Treasury 2015b). Some of those pressures could be offset by the growth in the size and efficiency of the superannuation pillar of the retirement income system.

The substantial current size of the superannuation system and its projected growth also magnify the cost to members of any inefficiency or uncompetitiveness in the system. As discussed earlier, the system is not mature, with the first cohort to retire following a lifetime of compulsory contributions in late 2030s. However, some parties have argued that the ‘true’ maturity of the system will not occur until at least 2050, when the first cohort of individuals to contribute at a rate of at least 9 per cent for an entire working life will retire (AIST, sub. 30, p. 14).

The level of funds under management and average account balances should continue to increase at substantial pace over the next few decades. Most projections forecast continued strong growth until the mid-2030s with between \$5 trillion and \$6.3 trillion under management, representing between 130 to 180 per cent of GDP, depending on the assumptions employed (table 1.1).

The Cooper Review (2010a) also estimated that by 2035, the average **accumulation** balance of a superannuation account would grow from the \$15 000 that was current at the time, to \$180 000 in 2009 dollars. With regard to balances **at the point of retirement**, the Actuaries Institute (2015) estimated that the median balance at retirement (age 65) for a couple currently aged 30 will be \$817 400 (in 2015 dollars). The 2012-13 Commonwealth Budget estimated that by 2040 the **system-wide** real average account balance would be \$440 000.

Despite the projected growth in absolute size, there is still some uncertainty about whether a mature system in the 2030s will actually provide adequate retirement incomes, although sometimes it can be difficult to distinguish substance from self interest in such claims.

The industry is expected to continue its trend of consolidation. The Cooper Review (2010a) forecast that by 2035 there will be approximately 75 institutional funds, compared with over 250 today. This means that, combined with sustained growth in contributions and the enhanced use of platform services, there will be significant growth in the scope to realise economies of scale.

Table 1.1 Projected size of the superannuation industry

	<i>Base year</i>	<i>Base value (trillion)</i>	<i>End year</i>	<i>End value (trillion)</i>
KPMG	2014	\$1.85	2025	\$3.45
Actuaries Institute	2014	\$1.84	2029	\$3.7
Cooper Review	2009	\$1.1	2035	\$6.1
Deloitte ^a	2015	\$2.0	2035	\$6.3
Treasury	2011	\$1.3	2040	\$7.75
Rice Warner	2013	\$1.6	2043	\$5.1

^a Deloitte final value deflated for expected CPI of 2.5% per year.

Sources: Actuaries Institute (2015); Australian Government (2012), Cooper et al. (2010a), Deloitte (2015), KPMG (2015), Rice Warner (2014a).

SMSF assets are projected to continue to grow albeit at a reduced rate, and the proportion of total assets held in SMSFs has been forecast to decrease slightly. Deloitte (2015) projected that the SMSF share of total superannuation assets will fall from 34 per cent today, to 30 per cent in 2035. It should be noted, though, that SMSFs are expected to have the largest share of *post-retirement* assets by an increasingly large margin by 2035. This is primarily attributable to the fact that many members transfer their assets into an SMSF as they approach retirement.

Last, the effects of the reforms stemming from the Cooper Review (2010a) are yet to be fully realised. When devising recommendations, the review estimated that the reforms would increase retirement balances by about \$40 000 through improved efficiency. The final rollover of all pre-existing default products into MySuper products is due by July 2017.

1.3 A guide to the rest of the report

This study consists of a guide to the report, seven chapters (including this one), and seven appendixes. Chapter 2 dissects the characteristics of the superannuation system that are pertinent to the assessment framework, and chapter 3 details the assessment framework guiding the study. Chapter 4 contains the system-level objectives that the Commission has used as a reference point by which to guide criteria and indicators. Chapters 5 and 6 contain the criteria and indicators the Commission is proposing in order to assess the competitiveness and efficiency of the superannuation system. And chapter 7 summarises the criteria the Commission has developed and draws out the key challenges and required evidence that will be involved in applying the criteria in the future.

Appendix A contains material on submissions and consultation processes. Appendix B examines the literature on member decision making and Australians' superannuation knowledge and behaviour. Appendix C analyses corporate tendering for default superannuation contributions and what it can reveal about the competitiveness of the

system. Appendix D assesses the current status of the market for retirement income products. Appendix E considers the key lessons from international experiences and comparisons. Appendix F discusses the impact of the superannuation system on overall financial stability. Appendix G outlines how the trends in the SMSF sector will be factored into the Commission's framework. And appendix H describes the system's regulatory environment and how it may impact on competition and efficiency.

Draft

DRAFT REPORT

This draft report is no longer open for consultation. For final outcomes of this project refer to the research report.

Draft

2 Key characteristics of the superannuation system

Key points

- Australia has a three pillar retirement income system made up of a government funded and means-tested Age Pension, compulsory superannuation and voluntary private savings (including voluntary superannuation contributions). Superannuation spans two of the three pillars and also provides life and disability insurance to some members to help manage income-related risks.
- The superannuation system incorporates three phases, each governed by specific policy settings, including concessional tax treatment at each stage:
 - Accumulation — compulsory contributions, preservation of benefits.
 - Transition — transitional arrangements as members approach retirement.
 - Retirement — withdrawal of benefits.
- The system involves many participants with diverse roles, including members, employers, superannuation funds, service providers, insurers, advisers and regulators.
- The system is not a standard market. It has many unique characteristics that have important implications for the development of criteria to assess the efficiency and competitiveness of the superannuation system.
 - Demand-side competition is limited by the extent of member disengagement and is further muted as contributions are mandatory.
 - A diverse range of fund and product types increases complexity and requires a flexible approach to the development of assessment criteria and indicators.
 - The complex integration of service providers requires that criteria can assess competitiveness throughout the value chain, rather than just the retail level.
 - A highly regulated landscape can reduce or remove market failures, but often comes at a cost, such as regulatory burden or other unintended consequences for competitiveness and efficiency. Assessment criteria should account for the impact of the system's regulations and regulators on market participants.
 - There are many principal-agent relationships in the superannuation system with potential for conflicts of interest. How well those potential problems are addressed has direct implications for competitiveness and efficiency.
- The system is large, dynamic and continuing to evolve as it matures. Assessment criteria should be flexible to adapt to the changing nature of the system.

The superannuation system is not a standard market. It has many unique characteristics that have important implications for the development of criteria to assess the efficiency and competitiveness of the superannuation system.

This chapter provides an overview of the superannuation system, including its role in the broader retirement income system, through a market framework lens, and describes the unique characteristics that are particularly relevant to the development of assessment criteria in chapters 5 and 6.

2.1 What is the superannuation ‘system’?

Three pillars of retirement income

Australia has a three-pillar retirement income system made up of a government-funded and means-tested Age Pension, compulsory superannuation and voluntary private savings (including voluntary superannuation contributions) (Murray et al. 2014b). This last pillar also includes wealth stored in the family home, which is the largest asset for most households (PC 2015a). These pillars are strongly linked to one another through the tax and transfer system. However, this interconnectedness adds complexity as changes to one pillar are likely to affect the others. Spanning two of the three pillars — compulsory and voluntary private savings — the superannuation ‘system’ has a fundamental and growing role in providing retirement income. The superannuation system is also able to provide life, total permanent disability and income protection insurance to members to help manage income-related risks.

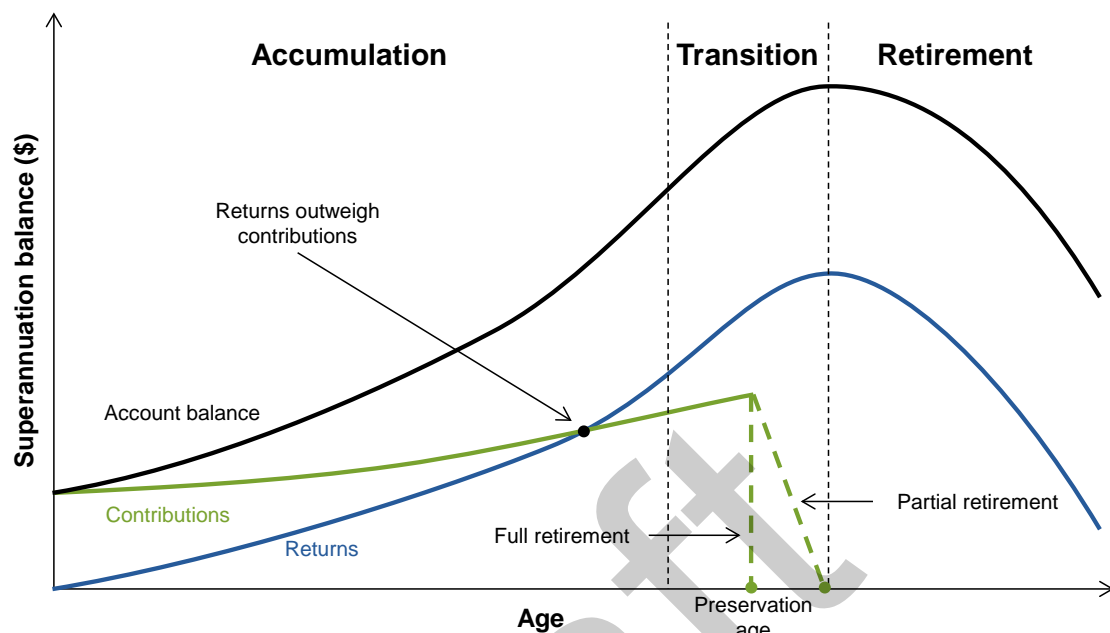
The system incorporates three phases

Superannuation is a long-term investment that enables income and consumption smoothing over a person’s lifetime. This encompasses three phases:

- accumulation
- transition
- retirement (figure 2.1).

These phases are in a sense arbitrary and arise because of distinct policy settings. As the superannuation system matures, one would expect the phases to be viewed less distinctively and for the system to focus on delivering life-time outcomes for members.

Figure 2.1 A simple schema of the three phases of superannuation



Accumulation phase

The accumulation phase of the superannuation system generally spans the duration of a person's working life and is marked by several key features determined by government policy.

Superannuation is compulsory under the *Superannuation Guarantee (Administration) Act 1992* (Cwlth) (SG Act). The Superannuation Guarantee mandates the vast majority of employers to provide a minimum level of 'employer contributions' — currently 9.5 per cent of ordinary time earnings — to their employee's superannuation fund. Compulsion can reduce the potential for inadequate saving caused by myopic decision making and moral hazard associated with the Age Pension (Drew and Stanford 2004).

Balances cannot be withdrawn during the accumulation phase. Individuals are generally restricted from taking their superannuation benefits before reaching the 'preservation age', as set under the *Superannuation Industry (Supervision) Regulations 1994* (Cwlth) (SIS Regs).² The preservation age is legislated to gradually increase from 55 years in 2015 to 60 years in 2025 (SIS Regs, r. 6.01(2)).

Balances are concessionally taxed within the superannuation system. The main reasons for this concessional tax treatment is to compensate for the loss of purchasing power (due to inflation) and for deferring consumption (Treasury 2009a).

² Early access may be granted under exceptional circumstances, such as medical or financial hardship.

The system allocates members to default funds. While most members are free to choose which superannuation fund receives their employer contributions, if they do not nominate a complying fund, the employer-nominated default fund is used.

Transition-to-retirement phase

The transition-to-retirement phase involves the period of time as members approach retirement. There is no distinct point at which a member enters this phase, the period will differ for each member.

As they approach and enter retirement and their investment time horizons fall and become more uncertain, **members face many risks** to their retirement incomes, including longevity, investment and sequencing risk. In this phase, members have the opportunity to consider an individual approach to managing these risks using particular (or a combination of) products, investment strategies and withdrawal strategies. For example, they could construct their portfolio to incorporate separate buckets of assets to reflect various purposes for the funds (such as immediate expenditure and longer term income) (appendix D).

Further, moving from the accumulation to retirement phase may not be sudden or voluntary. **Individuals can transition to the retirement phase** if they choose to continue working in some capacity. Once an individual reaches the preservation age, they can receive regular payments — up to 10 per cent of their balance every year — from a ‘transition to retirement’ income stream, while working (ATO 2015s).

Retirement phase

The retirement phase of the superannuation system generally begins when an individual is eligible to withdraw funds from their superannuation balance.

Balances may be withdrawn when an individual meets certain conditions. Generally, individuals can access their superannuation balance when they reach the preservation age and retire, reach the preservation age and begin a transition to retirement income stream, or reach 65 years of age (ATO 2015a).

Balances can be taken as a lump sum or an income stream (or a combination of both) (appendix D). Individuals can choose to withdraw all or some of their balance as a lump sum payment. Balances not taken as a lump sum can be taken as regular payments from an income stream. With an account-based income stream, the superannuation fund generally continues to invest the balance; the **investment returns are generally tax free**.³ However, individuals taking an income stream are required to withdraw a minimum proportion of their account balance every year — between 4 and 14 per cent, depending on age. These

³ A non-account-based income stream, such as an annuity, involves an agreement with a superannuation fund to make regular payments over an agreed term, usually guaranteed for life.

minimum withdrawal rates were introduced to ensure superannuation balances provide an income stream in retirement and are eventually withdrawn from the concessional tax environment (Australian Government 2014c).

Many participants with diverse roles

The superannuation system incorporates many participants with diverse roles and responsibilities. It is useful to view the superannuation system within a market framework to understand the roles of the participants and how they relate to each other.

Figure 2.2 provides an overview of the superannuation system using a market framework that provides a distinction between the retail and wholesale levels of the system. The retail level of the market is traditionally viewed as the superannuation ‘industry’, however the system is much broader, extending to include service providers at the wholesale level.

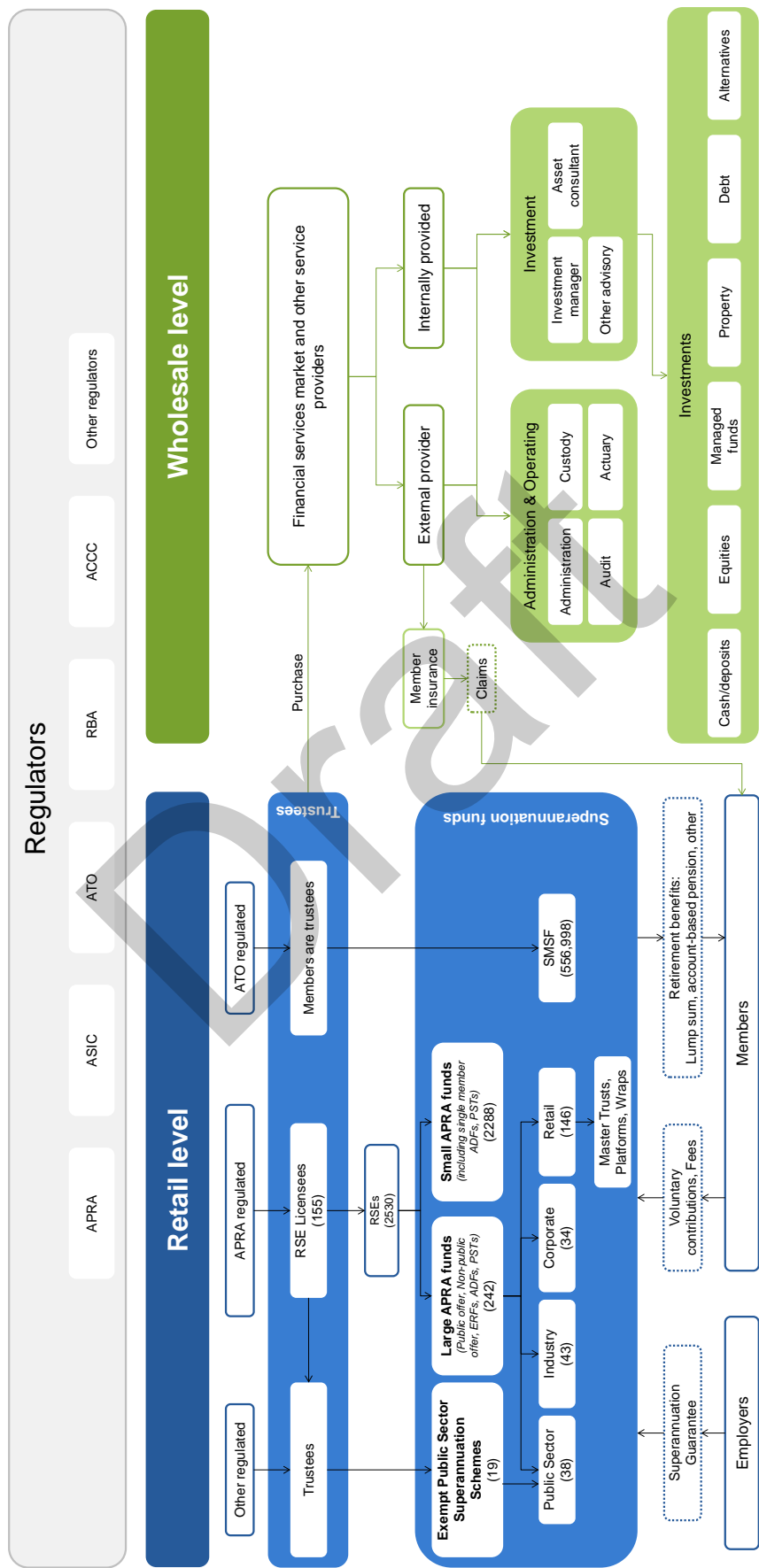
Members and employers

Superannuation fund members (members) are the end consumers of superannuation services. Most members are, or have been, employees compelled to join the system.⁴ A person ceases to be a member when they withdraw their entire balance. In 2013-14, about 75 per cent of males and 67 per cent of females over 15 years of age had a superannuation balance (chapter 1).

Employers have a unique role in the system, acting as an intermediary between members and superannuation funds. The relationship between members and employers is integral to the design of the system and historically superannuation has been intricately linked to the industrial relations system (chapter 1). The majority of employees in Australia have become members of superannuation funds as a requirement under the SG Act. In general, employers are required to make Superannuation Guarantee contributions for any employee paid at least \$450 per month; if they are below 18 years of age, they must also be working over 30 hours per week (ATO 2015t). However, employment arrangements can vary widely and some employers are exempt from making superannuation contributions (ATO 2015t).

⁴ Self-employed people can also elect to become members by claiming a full deduction for contributions (ATO 2015r) and people outside the workforce can also do so under limited circumstances.

Figure 2.2 An overview of the superannuation system^a



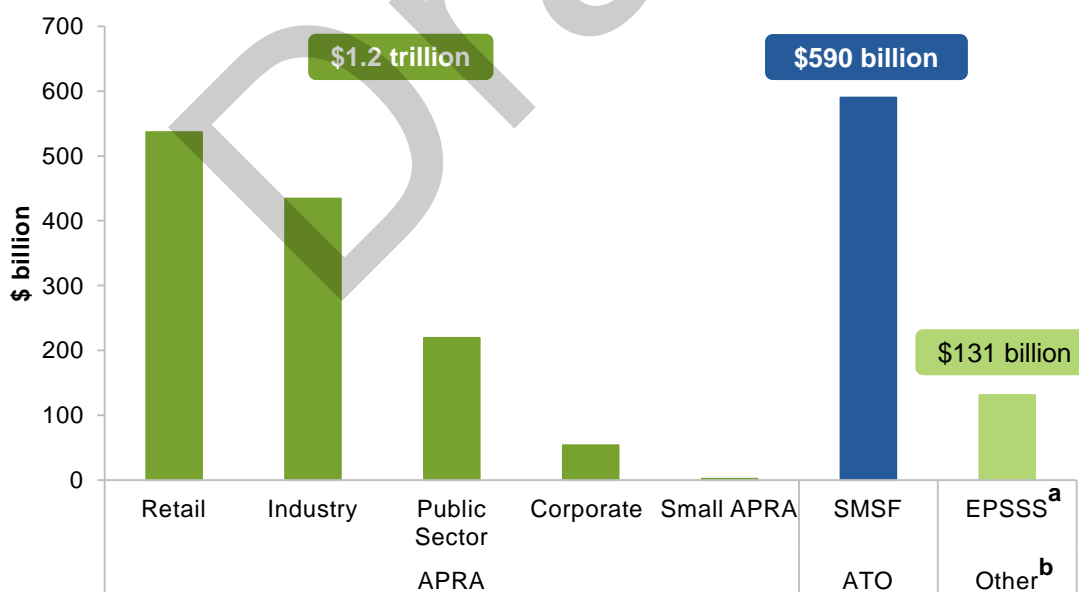
^a Numbers in brackets denote number of trustees or superannuation funds as reported by APRA as at June 2015.
Data source: APRA (2016c).

Employers also have the unique role of choosing a ‘default fund’ that compulsory contributions are automatically paid into, unless members actively choose a different fund. While some employers can nominate any legally complying superannuation fund to be the default, employers under certain employment arrangements — such as some modern awards and agreements — are restricted in their choice (PC 2012).

Superannuation funds

A superannuation fund is any fund or scheme that is eligible to receive Superannuation Guarantee contributions. Superannuation funds typically take the legal form of a trust, empowering an entity to act as a trustee which owes an obligation to the fund’s beneficiaries (members) (Donald et al. 2016). At a fundamental level, funds are differentiated by regulation, depending on whether the trustees are also the members. In order to become a legally complying fund, a superannuation fund and its trustees must be regulated by the Australian Prudential Regulation Authority (APRA), the Australian Tax Office (ATO) or other government legislation (figure 2.3).

Figure 2.3 Total assets by regulatory classification and fund type
As at June 2015



^a Exempt Public Sector Superannuation Scheme. ^b There is also about \$56 billion held in balance of life office statutory funds which are assets held for superannuation or retirement purposes in statutory funds of life insurance companies, excluding the assets held in life office statutory funds by superannuation entities. The balance of life office funds includes annuities and assets backing non-policyholder liabilities. These products are regulated under the *Life Insurance Act 1995* (Cwlth).

Data source: APRA (2016c).

An APRA-regulated fund must apply to be a registrable superannuation entity (RSE) and its trustees must be RSE licensees as defined under the SIS Act. APRA regulates the majority of large superannuation funds catering to more than four members (APRA-regulated institutional funds), as well as ‘small APRA funds’ involving fewer than five members. APRA-regulated institutional funds can be segmented in many ways (box 2.1), but they are generally classified into four fund types.

- **Retail funds** operate under the trusteeship of a ‘for-profit’ RSE licensee with a corporate, industry or general membership base.
- **Industry funds** operate under the trusteeship of a ‘not-for-profit’ RSE licensee with either an industry or general membership base.
- **Public sector funds** operate under the trusteeship of a not-for-profit RSE licensee with a government membership base.
- **Corporate funds** operate under the trusteeship of a not-for-profit RSE licensee with a corporate membership base. (APRA 2016c)

As at June 2015, APRA reported about 2530 RSEs operating under 155 RSE licensees. Of these, just 242 RSEs were institutional funds, but they made up the majority of all superannuation assets under management — about \$1.2 trillion (figure 2.3). The other 2288 RSEs were small APRA funds — with about \$2 billion of assets — used by members that wish to retain a small fund where the trustee is not the member.

The ATO regulates self-managed superannuation funds (**SMSF**), which include up to four members, all of whom are trustees or directors of the corporate trustee (appendix G) (this differs from small APRA funds, where the trustees are still RSE licensees). SMSFs are exempt from prudential regulation on the basis that there is no divergence in interests between members and trustees (Treasury 2014). The number of SMSFs has grown significantly in the past few decades — there were more than 550 000 SMSFs with about \$590 billion in assets as at June 2015 (APRA 2016c).⁵

While the vast majority of superannuation funds are regulated by APRA or the ATO, a small number of exempt public sector superannuation schemes (**EPSSS**) — default funds for some public sector employees — are regulated under other government legislation. However, 19 of about 60 such funds voluntarily report statistical information to APRA (APRA 2016c; SIS Regs, r. 1AA(3)).

Superannuation funds can offer a range of investment products to members in the accumulation phase, which are differentiated in many ways, such as risk, return or investment style. There are more than 40 000 investment options across the industry (APRA, sub. 32). Further, superannuation funds can also offer retirement income products for members in the retirement phase (appendix D).

⁵ More recent data can be found in appendix G. This chapter uses June 2015 data for comparability.

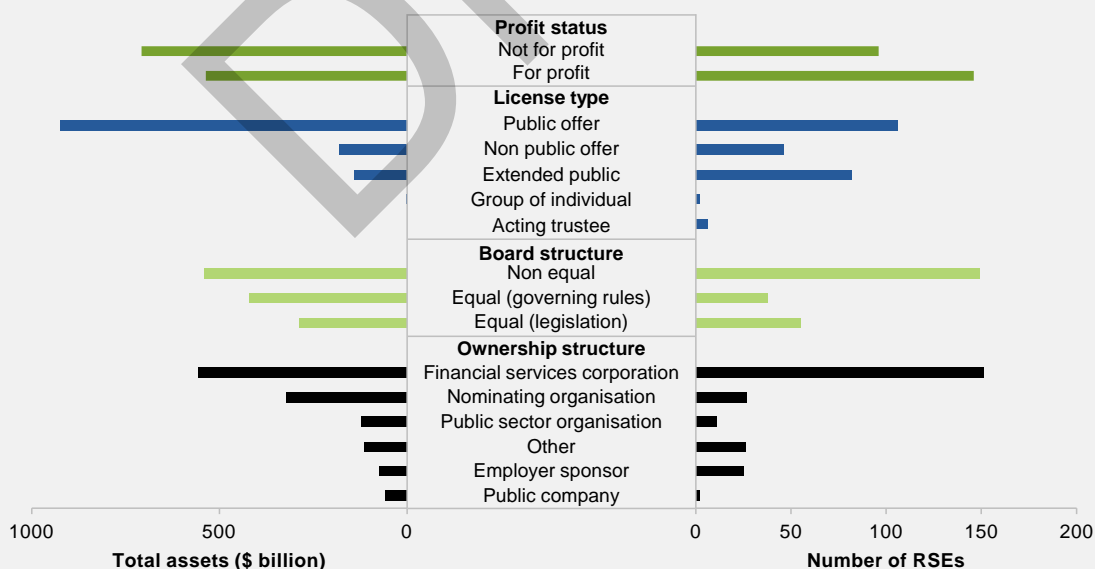
This product proliferation exists despite the introduction of the MySuper reforms. All superannuation funds must use a 'MySuper' product as their default from 1 October 2013 (Australian Government 2011). Further, all members under previous default arrangements must be transferred to a MySuper product by 1 July 2017. The default MySuper products are designed to have a simple set of product features. This ensures members do not pay fees for unnecessary services they do not need or use and to facilitate greater comparability to better inform member choice.

Box 2.1 Characteristics of APRA-regulated institutional funds

APRA-regulated institutional funds have a number of characteristics, in addition to fund type. These characteristics provide other methods of segmenting funds.

- **Profit status** represents where a registrable superannuation entity (RSE) licensee's operations are a source of financial gain to the licensee owners or its associates.
- **License type** represents whether the RSE licensee of a fund is allowed to offer its superannuation services to the public or not. An applicant should nominate for an 'extended public offer' license if they intend to operate one or more non-public-offer superannuation entities and a public offer superannuation entity.
- **Board structure** represents whether the RSE licensee has an equal representation of employer and member representatives on the trustee board.
- **Ownership structure** represents the owner of the RSE licensee.

Total assets and number of RSEs, by fund characteristics, as at June 2015



Source: APRA (2016c).

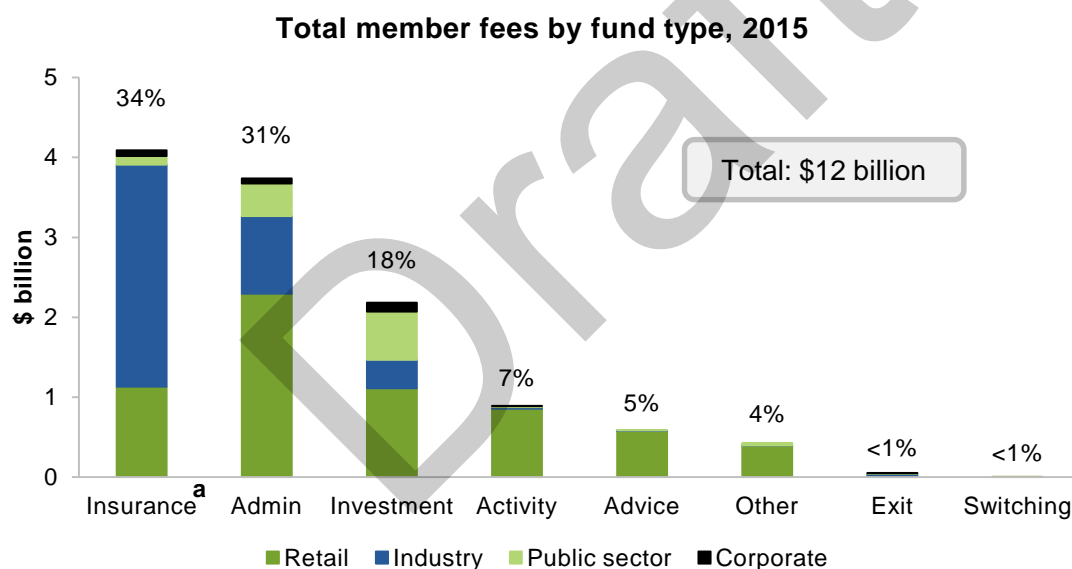
Superannuation funds charge members fees to cover the costs of administering and investing their superannuation balances. Members can be charged a range of fees, such as general administration, investment, insurance administration (not premiums), advice, exit

and switching fees (figure 2.4). The amount paid in fees is very important in the context of superannuation balances. Superannuation funds may charge higher fees to compensate for a greater level of service quality or greater expected returns (above a passive investment benchmark). This may be warranted if the benefits from the added value or higher returns outweigh the cost of fees.

The vast majority of superannuation funds are defined contribution (over 95 per cent of member accounts) (APRA 2016c). In 2013, just 15 funds were solely defined benefit funds and 74 funds had a hybrid benefit structure (APRA 2014d). Most defined benefits funds today are legacy corporate or public sector funds that are closed to new members. Defined benefit funds have complex long-term liabilities that cannot easily be transferred to another fund or party.

Figure 2.4 **Total member fees by fee type and fund type**

Year end June 2015



^a Insurance fees may be overstated as it may include some misreported insurance premiums.

Data source: APRA (2016c).

Service providers

The main role of superannuation trustees is to provide superannuation services to members of the superannuation fund. Trustees can choose to provide some of these services internally or they can be outsourced to external service providers. The provision of these services to trustees (both internal and external) makes up the ‘wholesale level’ of the superannuation system framework set out in figure 2.2.

These services cover a range of functions, some of which are required under superannuation law. APRA's reporting framework categorises service expenses by type, generally related to fees charged to members (table 2.1). There are many service providers in the system, however, there is evidence that the market is concentrated in particular service areas (figure 2.5).

Table 2.1 Services by expense type

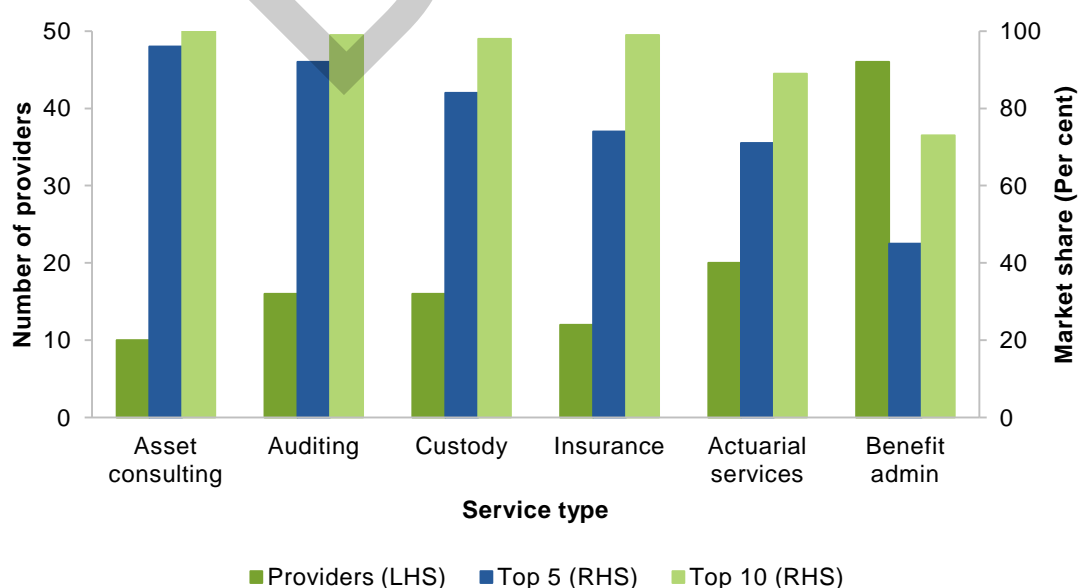
<i>Expense type</i>	<i>Definition</i>
Investment	Represents expenses that relate to the investment of the assets of the entity. Includes expenses for which investment fees are charged and expenses associated with generating income on investments.
Administration	Represents expenses that relate to the administration or operation of the fund. Includes administration expenses for which administration fees are charged.
Operating	Represents expenses that relate to the operation of the fund by the RSE licensee. Includes operating expenses for which administration fees are charged.
Advice	Represents expenses that relate to the provision of financial product advice to a member. Includes expenses for which activity fees relating to provision of financial product are charged.
Insurance administration ^a	Represents expense activities of an RSE licensee, life insurer, administrator or other service provider that relate to the administration or operation of acquired insurance or self-insurance arrangements to members.

^a Not including insurance premiums.

Source: APRA (2015i).

Figure 2.5 Market concentration of service providers

As at 30 June 2012



Data source: Donald et al (2016).

In 2015, APRA-regulated institutional funds paid over \$9 billion to service providers (not including insurance premiums). About 70 per cent of this related to administration and operating expenses and about 30 per cent related to investment services. Further, just 15 per cent of these expenses were incurred internally, with the remainder incurred by associated (26 per cent) and non-associated (59 per cent) external providers. Similarly, the many SMSF trustees engage service providers to help manage their funds (Cooper et al. 2010b). These providers mainly include accountants, auditors, financial advisers and administrators.

Insurance

Superannuation funds have traditionally provided life, total and permanent disability (TPD) and income protection insurance to members by default. In 2015, APRA-regulated institutional funds collected about \$8 billion in insurance premiums and about half of member accounts received life and/or TPD insurance cover through their superannuation fund (table 2.2).

Under the SIS Act, all MySuper products are required to provide life and TPD insurance to members, and may choose to provide income protection insurance, by default, as long as ‘the cost of the insurance does not inappropriately erode the retirement income of beneficiaries’ (SIS Act, s. 52(7)(c)). Insurance provision through MySuper products was included to ‘... provide a safety net to members who are least likely to give consideration to their insurance needs’ (Treasury 2012, p. 23). MySuper members may elect to opt-out of the insurance cover.

Superannuation funds can either set up associated insurance companies to provide these services or outsource to an external provider. Most outsource to an external provider. In 2015, 12 insurance providers serviced 200 of Australia’s largest superannuation funds (figure 2.5). Self-insurance of life and TPD cover has been restricted to defined benefit funds due to the risks involved (Actuaries Institute 2014).

Table 2.2 Insurance claims and policies

Year end June 2015

<i>Insurance type</i>	<i>Member accounts</i>		<i>Claims paid</i>	
	million	thousand	\$ billion (total)	\$ '000 per claim
Life	15.3	17.3	2.3	132.5
Total and permanent disability	13.2	15.7	1.4	92.1
Income protection	5.3	37.2	0.7	17.8
Total	33.8	70.2	4.4	

Data source: APRA (2016c).

Regulators

Australia's regulatory system is described as a 'twin peaks' model, where regulators focus on particular outcomes across the system, rather than particular sectors (Murray et al. 2014a) (appendix H). The twin peaks include:

- APRA, which specialises in prudential regulation of financial institutions, such as superannuation, banking and insurance
- the Australian Securities and Investments Commission (ASIC), which has a broader conduct and integrity role as the corporate, markets and financial services regulator.

APRA and ASIC both play an important role in the superannuation system, as well as the ATO, which is the regulator for self-managed superannuation funds (box 2.2).

Box 2.2 Key regulators in the superannuation system

The Australian Prudential Regulation Authority (APRA) requires APRA-regulated funds and their trustees to act prudently in the interests of the fund's members. Under its mandate, APRA is explicitly required to balance objectives of financial safety with competition and efficiency. APRA has many legal powers and instruments it can use to fulfil its role, including registration and licencing of funds and trustees, reporting requirements, risk assessment and corrective response powers. Further, APRA provides prudential regulation to the life insurance industry.

The Australian Securities and Investments Commission (ASIC) regulates the conduct and disclosure obligations of financial service providers, including superannuation trustees and insurance providers. ASIC's role with regard to superannuation primarily involves promoting financial literacy of members, regulating proper disclosure by funds and integrity of financial service providers. ASIC also regulates service providers for self-managed superannuation funds, such as financial advisers, accountants and administrators.

The Australian Taxation Office regulates employers, ensuring they make employer contributions, and regulates tax compliance of self-managed superannuation funds.

Source: Appendix H.

Several other regulators also have roles that influence the superannuation system. The Reserve Bank of Australia (RBA) is responsible for monetary policy and administering the monetary and payments system. The Australian Competition and Consumer Commission (ACCC) indirectly regulates participants of the superannuation system, ensuring that they comply with competition, fair trade and consumer protection laws. The Council of Financial Regulators (CFR) — made up of APRA, ASIC, the RBA and the Treasury — is the coordinating body for Australia's main financial regulatory agencies. It operates as a high level forum for co-operation and collaboration among members. The Superannuation Complaints Tribunal (SCT) is an independent dispute resolution body. It deals with complaints relating to the decisions and conduct of trustees, insurers and other decision makers within the superannuation system.

2.2 Superannuation is a unique market

The superannuation system has some unique characteristics that (as a whole) may not be found in standard markets. The system is compulsory, complex, and members can disengage in the face of cognitive constraints and restrictions on choice. This section discusses some of the key characteristics of the superannuation system and their implications for assessing efficiency and competitiveness.

Policy-driven demand

The demand for superannuation services is, in large part, driven by government policy — chiefly compulsory superannuation and its concessional tax treatment.

Compulsory employer contributions mandate a minimum level of member savings for retirement. In the absence of compulsory saving, members would save according to their individual consumption and saving preferences. The compulsory minimum level of member savings means that some members are forced to save more than they would otherwise prefer. In contrast, other members who choose to save beyond this minimum level can either voluntarily contribute more to the superannuation system, or save outside of the system.

The concessional tax treatment also influences the level of superannuation savings. It can encourage voluntary superannuation contributions. And to the extent that superannuation is taxed differently than other savings instruments, it distorts the choice of savings vehicle and investment strategy.

Policy-driven growth has important implications for the overall assessment of the efficiency of the superannuation system. On the demand side, compulsion and concessional tax treatment can distort the level and composition of savings, leading to allocative inefficiency. On the supply side, guaranteed demand can dull incentives for suppliers to be competitive, or lead to rent seeking.

Disengaged members

In a standard competitive market, well informed and highly engaged consumers make decisions in their own best interest, driving demand for goods or services they value. However, there are several reasons why members may disengage from the superannuation system, many of which may not be irrational or suboptimal (appendix B).

- The **compulsory nature of the system** means that most members contribute to their superannuation, regardless of their personal preferences.
- **Cognitive constraints and behavioural biases** may impede member engagement and optimal decision making. For example, lack of financial literacy, myopia, complexity

of long-term decision making, loss aversion, reliance on mental shortcuts, a tendency to procrastinate and general apathy.

- The superannuation system uses a **default model** to address member disengagement, but it may also act to increase that disengagement. That is, reducing the penalty for disengagement may cause more members to disengage.
- Under some circumstances, members may be **constrained from making an active choice**. Regulations prevent about 20 per cent of the workforce — particularly employees under some modern awards and enterprise bargaining agreements — from choosing a superannuation fund other than the default (ASFA 2010; Treasury 2015a).

The level of member engagement can have important implications for the competitiveness and ultimately efficiency of the superannuation system. Hence a measure of engagement is relevant in the development of assessment criteria and indicators. However, member engagement is not a guarantee of good outcomes for members and care is needed in both measurement and interpretation (chapter 5). For example, it is important to distinguish between member activity and member engagement — an absence of activity does not in and of itself necessarily represent a lack of member engagement.

Risk management falls to members

The superannuation system is primarily made up of defined contribution schemes, giving members greater responsibility for managing risks, including investment, longevity, sequencing, inflation and interest rate risk.

The trade-off between risk and return is well known. Managing this trade-off becomes more complex where there are very long time horizons, significant uncertainty and where members may not have the capability to make optimal decisions. The extent to which the superannuation system helps members manage risk has implications for the efficiency of the system.

Sequencing risk is the risk of experiencing poor investment returns just prior to drawing on funds in retirement. Research suggests that sequencing risk increases in the lead up to retirement as investment returns begin to outweigh contributions (Basu, Doran and Drew 2012). This risk is likely to be more prevalent and concentrated for members taking lump-sum withdrawals, as they divest immediately and can no longer invest in the tax-concessional superannuation environment. Smart default products can also be used to gauge and manage sequencing risk (Fiduciary's Friend, sub. 7). Members can also manage sequencing risk by diversifying their superannuation investment portfolio and choosing less risky investments as they approach retirement. However, this presents a trade-off between managing sequencing and longevity risks.

Members also face longevity risk — the risk of outliving their savings — and are responsible for managing this risk by choosing how much they save, their investment asset allocation and the rate at which they draw down on their wealth. Retirees risk exhausting

their savings prematurely or drawing on their savings too conservatively, leading to a lower standard of living (Murray et al. 2014b). Longevity risk can be difficult to manage, although members can transfer some of this risk onto a third party through financial products (such as annuities) and the Age Pension ultimately acts as a safety net.

A diverse range of fund and product types

As noted earlier, there are more than 40 000 investment products offered by superannuation funds. Some products, such as Master Trusts or Investment Wraps, also give members the ability to implement an individual investment strategy. In addition, over one million members belong to small APRA funds and SMSFs, adding to the diversity (APRA 2016c).

This diversity has important implications for the development of competitiveness and efficiency assessment criteria. While diversity and choice can, all else equal, be desirable, it can lead to suboptimal outcomes in a complex market with constrained and costly decision making. For example, high search costs for members can make it difficult to identify the best product for their circumstances. Further, this diversity makes it inappropriate to use a one-size-fits-all approach to assessing superannuation funds.

Complex integration of service providers

Superannuation funds supply many different services to their members. Trustees may choose to provide services internally or through an associated external organisation to tailor the service to the membership base. Alternatively, the fund may outsource some services to take advantage of scale economies.

The market for service providers within the superannuation system is fairly concentrated within some functions, highly connected, dynamic and very complex (Donald et al. 2016). The interconnectedness and complexity of service providers reduces transparency of the system, increasing the difficulty of both regulation and assessment of the system's performance. For example, fees may be disclosed differently, or not at all, depending on whether services are provided in-house or externally.

This complexity has important implications for the development of criteria and indicators, which will be required to assess the competitiveness at various stages of the value chain, not just at the retail level.

Highly regulated landscape

Regulation is ideally used to correct market failures by changing incentives of the participants involved (appendix H). The unique characteristics of the superannuation system and myriad principal-agent relationships has led to most participants being subject

to significant legislative and regulatory oversight. For example, most institutional funds and trustees are prudentially regulated and service providers are regulated to ensure consumer protection.

Superannuation funds face a different level of prudential regulation depending on whether the trustees of the fund are the members — for example, institutional funds compared with SMSFs. Further, there is regulated access to default status at both the fund (through listings in modern awards) and product (MySuper) level.

Financial service providers, generally regulated by ASIC, face governance standards, disclosure requirements, registration and penalties due to regulatory infringement. In addition, APRA requires that RSEs enter into an ‘outsourcing agreement’ with service providers that addresses some minimum requirements, for example, giving APRA access to information from the service provider if required (APRA 2012b). This enables the RSE to pass through (contractually) some of the regulatory obligations APRA require of them — essentially extending APRA’s prudential regulatory arm to service providers.

The high level of regulation in the superannuation system has important implications for efficiency and competitiveness. While regulations are usually applied to improve market efficiency and competitiveness, there is generally a cost involved. Too much regulation or poor regulator performance can be restrictive, burdensome and unnecessary, reducing competitiveness and efficiency. Further, regulation used to correct one market failure may have unintended consequences on other aspects of the system. Therefore, assessment criteria must take into account the impact of the system’s regulations and regulators.

Principal–agent relationships abound

The design of the superannuation system and the number and diversity of participants has formed many principal–agent relationships that span both the demand and supply sides of the market (Drew and Stanford 2003). These relationships occur where one entity (an agent) is engaged to make decisions on behalf of another entity (the principal). Assuming that both the principal and agent are motivated to act in their own interests, problems can arise in cases where these interests are not aligned and the agent has the opportunity to exploit asymmetric information to act to the detriment of the principal. Key relationships in the superannuation system are outlined in box 2.3.

Principal–agent issues can be managed, either by the parties themselves (for example, via contracts) or via regulation. Effective management of principal–agent issues by both providers and regulators is a key ingredient of an efficient superannuation system, and the Commission has developed criteria to assess this (chapters 5 and 6).

Box 2.3 **Key principal–agent relationships in the superannuation system**

Employers and members

Under the default superannuation system, employers are required to nominate a default fund for employees who do not make an alternative choice. This means that some members only transact with their superannuation funds indirectly — obscuring the member's consumption and saving decision.

In cases where an employer is free to choose from a number of default funds, there are several reasons why they might face an incentive to make a decision that is not in the best interests of their employees (PC 2012). For example, they may choose a fund on the basis of less onerous administrative requirements.

In addition, employers (rather than members) may be targeted by superannuation funds that wish to be the employer default. However, it is illegal for a superannuation fund to give an employer benefits as an incentive to use their fund as the workplace default (*Superannuation Industry (Supervision) Act 1993* (Cwlth), s. 68A). Some employers see their role in superannuation as a burden and are concerned they lack the expertise to make the decisions required (COSBOA, sub. 33).

Trustees and members

Superannuation fund trustees have a fiduciary responsibility for managing and investing the contributions of members. However, this does not make the relationship immune from conflict. For example, in circumstances where members may benefit from a fund merging or closing down, this may not be in the best interests of trustees who face the prospect of losing their role.

Trustees also have an obligation to act in the best interests of all members and can face conflicting member interests which are difficult to manage. Further, for-profit superannuation funds are required to act in the best interests of members, even when doing so may conflict with shareholder interests.

Trustees and service providers

Trustees outsource many of their responsibilities to service providers. Problems can arise where profit maximising service providers are motivated to act in a way that is detrimental to the members' interests. For example, a fund manager may pursue a costly, active investment strategy that does not deliver equal or better net returns than a passive investment strategy. Flawed remuneration policies, such as reward for short-term targets, can exacerbate conflicts of interest (Neal and Warren 2015).

The system is large and dynamic

The superannuation system has undergone significant growth and regulatory change over its history and will continue to evolve as it matures (chapter 1). This continual change has implications for the efficiency and competitiveness of the system.

The system's size and average member balances are expected to continue growing, meaning the system will have greater importance for overall financial market stability

(appendix F). This may imply a trade-off between short-run static efficiency and longer-run dynamic efficiency. As the system grows, the scope to realise greater economies of scale will also increase. For example, there is an increasing ability for smaller funds, such as SMSFs, to access economies of scale using platforms and other services, with the potential to affect market power and competitive pressures within the system. In addition, the growing number of retirees is likely to increase the number and variety of retirement income products as funds develop new products to meet the increasing demand (Rice Warner 2016b). Policy (and tax) changes are also frequently considered by government, increasing the likelihood that the system's design will continue to change.

2.3 In sum

The design, size, diversity and complexity of the superannuation system distinguish it from typical markets. Therefore the assessment framework has a focus on incentives and drivers (inputs or processes) of particular outcomes, as well as the outcomes themselves. Importantly, no single criterion or indicator can be used to adequately assess its competitiveness and/or efficiency. In some cases, the assessment will focus on a particular element of the system and in other cases, the system as a whole. Finally, the assessment framework will need to be sufficiently flexible to accommodate the dynamic and segmented nature of the system and policy-induced constraints on the system's competitiveness and efficiency.

DRAFT REPORT

This draft report is no longer open for consultation. For final outcomes of this project refer to the research report.

Draft

3 The Commission's assessment framework

Key points

- The size and significance of the Australian superannuation system mean that its efficiency and competitiveness materially impacts the wellbeing of Australians. It also means there is a strong incentive to pursue improvements in efficiency and competitiveness. Relatively small improvements can have a large impact.
- The assessment framework needs to be amenable to the consideration of a multitude of factors – there is no 'silver bullet' approach to assessment. The framework will extensively employ benchmarking, ranking the performance of the superannuation system against either other superannuation systems or relevant performance benchmarks. The Commission will also consider barriers that potentially impede the efficiency and competitiveness of the superannuation system, and therefore its performance.
- The Commission's approach to assessing the efficiency and competitiveness of the superannuation system will involve defining the system-level objectives, then formulating assessment criteria and developing performance indicators based on the criteria.
- The Commission will take current policy settings as given when developing the assessment criteria. The key focus therefore is to develop criteria that are within the influence of the system.
- The performance indicators chosen will vary significantly in their nature, with a mix of quantitative and qualitative indicators, with indicators variously based on inputs and processes, outputs, outcomes and behavioural factors.
- In developing the framework, the Commission has also considered the data requirements for stage 3 of this review process — the actual assessment of efficiency and competitiveness — and sees this first stage as an opportunity to highlight any potentially useful additional data or research that can be obtained without creating unnecessary burdens on the superannuation system.

3.1 Why are efficiency and competitiveness important?

The size and significance of the Australian superannuation system, and its compulsory nature, mean that its efficiency and competitiveness have major impacts on the wealth and therefore wellbeing of Australians, particularly in retirement. The system has assets of approximately \$2 trillion, accounts for almost one quarter of financial institution assets (RBA 2016a) and represents around 20 per cent of household assets (RBA 2016b). Small improvements to the efficiency of the system can therefore have a large impact.

Put most simply, an efficient and competitive superannuation system means members have larger balances (for a given level of contribution) and higher living standards in retirement. An efficient superannuation system broadly means costs are minimised, returns maximised, members placed in the most appropriate investments based on their preferences and needs, and that the system embraces innovation and technology to improve outcomes over time.

Competition is a means to an end. Competition — meaning rivalry among providers — is generally critical to promoting efficiency, as it provides incentives for funds to become more efficient in order to improve or maintain market share. Competition should also ‘weed out’ inefficient providers. However, the presence of economies of scale (that is, falling per unit costs within funds as output increases and fixed costs are spread across more members) means a greater number of competitors does not *always* promote efficiency. If there were too many funds, they would not be able to take advantage of scale economies and therefore costs across the system would be higher than otherwise.

The Institute of Public Accountants highlighted the benefits of competition and efficiency in superannuation (sub. 22, pp. 4–5).

Competition is central to the operation of financial markets and fosters innovation, productivity, growth and efficiency ... Increased competition should result in the system whereby (i) costs are minimised, (ii) returns on investments are maximised, (iii) funds have incentives to improve and innovate their product range to meet the needs of the market, (iv) there are improvements in the quality of service for members, (v) there is continual improvements in technology and systems resulting in product enhancements and cost reductions and offerings and (vi) funds have an incentive to keep members better informed and educated allowing members to make more informed choices.

In contrast, the Australian Council of Trade Unions (sub. 18, p. 7) questioned whether increases in competition have led to increased efficiency in the superannuation sector.

Over thirty years experience in this sector has seen almost no tangible evidence of competition enhancing efficiency. In fact there is almost no evidence of sustained savings in administration costs and the reverse evidence – that is systematic increasing of costs – in the investment area. Indeed none of the removal of the impediments at the margin – the advent of retail funds into the default and corporate tender space – have seen any sustained evidence of cost reduction and no industry analysis suggests it may be forthcoming if impediments were further eased.

The Grattan Institute has previously noted the potential for significant gains from a more efficient system.

There are too many accounts, too many funds, and too many of them incur high administrative costs. We pay \$4 billion a year above what would be charged by lean funds. (Minifie, Cameron and Savage 2015, p. 2)

3.2 The Commission's approach to assessment

Given the number of factors influencing the efficiency and competitiveness of the superannuation system, there is no 'silver bullet' approach to assessment. The Commission will draw on two complementary ways of assessing performance: benchmarking performance, and identifying and assessing barriers that impede performance.

Benchmarking performance

The assessment framework will extensively employ benchmarking. The term 'benchmarking' is used broadly: performance can be benchmarked against others (for example, other funds or countries), against stipulated objectives (for example, an 'efficiency frontier' or a market benchmark) and over time. Benchmarking can vary from simple comparisons of particular indicators to more sophisticated modelling techniques able to incorporate multiple factors, such as data envelopment analysis or stochastic frontier analysis (chapter 6). It can also be 'point of time' in nature, such as ranking funds with the best governance arrangements at a particular date, or be longitudinal (that is, based on performance over time), such as highest net returns over a ten year period. Longitudinal assessments are particularly useful for highlighting trends (such as whether the sector has become more competitive over time).

Benchmarking has significant advantages in assessing performance. It can produce transparent results that are relatively straight-forward to interpret. Relatively complex benchmarking methods can help attribute causes of inefficiency or poor performance (or, conversely, good performance). The results of benchmarking can also be seen as more objective than other ways of measuring performance.

Third Horizon (sub. 3, p. 2) saw a number of benefits from the availability of benchmarked data:

The major shortfall we have identified which prevents the desire for cost-discipline from being turned into demonstrably cost-effective operating models is the lack of necessary comparable cost data. We believe if and when this information shortfall is addressed that management, both self-motivated and prompted (e.g. peer group pressure, Board requirements, regulatory scrutiny, customer / member expectations), will address evident cost inefficiencies with alacrity.

The Australian Council of Trade Unions (sub. 18, p. 10) saw a role for benchmarking in various areas, including operational efficiency:

The ACTU believes that the development of appropriate benchmarks [should involve constructing] an index based on a long term performance of a selected group of existing default funds. The ACTU does not rely on any international benchmarks in this regard.

Benchmarking to measure the performance of superannuation funds also has widespread international acceptance. Canada's CEM Benchmarking notes its benchmarking exercises

have over 350 corporate and government clients around the world (CEM Benchmarking 2016).

However, there are a number of difficulties associated with benchmarking. Potential problems may stem from data availability, reliability or comparability. Moreover, some areas in which it is important to measure the industry's performance — such as the degree to which superannuation funds' services match the needs and preferences of members — do not lend themselves to measurement through numerical means.

The Financial Services Council saw benchmarking as problematic where products were not directly comparable.

The FSC (sub. 29, p. 23) supports benchmarking of product performance based on 'like-for-like' comparisons as is currently undertaken by [the Australian Prudential Regulation Authority]. MySuper products can more readily be benchmarked as they are broadly designed for disengaged consumers. ... Benchmarking product performance between choice products, however, is more difficult ... there are a diverse range of choice products designed to cater to specific cohorts of members who may select that product as part of a comprehensive strategy for managing their financial affairs.

One approach to ensuring comparability is to collect data specifically for the benchmarking exercise, which is what private research and benchmarking organisations tend to do. Another is to confine benchmarking to those aspects where comparability can be achieved.

Assessing barriers to performance

A complement to measuring performance against benchmarks is to identify barriers that potentially impede the efficiency and competitiveness of the superannuation system, and therefore its performance. Some barriers may be market related (such as some barriers to entry), while others may be policy-related and outside the system's control. Where barriers exist, the Commission will seek to determine their materiality. Such exercises are likely to be qualitative in nature.

In responding to the Commission's proposal to assess barriers to performance, the Australian Institute of Superannuation Trustees (AIST) (sub. 30, p. 24) was supportive of this approach:

We first turn to a number of key barriers to effective competition ... improving fee disclosure and comparability ... the need for meaningful information, the impact of financial literacy, the management of conflicts of interest, and the offering of inducements to employers. These barriers are in addition to member disengagement and for-profit driven related party arrangements. ... AIST strongly supports the Productivity Commission's objective to identify current gaps and other issues with evidence regarding the superannuation system.

However, the Australian Chamber of Commerce and Industry (sub. 24, p. 9) saw this approach as problematic:

The idea of using an assessment via market barriers to competition and efficient outcomes is more problematic. ... The Australian Chamber prefers an approach where performance indicators can be expressed as outcomes that are linked to the overall objectives of the system, with the main objective being that which prioritises the substituting or supplementing the age pension without overly burdening employers. That latter consideration must qualify the main objective.

The Commission considers assessment of barriers to efficient and competitive outcomes is of particular importance in determining whether or not observed performance is within the control of the system, and in providing insights into how performance can be improved. As such it is both essential for interpretation and therefore complementary to benchmarking.

The need to consider multiple criteria

The Commission has sought to develop a balanced framework reflecting the various trade-offs implicit within the superannuation system. For example, fees must be weighed up against the services provided and against overall rates of return. The Centre for International Finance and Regulation (sub. 10, p. 6) highlighted the importance of considering trade-offs.

We would like to underline the importance of assessing the broad range of services provided to members; and encourage the [Commission] to call into question the perception that lower cost alternatives are necessarily superior. Superannuation funds have been expanding the scope and quality of the ancillary services they offer to members. While this has undoubtedly been a contributor to higher costs, the central issue is whether these services offer value for money.

Industry Super Australia (sub. 38, pp. 8–9) also noted the potential trade-offs between fees and rates of return:

While fees are an important part of net performance, reliance on fees alone to gauge efficiency can lead to a false economy in which net performance is compromised to achieve lower fees. Long-term net investment returns determine outcomes, and are therefore the critical measure for fund members.

The Commission's assessment will be based on multiple criteria, weighted according to their significance and backed up by a range of performance indicators. This is often referred to as multi-criteria analysis and is used for decision making when there are a large number of criteria to be taken into account before a decision can appropriately be made, and particularly where there are conflicting objectives (Dodgson et al. 2009).

Dodgson et al. (2009, p. 21) have noted multi-criteria analysis has a number of advantages over less formal approaches to decision making:

- it is open and explicit

-
- the choice of objectives and criteria that any decision making group may make are open to analysis and to change if they are felt to be inappropriate
 - scores and weights, when used, are also explicit and are developed according to established techniques. They can also be cross-referenced to other sources of information on relative values, and amended if necessary
 - performance measurement can be sub-contracted to experts, so need not necessarily be left in the hands of the decision making body itself
 - it can provide an important means of communication, within the decision making body and sometimes, later, between that body and the wider community, and
 - scores and weights are used, it provides an audit trail.

Major stakeholders agreed there is a need to consider a wide range of criteria. For example, AIST (sub. 30, p. 4) stated:

When examining the issue of “is the system delivering for members”, AIST recommends a range of measures including improved meaningful disclosure and consumer engagement, strengthened conflicts of interest management, and an equal disclosure and [Australian Prudential Regulation Authority] reporting regime for MySuper and Choice.

The Financial Services Council (sub. 29, p. 29) proposed ten specific questions for the Commission to consider in assessing the efficiency and competitiveness of the superannuation system, noting:

Taking into account complexities arising in assessing the efficiency and competitiveness of the superannuation system, the FSC recommends that the Productivity Commission focus on system level questions that would measure whether superannuation is delivering on the promise of achieving adequate retirement incomes for Australians.

The Australian Prudential Regulation Authority stated:

Given the varying needs and retirement objectives of individual members, there is no single “best” outcome or approach that would be expected to deliver appropriate net retirement outcomes for all members across the superannuation system as a whole. An appropriately broad assessment therefore necessarily involves both qualitative and quantitative assessment approaches and measures ... APRA encourages the Productivity Commission to establish criteria that recognise the importance of optimising overall long-term outcomes across a wide range of factors and taking into account the broad spectrum of funds and members across the superannuation system. (sub. 32, p. 2)

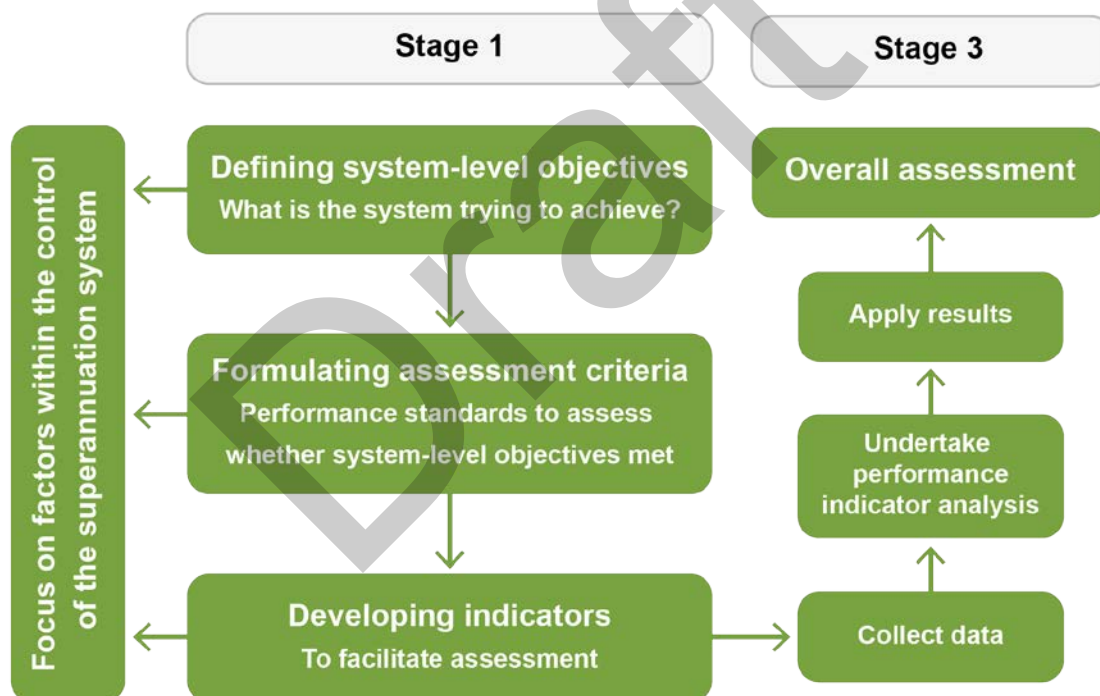
The concept of using multiple criteria, weighted by significance, to measure performance is widely accepted in the superannuation sector. For example, when determining overall fund performance, superannuation fund ratings agencies typically apply varying weight to a number of categories including investment performance and process, the level and transparency of fees, administration, governance, the cost and level of insurance, and advice to members.

A three-step process

The Commission's approach to assessment involves three steps:

1. defining system-level objectives (chapter 4) for the superannuation system — what is the system trying to achieve?
2. formulating assessment criteria based on these objectives — that is, the performance standards by which the Commission will assess if the system-level objectives have been achieved.
3. identifying indicators and other evidence (chapters 5 and 6) to facilitate interpretation and ultimate assessment in stage 3 (figure 3.1).

Figure 3.1 The Commission's approach to assessment



The Commission will take current policy settings as given when developing the assessment criteria. The key focus therefore is to develop criteria that are within the influence of the system. This is done in two main ways: (i) **by omission** — the Commission is not proposing to assess the system on what is outside its influence (such as whether the overall level of saving is optimal); and (ii) **by recognising the influence of policy factors when proposing criteria in some areas**. However, this approach will not neatly apply (ex ante) to all criteria. Ultimately, the assessment in stage 3 will also need to consider whether policy settings are constraining the ability of the system to achieve certain objectives.

The assessment criteria will be relatively high level and will be phrased as questions relating to the system-level objectives. There may be multiple indicators attached to each criterion to guide measurement of overall performance (box 3.1).

The weighting attached to each criterion will depend on how significant each is likely to be in terms of member outcomes. The method of determining the appropriate weights for each criterion will vary depending on the evidence available. It is envisaged that in some cases, weights will be based on econometric evidence about the significance of particular factors, while in other cases judgment will be required. The actual weights will be determined in stage 3 of the review.

Box 3.1 A hypothetical example of assessing performance

The Commission's analysis will commence by defining system-level objectives (chapter 4) for the superannuation system. These objectives are based on what an efficient and competitive superannuation system could be expected to achieve. For example, a possible system-level objective could be that 'the superannuation system meets the preferences and needs of a diverse range of members'.

Based on the system-level objectives determined, performance will be measured using one or more criteria, with potentially multiple indicators attached to each criterion. Each criterion will be weighted according to its likely significance.

For example, one possible criterion could be 'Does the system accommodate the individual preferences of members?' Indicators attached to this criterion could include the number of individual products available, levels of switching between funds, member information collected by funds, surveyed levels of member satisfaction and the extent to which members read financial material provided by funds.

In determining the appropriate indicators to include under each criterion, the Commission would be guided by available evidence about each indicator's interpretation and 'signalling value' — that is, evidence that particular indicators (individually or collectively) were associated with more optimal decisions and better outcomes for members. Evidence considered by the Commission will include previous academic studies, surveys and consultation with stakeholders. Sometimes the interpretation of the indicators will only become clear when the indicators are considered collectively.

Each criterion (and attached indicators) must be measurable (quantitatively or qualitatively) in that there must be some way of objectively assessing performance against it. However, some criteria might lend themselves to a simple 'yes' or 'no' answer about whether performance is satisfactory. In other cases, a score (such as a mark out of five) may be applied to determine the adequacy of performance. In some cases, directions of change (towards greater efficiency? lower fees?) might be of more interest than absolute levels of performance.

3.3 The choice of performance indicators

In choosing performance indicators, the Commission has concluded there is a need for differing approaches depending on what is being assessed and the level of information available. While some indicators will invariably be more significant than others in assessing performance, no one indicator (or even a handful of indicators) will be determinative of overall performance. The Commission will consider the indicators as a whole (chapter 7).

The performance indicators chosen will vary significantly in their nature. Depending on the aspect of performance being measured, there will be a mixture of quantitative (that is, expressed numerically) and qualitative (that is, descriptive rather than specifically measured) indicators. In some cases, problems with data availability or comparability might mean only qualitative answers are available where ideally quantitative answers would have been preferred. The quantitative indicators, being essentially historical data, provide an ex post assessment of efficiency or competitiveness. Qualitative indicators (such as those reflecting the quality of governance) can reflect past and present performance and also bear on likely performance into the future.

The Law Council of Australia (sub. 17, pp. 5–6) saw a combination of qualitative and quantitative indicators as appropriate:

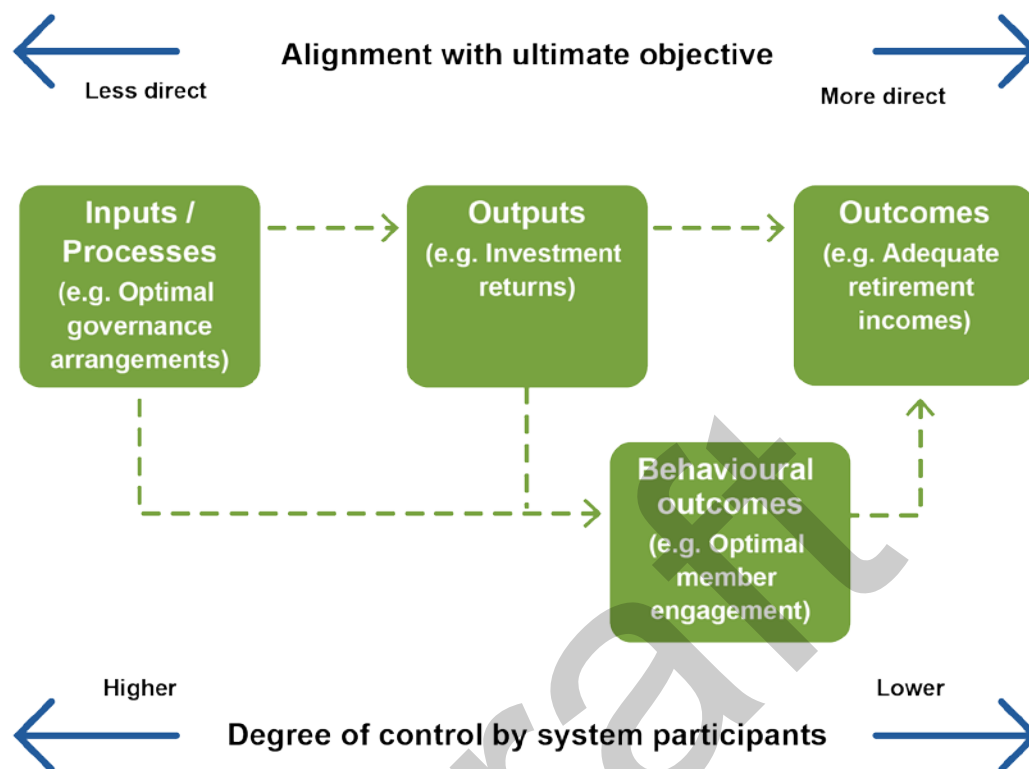
To properly assess efficiency, both quantitative (i.e. investment returns over a set period) and qualitative measures (i.e. financial stability and governance) should be considered. For example, each member indirectly bears a portion of the cost of regulating the superannuation system which impacts on their investment returns. This cost, however, is offset to the extent it protects the member against losses caused by fraud or system failure, for which they may be unable to be adequately compensated.

Indicators will also be based on inputs and processes, outputs, outcomes and behavioural factors. There are typically trade-offs between the significance of some indicators and the degree of control that the superannuation system has over them (figure 3.2). Outcome indicators (such as ‘effect of the system on financial security in retirement’) are strongly aligned with system objectives, but they are subject to multiple influences, many of which are outside the control of the superannuation system.

CPA Australia (sub. 14, p. 1) suggested outcome-based indicators should represent the predominant focus of the study:

We agree with the Commission drawing on a range of performance indicators, however we believe the focus should be on outcomes as the ultimate purpose of the superannuation system is to maximise retirement outcomes for retirees. Similarly, it is important to assess the barriers to meeting these outcomes.

Figure 3.2 Trade-offs in the choice of assessment indicators



Output measures such as net investment returns, while under greater influence of the system, can also be very difficult to measure, particularly if attempts are made to isolate the impact of the superannuation system from broader market trends (chapter 6).

In some cases, indicators might be based on processes or inputs into the superannuation system (for example, rules relating to fund governance). These indicators have the advantage of being straight-forward and generally easy to measure. They are also within the scope of what superannuation system participants can influence. However, input-based indicators are likely to be somewhat removed from the objectives of the superannuation system.

The Centre for International Finance and Regulation (sub. 10, p. 4) saw an important role for input-based indicators:

The default segment should be evaluated in a different manner to other choice-driven segments. Assessment should involve input-based measures aimed at evaluating the extent to which fiduciaries and agents who make choices on behalf of members are aligned with members and their needs. The assessment of competition in the default segment should focus on the mechanisms by which members are allocated to default fund providers.

The Depository Trust and Clearing Corporation (sub. 15, p. 1) also saw input-based indicators as relevant:

We ... believe there is benefit in including ‘process’ and ‘input’ indicators ... as part of the mix of measures used to assess the overall efficiency of the superannuation system. In particular, the extent to which the underlying financial system features and benefits from automation and straight-through processing (STP), harmonisation of standards and best practice, and innovation generally is likely to have a direct impact on rates of return.

The trade-offs between alignment of objectives and the degree of control by system participants can be highlighted in the Sparrow Tiered Performance Framework (Sparrow 2000). The framework consists of four tiers, with tier 1 containing key outcome indicators, which might be largely outside the control of the superannuation system. Tier 2 focuses on behavioural outcomes (for participants in the superannuation system, including members). Tier 3 measures system activities and output, while tier 4 seeks to capture measures of the system’s efficiency in using resources.

While the Sparrow framework was originally developed in the context of performance measurement for regulatory agencies, the principles underlying it also apply to measuring the performance of the superannuation system. An example of how the framework operates is shown in table 3.1 (with hypothetical indicators).

Table 3.1 The Sparrow Tiered Performance Framework – Application to Superannuation

<i>Tier 1. Effects, impacts and outcomes</i>
Adequate retirement incomes
<i>Tier 2. Behavioural outcomes</i>
a. Sufficient member engagement
b. Informed member decisions (including decisions by intermediaries)
c. Reduced contraventions of governance standards
<i>Tier 3. Activities and outputs</i>
a. Investment returns
b. Product innovation
<i>Tier 4. Resource efficiency</i>
a. Cost minimisation
b. Governance arrangements

Source: Adapted from Sparrow (2000).

In undertaking this study, the Commission will also draw on the performance reporting framework used in the Steering Committee for the Review of Government Service Provision’s Report on Government Services, for which the Productivity Commission acts as the Secretariat. The framework is focused on outcomes, but is supplemented by performance information on outputs and inputs (SCRCSP 2016).

Role of evidence, judgment and interpretation

A number of indicators presented in this study have results which could be seen as ambiguous and therefore requiring robust evidence and judgment for correct interpretation. For example, low rates of switching between funds could indicate consumer satisfaction with superannuation funds, consumer inertia, the presence of barriers to people switching funds, or a combination of all these factors. In interpreting these potentially ambiguous indicators, the Commission will consider other indicators and other available evidence. Are members engaged? Is switching funds difficult? Individual indicators therefore need to be interpreted in the context of related indicators and overall performance.

The need to exercise evidence-based interpretation and judgment in assessing performance in the superannuation system is not unusual. For example, experts in the superannuation field routinely employ evidence-based interpretation and judgment when assessing the bidders in a corporate tender (appendix C), as would ratings agencies when determining awards such as ‘Fund of the Year’.

Existing composite indicators

In approaching its task, the Commission has considered the usefulness of a number of existing indicators relating to superannuation performance, including performance indicators produced by the OECD, and composite indexes such as the Melbourne Mercer Global Pension Index and Allianz Pension Sustainability Index (appendix E) which seek to assess the overall superannuation system in a global context.

AIST (sub. 30, p. 21) saw a role for the composite indicators, stating it was important to compare the Australian superannuation system with systems in other countries. However, Mercer (sub. 31, pp. 19–20) noted the difficulties associated with compiling such indicators:

The [Melbourne Mercer Global Pension Index] ... adopts an evidence-based approach with the use of very limited subjectivity. It's also worth noting that the provision of data and comparable information is problematic in the pension space, particularly when one is comparing 25 countries with a range of languages, legislative backgrounds and societal expectations. ... The only indicator that the [Melbourne Mercer Global Pension Index] uses that considers efficiency or competition is the assessment of costs. ... However, the two proxies used for this indicator are not perfect and are merely indicative. Obtaining hard, reliable and truly comparative data for the pension industry around the world is very, very difficult.

The Financial Planning Association of Australia (sub. 28, pp. 4–5) questioned the relevance of the composite measures:

The FPA is not sure that any of the existing cross-country composite measures of pension system performance would be suitable for the study. For example, the Melbourne Mercer Global Pension Index assesses median retirement income, whereas we would suggest that adequacy be based on the member's cohort (which might be divided along the lines of pre-retirement income). The present study's purposes would also be at odds with those of the

Allianz Pension Sustainability Index, which includes downward pressure on replacement rates as an indicator of improved pension sustainability.

AIST also drew the Commission's attention to a tool they have developed in association with Mercer to (in part) assess the performance of the Australian superannuation system, called the AIST-Mercer Super Tracker. It includes ten performance indicators measuring the adequacy and sustainability of the Australian superannuation system, including measures of net retirement incomes, and the cost of government support to retirees (sub. 30, p. 21).

The Commission considers that these pre-existing indicators are of limited usefulness in assessing the performance of the superannuation system. The indicators have been developed predominantly as measures of the adequacy and sustainability of retirement income, rather than being focused on efficiency and competitiveness of the superannuation system. They do not, therefore, specifically relate to the information the Commission is looking for. Moreover, the diversity of superannuation systems internationally (appendix E) means there are significant comparability limitations associated with these indicators.

That said, the Commission notes some of the information contained within these indexes is potentially useful, and will consider it in combination with all other material available. In particular, it is likely the Commission will consider some of the sub-indices relating to system governance and integrity (chapter 6).

Evidence for Stage 3

In undertaking this stage 1 study to establish the framework to assess the efficiency and competitiveness of the superannuation system, in addition to developing criteria and performance indicators, the Commission will also need to consider the data requirements for undertaking the stage 3 assessment. In approaching stage 3 of this process, the Commission envisages relying predominately on three types of evidence.

1. The Commission's own research and analysis, based on currently available data and evidence.
2. Research and analysis obtained from other sources, such as fund ratings agencies, academics and industry regulators.
3. New evidence to be collected following the outlining of assessment criteria and performance indicators in stage 1 of this study.

The Commission therefore sees stage 1 of this project as an opportunity to determine what additional data or research might be required to assist the Commission in undertaking its stage 3 assessment, to inform stakeholders of these requirements and to assess whether and how the data can be obtained without creating unnecessary burdens on the superannuation system.

Data quality issues

A challenge for the Commission in undertaking stage 3 will be reporting against indicators where there are quality or comparability issues for the available data. A number of submissions have raised data related concerns and potential traps in applying available data (for example, the Centre for International Finance and Regulation sub. 10, the Institute of Public Accountants sub. 22 and the Financial Planning Association of Australia sub. 28).

In preparing this draft report the Commission has consulted with a wide range of system experts on data issues (appendix A) and this consultation will continue. The Commission will seek to obtain the best available data to assess performance. In many cases these data will be available from government agencies. In other cases, the best available data may be sought from sources such as academics, actuaries and ratings agencies. For many indicators, there will be a range of data available.

In drawing conclusions from available data, the Commission will be cognisant of data efficacy issues, and will be transparent about data sources and limitations. Specific data concerns relating to individual indicators are discussed in subsequent chapters. Chapter 7 discusses the data gaps, and potential evidence sources, collectively.

4 What are the objectives of the superannuation system?

Key points

- The purpose of this study is to design a framework for assessing the competitiveness and efficiency of the superannuation system. The system-level objectives set out in this chapter provide a reference point against which the outcomes of the system can be assessed.
- The Australian Government has announced that the objective of superannuation is to provide income in retirement to substitute or supplement the Age Pension, and that this objective will be legislated. The role of superannuation in providing retirement incomes is well accepted.
- Efficient outcomes are not solely about producing outputs at least cost (operational efficiency) but also include offering products and services that meet the needs and preferences of members (allocative efficiency). An efficient system will also improve in both of these areas over time (dynamic efficiency).
- Competition in the superannuation system is not an end in itself, but provides benefits to the community as a whole and members in particular when it promotes efficient outcomes.
- Five system-level objectives have been proposed, against which the assessment criteria are designed, to ultimately guide the final assessment.
 - The superannuation system maximises net returns on member contributions and balances over the long term.
 - The superannuation system meets member preferences and needs, in relation to information, products and risk management, over the member's lifetime.
 - The superannuation system provides insurance that meets members' needs at least cost.
 - The superannuation system complements a stable financial system and does not impede long-term improvements in efficiency.
 - Competition in the superannuation system that drives efficient outcomes for members.

The Australian Government has pronounced the objective of superannuation as *providing income in retirement to substitute or supplement the Age Pension*. This objective has a clear adequacy and sustainability focus, and casts superannuation as only one part of the retirement income system.

This objective on its own is both too high level for the purposes of this study and (as articulated by the Government) framed within the principles of adequacy, sustainability and fairness. Retirement incomes are a function of many factors outside the influence of the superannuation system, such as government policy and the economic environment.

This study will need to articulate objectives that are within the *scope of influence* of the superannuation system and *specific to the principles of competitiveness and efficiency*.

The role of this chapter is to develop system-level objectives that support the Government's overarching objective and maintain a focus on members' best interests, but are specific to competition and efficiency and can be used to frame the criteria and indicators set out in this study.

The first section of this chapter (4.1) explains the need for system-level competition and efficiency objectives, and the following section (4.2) details the outcome of the Government process for developing a high-level objective for superannuation. On that foundation, section 4.3 defines the concepts of competition and efficiency and explains how they relate specifically to the superannuation system. Finally, section 4.4 articulates the specific system-level objectives the Commission has developed as the starting point of the assessment framework. Chapters 5 and 6 develop assessment criteria and indicators based on these system-level objectives.

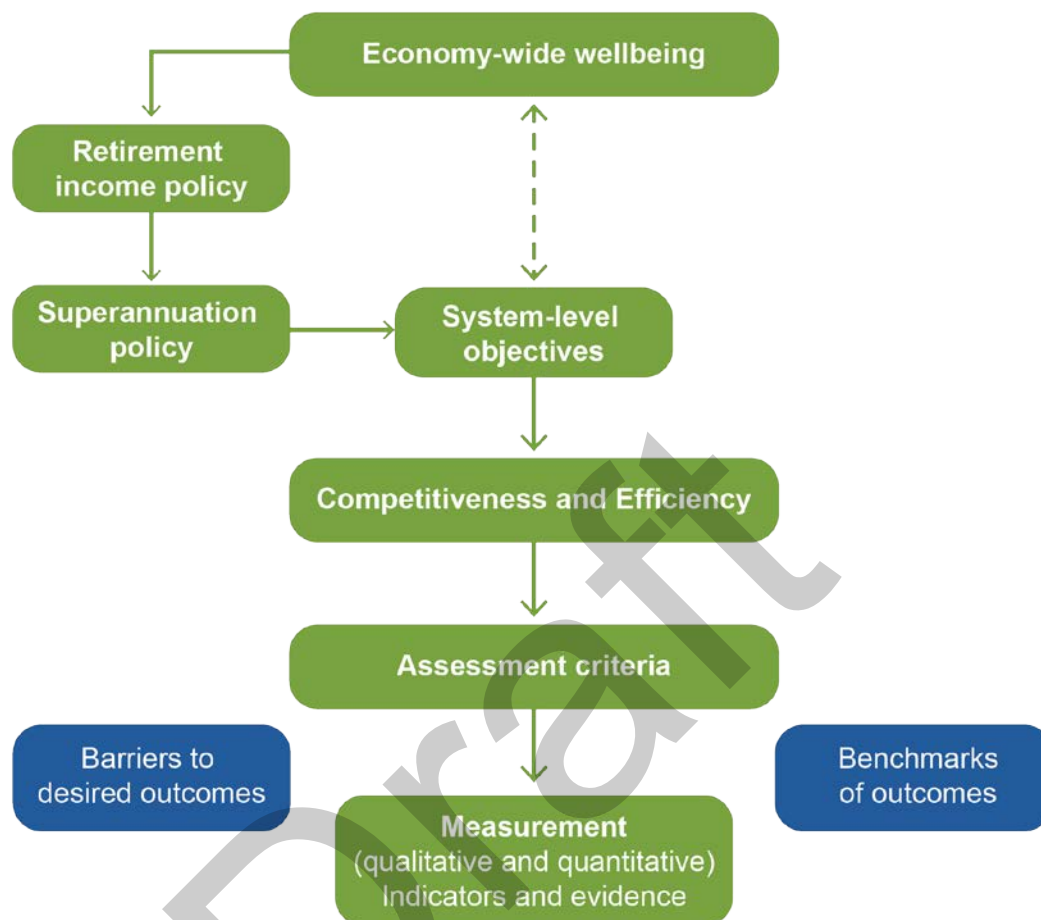
4.1 Why do we need to articulate objectives for this study?

The first step to assessing the superannuation system is to determine the objectives of that system against which outcomes can be measured. This is because what is efficient ultimately depends on the objectives being targeted. Clear objectives are essential for the development of assessment criteria and indicators, as explained in the assessment framework (chapter 3).

The terms of reference for this study require the development of criteria to assess the *efficiency* and *competitiveness* of the superannuation system. As part of this assessment process, the study will articulate *system-level objectives* that (i) take current policy settings as a given, (ii) are specific to competition and efficiency, and (iii) link back to the overarching objective set by Government. This study also considers the efficiency and competitiveness of insurance, which has some impact on the final outcomes of the system from a member perspective.

Overall, it is necessary to keep the focus of this framework on the best interests of members (figure 4.1). This distinguishes the system-level objectives in this chapter (designed to focus on member interests) from the Government superannuation objective, which consider other issues such as the interaction of superannuation with the Age Pension.

Figure 4.1 A broad schema of the Commission's approach



4.2 Development of a high-level objective for superannuation

Following the Financial System Inquiry (FSI) recommendation that a clear objective be set for the superannuation system (Murray et al. 2014a, p. 95), in 2016 the Australian Government consulted on developing an overarching objective for superannuation in the context of the whole retirement income system from the perspective of being fair, adequate and sustainable. At a high level, stakeholders agreed that the primary objective of superannuation was to generate retirement incomes. There were, however, differences of opinion as to *what level* of retirement income the superannuation system should support:

- to substitute or supplement the Age Pension (Murray et al. 2014a; Fiduciarys Friend, sub. 7)
- to provide a comfortable retirement income (ACTU, sub. 18; AIST, sub. 30)
- to maximise retirement income (Energy Super, sub. 19)

- to maintain standard of living in retirement, that is, maintain a certain level of pre-retirement income (SMSFOA, sub. 20).

Following the consultation process, the Government announced it intends to legislate the overarching objective of superannuation suggested by the FSI:

To provide income in retirement to substitute or supplement the Age Pension. (Treasurer and Minister for Small Business 2016)

This objective does not address the question of what level of retirement income superannuation should generate. It focuses on the adequacy and sustainability of the retirement income system, reflecting the fact that superannuation is not the sole determinant of retirement incomes, but one of three retirement income pillars (chapter 2).

The Government will release its subsidiary objectives for superannuation after further consultation. The subsidiary objectives will not be legislated but will be set out in explanatory material to the Act (Treasurer and Minister for Small Business 2016). Box 4.1 sets out the subsidiary objectives suggested by the FSI report.

Box 4.1 Financial System Inquiry subsidiary objectives

In addition to the overarching objective that has been accepted by Government, the Financial System Inquiry formulated six subsidiary objectives. They were for superannuation to:

- facilitate consumption smoothing over the course of an individual's life
- help people manage financial risks in retirement
- be fully funded from savings
- be invested in the best interests of superannuation fund members
- alleviate fiscal pressures on Government from the retirement income system
- be simple and efficient, and provide safeguards.

Source: Murray et al. (2014a, p. 95).

The Government will also legislate an accountability mechanism to ensure that all new superannuation legislation is considered in the context of the objective (Treasurer and Minister for Small Business 2016). This will:

... serve as a guide to policy-makers, regulators, industry and the community about superannuation's fundamental purpose ... [and thus] provide a way in which competing superannuation proposals can be measured and a framework for evaluating the fairness, adequacy and sustainability of the superannuation system. (Australian Government 2016, p. 1)

Policy stability is important for the effectiveness of the superannuation system as a long-term savings vehicle, because policy changes, especially if they are seen to be frequent or to apply to income saved under previous arrangements, can undermine confidence in the system (Association of Independent Retirees, sub. 6; AIST, sub. 30; FSC, sub. 29).

Study participants expressed a desire that an overarching objective and accountability mechanism will bring coherence to the process of regulatory change in superannuation.

Many changes made since the inception of the system have been piecemeal and ad hoc. An overarching objective enshrined in legislation should help to remedy this unsatisfactory approach. (ACCI, sub. 24, p. 6)

4.3 How are efficiency and competition defined for this study?

Competition and efficiency are not merely academic concepts, but have tangible positive impacts on the economy and individual wellbeing. A system that is competitive and efficient will not necessarily satisfy the Government's overarching objective in and of itself, as retirement incomes are not solely reliant on the superannuation system. However, a system that is competitive and efficient is more likely to be fair, adequate and sustainable than one that is not (figure 4.2). For example, an efficient system will generate higher investment returns over time and therefore deliver higher retirement incomes and decrease dependence on the Age Pension. Efficiency and competition are defined in box 4.2.

Box 4.2 The dimensions of efficiency and competition

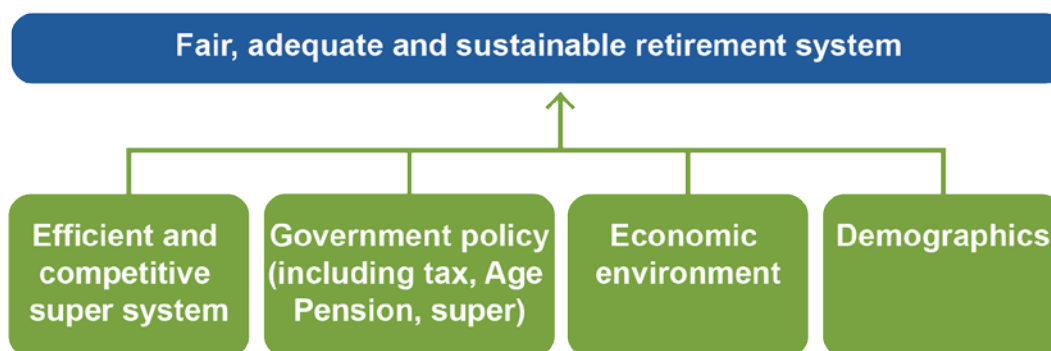
Economic efficiency is about maximising the aggregate or collective wellbeing of the members of the community. Economic efficiency requires satisfaction of three components.

- **Operational (or productive) efficiency** is achieved when output is produced at minimum cost. This occurs where no more output can be produced given the resources available.
- **Allocative efficiency** refers to the allocation of resources to their highest value uses. Ultimately, the objective is to align the services offered by the superannuation system with the preferences of members, and to maximise their wellbeing to the greatest extent possible — the best or 'most efficient' allocation uses resources in the way that contributes the most to community wellbeing.
- **Dynamic efficiency** involves improving operational and allocative efficiency over time. Whereas operational and allocative efficiency assume current technological and other constraints, dynamic efficiency occurs when innovation and technological change increase the overall benefits that could be achieved in a competitive and efficient system. This can mean finding better products and better ways of producing them.

Competition is closely linked to efficiency in that competitive pressure drives firms to be more efficient. Through this process, competition leads to reduced prices and improved service quality, and therefore enhanced community wellbeing.

Source: PC (2013, p. 3).

Figure 4.2 **Contributors to a fair, adequate and sustainable retirement income system**



Characteristics of a competitive and efficient superannuation system

While markets are rarely perfectly competitive or efficient, it is still beneficial to consider the characteristics one would expect to observe in an ideal superannuation system. As far as these characteristics can be observed and measured, a clearer picture emerges of sources of inefficiency, impediments to efficiency or competition and what measures may improve the overall operation of the system.

There are potentially unlimited ways to describe the characteristics of a competitive and efficient system, so the following list can be taken as indicative rather than exhaustive. A competitive and efficient superannuation system:

- maximises outputs for given inputs (however, it may not be straightforward to define inputs and outputs for the superannuation system, as discussed below)
- allows for the efficient entry and exit of funds and other service providers
- realises economies of scale and scope that may exist, without generating diseconomies
- is transparent and accountable to members, and easy for members to engage with
- allows members to choose products that meet their preferences and needs
- takes behavioural biases into account in the system conduct and design, so that appropriate products are offered and superannuation funds act in the best interests of members, whether those members are meaningfully engaged or not
- effectively manages principle–agent problems either through well-designed governance, trust and contractual arrangements, and/or well-designed regulatory measures
- is sufficiently stable (in terms of prudential regulation and the role superannuation plays in the broader financial system) to allow long-term investment and innovation

-
- tax and policy settings do not distort efficiency and competition except where the benefits of doing so outweigh the costs.

The following sections elaborate on these characteristics of efficiency and competitiveness specifically in the context of the superannuation market.

Operational efficiency in the superannuation system

Operational or productive efficiency refers to producing the maximum value of output for a given level of costs. Alternatively, it can be defined as minimising the costs of producing a given level of output. This requires an understanding of system inputs and outputs, which can be defined more or less narrowly and can change depending on whether a member is in the accumulation, transition or retirement phase (David Hartley, sub. 12).

For example, in the *accumulation* phase, inputs into the system include the fees paid by members (reflective of costs incurred); while outputs include the return members earn on their contributions (taking into account the risks they take) and the level of service quality provided to members (such as call-centre services, web-based resources and education material) (CIFR sub. 10; Fiduciary's Friend, sub. 7; Mercer, sub. 31; Liu and Sy 2009, p. 27).

In the *transition* and *retirement* phases, key inputs into the system continue to be fees paid by members. However, the focus of output shifts to the level of retirement income provided to members and the form in which it comes. In a defined contribution system this is inherently linked to the assets accrued during accumulation. Retirement income could take different forms in practice, such as a lump sum, account-based income stream or different types of annuities, each with their own cost structures. Ongoing investment returns and ancillary services provided to members may also remain important to members depending on the nature of their retirement preferences and product choice.

Other inputs are less visible (and likely harder to quantify) but potentially no less important as contributors to the nature and quality of outputs in the system, such as governance arrangements.

Allocative efficiency in the superannuation system

Allocative efficiency refers to the allocation of resources to their highest value uses. As such, members would make decisions in their best interests and the outcomes of the superannuation system would align with the preferences of members and maximise their wellbeing to the greatest extent possible.

In principle, an assessment of allocative efficiency requires information about the preferences of users of the system (or knowledge of what outcomes would maximise their wellbeing, if preferences are suboptimal). In practice, it may be challenging to reveal members' preferences about some of the key decisions, such as their tolerance for

investment risk at different stages of the life cycle, and the precise nature of their demand for ancillary services, such as financial advice and insurance. Individuals also face various trade-offs in making choices about superannuation (box 4.3). There is significant heterogeneity of individual circumstances and preferences within the system (meaning that a ‘median’ user will not necessarily reflect what is allocatively efficient for all or even most members); and there is debate about what optimal preferences and behaviour actually look like (chapter 6).

Box 4.3 Trade-offs in decisions about superannuation

- **Lifetime saving and years of work** — with everything else equal, a lower level of saving can mean that a person has to work longer and/or retire later to be able to achieve a target income in retirement. This trade-off involves finding the right balance between the benefits from consumption and the benefits of having more leisure time.
- **Current and future consumption** — for a given income, the greater a person's level of consumption today, the lower the savings to fund consumption in the future. This trade-off involves maximising the benefit from consumption over a person's life cycle. This consideration is important both during the accumulation phase of superannuation, when the decision is how much to contribute voluntarily, and in the transition and retirement phases, when the question is how quickly to draw down the savings.
- **Risk and return** — this is the principle that there is a trade-off between the desire to achieve a high return and a desire to minimise risk, and the need to manage sequencing risk (and other risks, such as inflation risk) in the transition to (and during) retirement.
- **Consumption and longevity risk** — one of the issues in achieving the ‘right level’ of consumption in retirement is managing longevity risk. This trade-off involves balancing the level of consumption in retirement against the risk of outliving savings, or of consuming too little and leaving an unintended bequest.

A superannuation system that meets the needs of a diverse range of members must also consider members who do not have stable work patterns (who spend time out of paid work for various reasons), and also low-income members, whose interests may not be best served by a system designed for the average worker. These equity issues have been raised by a number of stakeholders (for example, the Queensland Nurses’ Union, sub. 16).

Dynamic efficiency in the superannuation system

Dynamic efficiency (improvements to operational and allocative efficiency over time) is particularly important in the superannuation system, where decisions and their consequences span long time horizons. Dynamic efficiency can manifest in various ways.

- For supply-side participants, dynamic efficiency can include innovation, cost reduction and improvements in the quality and appropriateness of products and services offered to members.

-
- For members, it suggests managing important trade-offs over the life cycle, such as between current and future consumption.
 - For the system as a whole, stability and a predictable policy and market environment are important to facilitate improvements in operational and allocative efficiency over time.

Competition in the superannuation system

Competition in the superannuation system is not an end in itself. Competition is an intermediate objective insofar as it drives more efficient outcomes for consumers: lower prices, better products and improved choices.

Some stakeholders (for example, ACTU, sub. 18) argued that competition was not necessary to deliver positive outcomes for members and that historically, greater levels of competition have not led to improved efficiency in the Australian superannuation system. Importantly, the number of providers is not reflective of the level of competition (chapter 5). Around the world, there are examples of private pension systems that rely on a central (typically government) provider (appendix E). However, member choice and competition are institutionally entrenched in Australia's superannuation system, and the issue as to whether existing settings should be replaced by a substantively different approach is not within the scope of this study.

In theory, a competitive environment in the superannuation system means that funds and other service providers within the system have appropriate incentives to deliver the products and services that members want at prices which reflect their costs of supply, and to continually innovate over time in order to attract and retain members.

On the supply side, a competitive and contestable market should lead to the realisation of economies of scale and downward pressure on fees over time. A competitive market does not necessarily mean that there will be a lot of firms. In fact, the presence of many firms and unrealised economies of scale could be evidence of a lack of competitive pressure to drive inefficient firms out of the market. Competition should mean that efficient providers not yet in the market will enter, efficient providers already in the market gain market share over time, and inefficient providers will face pressure to exit. Depending on the underlying economic cost structures in the system, these changes over time could lead to even greater concentration of superannuation funds and service providers.

Given these market features, there is a risk of misinterpreting the role (and degree) of competition in the superannuation system if simple indicators, such as number of producers or market share, are used to measure competitiveness. More targeted assessment criteria and indicators are developed in chapter 5.

There may be trade-offs between competition and efficiency

Participants have expressed various opinions on the role and usefulness of competition in the superannuation system. For example:

- the Australian Council of Trade Unions (sub. 18) suggests that competition in superannuation may lead to lower living standards in retirement
- the Financial Planning Association of Australia (sub. 28) and Financial Services Council (sub. 29) ask whether optimal consolidation could increase competition
- Fiduciary's Friend (sub. 7) rejects market consolidation as uncompetitive in the long term. These issues are discussed in chapter 5.

While promoting competition often delivers more efficient outcomes, the relationship is not always straightforward, and there may be trade-offs in the superannuation system. For example, there is a complex interface between competition in financial markets and the stability of the financial system more broadly (appendix F) (Allen and Gale 2004; IMF 2013). Specifically in the context of superannuation, the FSI found that fund portability rules — which would be expected to facilitate greater member-driven competition — may distort asset allocation within the system in favour of greater than optimal levels of liquidity being needed in superannuation investment portfolios (Murray et al. 2014a).

On the demand side, if fund members are not well informed or engaged, or have limited influence on fund governance and direction, providers within the system could potentially compete on irrelevant product features that add little value to members (FPAA, sub. 28). This is particularly a risk in superannuation due to behavioural biases, information asymmetries and institutional settings discussed in this study.

The ways in which competition does and does not promote efficiency — and the implications this may have for the design and interpretation of criteria and indicators — are discussed further in chapters 5 and 6.

4.4 System-level objectives

As discussed earlier, it is necessary to express the objectives of the superannuation system at a more workable level and from the perspective of competition and efficiency to give substance to an assessment framework for this study. The following sections consider objectives of the superannuation system that are specific to competition and efficiency, take current policy settings as given, and link back to the overarching objective set by Government. The system-level objectives developed also maintain a focus on what is in the best interests of members.

Developing a system-level objective for competition

Competition that drives efficient outcomes

OBJECTIVE 4.1

Competition in the superannuation system that drives efficient outcomes for members through:

- a market structure and other supply and demand-side conditions that facilitate rivalry and contestability
- suppliers competing on aspects of value to members across the accumulation, transition and retirement phases.

In line with the discussion above, competition is desirable insofar as it promotes efficient outcomes. Competition that benefits members can be assessed using various criteria. For example, on the demand side, switching superannuation funds should be a relatively low-cost and simple exercise. This means that members need to have information that is relevant, easily available, easily understood and comparable, and need to be engaged with their superannuation to some extent. Suppliers should compete on product attributes that add value for members.

Members are not the only decision makers in the superannuation system — employers, financial advisers, superannuation fund trustees and other stakeholders may also play a role in determining the level of competition. This suggests that an assessment of competition needs to take into account the complex supply chain, member intermediaries and the various principal–agent relationships that take place at different levels (chapter 2).

In terms of market structure, the height of barriers to entry and exit is an important determinant of contestability and competitive pressure. Barriers can include regulation, set-up costs and vertical and horizontal integration on the supply side. Economies of scale can be an efficient barrier to entry if they drive lower fees and better outcomes for members. However, the relationship between fund size and efficiency is not straightforward and requires examination. Chapter 5 discusses these issues further and develops assessment criteria and indicators that can be applied.

Developing system-level objectives for efficiency

Maximises long-term net returns

OBJECTIVE 4.2

The superannuation system maximises net returns on member contributions and balances over the long term.

Over the long term, net returns are a paramount driver of final account balances and therefore retirement incomes for members (the overarching Government objective). An assessment of the superannuation system should include whether investment returns are being maximised over the long term and whether fees and costs are being minimised.

An assessment of this objective also needs to take into account other relevant outputs, such as member and ancillary services. For example, some members may place a high value on the level of service quality (beyond investment returns) they receive from their superannuation funds. The provision of these services is relevant to other objectives, but the costs are paid out of members' balances, so the efficient and competitive functioning of the markets for related services will also have a bearing on net returns. These issues are explored further, and assessment criteria and indicators developed, in chapter 6.

Meets member preferences and needs

OBJECTIVE 4.3

The superannuation system meets member preferences and needs, in relation to information, products and risk management, over the member's lifetime.

Superannuation is a compulsory system with broad coverage of the Australian population (chapter 1). Therefore the system needs to allow a very diverse range of members to achieve meaningful outcomes as they move through the different phases of their life cycle, and also meet the diverse preferences of members for specific outcomes in their best interests.

Given consumption and risk preferences, an allocatively efficient system should optimise (rather than maximise) retirement income given the various trade-offs people face in making decisions about their superannuation (box 4.3). This includes offering opportunities for lifetime consumption smoothing to maximise wellbeing. Clearly the extent to which the superannuation system can deliver such efficiency will be constrained by policy settings such as the level of compulsory saving required of employees.

Life-cycle consumption smoothing in superannuation is driven by member decisions about the size and timing of superannuation savings and withdrawals to reflect their consumption preferences, future discount values and attitudes toward risks (including longevity and investment risks). The superannuation system should offer the tools and products that allow members to manage these risks, and should also collect sufficient information about preferences to help members make the necessary decisions.

Making these decisions is difficult even for financially literate and engaged members, meaning there is a high risk of suboptimal decision making (appendix B). There are ways in which lessons from behavioural finance could be used to encourage members to reveal preferences and make decisions that align with their preferences and needs.

Insurance services are covered in the following objective, and ways of measuring allocative efficiency are developed in chapter 6.

Provides insurance that meets members' needs at least cost

OBJECTIVE 4.4

The superannuation system provides insurance that meets members' needs at least cost.

MySuper products are required under legislation to provide default life and disability insurance coverage on an opt-out basis, and other superannuation products are also commonly bundled with insurance. The bundling of group insurance with superannuation is *prima facie* likely to lead to allocative inefficiency. Inefficiency could result from people being provided with insurance they do not need, or going without adequate insurance under the assumption that their level of cover within superannuation is sufficient. On the other hand, various participants consider the provision of default insurance within superannuation to be an important mechanism to address levels of 'underinsurance' in society more broadly.

Taking the default insurance arrangements within superannuation as given, a relevant system-level objective for this study is whether the system is working well towards providing insurance that meets members' needs. While an assessment of this question is challenging at the system level, a range of considerations may inform the development of assessment criteria and indicators. For example, allocative efficiency is likely to be enhanced when trustees choose the most appropriate insurance for their members (such as through the use of smart defaults⁶) and opt-out arrangements work well and are informed

⁶ While individual risk preferences may be difficult to reveal, 'smart defaults' should match members to products that are most likely to meet their needs given available information, such as age, gender, occupation and income. Smart defaults can also be used as an informational tool to recommend a particular level of insurance cover to members.

by high quality information about risks. Evidence of duplicate coverage (for members with multiple default products) may point to allocative inefficiency within the system. And evidence of downward pressure on administrative costs and fees associated with insurance over time can be evidence of dynamic efficiency. Duplicate coverage is a particular problem where income protection insurance is offered and accepted, as it cannot be claimed simultaneously under two policies.

On the cost side, insurance premiums charged to members ultimately detract from their retirement balances. Therefore, an efficient system would minimise the costs faced by members for a given level of appropriate cover. Again, there are potential challenges in assessing the extent to which this objective is met, not least because insurance products can be difficult to compare on a like-for-like basis, as cover depends on specific wording in the terms and conditions. Nonetheless, relevant criteria and indicators for this objective may take into account industry data such as loss ratios, commissions and comparisons with non-bundled products. These issues are explored further in chapter 6.

Complements a stable financial system

OBJECTIVE 4.5

The superannuation system complements a stable financial system and does not impede long-term improvements in efficiency.

Dynamic efficiency is addressed by considering changes in operational and allocative efficiency over time in relation to other system-level objectives. An additional consideration for the dynamic efficiency of the superannuation system is how the superannuation system influences and is influenced by broader financial system stability.

Improvements in operational and allocative efficiency are more likely to be facilitated when regulation is technologically neutral, that is, where the regulatory system does not discriminate against new and innovative ways to deliver better or lower-cost services (AIST, sub. 30). One way this can be addressed is to ensure the system rules allow regulators to respond flexibly to changes and developments in technology.

The stability of the policy and regulatory environment may also have implications for dynamic efficiency. Policy and regulatory changes are a necessary part of the evolution of the superannuation system and can boost efficiency. However, they also have the potential to become a source of uncertainty and instability that could impact the longer-term outcomes of the system. Policy changes and their frequency are outside the control of the superannuation system.

The stability of the superannuation system is particularly important given its growing size and importance to the financial system and economy, and the potential for systemic risks to move across the system. Furthermore, the superannuation system can play an important

role in the overall stability of the Australian financial system and the economy, due to its size and the long-term nature of investments. Some experts are concerned about interconnectedness and the high levels of concentration in markets providing services to superannuation funds, such as asset custodians ('too connected to fail'). Some have expressed concern that the sheer size of superannuation can amplify asset price cycles. However, others see superannuation as *improving* financial stability due to its long-term focus and low leverage in investments. These issues are discussed in chapter 6 and appendix F.

Draft

DRAFT REPORT

This draft report is no longer open for consultation. For final outcomes of this project refer to the research report.

Draft

5 Assessing competitiveness

Key points

- The unique features of Australia's superannuation system require some customisation of commonly used frameworks for assessing competition. Nevertheless, the broad approach involves three steps:
 - (1) defining market boundaries, (2) undertaking a structural assessment of whether the market (including regulatory) conditions are conducive to competition, and (3) testing conduct and outcomes against expectations for a competitive market.
- The key criterion in market definition is demand and supply substitutability. While there are econometric and qualitative tools to assess this, conclusions are rarely precise.
 - Given the heterogeneity of the system, the key task is identifying market segments that have distinct characteristics and examining their role within the broader market.
- A key aspect of assessing the underlying conditions for competition relates to concerns that disengaged and uninformed members are not generating competitive pressure on supply.
- Member engagement can be a partial and (at times) misleading indicator of efficient competition. It should only be used in combination with complementary indicators, such as availability of relevant information and financial literacy of members. In some cases, better outcomes could be achieved by delegating decisions to agents or by using defaults.
 - Activity-based measures, such as member switching and default rates are not necessarily a reliable indicator of engagement.
- Measures of market concentration are an ambiguous indicator of competition, because they can mask efficiency-enhancing consolidation and also ignore market contestability. They should be used in combination with assessing barriers to entry and realisation of economies of scale.
- Economies of scale are an important consideration. Unused scale economies can be a symptom of barriers to exit, while poor pass through of upstream scale benefits to members could indicate market power within the value chain.
- Assessing competitive outcomes should involve an analysis of trends in costs and prices, as well as examination of whether competition is aligned with member preferences. The trade-offs between costs and quality should not be ignored.
- There are gaps in the evidence required for a comprehensive assessment of competition. In particular, survey evidence of member preferences and motivations may be required to reach more robust conclusions.

Chapter 4 outlined the potential benefits from competition in the superannuation system and some trade-offs that could arise between competition and efficiency. It explained that competition within the system was an important force for improved member outcomes, but that any assessment of competition had to be linked to the ultimate objective of efficiency.

Consistent with this approach, the Commission formulated an overarching objective for a competitive system:

Competition that drives efficient outcomes for members through:

- a market structure and other supply and demand-side conditions that facilitate rivalry and contestability
- suppliers competing on aspects of value to members across the accumulation, transition and retirement phases.

This chapter proposes a set of assessment criteria and indicators to support this objective. Any assessment must be ‘fit for purpose’ and reflect the unique features of the superannuation system (chapter 2). To the Commission’s knowledge, an assessment of this nature has not been previously conducted in Australia or in any other country with a comparable system. Nevertheless, there are established frameworks for assessing the level and nature of competition in a market that the Commission will draw on. A necessary first step involves defining the market to set the scene for further analysis (section 5.1). Beyond that, there are two complementary approaches to assessing the nature and extent of competition in a market:

- a ‘structural’ assessment of the market to evaluate whether the conditions within the market are conducive to competition (sections 5.2 and 5.3)
- an ‘outcomes’ assessment, which focuses on actual conduct and outcomes, and tests whether they are consistent with what is expected in a competitive market (section 5.4).

5.1 Defining the market

Defining the market boundaries is an important first step in assessing competition. This task is enshrined in Australian competition law and is a common requirement in other countries’ competition regimes (OECD 2012a). It can assist in understanding the nature of competition in the market and also influence conclusions on the extent of competition. For example, specifying market boundaries too narrowly could lead to underestimated levels of competition, and vice versa.

This section will outline the Commission’s framework for defining market boundaries and will propose some rough delineations for participant feedback. However, ultimately, the task of market definition will be a matter for the future review of the system following the full implementation of MySuper reforms.

Commission’s approach to defining market boundaries

The key concept in identifying the market boundaries is supply and demand side substitutability (for example, s. 4E of the *Competition and Consumer Act 2010* (Cwlth)). Where products or services are regarded as highly interchangeable by consumers they are

generally treated as being in the same market. Similarly, where suppliers producing other products can easily switch to producing a particular product in question, they could be regarded as being part of the ‘field of rivalry’ that constitutes the market for that good.

Market definition is typically a challenging and imprecise task. However, in the context of the superannuation system, the task is aided by the fact that the system is largely a product of policy — in particular the Superannuation Guarantee and the concessional tax treatment of contributions and withdrawals (chapter 2). Thus, the outer boundaries of the market can be roughly presumed to correspond to the boundaries of the superannuation system.

Beyond that, the Commission’s analysis (chapter 2), participant feedback and other research (AIST, sub. 30; FSC, sub. 29; Industry Super Australia, sub. 38) indicate that the key dimensions for delineating the markets within the system are the **functional** and the **product** dimensions. With respect to the former, the market can be split into two levels:

- a retail level that involves the interaction between the members and the funds and other entities that provide services directly to members⁷
- a wholesale level that involves the interaction between funds and other retail-level service providers, and upstream providers of various services.

Participants and other commentators have raised competition and efficiency concerns with respect to both the wholesale and the retail sides of the superannuation market. The Commission will use this classification when designing its assessment criteria and indicators.

With respect to the product dimension, the end product that reaches members comprises of a bundle of distinct administrative, investment and ancillary services. The Commission will use the wholesale supply and demand of **each of those distinct services** within the current system as a starting point for delineating **wholesale market boundaries**. At the **retail end**, the product dimension is more aggregated and comprises:

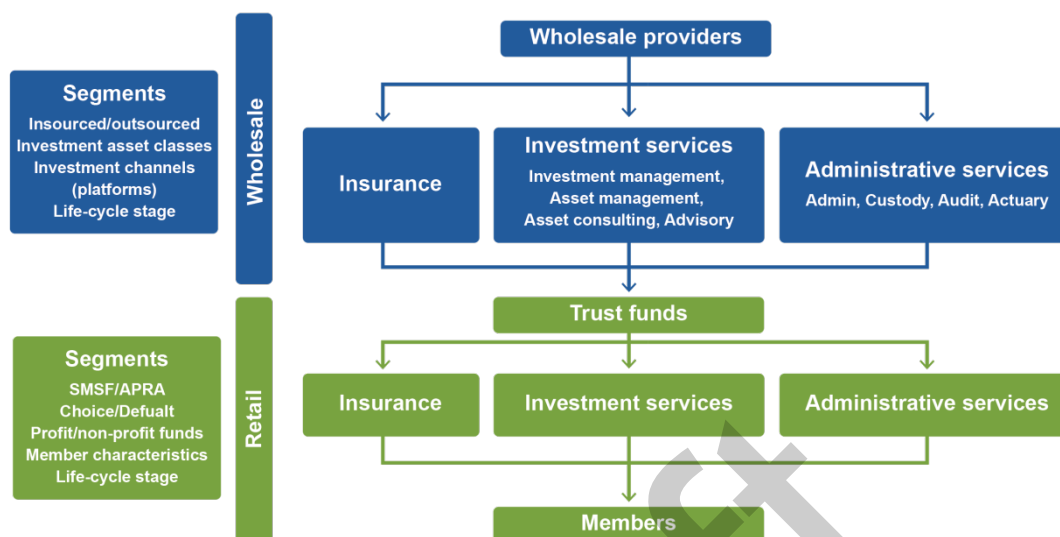
- core (investment and administration) services provided to members
- insurance (figure 5.1).⁸

For both the wholesale and retail levels of the system, the products could differ depending on the life-cycle stage of the member.

⁷ Throughout this report, ‘retail level’ denotes a functional dimension of the superannuation market — a distinct concept from ‘retail superannuation funds’.

⁸ In developing the criteria for competitiveness, the study will consider intrafund *financial advice* (an ancillary service provided by superannuation funds) as part of the core services provided to members. The broader market for financial advice is outside the scope of this review.

Figure 5.1 Functional and product dimensions in superannuation



Market segmentation within the superannuation system

Given the heterogeneity of the system, the key issue in market definition is the extent to which the market is segmented along product and/or consumer lines. If particular segments within the market are highly insulated from the rest of the market, then they would not be exerting competitive pressure on other parts of the market. Moreover, there may be a lack of competition within the segment due to being isolated from the external competitive pressures.

Market segmentation is particularly important at the retail end of the market, where there are concerns about disengagement of large groups of members from their investment, retirement income and insurance outcomes, and the extent to which providers can exploit that. There are many ways to slice the retail market, but ultimately different demarcations might apply depending on the nature of the competition concern. For example, the market could be segmented along the lines of:

- default and choice (as a rough proxy for member engagement and active choice)
- type of fund — self managed superannuation fund (SMSF) or institutional (again as a proxy of member engagement); profit or non-profit (because a non-profit fund with market power might operate differently from a profit-motivated fund faced with the same conditions)
- member characteristics (age, gender, occupation, financial literacy, balance of savings) — to test the reasons for any material differences in behaviour and outcomes across particular groups of members.

-
- type of retirement product — as a proxy for concerns that there is a lack of development of diverse retirement products, including those offering longevity protection
 - type of insurance product — group or individual, to determine whether the main source of competitive pressure is at member or wholesale (trustee) level.

Where applicable, the Commission will nominate for which segment the proposed indicators are most relevant.

5.2 Demand side conditions and barriers to competition

In contrast to traditional assessments of competition, which often focus predominantly on the conditions and barriers on the supply side, the demand side (particularly at member level) plays a key role in shaping competition in the superannuation system. The existence of informed and rational competitive pressure from members is important for the emergence of competition on service aspects that are relevant to members, and for the transfer of the benefits of competition to members (ISN 2010).

As discussed in chapter 2, several mutually-reinforcing aspects of the current system could impede or distort important demand-based signals to suppliers of superannuation services:

- passivity and disengagement of members — driven by the long horizons for most decisions, various behavioural and cognitive biases, transaction costs of active involvement, and institutional settings that discourage involvement
- challenges in making informed and rational decisions — driven by inherent complexity of the decisions and the lack of relevant and accessible information
- prevalence of principal-agent relationships that span the supply-demand interface — driven by the structure of the system and the information asymmetries arising from lack of transparency and the high costs for members to become informed.

Some commentators have argued that the importance of demand side pressure at the retail level is overstated and that positive member outcomes could be achieved through strong competition at the wholesale level. For example, in its response to the final recommendations of the Financial System Inquiry (FSI), Chant West (2015, p. 1) argued:

We contend that, while consumers (i.e. fund members) are not driving competition, the funds themselves and their service providers are. Every day, in the course of our business, we observe funds and providers competing fiercely, and we believe this ensures competitive pricing.

The Commission agrees that competition at the wholesale level is a necessary condition for better member outcomes. (The structural and outcome-based criteria and indicators for wholesale level competition are discussed in subsequent sections). However, it is not a sufficient condition in itself. Some member-level pressure is necessary to signal

preferences and to ensure that the benefits of wholesale-level competition are passed through to the member. That said, in some cases this pressure could arise from the intermediaries (particularly employers) acting on behalf of members.

Assessing demand-side competition at member level

Under certain conditions active member involvement in the investment, transition and decumulation decisions can communicate important information to providers about member preferences, while the threat of switching providers (including establishing an SMSF) can act as a discipline on costs and service quality. However, there are several important caveats to using measures of engagement as a proxy for competitive pressure.

Quality of decision-making is the ultimate goal

Member engagement is a partial measure that may not necessarily reflect the *quality* of the decision making, and may not be appropriate when the member is not the best placed person to make the decision. The Industry Super Network (2010) argued that members should be divided into three segments — passive members, active members relying on advice, and informed and independent members — and that the issues and policy solutions may differ across the segments.

Member engagement should not be examined in isolation from measures of financial literacy and cognitive capacity. On the latter, cognitive decline in very old age can significantly affect the quality of financial decision making (Agarwal et al. 2009). Furthermore, the quality of member engagement is affected by the conditions and actions on the supply side. In this context, availability of relevant, accessible information from fund trustees and other agents of the member is a necessary condition.

Several participants commented that in some cases, better outcomes could be achieved by a ‘properly motivated’ agent (for example, David Hartley, sub. 12), and that some level of member disengagement would be unavoidable. This elevates the importance of substitute policies such as the regulation of governance to address principal-agent problems (appendix H and chapter 6) and well-calibrated default arrangements (AIST, sub. 30; CIFR, sub. 10; Fiduciarys Friend, sub. 7). An additional important test in this context is the volume of decisions on default fund status undertaken by employers who are ill-equipped or unwilling to perform the task. This would be proxied by a survey of employers, and the results could be weighted by funds under management.

Costs and benefits of engagement depend on member circumstances and external factors

Using member engagement as a criterion should be combined with analysis of the factors driving outcomes. These include the costs of becoming actively engaged, such as the costs

of time and learning, costs of monitoring the decisions of providers, and the costs of switching products or funds. They also include the benefits of becoming engaged, which would differ according to particular circumstances of the member. For example, the optimal level of member involvement may be greater for higher investment balances. It is also likely to vary with age and could be greater at particular stages in the life cycle, such as the transition stage (ASIC, sub. 35; (Clark, Fiaschetti and Tufano 2016).

‘Environmental’ factors, such as substantial changes in market conditions or policy, could also provide valuable context in assessing the level of member engagement. In a well-functioning market, member activity would be expected to rise at times of such changes.

Not every member needs to be engaged to drive competition

The interpretation of indicators of engagement needs to recognise the extent to which funds are able to segment the market into engaged and disengaged members and the capacity of the ‘engaged’ segment to influence overall outcomes. Where segmentation is not possible and the engaged group is sufficiently large, the passive members may be able to free ride on the actions and the implicit threat of switching from active members. The capacity of agents to influence outcomes should also not be discounted. For example, large employers may be well-placed to negotiate corporate fee discounts on behalf of their employees (appendix C).

It is impossible to specify *ex ante* a benchmark size for an ‘engaged’ group that would influence broader outcomes, nor is it easy to predict the effect of such engagement on the outcomes of other members. Some commentators argue that funds compete ‘at the margin’ and that the threat of switching from a very small group of engaged consumers drives better outcomes for all members.⁹ Others contend that the evidence on the dispersion of fees and net returns proves that large groups of members are effectively insulated from competitive pressure generated by others (Minifie 2015). Moreover, even if the actions of the engaged group influence the fund’s provision of services to its entire member base, the change may not be an improvement for other members. Some commentators have argued that funds customising their services to retain members who threaten to switch to an SMSF are increasing costs for all members for services of questionable value to the majority (appendix G). An assessment of all of those dynamics would require evidence of actual practices of funds on service and price dispersion within the fund.

⁹ For example, Officer (2014) argued that even if two-thirds of the members in a fund were completely disengaged, the remaining members would generate sufficient competitive pressure.

The case for member engagement in insurance is more nuanced than for other services

High member engagement in the decisions on bundled life and total and permanent disability insurance could have different implications compared to the consequences of member activism in other superannuation services. Insurance policies are typically negotiated in bulk by trustees for the entire member base of the fund. Thus, the key source of competitive pressure is at the wholesale level, and the product is not designed to reflect individual circumstances of members.¹⁰

This structure has both positive and negative implications for allocative and operational efficiency (chapter 6). In the context of competition, higher member engagement could also lead to both costs and benefits. For example, member engagement could lead to adverse selection problems. Reducing the size of the pool could also diminish any scale economies and the bargaining power of trustees in negotiating the group policy with the wholesale provider.

Traditional indicators of engagement are ambiguous

Member switching behaviour is an intuitively appealing and commonly used indicator of engagement. However, analysis of switching rates should account for other reasons for switching to a new fund, such as changing jobs or the employer changing their default fund (appendix B). In this context, switching rates to the SMSF segment might be a more robust indicator of engagement and a standalone indicator of competitive pressure. Analysis of switching rates to the SMSF segment can be complemented with survey evidence on motivations for switching to gauge the extent to which such behaviour could be a driver of, or be explained by, competition (appendix G).

Any measures of engagement should also recognise the potential ambiguity in interpreting the passive behaviour of members. High levels of default and low levels of switching could be both an indicator of disengagement, or of making an active choice and being satisfied with it (Butt et al. 2015). In this context, indicators of monitoring behaviour might be more instructive, though harder to measure (table 5.1).

Beyond that, the causal relationship between indicators of active consumer engagement on the one side and competitive markets on the other, is not always simple. For example, if members perceive the market as being competitive they could make the assumption that competition has already resulted in relatively similar products and prices across funds and that there is little value in incurring the search and other costs of becoming engaged.

¹⁰ Nevertheless, some tailoring of products can still occur at group level, because member bases of different funds would have different insurance risks and needs on average.

Table 5.1 Demand-side characteristics: criteria and indicators

<i>Indicators</i>	<i>Assessment methods</i>	<i>Evidence sources</i>
Is there sufficient member engagement to exert competitive pressure?		
• Member account monitoring activity (use of websites, call centre enquiries)* (input, behaviour)	• Trend analysis	• Surveys; industry data
• Member awareness of key features of their superannuation, including insurance* (input)	• Trend analysis; qualitative	• Surveys
• Active member ratio (input)	• Trend analysis	• Surveys; industry data
• Switching rate between and within default and choice funds and between institutional funds and SMSFs, by age and wealth (behaviour)	• Trend analysis	• Surveys; regulator data
• Default rates for funds, investment and retirement income products, and insurance (behaviour)	• Trend analysis	• Surveys
• Duplicate accumulation accounts and insurance policies (output)	• Trend analysis	• Surveys
• Information collection by funds on key member characteristics* (input)	• Qualitative	• Surveys; case studies
Are members and member intermediaries able to make informed decisions?		
• Availability, cost and quality of information on fees and investment risks at product level* (input)	• Trend analysis; qualitative	• Surveys; industry data
• Financial literacy and numeracy compared to an 'adequate' standard (input)	• Trend analysis	• Surveys
• Use of advisers by members and/or member intermediaries (input)	• Trend analysis	• Surveys
• Capacity and willingness of employers to select a default fund (input)	• Qualitative	• Reviews by others
Is there low market segmentation along member engagement lines?		
• Fund expenditure on member retention relative to overall marketing expenditure (input)	• Trend analysis	• Surveys
• Fee dispersion (between default and choice products, comparable products within a fund, and within products) (output)	• Trend analysis	• Industry data
Do active members and member intermediaries have sufficient countervailing power?		
• Fund and product switching costs (administrative, search and learning costs) (input)	• Trend analysis	• Surveys; industry data
• Size of the SMSF sector (funds and members) relative to institutional sector (output)	• Trend analysis	• Regulator data
• Switching rate from institutional funds to SMSFs (behaviour)	• Trend analysis	• Surveys; regulator data
• Changes in market shares of funds (output)	• Trend analysis	• Regulator data
• Corporate fee discounts (output)	• Trend analysis	• Regulator data; industry data

(continued next page)

Table 5.1 (continued)

<i>Indicators</i>	<i>Assessment methods</i>	<i>Evidence sources</i>
Are principal-agent problems being minimised?		
• Existing ratings of system-wide quality of governance* (input)	• Qualitative	• Reviews by others
• Accurate disclosure of trustee directors' and investment committee members' qualifications and relevant skills/experience, remuneration structures, and potential conflicts of interest due to related-party dealings and competing duties* (behaviour)	• Qualitative	• Reviews by others
• Contraventions of regulator governance standards by trustees, employers, service providers and financial advisers* (behaviour)	• Trend analysis	• Regulator data
• Level of skills and standard of performance for trustee boards and investment committees, including review processes* (input)	• Qualitative	• Surveys; reviews by others
• Member satisfaction and trust* (outcome)	• Trend analysis	• Surveys
* Indicators marked with an asterisk are common to both competition and efficiency.		

INFORMATION REQUEST

What other indicators do the industry and researchers use to assess member engagement? How could those indicators be applied in a system-level assessment of competitiveness and efficiency?

What is the aggregate size and number of corporate tenders run each year, and what proportion of the system is accounted for by funds selected through this mechanism? How reliable are the APRA data on corporate fee discounts? Is there a more reliable source?

5.3 Supply-side conditions and barriers to competition

As discussed in chapter 4, one of the key system level objectives for a competitive market in superannuation is that the market structure and other supply-side conditions facilitate competition and contestability.

Analysis of the structure and conditions on the supply-side is a standard part of most competition assessments. In the context of superannuation, three assessment criteria are particularly relevant:

- degree to which current market structure (proxied by market concentration) is conducive to rivalry between incumbent providers of services
- contestability and height of barriers to entry and exit as a source of external competitive pressure on incumbents

-
- anti-competitive effects arising from vertical and horizontal integration of providers.

Rivalry between incumbent providers and market concentration

Analysis of market structure to gauge the scope for, and constraints on, rivalry within the market is one of the most commonly used approaches in Australia and internationally (ACCC 2008; US Department of Justice 2015). The key indicator is market concentration — the extent to which total supply of the product is dominated by a small number of large providers. This indicator has been used in the context of the general state of competition in the Australian financial system (Murray et al. 2014a) and the superannuation system more specifically (APRA 2015a).

Rationale for looking at market concentration and challenges in interpretation

The theory behind the market concentration indicator is that in markets with a larger number of smaller suppliers, each individual supplier has less influence over the market, and it is also more difficult for suppliers to engage in collusive behaviour (Bain 1968; Weiss 1979).¹¹ Liu and Arnold (2010a) found that for superannuation services that were characterised by highly concentrated markets (such as custodial services), firms with a high market share commanded higher prices than their smaller competitors.

However, a high level of market concentration is an ambiguous indicator of the degree of rivalry, and in some circumstances growing concentration may even be evidence of strong competition. For example, high market concentration can be a consequence of significant economies of scale that make it efficient to have a small number of providers, and of competitive pressures driving out inefficient providers (van Leuvensteijn et al. 2007).

The retail level of the market in the accumulation stage is a case where rising market concentration would generally be a desirable outcome. Most of the concerns on the retail side relate to the market being too fragmented with many heterogeneous funds, product proliferation and high search costs for members, which together exacerbate the consequences of disengagement on the demand side. Nevertheless, analysis of changing market concentration at the retail level would need to unbundle the growth in concentration attributable purely to the compulsory contributions under the Superannuation Guarantee. Even if there is no member switching or fund consolidation, large funds could grow their market share purely by virtue of their size, default status and compulsory contributions.

Market concentration might have a more traditional interpretation in the analysis of the wholesale side of the superannuation system. However, even here a high level of market concentration is a very partial indicator. It does not account for market contestability — the competitive pressures exerted by the threat of entry of new competitors.

¹¹ A separate application of market concentration is in assessing the level of systemic risk (discussed in chapter 6)

Thus, any analysis of the current market structure should be complemented by assessing the criterion of contestability (discussed below). It should also be accompanied by evidence on actual outcomes in the relevant market, following increases or reductions in concentration.

Measuring market concentration

Market concentration is most commonly measured using market concentration ratios and the Herfindahl-Hirschman Index (HHI). Market concentration ratios indicate the collective market share of the largest firms in the industry. The number of firms used in the ratio can vary. For example, the Australian Prudential Regulation Authority (APRA) uses the collective market share for the 5, 10 and 20 largest funds (APRA 2016c). Key limitations of this indicator are that it relies on an arbitrarily chosen number of firms and that it does not reveal the relative market shares of individual firms (Shughart II 2008). The HHI addresses both of those shortcomings (box 5.1).

Box 5.1 Herfindahl-Hirschman Index

The Herfindahl-Hirschman Index (HHI) is calculated by summing the squares of each firm's percentage market share, thereby giving greater weight to the market shares of larger firms. The HHI approaches zero when a market is occupied by a large number of firms of relatively equal size (an arithmetic consequence of its construction). It reaches its maximum of 10 000 when a market is controlled by a single firm. The HHI increases both as the number of firms in the market decreases and as the disparity in size between those firms increases.

The HHI is used by government agencies as an input into their analysis of the level of competition in particular markets. For example, as part of its overall assessment of a merger, the Australian Competition and Consumer Commission (ACCC) takes into account the HHI as a preliminary indicator of likely competition effects. Generally, the ACCC will be less likely to identify horizontal competition concerns where the post-merger HHI would:

- be less than 2000 or
- if it would change by less than 100.

While there is no threshold HHI level that triggers competition concerns in Australian competition law, in the United States, government agencies generally consider markets in which the HHI is above 1800 points to be highly concentrated.

Sources: ACCC (2008); US Department of Justice (2015).

However, examining market shares of providers — particularly their change over time — can also generate important insights into market dynamics. Thus, the Commission will examine both the market shares of particular providers and the HHI.

One issue in calculating market shares is what unit of analysis to use for measuring the size of the relevant market. In the case of the superannuation system, market analysts focus on the shares of inputs into the system, expressed in the form of funds under management,

number of accounts and number of members. The Commission proposes to assess concentration for all of those units.

There is merit in focusing the analysis of market concentration on parts of the market where previous research demonstrated relatively high concentration. Recent estimates (based on the HHI) suggest that market concentration may have exceeded highly concentrated levels for custodial, asset consulting and auditing services (Donald et al. 2014). It was also approaching those levels for actuarial services and insurance, and had risen rapidly in benefit administration. Market concentration may also need to be measured for particular market segments. For example, Liu (2013a) found moderate levels of market concentration for investment management in some asset classes, including Australian listed property and international fixed income. The ACCC previously blocked a merger between the National Australia Bank and AXA Asia-Pacific, finding that this would lead to a high concentration in the market for retail investment platforms (ACCC 2010).

When looking at concentration in each wholesale service, market shares need to be assigned both to the specialist providers operating in the outsourced market and the in-house providers of the service. This would provide a more accurate reflection of the substitution possibilities available to the fund at the wholesale level (though some funds would not have the requisite size to undertake in-sourcing of certain services).¹² In order to accurately reflect the nature of competition in each market when assigning market shares to entities, it would be important to aggregate the market shares of members of conglomerates operating in the same market (Liu 2013a).

In examining concentration there is merit in distinguishing between the accumulation and the transition/retirement stages. The transition and retirement stages involve some specialised service providers of retirement income products and the market for some products, such as annuities, is currently highly concentrated (appendix D).¹³

To be a useful proxy of competition, market concentration needs to be viewed in a dynamic context. As discussed in chapters 1 and 2, the system has been evolving rapidly, both as a consequence of natural growth and in response to various policy changes, and further changes are projected. Thus, the stage 3 assessment would examine changes to market shares and concentration over time. It should also be complemented by a time series analysis of exits and entries in the relevant markets. Finally, as discussed earlier, interpretation of this indicator will be contingent on the assessment of economies of scale and contestability in the relevant market.

¹² Incorporating in-house provision into the assessment of wholesale concentration is also important in gauging the level of systemic risk (chapter 6). A focus on the outsourced market in isolation might overstate the risks to the system from the failure of particular wholesale providers.

¹³ Nevertheless, some retirement income products rely on pooling member risk, and a degree of market concentration in provision may be unavoidable, and perhaps even desirable.

Contestability and barriers to entry and exit

The height of barriers to entry and exit are an important determinant of contestability and competitive pressure in a market. Where new providers can enter the market freely and at low cost, this can constrain the ability of incumbent providers to exercise any market power they might have. Barriers to exit are an important indicator in their own right — the ability of providers to leave the market or to consolidate with more efficient competitors is a key requirement for efficiency-enhancing competition (consolidation and economies of scale are discussed later). Exit barriers can also create a disincentive for entry.

The Commission will adopt the ACCC (2008) classification of barriers to entry and incumbency advantages:

- **legal or regulatory barriers**, which include licensing conditions and other restrictions on the ability of new entrants to service particular markets
- **structural or technological barriers**, including: substantial economies of scale and large sunk costs; and high customer switching costs or customer inertia to switching suppliers
- **strategic barriers** which include actions by incumbent firms to deter new entry, such as creation of strategic customer switching costs through contracting, or via bundling of several products.

There is no universal methodology for assessing the height of barriers to entry. The ACCC conducts such assessments as part of its merger reviews. These are customised to individual markets and draw on a combination of qualitative and quantitative evidence (box 5.2).

The Commission's assessment for the stage 3 review will depend on evidence on the existence of particular barriers to entry at the time of that review. However, two potential barriers have been raised in the literature and by participants in this study. The first relates to the effect of current default arrangements on market contestability at fund level. The second potential source of entry barriers relates to the strategic barriers created by horizontal and vertical relationships (discussed under a separate heading below).¹⁴

¹⁴ A separate issue discussed later in the chapter relates to the effect of various regulatory rules on the ability of funds to consolidate or exit the system.

Box 5.2 Measuring barriers to entry under ACCC Merger Guidelines

The ACCC (2008, p. 41) lists the evidence it may require for its assessment of the barriers to entry as part of its merger reviews:

- the ability of producers that are not current competitors to switch production to competing products or services
- the market conditions that may affect the ability of existing firms to expand
- the size and extent of any investment, particularly sunk investment, that producers would need to make to either enter the relevant market/s or to expand production significantly in these market/s
- the extent of brand loyalty in the relevant market/s
- the existence and nature of any long-term supply contracts in the relevant market/s
- any relevant 'switching costs' (such as product compatibility issues, product bundling, contract termination charges) that may prevent buyers in the relevant market/s from changing suppliers or sellers in the relevant market/s from changing buyers, in the short to medium term
- evidence of any growth or decline in the relevant market/s.

Default arrangements and contestability

As discussed in chapter 2, under the *Superannuation Guarantee (Administration) Act 1992* (Cwlth), the system allocates members to a default fund selected by their employer, if they do not actively choose a different fund. Default status confers an advantage on the funds that have it, and constitutes a barrier to entry for competing funds. The height of the barrier ultimately depends on the extent to which members allocated to the default fund actively consider the substitution possibilities. Thus, it should be examined in combination with **demand-side measures** of member engagement.

However, defaults are also a necessary feature of the system, given the unwillingness of many members to make active choices about superannuation. As such, the more relevant consideration may be whether *the process of selecting defaults* is contestable and competitive and undertaken by those who are best placed to make the decision in terms of expertise and incentives.

Default funds in modern awards

Some employees derive their default superannuation product from a modern award. The funds that are currently listed in those awards have largely been grandfathered from earlier versions of awards. Several reviews (for example, PC 2012) argued that the costs and barriers for new entrants that wish to obtain listing are sufficiently high to reduce contestability and competition in the default segment of the market, as well as adversely affect efficiency. Several types of evidence could be used concurrently to examine the

height of this barrier. The number of actual new listings over time, and new listings relative to attempts to be listed would be one type of evidence. This could be complemented by evidence on the actual or likely costs of entry that draws on the administrative and compliance costs faced by new entrants that previously attempted to be listed in the award. An important caveat is that those indicators might understate the true size of the barrier, if some funds are not even attempting to get listed, because of an inherently low chance of success.

The role of employers

With very few exceptions (detailed in chapter 2), the ultimate decision on the choice of default fund rests with the employer. A combination of input, behavioural and outcome indicators is required to examine the extent to which this arrangement may be generating barriers to entry in some cases.

The Commission will need to examine evidence on the magnitude of principal-agent problems in default fund selection, and the extent to which this is a barrier to entry. Industry Super Australia (ISA, sub. 38) contended that some retail funds were offering inducements to employers to secure default status for their fund. Section 68A of the *Superannuation Industry (Supervision) Act 1994* (Cwlth) (SIS Act) prohibits fund trustees from offering certain inducements to employers on the condition that their employees would join the fund. In its investigation into such behaviour, the Australian Securities and Investments Commission (ASIC) found no evidence of breaches of the provision, but noted that contraventions were difficult to prove (ASIC 2016a; Senate Economics Legislation Committee 2015).

Beyond those specific concerns, the Commission will examine features of the selection processes used by employers. Indicators would test whether there was sufficient competitive pressure and focus on the extent of reliance on defaults specified in awards, the number of funds considered (either through tender or going to the market directly), the selection criteria, the duration of default status, and grounds for changing the default fund (appendix C).

Ultimately, the assessment would need to cross-refer to outcomes for members, including reductions in fees and/or improvements in service quality.

Competition implications of vertical and horizontal relationships

Australian retail funds are often owned by banks. Thus, many of them tend to be vertically and horizontally integrated entities, operating in both the wholesale and retail limbs of the superannuation system, as well as offering various financial services outside of the system.

There are two competition-related concerns from this market structure — one relating to the implications of horizontal integration for retail-level competition, and one pertaining to the effect of vertical integration on competition in upstream wholesale markets.

On the first issue, horizontal integration of retail funds could enable them to leverage their competitive advantage, as well as market power in other markets to create barriers to competition from other funds. For example, there is some industry survey evidence indicating that retail funds are increasingly drawing on their banking relationships to market superannuation services directly to clients (Investment Trends 2015).

On the second issue, concerns would arise if lack of demand side competitive pressure at the retail level enabled a fund to stifle wholesale competition by outsourcing particular services to related parties ahead of more efficient (but unrelated) service providers.

Assessing the effect of integration on retail-level competition between funds

The ability of some funds to use their horizontal connections to attract and retain members can be a barrier to entry or otherwise commercially disadvantage other funds that do not have those connections. As with default arrangements, these relationships could represent a distribution channel that new entrants would not be able to access.

However, this market structure is not necessarily inefficient. There may be economies of scale and scope in the joint provision of banking and superannuation services to members. There may also be direct benefits for members due to the convenience of integrating their financial affairs with one provider.

The key question is not whether some retail funds have a competitive advantage over other funds, but of how it is used and the long-term consequences for members. Concerns would arise about:

- fund activities that contravene the legislative prohibitions on inducements to employers
- evidence that impediments to accessing distribution channels are leading to adverse outcomes for members.

The former would require evidence of ASIC enforcement activity and outcomes. On the latter, assessment would require a time series comparison of key indicators of performance — fees, net returns and service quality — of the funds that can access particular distribution channels and those that cannot.

The effect of integration on wholesale level competition and member outcomes

Liu and Arnold (2010a, 2010b, 2012) conducted econometric analysis of fund outsourcing arrangements. They found that for-profit funds that outsourced administration to a related party tended to pay higher fees than those that outsourced to an independent provider. In the case of insurance, trustees that were bound by their trust deed to deal with a

related-party provider paid higher fees than those that were free to choose any insurance provider. Liu and Arnold also found that those higher cost related-party transactions translated to higher fees for members.

Assessing the effect of such integration on wholesale level competition and member outcomes would require a focus on input, output and outcome indicators. This would include examining whether funds face any constraints in making the choice, such as requirements in their trust deed to only deal with related parties. The processes used by the funds to decide on service provision will be benchmarked against APRA¹⁵ and ASIC guidance on managing conflicts of interest. In the context of related-party outsourcing, ASIC (2016c, p. 13) specified the following factors for effective management of conflicts of interest:

- a service provider assessment on an objective set of criteria, including price
- arm's length engagement
- independent oversight to prevent abuse, such as extracting more fees.

Beyond that, the assessment would involve a comparison of service-specific costs and member fees of funds that outsource administrative and insurance services to related and unrelated providers (chapter 6). A complementary indicator would focus on the transparency of fee disclosure by funds and the alignment of those fees with the underlying costs (table 5.2). (The assessment criteria and indicators that focus on actual market conduct and outcomes are discussed in section 5.4).

Table 5.2 Supply-side characteristics: criteria and indicators

<i>Indicators</i>	<i>Assessment methods</i>	<i>Evidence sources</i>
Is there rivalry among incumbent providers?		
• Market concentration (Herfindahl-Hirschman Index and market shares of largest providers) (output)	• Trend analysis	• Regulator data
• Number of institutional funds (input)	• Trend analysis	• Regulator data

(continued next page)

¹⁵ APRA has recently signalled that it will be undertaking a review of funds' related-party arrangements to ensure that these arrangements are consistent with the interests of members (Byres 2016).

Table 5.2 (continued)

<i>Indicators</i>	<i>Assessment methods</i>	<i>Evidence sources</i>
Is the market contestable?		
• Height of barriers to entry — effect of default rules on market entry (input)	• Qualitative	• Surveys; case studies
• Height of barriers to entry — market impediments to funds accessing distribution channels (input)	• Qualitative	• Surveys; case studies
• Mergers prevented by bulk transfer rules (behaviour)	• Trend analysis; qualitative	• Surveys; case studies
• New entries into and exits from the market (behaviour)	• Trend analysis	• Regulator data
• Capacity and willingness of employers to select a default fund (input)	• Qualitative	• Reviews by others
• Prosecutions of fund trustees for contraventions of SIS Act on inducements (output)	• Trend analysis; qualitative	• Regulator data
Are there material anticompetitive effects of vertical and horizontal integration?		
• Alignment in the structure of member fees and underlying costs (output)	• Econometrics	• Regulator data; industry data
• Proportion of funds required (by trust deed) to outsource to related-party providers (input)	• Trend analysis	• Surveys
• Process used by funds to make outsourcing decisions (input)	• Qualitative	• Surveys; case studies
• Cost and member fee differences from outsourcing administrative and insurance services to related versus unrelated parties (output)	• Trend analysis	• Surveys
• Transparency and efficacy of fee disclosure by funds, including for distinct services (behaviour)	• Qualitative	• Surveys; reviews by others

INFORMATION REQUEST

What is the best way to measure the height of barriers to entry arising from the inability of prospective entrants to access the distribution channels available to incumbent funds, including through being afforded default status? Is there case study evidence of new entry being prevented by those barriers?

What is the best way to measure differences in the costs and member fees from funds outsourcing services to related versus unrelated providers? What is the best source of data for such analysis?

Effectiveness of regulatory regime in promoting competitive outcomes

As discussed in appendix H, various aspects of the superannuation system are regulated to address particular market failures, some of which have direct implications for competition.

Both the content of the regulations and how they are administered by the regulators are important. On the latter, APRA has a legislated mandate to balance its various prudential objectives with the objectives of competition and contestability (s. 8(2) of the *Australian*

Prudential Regulation Authority Act 1998 (Cwlth)). However, balancing competition objectives with APRA's core functions is inherently challenging and there is a concern that the former receives less attention than the latter. The FSI observed:

At present, regulator mandates adopt an inconsistent approach to competition ... APRA is required to consider competition and contestability in its decisions, although the industry frameworks do not adopt a consistent approach to this issue ... Furthermore, there is no current requirement for regulators to explain how they balance competition considerations with other regulatory objectives in reaching decisions. (Murray et al. 2014a, p. 255)

On the other hand, ASIC currently does not have an explicit competition mandate, although the Australian Government (2015a) committed to introduce this in its response to a recommendation from the FSI. Nonetheless, ASIC has a broader economic efficiency mandate under both its enabling legislation (appendix H) and statement of expectations from the Australian Government (2014a).

The effect of the current regulations and their administration on competition can be assessed using evidence from a variety of sources. These can include:

- analysis contained in relevant regulation impact statements (where those exist)
- post-implementation policy reviews
- self-assessment and performance reporting of the regulators
- external stakeholder feedback.

Overall, this is an area where little information is collected in a form that would be useful for a future assessment, and the Commission will require substantial input from regulators and industry stakeholders.

5.4 Assessment of market conduct and outcomes

A key system level objective for competition is that superannuation industry players compete on aspects of value to members, such as fees, returns and service quality (chapter 4). The Commission proposes three inter-related assessment criteria to support this objective:

- high degree of competition on costs
- utilisation and pass-through of benefits from economies of scale
- high degree of competition on other aspects of value to members.

Competition as a driver of costs, prices and margins

In competitive markets, prices are assumed to converge on the underlying economic costs of providing a product or service. The intuition is that all of the economic profits are

competed away and no provider could sustain an increase in their prices without losing market share to their competitors or new entrants into the market.

Undertaking such assessment comes with a caveat that focusing on costs alone can come at the expense of other relevant factors, such as quality of service and other aspects of value to the consumer. Thus, an assessment of costs should not be conducted in isolation from those considerations.

A number of indicators have been developed to draw on the simple relationship between costs and prices to assess the extent of competition in the market. The most common indicators in the context of financial markets are the Lerner Index, the Panzar-Rosse H-Statistic and the Boone measure of competition. While there is a large and growing literature applying those indicators to competition in banking markets, their usefulness for assessing competition in the Australian superannuation system is at best limited (box 5.3).

Box 5.3 Indicators used to assess competition in banking

Lerner Index

The Lerner index infers market power from a firm's ability to set a price (P) above its marginal cost (MC), which is the assumed benchmark price for a perfectly competitive market. The index is given by $(P-MC)/P$. A value of **0** corresponds to perfect competition, while, a value of **1** corresponds to a monopoly, where the firm has full influence over price. The Lerner index has been used internationally to measure competition in the banking sector.

While the Lerner index is intuitively appealing, it is largely a theoretical tool, which has limited usefulness for assessing competition in superannuation. First, it is a static measure that does not capture dynamic effects, such as technological change, innovation and learning by doing. Second, it overestimates market power in markets with substantial economies of scale, because in such markets marginal cost pricing is not an efficient long-run strategy to cover the costs of upfront investment. Third, the index is also poorly suited to situations where there is significant bundling of products, or where there are complex upstream markets. Attribution of marginal costs and prices to particular inputs and products becomes very challenging.

Panzar-Rosse H-statistic

The H-statistic measures the percentage change in total revenues of the provider in response to a 1 per cent change in input costs. The value of the measure can range from **less than 0 to 1**. Positive values of the H-statistic are associated with a more competitive system. The underlying logic behind the measure is that in a perfectly competitive environment, an increase in supplier costs would lead to an identical increase in consumer prices, with the market clearing via the exit of some providers. Following a rapid early expansion of research applying this measure, significant methodological and interpretation issues appear to have emerged. Recent research (Bikker, Shaffer and Spierdijk 2009; Spierdijk and Shaffer 2015) identified problems with how a large number of studies incorporated scale economies into the measure, concluding that this invalidated the results. They also found that the measure could not reliably support a finding of market power or strong competition.

(continued next page)

Box 5.3 (continued)**Boone measure**

In competitive markets, more efficient providers would be expected over time to achieve higher profits and/or greater market share. The 'Boone' measure of competition tests the sensitivity of either the provider's profits or their market share to the level of their marginal costs. The lower the reward for efficiency, the less competitive the market. The Boone measure is intuitively appealing but has many challenges in application. Even if the data challenges could be overcome, the measure would struggle to account for several features of the current institutional and market structure including:

- the effect of compulsory contributions on the size of the system and individual funds
- the different incentives faced by profit and non-profit funds (the indicator assumes that all providers would pass through their efficiency gains to consumers in the same manner)
- the heterogeneity of services offered to members, including heterogeneity in bundled insurance products and differences in service quality
- the fluid nature of insourcing and outsourcing of wholesale functions, which would make it difficult to link operational efficiency to changing market shares for those services.

Sources: Bikker and Haaf (2002); Boone (2008); Elzinga and Mills (2011); Lerner (1934); Panzar and Rosse (1987); World Bank (nd).

Preferred approach to examining costs and prices

The relationship between the costs of service provision and the prices charged to funds in wholesale markets and to members in retail markets is important. The Commission favours a simpler approach than that embodied in the indicators outlined in box 5.3, but one that draws on a combination of evidence.

The first proposed indicator involves examining the longer term trends in the costs at the wholesale and retail level, with a declining trend being a proxy for competitive pressure. At the wholesale level, this would involve looking at system-wide average costs (either per member, or dollar of funds under management), for each service type. At the retail level, the analysis can be further decomposed by fund type.

The second proposed indicator draws on a time series assessment of margins to test both the absolute size and whether prices track the changes in the costs of service provision. This approach would provide an indirect measure of the extent of competitive pressure and market power — in a competitive market, prices would track costs more closely, as downward pressure is exerted on margins. In the wholesale market this can be done separately for specific service types. The stage 3 assessment is likely to focus on services for which the market is highly concentrated (discussed above). For the retail market, the analysis could focus on the fund and segment level — for example, the relationship between fees and costs could be tested for MySuper products and across all institutional funds.

In a report for the FSI, Rice Warner (2014c) presented a time series analysis of costs and margins of the nature envisaged by the Commission, but only at the fund level. The Commission recognises that doing the cost and margin analysis at the wholesale level would involve potentially significant methodological challenges. There is no publicly available data on the costs of outsourced providers and it might also be difficult to attribute the costs of outsourced providers to superannuation-specific services. Nevertheless, this type of analysis could provide important insights into the level of competition in wholesale markets. The Commission is seeking further feedback on the best approach for conducting this assessment.

The third proposed indicator involves international benchmarking of prices for particular wholesale services that are comparable internationally (and are often supplied by multinational providers competing in global markets). As discussed in appendix E, this would be most useful for investment management fees for specific asset classes.

The fourth type of indicator involves a bottom-up examination and comparison of the structure of costs and prices. In a competitive market the composition and basis for the price paid by the fund or member would align with the structure of the costs of the service provider and the basis on which those costs are incurred. A common concern about the way prices are constructed, is that the investment management component is levied as a proportion of the assets under management (Cooper et al. 2010a), which does not reflect the transactional nature of the costs and the economies of scale for the fund manager (economies of scale are discussed below).

Finally, an important input indicator is clarity and accuracy of information on prices paid by members for distinct components of the superannuation service. In this context, disclosure and accurate attribution of components of the fee to particular services is both necessary to assess whether costs and prices actually align, and an indirect indicator of competition in its own right (Mercer, sub. 31).

The Commission's preliminary analysis of the evidence currently disclosed by funds indicates significant data quality issues that might hinder such analysis. There are also problems with APRA system-level data, due to likely misattribution of costs and fees (for example, across administration and investment categories and within insurance) and inconsistent and missing data for some types of costs (for example, indirect costs and related-party costs). These data quality problems might be teething issues, and data quality could improve over time. Nonetheless, for robustness, the Commission will draw on other sources of cost and fee data, where available (chapter 7).

INFORMATION REQUEST

What is the most robust and feasible way of assessing system-level trends in the costs and margins of wholesale providers of administrative and investment superannuation services? What are the best sources of data for such analysis?

Economies of scale as an indicator of competition

Economies of scale are a reduction in the average per unit costs of supplying a product or service arising from increases in the volume of output. Multiple commentators and reviews (Cooper et al. 2010a; Minifie, Cameron and Savage 2014; Murray et al. 2014a; Wallis 1997) have identified scale economies as an important driver of outcomes for members. An assessment of economies of scale can also be used in the context of competition. Evidence of a fragmented market with significant unused economies of scale could be a symptom of barriers to exit or consolidation, or signal an actual lack of competition in the market (van Leuvensteijn et al. 2007). Furthermore, where economies of scale are achieved in parts of the superannuation supply chain, but the gains do not reach members, this could signal that those gains are dissipated or captured in other parts of the chain, potentially due to lack of competition.

Sources of economies of scale in superannuation

There are several potential drivers of scale economies in the superannuation supply chain, whose relative importance would vary depending on the type of service:

- the ability to spread fixed costs over a larger pool of funds under management, or a greater number of members or accounts
- the ability to retain higher quality staff
- the ability to overcome particular operational barriers that are faced by smaller entities — for example, investing in particular asset classes that require large scale investments
- greater bargaining power with upstream providers of services (Cummings 2012).

A further source of cost reductions from growing size that does not fall within a conventional definition of scale economies are the benefits of risk pooling. These benefits are particularly important in the context of retirement income products that provide longevity insurance (appendix D).

Economies of scale would not always manifest in lower prices. In some cases, growing scale might deliver a higher *quality* of service for a given price. A further (related) benefit of size is *economies of scope* in service provision. These can extend beyond the bounds of the system (as in the case of integrated banking and superannuation services discussed earlier), or reside within it. For example, larger funds might be better placed to bring some previously outsourced functions in-house, placing competitive pressure on wholesale providers. A larger fund might also be able to provide a more diverse range of products and services to its members than a smaller counterpart.

However, the relationship between size and efficiency is not straightforward. For some functions, there are likely to be size limits beyond which the gains from increasing scale are no longer material. In some cases, diseconomies of scale may arise. Several researchers (cited by Cummings 2012) found that for particular types of investment, such as listed

(domestic) equity securities, size can be a disadvantage due to market impact costs and delays in executing trades. Rice Warner (2014c) observed that trustees generally do not issue investment mandates greater than \$500 million to individual investment managers for risk management reasons (although it had limited data on mandates for offshore investments). Constraints on investment mandates that will be accepted by external active managers may also play a role (CIFR, sub. 10). There may also be smaller providers across the value chain that can achieve efficiencies through greater flexibility and innovation (ASFA, sub. 42).

Furthermore, both the scope for, and the benefits of scale need to be viewed in a dynamic context. For example, technological improvements might affect the optimal size of the fund or an upstream provider of services and invalidate past findings on optimal size. Growing system maturity and demographic change is likely to affect the scope for economies of scale across the accumulation and retirement stages. And growing scale could enable changes in business practices (such as investments in higher cost assets potentially offering higher net returns), but the benefits might not manifest for some time (CIFR, sub. 10; Mercer, sub. 31).

A further complication is that growing fund size is not the only way to achieve all economies of scale. Scale can also be achieved through outsourcing to large upstream providers or by setting up or accessing specialised pooling vehicles such as pooled trusts and distribution channels such as investment platforms.

The analysis also needs to be able to distinguish the internal scale achieved because of competitiveness (securing greater market share) from exogenous growth resulting from the system getting bigger due to regulatory fiat. The latter cannot be attributed to competitive pressures. It can also weaken the incentive to find internal economies of scale for industry participants even in a competitive environment, if the gains from greater scale diminish with size.

Finally, to be able to draw any conclusions about competition for the benefit of members, analysis needs to link the evidence on growing economies of scale (irrespective of source) to improvements in member outcomes in the form of lower fees (for equivalent returns) or better service quality.

Past research on economies of scale in superannuation

Several Australian researchers have attempted to measure economies of scale in superannuation, reaching slightly different conclusions (table 5.3). Those studies examined the extent to which fund size and other characteristics, such as number of accounts and average balances, affected outcomes for members.

Two approaches have been employed. The first focuses on how the size and characteristics of a fund affect its costs (Higgs and Worthington 2012; Sy 2012) — the traditional approach to assessing economies of scale. The second involves an additional step of

inferring the impact of economies of scale on gross and net risk-adjusted *returns* (for example, Cummings 2012).

The latter approach requires potentially questionable assumptions about the links between cost reductions for providers, and the fees and returns that reach members. However, even the traditional approach to assessing economies of scale is challenging due to incomplete and potentially unreliable cost data. Costs can be classified into direct expenses recorded by the fund, and indirect costs that affect net returns, but are not always identified separately. Examples include fees that an external investment manager embeds in the net returns on investment. In some cases the direct cost data might also be unreliable. As discussed earlier, the funds that outsource functions to related parties might have transfer pricing arrangements that do not reflect underlying costs (Sy 2012).

Table 5.3 Recent studies on economies of scale in superannuation

	<i>Study details</i>	<i>Findings</i>
Cummings (2012)	Data from 280 funds, 2004–2010 Relationship between fund size and investment returns, investment and operating expenses	Economies of scale in operation and investment for non-profit funds, not exhausted at largest fund size Economies of scale for operation costs, but not investment costs for retail funds — weak case for consolidation of retail funds
Higgs and Worthington (2012)	Largest 200 funds in 2011 Relationship between fund size and operating and investment costs Relationship between fund size and scope economies from in-sourcing	Economies of scale in operation and investment up to at least 300 per cent of mean fund size Weak economies of scope, only at extremely large fund size and only for operation expenses — generally cost savings in contracting out
Sy (2012)	Data from all APRA regulated funds between 2004–2011 Relationship between fund size and direct reported expenses	No economies of scale for retail funds (data problems because of related-party transactions) No relationship between retail fund size and fees (dissipation of rent to upstream intermediaries) Weak economies of scale for non-profit funds (high extent of outsourcing reduces the fixed cost base from which fund level economies can arise) Natural asset growth much bigger source of scale than consolidation
Rice Warner (2014c)	Relationship between fund size and fees, based on APRA and own expenses data for selected funds	Economies of scale in operation (from growing number of members and average account balances) and in investment (from larger mandates). Limited benefits from scale in operation beyond 400 000 members; investment scale largely exhausted at \$10 billion of funds under management
Minifie, Cameron and Savage (2015)	Relationship between fund size and administration fees	Fixed administration costs are one third of total fund costs and are key source of scale Consolidation of 50 largest funds into 25 would save one sixth of total costs (\$270 million)

Preferred approach for assessing economies of scale

The Commission's preferred approach to assessing economies of scale has the following elements:

- Focus on two types of indicator: the magnitude of unused economies of scale; and the extent to which growth in economies of scale over time reaches members in the form of reduced fees or service quality improvements.
- Examine economies of scale both at the fund level and for some wholesale services. The latter is required to account for alternative ways of capturing scale, as well as to test whether scale generated in upstream markets manifests in benefits for members. In looking at wholesale services, the focus would be on those that have a high fixed cost component such as administration, and potentially, investment management.
- Assess economies of scale in the context of the cost of delivering particular services and member fees and measure them both per member and per dollar value of funds under management. The latter reflects that for some services, the costs and fees would be linked more closely to the number of transactions and/or accounts, while for others they would be more closely connected to assets (either aggregate or average balances).
- Complement the analysis with an assessment of the policies that directly affect the incentives and scope for consolidation, including the APRA scale test for MySuper funds and the bulk transfer rules under the SIS Act (discussed below).

Effect of policy settings and other barriers

A top-down assessment should be complemented by analysis of the policies and other market conditions that directly influence the capacity and incentives of providers to achieve scale economies.

There has been considerable debate in the industry about mergers not going ahead due to principal-agent problems. Several stakeholders have contended that some board directors (and their sponsoring bodies) have an incentive to avoid mergers that would force them to relinquish their position on the board. Those concerns were evident in the lead up to the unsuccessful proposed legislation that would have required a minimum of one-third of independent directors and an independent chair on the board of each fund (Rose 2015).

Nevertheless, there are currently two sets of regulatory rules that directly target principal-agent problems in the context of economies of scale:

- a requirement under s. 29VN of the SIS Act (introduced in July 2013) that all trustees offering a MySuper product undertake an annual scale assessment to determine whether the size of the MySuper product and the fund overall disadvantage the members relative to members of other MySuper products.
- a requirement on trustees of funds wishing to exit and transfer their membership via a 'bulk transfer' to ensure that the transfer is in the best interests of members and that all

of the members will retain all of the benefits from the old fund, including insurance (r. 1.03 of the SIS Regulations). This is combined with the general requirement under s. 52 of the SIS Act that the trustees of both funds act in the best interests of members.

Scale test

The scale test is still a relatively new regulatory requirement and there is little publicly available information on how it is applied by trustees and enforced by APRA (appendix H). The Explanatory Memorandum for the Superannuation Legislation Amendment (Trustee Obligations and Prudential Standards) Bill 2012 (p. 15) noted:

APRA will provide prudential guidance on processes trustees could adopt to form a determination and relevant considerations for trustees in rectifying insufficient scale.

To date, APRA has not published formal direction on how trustees should apply the scale test, although some general principles have been articulated in a speech by APRA's Deputy Chairman:

- The assessment will involve quantitative and qualitative aspects.
- The test will have a broader focus on maximising member outcomes through various means and will not require funds to attain a particular efficient size.
- The test will go beyond assessing performance against peers and assess performance against internal benchmarks.
- The test will be forward looking and require trustees to assess the long-term sustainability of their business plan and strategy (Rowell 2015).

In principle, the broader approach flagged by APRA, where scale is only one of the relevant factors, is more consistent with competition and efficiency objectives than an exclusive focus on fund size. However, scale may still be the dominant barrier to efficiency for some funds. Thus, the effectiveness of the test would be enhanced if trustees were explicitly required to account for the costs and benefits of the current structure (including the balance of in- and outsourcing) and size of their fund.

APRA has further stated that:

... consistent with the underlying philosophy of the SIS Act, all RSE licensees should regularly assess the extent to which appropriate net outcomes for members are being achieved over the long term based on a broader set of qualitative and quantitative factors, regardless of whether or not they offer a MySuper product. (sub. 32, p. 5)

While this approach would improve the coverage of the scale test, a potential residual issue is whether the test would cover provision of services to members in the retirement stage. As noted earlier, population ageing and growing system maturity would increase the relative importance and scope for economies of scale in this segment of the market. A flexible regulatory approach would accommodate those structural changes in the system.

The Commission aims to improve its understanding of the APRA methodology for the scale assessment to ascertain how it can be best utilised for the stage 3 review.

Beyond that, in the context of general acceptance that there are currently too many institutional funds, there are two indicators to assess the effectiveness of the scale test. The first is an output indicator reflecting the extent of consolidation (by number of funds, members and funds under management) that occurred as a result of APRA enforcing the scale test. The second is an outcome measure focusing on the size of fee reductions (or quality improvements) to members whose accounts have been transferred following consolidation.

Bulk transfer rules

For bulk transfers of members to a new fund, APRA (2001) requires trustees of both funds to undertake extensive checks that include scrutiny of the new fund's governing rules, various due diligence checks and legal advice. At a minimum these involve:

- estimating the amount of the original fund members' withdrawal benefits
- circumstances for becoming entitled to benefits and method of calculation of benefits
- preservation status of the benefits
- extent to which members bear investment risk and the investment choices they have
- provision and conditions of insurance
- the basis of valuation of assets
- other rights, such as conditions of release, rights to be credited with reserves.

Of the above, bundled insurance policies are likely to pose complications, given that they are typically negotiated in bulk and the premiums and conditions may be specific to each fund (reflecting its size and membership profile) (ASFA, sub. 42). Establishing equivalence of benefits may also be challenging where a defined benefit fund is attempting to merge with a defined contribution fund.

APRA (sub. 32) further observed that current successor fund transfers may be impeded by some constraints, including uncertainty of the capital gains tax status of MySuper transfers after July 2016 and uncertainty about the requirements on trustees for transfers of MySuper products with materially different features. APRA is developing prudential guidance on the latter issue. Mercer (sub. 31) argued that APRA's application of successor fund transfer rules restricted mergers that would have otherwise benefited members.

It is difficult to assess whether, and to what extent, the bulk transfer rules are preventing consolidation that would have otherwise benefited members on the whole. The test is whether the requirement to protect all member interests in a fund is preventing a merger that would benefit the member group as a whole, while leaving some members worse off. This would require case study evidence of attempted fund mergers not proceeding because

the trustees failed to meet the test — a data gap which would need to be addressed by the time of the stage 3 review.

Summary of criteria and indicators on cost and price-based competition

Table 5.4 Cost and price-based competition: criteria and indicators

<i>Indicators</i>	<i>Assessment methods</i>	<i>Evidence sources</i>
Do funds compete on costs?		
• Costs relative to assets and member base: wholesale (by service) and retail (by segment)* (input)	• Trend analysis	• Regulator data; industry data
• Margins: wholesale (by service) and retail (by segment)* (output)	• Trend analysis	• Regulator data; industry data
• Investment management fees by asset class compared to other countries* (output)	• Trend analysis	• Industry data
• Alignment of the structure of member fees and underlying costs (output)	• Econometrics	• Regulator data; industry data
• Transparency and efficacy of fee disclosure by funds, including for distinct services (behaviour)	• Qualitative	• Surveys; reviews by others
Are economies of scale utilised and the benefits passed through to members?		
• Unused scale economies at wholesale level (administration and investment management) and at retail level (output)	• Econometrics	• Regulator data; industry data
• Effectiveness of scale test (number of fund consolidations and magnitude of realised benefits) (output)	• Trend analysis; qualitative	• Regulator data
• Mergers prevented by bulk transfer rules (behaviour)	• Trend analysis; qualitative	• Surveys; case studies
• Pass through of benefits from scale economies (wholesale and retail) to members* (output)	• Econometrics	• Industry data
• Improvements in service quality in administration due to growing scale (output)	• Qualitative	• Surveys
• Increased diversification due to growing scale (input)	• Econometrics	• Regulator data; industry data

* Indicators marked with an asterisk are common to both competition and efficiency.

INFORMATION REQUEST

Which of the recent studies on economies of scale are most robust and why? What is the best way of disentangling internal and external economies of scale (that is those that arise from growth of individual funds from those caused by growth in the overall system)? How could the assessment be extended to the wholesale level?

Is there any existing evidence on the effect of bulk transfer rules on mergers?

Alignment of the focus of competition with demand

In a market where competition is facilitating efficiency, providers of a good or service compete on factors that are relevant to consumers. This criterion is particularly relevant on the retail side of the superannuation market, given broad concerns about the lack of demand side pressure from members.

There is a variety of economic models (for example, Anderson and Renault 1999; Ellison and Wolitzky 2009; Kuksov and Villas-Boas 2005) that identify and explain scenarios where transaction costs (in particular, search costs) and information asymmetries can give rise to wasteful competition on factors that do not add value to the consumer. While the models differ in design and application, there are some common themes.

In particular, in non-perfectly competitive markets, firms have an incentive to differentiate their product to create a sub-market for their brand and benefit from their market power in that submarket. In the context of superannuation, this can manifest in two key strategies:

- Product differentiation on aspects other than price, with funds competing on service quality, and bundled non-core products such as financial advice and insurance (both features and premiums).
- High advertising expenditure to generate recognition and loyalty to the ‘brand’.

The above strategies can be amplified, and the consequences of monopolistic competition distorted by the inherent features of the superannuation system. In particular, the disengagement, lack of financial literacy and behavioural characteristics (appendix B) of many members can encourage marketing and advertising that focuses on the brand or irrelevant or unverifiable outcomes, rather than specific aspects of the service.

The complexity of the underlying decisions and information asymmetries for members create scope for superannuation funds to differentiate their products on multiple characteristics to further complicate the comparison of products across providers. One outcome could be a system-wide proliferation of products that might differ significantly on subjective or hard-to-measure factors, such as claimed quality of service and particular inputs (for example, active investment management). For example, APRA (sub. 32) noted that there are currently over 40 000 investment options in Australian superannuation. It argued that this generated substantial operational complexities and cumbersome and inefficient processes that would ultimately disadvantage members.

The Institute of Public Accountants (sub. 22, p. 6) argued:

Competition which leads to a greater number of profit-making entrants to the marketplace seeking to differentiate themselves through a greater offering of non-standardised products and spending significant sums on advertisement and promotion in order to attract new members is unlikely to lead to a more efficient system.

Insurance is another service where similar distortions arise — inconsistent disclosure of product terms, as well as poor comparability of the products themselves, are well

documented. In a recent report on the private health insurance market, the ACCC (2014) found that such industry practices impeded consumer decision making.

The above concerns were paramount in the recommendations of the Cooper review to introduce a MySuper default product, which was supposed to have a degree of homogeneity (to facilitate comparability for members) and a focus on containing costs (Cooper et al. 2010a, pp. 5, 10).

However, there are caveats and challenges to applying these insights to an assessment of system outcomes. Any assessment of whether competition reflects the underlying preferences of members is complex, requires information about member preferences and can be vulnerable to subjective judgement. There is also potential ambiguity in interpreting some outcomes. For example, extensive and growing product diversity and competition on non-price aspects can be either a symptom of strategic monopolistic behaviour or a reflection of the funds meeting heterogeneous preferences of members. The latter is an allocatively and dynamically efficient outcome (chapter 6).

Similarly, it is challenging to draw unambiguous conclusions from evidence on marketing and advertising. The economic evidence on the effect of non-price advertising on prices and outcomes for consumers is mixed (see for example, Dukes 2008). The effect depends on a complex interplay of factors, including whether advertising is conveying socially valuable information (which is difficult to assess) and how the consumers respond to it.

Another approach involves a positive test. That is, the question is not whether the funds are competing on **irrelevant** factors, but whether there is competition on factors that are unambiguously **relevant**.

In the context of product development, this would involve looking at whether a fund and the system overall provide products that manage the key risks of members, including the life-cycle investment risks and longevity risks in retirement.

In the context of marketing and product disclosure, this would involve examining whether necessary information is provided to the member. This can include considerations of whether that information is provided in a prominent manner. Anthony Asher (sub. 21, p. 14) argued that levels of transparency on aspects such as conflicts of interest and costs could be used as a measure of competition:

... both clarity and quality. Perhaps the Commission could develop a puffery index for annual reports and other communication. The ratio of pictures to tables would be a good start! Much greater detail of costs, and of the investment performance measures ... would obviously help to focus minds on relevant issues.

A further important area for assessment relates to the practices and arrangements within the funds for collecting and maintaining information about their members to tailor their product to member needs and preferences. This could include basic information, such as age, gender and balance, but also extend to more detailed data collection on financial

literacy, awareness and engagement with their superannuation outcomes, and preferences on risk and investment.

In sum, an assessment on whether competition focuses on factors that are relevant to members should draw on evidence of what members value. Top down measures need to be supported by evidence of member preferences and of how those preferences are informing product and service development, and competition more broadly.

Ultimately, if competition in the superannuation system is delivering the outcomes that members want, this should manifest in outcome-based measures. Over time, improved service quality, reduced costs and higher net returns could be expected to lead to greater system-wide demand and higher voluntary consumption of core and ancillary superannuation services, holding all else equal. However, using this indicator would involve practical challenges in measurement and interpretation, in particular when determining an appropriate counterfactual. The changes in demand that relate to the performance of the system would need to be unbundled from other drivers of demand, such as economic growth, market performance and changes in broader retirement income policies. In this context, high and growing levels of member satisfaction and trust in the system is an indicator that would be both less challenging to measure and more directly linked to the objectives of competition in superannuation (table 5.5).

Table 5.5 Aligning competition with demand: criteria and indicators

<i>Indicators</i>	<i>Assessment methods</i>	<i>Evidence sources</i>
Do funds compete on relevant non-price dimensions?		
• Fund marketing expenditure (size, composition and share of operating expenses) (input)	• Trend analysis	• Surveys
• Information collection by funds on key member characteristics* (input)	• Qualitative	• Surveys; case studies
• Availability, cost and quality of information on fees and investment risks at product level* (input)	• Trend analysis; qualitative	• Surveys; industry data
• Comparability of insurance product information disclosed by funds* (input)	• Qualitative	• Surveys; case studies
• Member awareness of key features of their superannuation, including insurance* (input)	• Trend analysis; qualitative	• Surveys
Is there innovation and quality improvement in the system?		
• Declining number of products over time (accumulation) (output)	• Trend analysis	• Regulator data
• Introduction of new retirement income products and development of more tailored default products* (output)	• Trend analysis; qualitative	• Surveys; industry data
Are outcomes improving at the system level?		
• Growing voluntary consumption of superannuation services (investment, retirement products, advice, insurance) (output)	• Trend analysis	• Regulator data
• Member satisfaction and trust* (outcome)	• Trend analysis	• Surveys

* Indicators marked with an asterisk are common to both competition and efficiency.

INFORMATION REQUEST

What is the best outcome-based indicator of effective competition in the superannuation system and why? To what extent could growth in voluntary consumption of superannuation services be an indicator for such assessment?

Draft

6 Assessing efficiency

Key points

- Assessing the efficiency of the Australian superannuation system — across the dimensions of operational, allocative, and dynamic efficiency — is a unique and challenging task for which there is little precedent. Most previous studies that have examined efficiency in the system have focused on operational efficiency and matters (such as returns and fees) which lend themselves to measurement.
- Assessing the efficiency of the superannuation system requires considering how well it achieves the system-level objectives set out in chapter 4. This chapter does not assess efficiency in the superannuation system. Rather, it sets out the criteria and indicators that would guide the Commission's future assessment (stage 3).
- Maximising net investment returns (post taxes and fees) on member balances is a key way the system contributes to adequate and sustainable retirement incomes. The assessment criteria will focus on whether long-term net investment returns are being maximised, and costs and fees minimised, taking into account service features. The indicators applied will draw on quantitative benchmarks of returns, fees and costs, and on qualitative indicators.
 - At a system wide level, average net returns over the long term should be reflective of the overall system's diversification as well as market volatility.
 - Where required, the Commission will adopt straightforward approaches to risk adjustment, for example, by benchmarking net investment returns at the asset class level or across products with similar risk characteristics.
- Meeting the needs and preferences of members is another key objective of the system (and aligned with a consideration of allocative efficiency). However, assessing this at a system level is challenging due to the diversity of member preferences and needs. The assessment criteria and indicators focus predominantly on inputs to the system, observed member behaviours and potential impediments to efficient outcomes.
- Ensuring the superannuation system complements a stable financial system is also a relevant consideration. The assessment criteria and indicators focus on whether there are material systemic risks in the superannuation system.
- The majority of members are defaulted into insurance on an opt-out basis. Taking the default arrangements as a given, it is relevant to assess whether the insurance products provided are meeting members' needs and being provided at least cost. A mix of quantitative and qualitative indicators will inform the assessment.

This chapter outlines the criteria and indicators that will be applied in assessing the system-level objectives that pertain to efficiency in the stage 3 review. Where warranted, specific assessment criteria and indicators will be developed for the three phases of superannuation: accumulation, transition and retirement.

The system-level objectives for efficiency outlined in chapter 4 are loosely aligned with the three dimensions of efficiency: operational, allocative and dynamic. Dynamic efficiency includes improvements in operational and allocative efficiency over time. To minimise duplication, criteria for assessing dynamic efficiency will therefore rely mostly on the criteria and indicators (and changes over time) proposed in sections 6.1 and 6.2. An additional element of dynamic efficiency, related to system stability, is discussed in section 6.3. Standalone criteria are developed for insurance that have regard to both operational and allocative efficiency (section 6.4).

Some of the assessment criteria and indicators for competition in chapter 5 naturally go hand-in-hand with assessing efficiency, though in some cases there may be trade-offs between competition and efficiency (chapter 4). This chapter will highlight instances of competition and efficiency both reinforcing each other and working in opposing directions.

6.1 The system maximises net returns on member balances over the long term

Maximising net returns (after all fees and taxes) on a given account balance is the most important way in which the superannuation system contributes to adequate and sustainable retirement incomes. In a defined contribution world, this objective is equally relevant in the accumulation, transition and retirement phases. Assessment of this objective is closely aligned with operational and dynamic efficiency (chapter 4) and the competitiveness of the system (chapter 5).

Various factors contribute to net returns. The fees that funds charge their members are clearly an important part of the story as these detract from net returns. However, other factors could also bear on net returns, such as decisions on asset allocation, selection of specific assets, investment style and fund size. The existence of any market or regulatory impediment to investing member balances efficiently in upstream capital markets could further impact net returns. This suggests an assessment of this objective should focus on a broader set of matters than just costs and fees.

Another facet is assessing whether the system maximises net returns for members as they transition between the accumulation and retirement phases. Transition occurs as members start to make decisions about their retirement, such as changing their asset allocation strategy, selecting a retirement income product or drawing down income. A relevant issue is whether the system is effectively managing tax for members, including in transition.

While a focus on net returns is clearly important, other system outputs, such as the quality of member services, are also relevant, albeit harder to measure.

Four criteria will be used to assess whether the system maximises net returns on member balances over the long term:

- are net investment returns being maximised over the long term, taking account of service features provided to members?
- are costs incurred by funds and fees charged to members being minimised, taking account of service features provided to members?
- do all types of funds have opportunities to invest efficiently in upstream capital markets?
- is the system effectively managing tax for members, including in transition?

These criteria are framed at a system level. As far as possible, indicators have been designed to provide insights on system-wide efficiency. However, the Commission will focus on specific segments of the system (such as different groups of funds or products) where this can meaningfully inform the system-level assessment.

There are strong links between assessing operational efficiency and assessing competitiveness. In an efficient system, competition would provide funds with incentives to minimise their costs, charge cost-reflective prices, and maximise net returns and service quality provided to members. As such, some competition indicators from chapter 5 are also relevant to assessing the above criteria (this is highlighted where relevant in the indicator summary tables).

Are net investment returns being maximised over the long term, taking account of service features provided to members?

Superannuation funds invest member balances to earn a gross rate of return and charge fees to members for investment and administrative services. Taxes are also levied on member returns. In this report, unless otherwise noted, ‘net returns’ is defined as what members actually earn on their balances minus the taxes and fees they pay, including administration and investment fees. In certain instances, returns will be considered net of taxes and investment fees only. (Insurance is considered separately in section 6.4.)

These net returns are a key determinant of a member’s ultimate retirement income. For example, ASFA (sub. 42, p. 4) submits that for an individual on average earnings, with contributions made during a full working life, the ‘net benefit’ (net investment returns after all investment and administration fees, operational costs, indirect costs and taxes) delivered to a member will account for around 70 per cent of the value of their total amount at retirement.

There is widespread agreement among study participants that net returns over the *long term* (in the order of 10 years or longer) are a primary indicator of system performance (for example, AIST, sub. 30; ASFA, sub. 42; Energy Super, sub. 19).

Measuring net returns

Where historical data are available, net returns are relatively simple to calculate retrospectively. The Australian Prudential Regulation Authority (APRA) and various research firms publish and compare net returns of superannuation funds and products over various time periods.

There are, however, recognised limitations in using historical net returns as an indicator of operational efficiency in the superannuation system. For example, they are not necessarily a good indicator of future expected returns, and can be dominated by the performance of asset markets over which investment managers have little control (Asher, sub. 21; CIFR, sub. 10) (although performance attribution can be used to unbundle the value that investment managers add, as discussed below). Further, net returns typically do not account for the level of service quality provided to members in the form of administrative and ancillary services (APRA, sub. 32; CIFR, sub. 10).

Nevertheless, it is recognised by study participants that some measure of historical net returns is a relevant focus in this study. The key questions are how these are best measured and which indicators can be applied to meaningfully assess *system-level* efficiency.

Risk-adjustment of net returns

Assets within a superannuation portfolio are subject to a range of risks. Diversification of investments (and ultimately of underlying risk and return drivers known as ‘factor risks’¹⁶) is a means of reducing market risks to the portfolio and maximising long-term net risk-adjusted returns. Diversification is more effective where assets in the portfolio are diversified across their relative exposure to the same factor risk (Podkaminer 2013).

Understanding the risks associated with investment is important for assessing relative fund or investment option performance, both retrospectively and into the future. To hold riskier assets, investors expect to be compensated with higher returns.

There is extensive literature on how to adjust investment return data to account for the different types and level of risk that investors are taking. However, there is no universal agreement on how best to do this adjustment (box 6.1). Most measures of risk-adjusted returns use volatility (the standard deviation of past returns) as a proxy for risk. While past volatility can be relatively straightforward to measure, it has some limitations as a proxy for risk in the context of long-term investments such as superannuation (Keppler 1990; Leland 1999; SMSFOA, sub. 20). In particular, short- or even medium-term volatility is not necessarily indicative of the probability of members experiencing an adverse capital loss at the point of retirement.

¹⁶ Factor risks may include those arising from exposures to inflation, interest rates, economic growth or currency movements (Podkaminer 2013).

Box 6.1 Risk adjustment in theory and practice

Sharpe ratio

The **Sharpe ratio** is a widely known and used method to compare risk-adjusted investment performance of funds. It measures the average return received for incurring an additional unit of risk above the risk-free rate, and uses the standard deviation (or volatility) of past returns in the investment portfolio as a proxy for risk (Liu 2013b).

Several academic studies have estimated risk-adjusted returns for Australian superannuation funds using the Sharpe ratio (or variants thereof). For example, Coleman et al. (2003) used the Sharpe ratio to measure risk-adjusted net returns for funds relative to the risk-free market benchmark. They found that many funds (particularly retail funds) had underperformed relative to risk-free investment in Treasury notes. Ellis et al. (2008) applied the Sharpe Ratio to examine the risk-adjusted net returns of different types of funds, and for specific default investment options. They found, among other things, that lower average net returns were generated by retail funds for 'balanced' and growth' products.

Sy and Liu (2009) calculated risk-adjusted returns using the risk-adjusted value added (RAVA) metric (which they described as a variant on the Sharpe ratio). This metric uses the past volatility of the *benchmark* portfolio equivalent of a fund's asset allocation as the measure of risk (rather than volatility of each fund's investment portfolio). The researchers aimed to overcome some of the pitfalls of the Sharpe Ratio in ex-post performance ranking. They found evidence that the investment performance ranking of returns is persistent, and that higher operational costs are correlated significantly with lower net investment performance. The researchers noted that implementing the RAVA metric requires detailed asset allocation data at the fund level.

Other ratios

Other ratios on investment performance discussed in the literature are distinct from the Sharpe Ratio, but similarly seek to measure risk-adjusted returns within a 'reward to risk' framework (Aragon and Ferson 2006; Liu 2013b).

- The **Treynor Ratio** measures the systematic risk of the portfolio (rather than its total risk).
- The **Sortino Ratio** adjusts the Sharpe Ratio so the denominator focuses solely on downside volatility.
- **Jensen's Alpha** is a measure of risk-adjusted performance that represents the average return on a portfolio over and above that predicted by the capital asset pricing model, given the portfolio's beta and the average market return.
- **Value at Risk** is an alternative risk indicator which measures the risk of a portfolio as the maximum loss than the portfolio can sustain for a given confidence level and assumptions about the distribution of future returns.

Cummings and Ellis (2011) examined the pattern of investment by Australian superannuation funds in illiquid assets, estimating risk-adjusted returns of different types of funds using Jensen's Alpha. Among other things, they found that not-for-profit funds with more illiquid investments generate higher risk-adjusted returns (which suggests they capture a return premium for investing in these assets), and that one quarter of the difference in performance between not-for-profit funds and retail funds in Australia over this time period (2004–2010) related to the higher proportion of illiquid assets.

(continued next page)

Box 6.1 (continued)**Alternative methods to account for risk**

Ratings and benchmarking bodies sometimes use alternative approaches to account for risk in ranking the investment performance of superannuation funds. For example, Chant West and SuperRatings compare net investment returns for diversified products with similar asset allocation profiles (for example, those with similar percentage allocations to 'growth' assets) as a proxy for aligning investment product risk (Chant West nd; SuperRatings 2015).

CEM Benchmarking uses an extensive database of fund-level investment information (provided by participating funds) to benchmark the return of each asset class against a passive market return (Beath 2015; CEM Benchmarking nd). A time-weighted average of each asset class is taken to get a total fund-level return. The total 'net value added' is the gross value added over and above the 'policy return' (returns from a passive investible portfolio with similar risk characteristics, estimated by the breakdown of asset classes), less investment costs. Using its database and this methodology, CEM Benchmarking can compare fund-level net returns across funds.

APRA's Standard Risk Measure requires funds to report in their MySuper product dashboards on the likely number of negative annual returns over a 20-year period. A potential limitation of this measure is that it does not convey to members anything about the magnitude or path of negative returns, or their timing.

Moreover, many factors which could bear on forward-looking performance — such as the quality of investment governance — may be difficult to build into quantitative risk-adjustment exercises. Following the global financial crisis, there has been widespread criticism of conventional models of quantitative risk measurement (and management), especially in terms of assumptions about the correlation of risks across the financial sector (Kay 2015).

Some study participants supported the use of long-term historical net returns, without the need for volatility-based risk adjustment. For example, ASFA (sub. 42) proposed that the primary indicator of net benefit to members should take the form of rolling average net returns (across MySuper products), with a period of at least 20 years. On this basis, ASFA (sub. 42, p. 26) submitted that:

Given that returns are being measured over a period of at least 20 years, there should be no need to adjust returns to reflect risk. Instead, real returns should be utilised.

ISA (sub. 38) suggested using historical long-term average returns of a cohort of funds with strong long-term net performance as a benchmark for optimal net returns in the superannuation system. ISA (sub. 38, p. 26) submitted that:

Over the long term, the periodic volatility should be reflected in the average [return]. It is therefore unnecessary to use a volatility adjusted ratio, or attempt to define which risks would be included.

When the focus is system-wide (as it is here) and over a long enough time horizon, system-wide average net investment returns will collectively reflect the impact of diversification and average market volatility. In other words, this metric effectively captures risk-adjusted returns. Therefore, there is no need to apply volatility-based risk-adjustment measures to system-wide long-term net returns. The Commission will also adopt straightforward approaches to risk adjustment as discussed below.

A further measurement issue is the use of time or money-weighted returns.¹⁷ Much of the conventional industry and academic analysis of net returns in the superannuation system is based on time-weighted return measures. However, study participants and others have noted such measures do not necessarily provide insights for the sequencing of *when* returns happen (and the size of the portfolio at the time), which — in the context of long-term superannuation investments — can have a significant bearing on final retirement balances; and that use of money-weighted measures can overcome this limitation (Basu, Doran and Drew 2012; Bianchi et al. 2014; CIFR, sub. 10; Hartley, sub. 12).

The Commission's preferred approach

The Commission proposes to apply three sets of indicators to assess whether net investment returns are being maximised over the long term:

- long-term (5, 10 and 20 year) historical net returns at a system-wide level (and for some market segments) compared to various benchmarks
- long-term (5, 10 and 20 year) historical net returns to specific asset classes at the system level compared to asset class benchmarks
- dispersion of funds and products from a frontier of best performing funds and products (based on historical long-term net returns).

The Commission has adopted a straightforward approach to risk adjustment, where appropriate (for example, by comparing net returns among investments with similar risk characteristics). Otherwise, as discussed earlier, a system-wide and long-term perspective implicitly captures risk adjustment (whereby long-term average net returns are reflective of the system's diversification and average market volatility). Each approach is discussed further below, along with likely implementation challenges and specific issues on which the Commission is seeking participant feedback.

¹⁷ Time-weighted returns reflect the compound rate of growth in a portfolio over a specified period, while money-weighted returns reflect the rate of return that equates the discounted ending asset value to the sum of the initial assets under management and the present value of the capital flow realised over the life of the fund (Bianchi et al. 2014).

System-wide net returns

Long-term net returns from the overall superannuation system could be compared to various benchmarks: for example, a CPI + X target, a reference portfolio of assets, a cohort of strong performing funds, or funds in other countries (ASFA, sub. 42; CIFR, sub. 10; FSC, sub. 29; ISA 2013, sub. 38; ISN 2011).

In comparing system-wide net returns to a simple benchmark, the Commission is implicitly assessing the system's investment nous in individual asset classes as well as its effectiveness in diversification.

CPI + X benchmarks are commonly used in the finance sector and by superannuation funds to target and assess investment performance (Carruthers 2015). Some study participants favoured this as a relative benchmark for assessing system performance — for example, ASFA (sub. 42) indicated a CPI + 2.5 per cent benchmark may be appropriate for MySuper products. These benchmarks are transparent, simple to implement and easy to interpret. However, this approach also has limitations, especially at the system level, which include determining what 'X' should be and linking this to a meaningful proxy for the performance of the system. In other words, you cannot invest in CPI + X.

An alternative benchmark is using simulated returns to a passive reference portfolio in order to provide insights into the efficiency by which funds add value for members in the system (CIFR, sub. 10). Broadly, there are two forms this could take: estimating some form of 'optimal' portfolio based on modern portfolio theory,¹⁸ or use of a simple reference portfolio approach (such as one based on a generic low-cost strategy¹⁹ or representative of the average asset allocation across the system or in particular market segments). There is a trade-off between theoretical accuracy and practicality between the two approaches. As noted by CIFR (sub. 10), the 'optimal' portfolio approach is theoretically superior but difficult to apply, while a simple reference portfolio approach is easier to implement, but may not completely represent the optimal (efficient) alternative and is limited in scope.

International comparisons offer a further option to understand whether net returns achieved in the Australian system have been globally competitive. While intuitively appealing, this approach is challenging due to differences in policy, market structures and differences in asset allocations across countries (appendix E; ISA, sub. 38; FSC, sub. 29).

¹⁸ Also known as mean-variance analysis, modern portfolio theory is a framework for assembling a portfolio of assets such that the expected return is maximised for a given level of risk, defined as the variance of returns (Markowitz 1952).

¹⁹ As an example, CIFR (sub. 10) noted that a reference portfolio containing 70 per cent growth and 30 per cent income assets could be used as a benchmark for net returns for MySuper *balanced* default funds, although it also noted that there are disadvantages with this approach, including that the benchmark may not be optimal and accounting for risk is difficult under this framework.

The Commission's preferred approach is to compare system-wide net returns to the net returns from a passive, liquid reference portfolio. The key issue is what should be the asset allocation of the reference portfolio.

- Making the reference portfolio reflect the aggregate asset allocation in the superannuation system is simple and transparent, but it only measures the efficiency of certain investment decisions. In other words, it does not assess whether the actual asset allocation in the system is efficient.
- Articulating an asset allocation for the reference portfolio (such as 70/30) is also simple and transparent, but the optimal allocation is contestable and its specification could create peer risk (whereby superannuation funds strive to mimic the reference portfolio, rather than pursuing the best outcomes for their members).

Ultimately, the Commission can do both. For greater robustness in interpreting the results, this could be supplemented with comparisons of long-term net returns to various CPI + X benchmarks. Where data are available, the Commission proposes that both time-weighted and money-weighted average long-term net returns would be calculated. Net returns from separate segments of the retail level of the market — such as the self-managed superannuation fund (SMSF) and non-SMSF sectors, and MySuper products (ASFA, sub. 42; CIFR, sub. 10) — could also be compared to the relevant benchmarks.

INFORMATION REQUEST

What reference portfolio should be used to benchmark long-term net returns in the system and particular segments of the market?

What other benchmarks should be used to supplement the analysis? If a CPI + X benchmark was used what is the appropriate level of 'X'?

Asset-class net returns

In principle, long-term net returns to specific asset classes in the superannuation system could be compared to relevant asset class benchmarks to provide insights on whether superannuation funds collectively have over- or under-performed other investors. By focusing on individual asset classes, this analysis would allow the Commission to abstract from the differences in risk across asset classes and from external market factors (such as aggregate share market movements).

However, two implementation issues require further consideration: the selection of an appropriate benchmark for comparison and the calculation of net returns to asset classes.

Various asset-class benchmarks are cited in the literature (table 6.1). One of the main challenges would be determining appropriate benchmarks for unlisted assets (such unlisted property, infrastructure and private equity). Broadly, two approaches are possible: using a

listed index for equivalent types of assets, or constructing a target benchmark using modelling.

Table 6.1 Some examples of asset-class benchmarks

<i>Asset class</i>	<i>Possible benchmarks</i>
Fixed interest	Australian Broad Investment-Grade Bond Index (AusBIG) S&P ASX Australian Fixed Interest Index
Domestic equities	S&P/ASX 200 Accumulation Index S&P/ASX 300 Index
International equities	MSCI World ex-Australia Index S&P Developed ex-Australia LargeMidCap Index
Unlisted/listed property	S&P/ASX 300 A-REIT Index (listed) Mercer/IPD Australian Pooled Property Fund Index (unlisted)
Unlisted/listed infrastructure	S&P Global Infrastructure Index (listed) MSCI IPD Australian Unlisted Infrastructure Index
Private equity	Australia Private Equity and Venture Capital Index

Sources: AMP Capital (2015); Cummings (2012); IPD MSCI (2014); S&P Dow Jones Indices (2016a, 2016b, 2016c, 2016d).

A listed benchmark for equivalent unlisted assets would be straightforward to implement and have the advantage of representing a proxy for the next-best investable opportunity. However, the interpretation of results would need to account for key differences between listed and unlisted asset classes (such as liquidity and factor-risk correlations). Constructing target asset-class benchmarks using a modelling-based approach (such as by drawing on the capital asset pricing model) may be more conceptually appealing but challenging to do and, as a theoretical benchmark, would not represent an alternative investment opportunity.

The Commission favours an approach where net returns from asset classes are benchmarked against a listed index for each asset class. Conceptually, it is important that the benchmark is public and investable. This approach is straightforward and transparent, uses an alternative investment opportunity, and is similar to the approach used by CEM Benchmarking to estimate fund-level net returns (box 6.1).

However, calculating long-term historical net returns to specific asset classes at a system or market segment level is likely to be challenging. There are no publicly available data on returns to asset classes across the superannuation system, or segments of the system, and as such, a dataset would need to be constructed. Calculating fees and taxes for the benchmark investment to ensure the comparison is like-for-like is an additional complication. The Commission is seeking feedback from participants on the feasibility of this task and likely data requirements.

INFORMATION REQUEST

What are the appropriate market benchmarks to compare net returns from asset classes within the Australian superannuation system?

What data would be required to calculate the net returns (net of fees and taxes) to specific asset classes within or across the superannuation system? How could such data be obtained?

Dispersion of funds from an efficient frontier of best-performing funds

Fund- or product-level time series data could be used to construct a frontier of ‘best-performing’ products or funds (based on those which achieve the highest net returns). The aim would be to measure the proportion of funds or products that fall within a certain range of this frontier, dispersion near the frontier, and how it has changed over time. In an efficient system, it is reasonable to expect that there would be a high degree of clustering near the frontier of best performing funds or improvements toward this over time.

Various econometric approaches could be used to undertake frontier analysis, such as stochastic frontier analysis or data envelopment analysis (DEA) (box 6.2). DEA has been used in recent studies which have benchmarked the operational efficiency of Australia’s superannuation funds (focusing on the extent to which inputs are minimised for a given level of output), although these studies have reached contrasting conclusions. In part, this may be due to the fact the results of DEA are highly sensitive to data and the assumptions used in the analysis, a point reinforced by study participants (for example, ISA, sub. 38).

Box 6.2 Use of data envelopment analysis to assess the operational efficiency of Australian superannuation funds

Data envelopment analysis (DEA) is a non-parametric method of benchmarking. It uses measures of the inputs and outputs of many ‘decision-making units’ to determine their operational efficiency relative to each other. The process constructs an efficient production frontier made up of the best-performing decision-making units (Cooper, Seiford and Zhu 2004). DEA can take several forms. It can be calibrated to identify the minimum level of inputs required to produce a certain level of outputs (or vice versa), take account of multiple inputs and outputs, or take account of economies of scale or different operating environments.

Three studies have used DEA to explore the operational efficiency of Australian superannuation funds. Qu (2014, p. 1) estimated an efficient frontier for Australian superannuation funds and found that, overall, the industry ‘has relatively high technical and scale efficiency’. By contrast, Bui (2013, p. 1) used a similar approach and found that ‘most Australian superannuation funds are inefficient relative to the efficiency frontier’. In analysing retail funds in particular, Sathye (2011, p. 21) reported that ‘overall, the efficiency of Australia’s retail funds was found to be low’ and that there was scope to achieve significant economies of scale through fund mergers.

The Commission proposes to use the dispersion of superannuation funds or products from an efficient frontier as an indicator in its assessment. The Commission will further explore the use of DEA and other statistical techniques to estimate a frontier of best-performing funds, and is seeking further feedback from study participants on the merits of different methods.

Whichever approach is adopted, the Commission recognises it would be necessary to test the robustness of results in various ways — for example, by varying combinations of inputs and outputs, and considering net returns *with* and *without* administration fees. As part of this analysis, the Commission would consult extensively on the specification of the inputs and outputs to be used.

Product-level data for specific investment options would appear most appropriate as the unit of analysis in constructing the frontier. However, accounting for differences in risk between products would be important. A practical approach is to confine the analysis to products with similar asset allocation profiles, such as default products with similar allocations to growth assets, as a proxy for aligning products with similar risks. However, a practical challenge would be the scope and quality of available data. Regulator data for MySuper products are available only from 2013 (fund-level data are more readily available). The Commission will likely have to rely on private-sector product-level data to get a sufficient time series (chapter 7).

INFORMATION REQUEST

What is the most appropriate method to undertake efficiency frontier analysis in this study? What variables are most appropriate to use for inputs and outputs if data envelopment analysis was to be used?

What data would be required to develop these benchmarks and indicators? What data are available and what are likely to be the main data gaps?

Table 6.2 Investment returns: criterion and indicators

<i>Indicators</i>	<i>Assessment methods</i>	<i>Evidence sources</i>
Are net investment returns being maximised over the long term, taking account of service features provided to members?		
• Long-term (5, 10 and 20 year) historical net returns from the system and market segments compared to benchmarks (output)	• Trend analysis	• Regulator data; industry data
• Long-term (5, 10 and 20 year) historical net returns to specific asset classes at system level compared to asset-class benchmarks (output)	• Trend analysis	• Industry data
• Dispersion of funds and products from a frontier of best-performing funds and products (based on historical long-term net returns) (output)	• Econometrics	• Regulator data; industry data

Are costs incurred by funds and fees charged to members being minimised taking account of service features provided to members?

Maximising net returns also requires consideration of whether costs and fees (inputs to the system) are being minimised for *given service features* provided to members (outputs, either in the form of net returns, service quality, or both). In the context of this section, costs are those incurred by funds in providing services to members, while fees are in effect the prices funds' charge to members. Fees (and costs) in the Australian superannuation system have received a lot of attention recently, including as a result of research undertaken by the Grattan Institute (Minifie, Cameron and Savage 2014, 2015), and throughout the Financial System Inquiry (Murray et al. 2014a) (chapter 1 and appendix E).

In an efficient and competitive superannuation system, funds would have an incentive to minimise their costs and to align their fees with the underlying economic costs. In this way, costs and fees would be proportionally related (chapter 5). There would also be downward pressure on costs and fees over time, including through increases in scale and the adoption of cost-reducing technologies, and evidence that realised cost savings are passed through to members in the form of lower fees. Where higher fees are evident, they would be associated with higher value added to members, such as higher net returns over the long term or higher quality member services.

Types of costs and fees

The costs incurred by superannuation funds are diverse. Broadly, however, costs can be divided into two types: administration and operating costs (hereafter 'administration costs') and investment management costs (hereafter 'investment costs') (figure 6.1). Both cost types may contain elements of fixed costs, and costs that vary with assets under management and/or the number of members.

The fees charged by funds (a proxy for prices) can be categorised along similar lines to costs: administration fees, investment fees, and specific service fees. Funds charge member fees in diverse ways, for example, investment fees are often charged as a percentage of total assets, while administration fees can be charged on the same basis, via a fixed annual or weekly fee, or a combination (Minifie, Cameron and Savage 2015).

In assessing this criterion, the Commission's focus is on core investment and administrative services provided to members (whether in house or outsourced), including intrafund financial advice.²⁰ Sometimes, the Commission may need to analyse aggregate costs and fees because more detailed data are not as reliable. The key cost and fee data issues identified in this study include that:

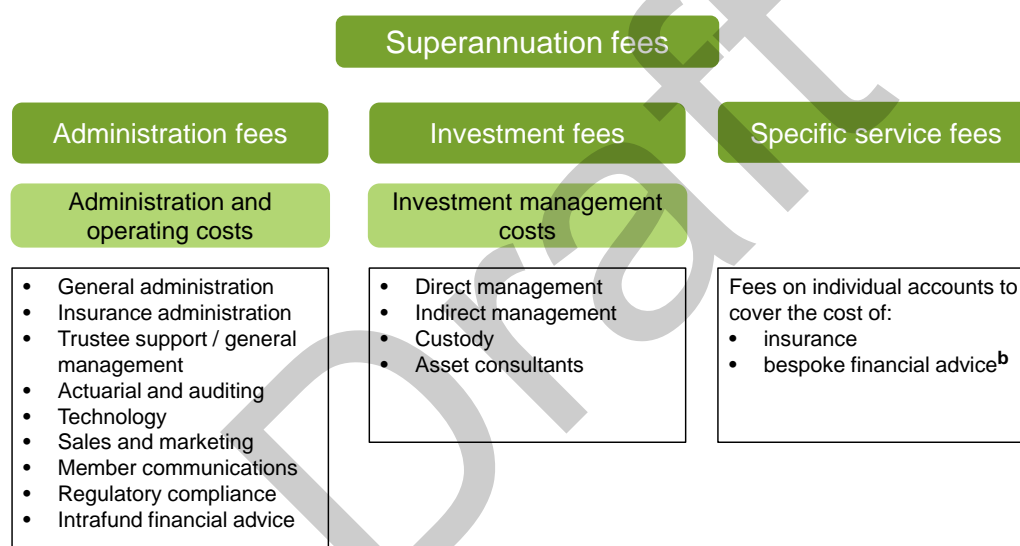
- there is inconsistent reporting on investment costs across funds — for example, some funds may not report all of their 'indirect' investment costs (costs embedded in

²⁰ Specific service fees charged to members for additional ancillary services (such as bespoke financial advice) are outside the scope of this study, while insurance is considered separately in section 6.4.

investment returns rather than reflected in explicit fees) (APRA, sub. 32; ASIC, sub. 35; SuperRatings 2015)

- there are more general concerns about inconsistent reporting practices by funds, such as in reporting across cost categories, and inconsistent and missing data (APRA, sub. 32; ASIC, sub. 35; SuperRatings 2015)
- there are different reporting practices and methods required by regulators in the SMSF and non-SMSF sectors (appendix G)
- APRA has only published product-level data for MySuper products from 2013, and not for choice products (APRA, sub. 32; ASIC, sub. 35; ISA sub. 38).

Figure 6.1 Superannuation costs and fees, by type^a



^a Costs and fees are not necessarily captured entirely or reported under these broad categories in practice. For example, APRA collects indirect cost ratios for investment, administration and advice costs, while some of the costs incurred by SMSFs, such as self-administration expenses, are not reported (appendix G). ^b Intrafund financial advice provided by a superannuation fund is within the scope of this study (and typically is covered by the administration fee charged to members) but bespoke financial advice purchased by members either inside or outside the system on a fee-for-service basis is not within scope.

Sources: Minifie, Cameron and Savage (2014, 2015); Rice Warner (2014c).

Costs and fees are an important contributor to net returns

The fees charged by superannuation funds detract from the returns received by members (and ultimately, from their available retirement income). Over the long-term, even

seemingly small differences in the fees charged to members can have a significant impact on retirement income.²¹

Using costs and fees to assess the performance of the superannuation system has several advantages. Costs and fees are more directly in the control of fund trustees than other factors which affect net returns. Fees are generally observable ex ante, and can be objectively measured. Further, extensive data on costs (and to a lesser extent fees) are reported by regulators (albeit subject to the limitations noted above), and are also available from product disclosure statements and industry sources (chapter 7).

However, several study participants submitted that a focus on costs and fees in isolation without taking into account associated service features (in the form of net returns or service quality) would provide an incomplete (and potentially misleading) picture of the efficiency of the superannuation system (for example, APRA, sub. 32; ASFA, sub. 42; CIFS, sub. 10; Energy Super, sub. 19; FPAA, sub. 28; Law Council of Australia, sub. 17; Mercer sub. 31). Moreover, several study participants have cautioned against comparing fees and costs in the Australian system with those in other countries, given the difficulties in adjusting results for policy differences and data reporting practices across countries (appendix E).

The Commission considers that assessing whether costs and fees are being minimised in the system for given service features is relevant for assessing whether the system is efficient. However, as a precursor to the design of indicators to assess this criterion, three issues warrant further consideration:

- the relationship between fees and scale
- the relationship between investment fees and net returns
- the relationship between administration fees and service quality.

The relationship between fees and scale

There are several potential sources of economies of scale in the superannuation supply chain and various studies have explored this (chapter 5). Evidence of unrealised scale is not only a potential indicator of a lack of competitiveness in the system, but also of operational inefficiency. Other things equal, sub-scale funds could lead to members paying higher fees than if a level of minimum efficient scale was met. However, smaller funds may still be able to access the benefits of greater scale, such as by outsourcing services or using investment platforms. On the other hand, scale efficiency is not a static concept. System maturity and an ageing population can also present structural changes to scale economies, including the balance of system assets residing in retirement phase and the potential for longevity pooling.

²¹ For example, Vanguard (nd) estimated that for a hypothetical portfolio with a starting value of \$100 000 which grows at 6 per cent annually over 30 years, investor fees of 0.25 per cent of assets every year (a low-cost scenario) versus 1.2 per cent of assets (a high cost scenario) result in a difference of \$130 000 at the end of 30 years.

The Commission's preferred approach for measuring economies of scale was outlined in chapter 5. Those indicators will also be used to inform the assessment of whether costs and fees are being minimised in the system, including the extent to which realised economies of scale are passed through to members over time.

The relationship between investment fees and net returns

Drawing on their own analysis and experiences, study participants noted that the investment fees charged by Australian superannuation funds are set in a highly competitive market and compare favourably to fees charged in other countries (FSC, sub. 29; Mercer, subs. 31, 45). Where there is evidence of higher investment fees in Australia, some study participants attribute this to more Australian funds typically pursuing higher-cost investment strategies designed to deliver higher net returns to members over the long term (ASFA, sub. 42; CIFR, sub. 10; FSC, sub. 29).

Higher-cost investment strategies could arise for two reasons: the pursuit of active (as opposed to passive)²² investment strategies within an asset class (such as in listed equities), or through securing further diversification with investments in alternative asset classes (such as non-listed infrastructure)²³ which typically involve higher transaction and asset management costs. Other related factors may also influence investment costs, such as whether investment functions are managed in house or outsourced.

There is considerable literature which explores whether fund managers can persistently 'beat the market' using active management strategies within a single asset class (usually listed equities). Jones and Wermers (2011) provide a useful summary. Some researchers have argued that in an efficient market it is not possible for actively managed funds to collectively outperform lower-fee passive funds. Various empirical studies support this view. Other studies indicate that while the average active manager may not outperform, a significant minority of active managers do add value, and that active management plays an important role in efficient capital allocation. Study participants noted the merits of active management remain a source of ongoing debate, and cautioned against extrapolating insights from the general literature to active management by institutional investors, such as superannuation funds (for example, CIFR, sub. 10).

A separate consideration is whether the higher costs of investing in alternative asset classes are justified. While some alternative asset classes can be costly to invest in (such as unlisted infrastructure), such investments may provide valuable diversification benefits within an investment portfolio, and improve risk-adjusted returns. Study participants noted

²² Active management is an investment strategy where the investment manager aims to outperform a targeted market benchmark, such as by gathering, analysing and acting on information (Jones and Wermers 2011). Passive management is an investment strategy that attempts to track a specific market index as closely as possible, after accounting for all expenses required to implement the strategy (Johnson and Juru 2015).

²³ Alternative asset classes can be defined as investments other than those in public equity, fixed income or cash. These can include real estate, commodities, hedge funds, private equity and private real assets.

that a feature of the Australian system is that fund assets have a higher exposure to alternative (and growth) assets (ASFA, sub. 42; FSC, sub. 29). Others have also noted that not-for-profit funds have made consistently higher allocations to unlisted asset classes, including unlisted property and infrastructure (Cummings and Ellis 2011; ISA, sub. 38). Some participants noted that because the growth in Australian superannuation funds has been accompanied by increasing allocations to higher-cost alternative assets, and this has restricted the scope for investment fee reductions (CIFR, sub. 10; Mercer, sub. 31).

Recent studies have explored the relationship between fees and net returns in Australia, and have reached different views on the value added from higher fees (box 6.3).

Box 6.3 Recent studies of the fee–return relationship in Australia

As part of a wider study, Grattan Institute researchers used econometric analysis to examine whether the average ‘high fee’ superannuation fund generated higher returns (after fees) than ‘low fee’ funds (Minifie, Cameron and Savage 2014). Using fund-level data, they found that funds which charged higher average fees generated lower average net returns over the period 2004–2012, without reducing risk. The research did find evidence of persistent outperformance among some funds; however, this was largely due to low fees. On this basis, the researchers concluded that fees are a more reliable indicator of future net returns than previous net returns.

In a submission to the Financial System Inquiry, Chant West (2014a) examined the relationship between fees, asset allocation and management style (passive versus active) for a sample of funds. This study applied a different methodology to the Grattan Institute analysis. Specifically, investment performance was assessed net of investment fees and gross of administration fees, and product rather than fund-level data were used. Chant West (2014a, p. 1) analysis showed that ‘members of high-investment fee funds, where the fee budget has been spent wisely, have been rewarded with higher net investment returns.’ Further, Chant West observed that while numerous academic studies around the world have shown that, in general, retail investors that pay higher fees for active management receive very little excess return, Australian superannuation funds are in a very different situation because of their scale and negotiating power as wholesale investors.

Looking at portfolio investment more broadly, researchers at Vanguard (Johnson and Juru 2015) compared the efficacy of actively managed fund returns with those from unmanaged benchmarks in Australia. They found that after costs, the average actively managed fund has underperformed various benchmarks in most asset class categories over short and long time periods and through varying market environments. The performance of actively managed funds was also compared to passive (or indexed) funds. The researchers found that low-cost index funds were more likely to outperform higher-cost actively managed funds.

The relationship between administrative fees and service quality

Several study participants submitted that the administrative and ancillary services provided by superannuation funds — such as online resources, call centres, account reporting, and intrafund financial advice — are an important dimension of system output that needs to be taken into account in the Commission’s analysis (AIST, sub. 30; ASFA, sub. 42; CIFR,

sub. 10; ISA, sub. 38). There are indications that funds have been expanding the scope and quality of the ancillary services they offer to members in recent years, which may be a contributor to higher fees but can lead to additional benefits to members (CIFR, sub. 10).

This issue was examined in research undertaken by Minifie, Cameron and Savage (2015, p. 2), who concluded that there is ‘little evidence that funds that charge higher fees provide better member services’, though data to support this appear to be sparse.

Evaluating the relationship between administration fees and member outcomes (based on service quality) on a quantitative basis is challenging. While the Commission has been presented with anecdotal evidence that higher administration fees (and spending by funds on member services) can lead to higher-quality member services, there is little systematic evidence (in the public domain) that can be drawn on. That said, several research firms benchmark fund performance by accounting for aspects of service quality provided to members (for example, Chant West nd; SuperRatings nd).

The Commission’s preferred approach

The Commission proposes to apply both quantitative and qualitative indicators to its assessment of whether costs and fees are being minimised in the system for given service features provided to members.

The first set of indicators reflect the costs and fees associated with investment management (scaled as a proportion of total assets) within the Australian superannuation system. These will be compared to pension funds in other countries and examined over time. This analysis will be most insightful for investment management costs and fees for specific asset classes. The Commission acknowledges the challenges involved in benchmarking costs and fees across countries, but these are not insurmountable (appendix E). The Commission will draw on best practice approaches to international benchmarking, such as the methodology developed by CEM Benchmarking in Canada (2016).

A second set of indicators reflect average investment management costs and fees across certain groups of funds within the Australian superannuation system. These can be used to test both whether costs and fees are declining over time, and whether there are any consistent patterns of difference across particular types of funds — for example, by fund size, level of outsourcing, use of related service providers and investment in alternative asset classes — that may provide insights into system-level efficiency. Comparisons between the SMSF and non-SMSF sectors may also provide relevant insights, notwithstanding data comparability challenges (appendix G). Investment fees could also be compared across groups of products, such as MySuper products.

The Commission will also use econometric analysis to explore the nature and strength of the relationships between investment fees and net returns in the superannuation system. As a complementary indicator, the Commission will examine the extent to which funds undertake performance attribution analysis and report the results (box 6.4).

Box 6.4 Performance attribution analysis

Performance attribution aims to unbundle the sources of return to an investment portfolio to explain how and why excess returns (over a relevant market benchmark) were achieved, and to disentangle those elements outside the investment manager's control.

There is a rich literature on performance attribution techniques, which come in various shapes and sizes. Applied to the superannuation system, performance attribution analysis could analyse how net returns are shaped by certain portfolio management decisions, such as strategic asset allocation, dynamic asset allocation, choice of investment manager or active investment management. Ideally, performance attribution would also extend to the relative importance of fees in detracting from investment returns.

Anecdotally, the Commission understands that most superannuation funds would conduct some form of performance attribution analysis (although it is not known how comprehensive and comparable the techniques are). This type of information may be a useful indicator for assessing the efficiency of superannuation funds. Disclosure of this type of information would be a contributor to the efficiency of the superannuation system.

Sources: Deloitte (2013); Morningstar (2010, nd).

INFORMATION REQUEST

How do funds do their internal performance attribution analysis (for example, to what extent is performance attributed to strategic asset allocation, dynamic asset allocation or the individual asset manager)? Are the results consistently reported and made public? What implications can be drawn from performance attribution for the measurement of system-wide efficiency in this study?

A third set of indicators reflect average administration costs and fees (which could be measured both per account and as a percentage of assets) across the system (excluding the SMSF sector) and for different segments of the market (such as MySuper and choice segments or product types). These will be examined over time, because average per member administration fees would be expected to decline over time in an efficient and competitive market. The analysis would also focus on the level of variation in the fees charged to members in these market segments. The analysis will also take into account other factors which may have a bearing on system-wide administration costs and fees, such as trends in the number of duplicate accounts in the system and compliance costs.

An important caveat to this analysis is the potential for products to have different levels of service quality. To address this, the Commission will explore whether there is a clear link between funds that charge higher administration fees and service quality. Private industry data collected on the service quality offered by funds (and for specific types of products) could assist this analysis. In addition, this issue could be examined on a qualitative basis, including through use of member surveys. Ultimately, an efficient system should be able to deliver both lower prices and higher quality products over time.

A fourth indicator focuses on the expected cost savings from SuperStream, a standard for electronically processing superannuation data and payments, with expectations of almost \$1 billion in savings annually (appendix H). To the extent that this has led to lower administration costs for superannuation funds (as distinct from employers), the cost savings would be expected to be passed through to members in an efficient system. To facilitate this analysis, the Commission will liaise with APRA on the information it is collecting (in SRS 711) on the number and cost of contributions transactions put through SuperStream or other methods, and with the Australian Taxation Office on the information it is reporting on its time-costs index for compliance (appendix H).

Finally, the Commission will take into account specific indicators developed to assess competition (chapter 5), most notably those examining margins between the wholesale and retail level, costs relative to assets and member bases, the pass through of benefits from economies of scale, and cost and member fee differences from outsourcing administrative and insurance services to related versus unrelated parties.

As noted in chapter 5, the quality of official system-level cost and fee data might limit the analysis of costs and fees. Given the recent revisions to APRA's reporting framework, some of these data quality problems may be resolved over time. Nonetheless, for robustness, in the stage 3 review the Commission would expect to draw on other sources of cost and fee data where they are available, such as product-level data collected from private research firms (chapter 7), and would take data quality issues into account in the interpretive narrative.

Table 6.3 Costs and fees: criterion and indicators

<i>Indicators</i>	<i>Assessment methods</i>	<i>Evidence sources</i>
Are costs incurred by funds and fees charged to members being minimised, taking account of service features provided to members?		
• Investment costs and fees across equivalent products and between market segments (input, output)	• Trend analysis	• Regulator data; industry data
• Investment management fees by asset class compared to other countries* (output)	• Trend analysis	• Industry data
• Relationship between investment fees and returns (output)	• Econometrics	• Regulator data; industry data
• Use and disclosure of performance attribution by funds (behaviour)	• Qualitative	• Surveys; case studies
• Administrative costs and fees at system level and for market segments (input, output)	• Trend analysis	• Regulator data; industry data
• Cost savings from SuperStream (output)	• Trend analysis	• Regulator data
• Relationship between level of administrative fees and quality of member services (output)	• Qualitative	• Surveys; case studies
• Costs relative to assets and member base: wholesale (by service) and retail (by segment)* (input)	• Trend analysis	• Regulator data; industry data
• Margins: wholesale (by service) and retail (by segment)* (output)	• Trend analysis	• Regulator data; industry data
• Pass through of benefits from scale economies (wholesale and retail) to members* (output)	• Econometrics	• Industry data

* Indicators marked with an asterisk are common to both competition and efficiency.

Do all types of funds have opportunities to invest in upstream capital markets?

A relevant consideration in assessing whether net returns are being maximised in the system is whether all types of funds are able to invest efficiently in upstream capital markets. Put another way, an efficiency assessment needs to consider whether there are any market or regulatory impediments to investment.

Different types of superannuation funds have different asset allocations and levels of diversification — for example, SMSFs in aggregate hold a much higher proportion of assets in cash and domestic equities than institutional funds (appendix G). Sustained differences in asset allocation between the SMSF and institutional-fund sector could be explained by member preferences (for example, a higher proportion of SMSF members are in the retirement phase).

However, such differences could also reflect the institutional structure and scale of SMSFs, to the extent that these limit SMSFs' ability to access particular types of investments on a cost-effective basis (such as international equities (hedged) and unlisted infrastructure). An assessment of this issue would also involve indicators which capture any differences in investment costs for particular asset classes (across retail and wholesale products),

minimum transaction values, and the availability of products or platforms in the market to facilitate investment pooling across investors.

Table 6.4 Upstream investment: criterion and indicators

<i>Indicators</i>	<i>Assessment methods</i>	<i>Evidence sources</i>
Do all types of funds have opportunities to invest efficiently in upstream capital markets?		
• Asset allocation in SMSFs compared to institutional funds (input)	• Trend analysis	• Regulator data
• Retail investment management costs compared to wholesale (input)	• Trend analysis	• Industry data
• Minimum transaction values (input)	• Trend analysis	• Industry data

Is the system effectively managing tax for members, including in transition?

Taxes are the biggest item to detract from net returns and ultimately member balances. While taxation policy is outside the control of the superannuation system — and hence outside the scope of this study — the way agents within the system respond to taxation rules is within scope. In other words, the Commission is planning to assess whether the superannuation system effectively manages tax. This is relevant to all phases of a member's life cycle, including as they transition to retirement.

The Cooper Review (Cooper et al. 2010b) noted a wide variation in the extent to which superannuation funds had regard to tax consequences, and identified the potential for leakage from suboptimal tax management. Since then, regulations have been amended and trustees must give regard to the expected tax consequences of their investment strategy (*Superannuation Industry (Supervision) Act 1993* (Cwlth) s. 52(6a)). It is reasonable to assume that superannuation funds have become better over time at managing tax consequences, and this issue did not feature prominently in participant feedback. Nonetheless, there is merit in looking at average effective tax rates across segments of the superannuation system to gain an insight into how well the system is managing tax.

The Commission also intends to examine take up rates of co-contributions and tax offsets, as these can have a material impact, especially on smaller balances. Take-up rates from eligible populations can also give an indicator of member engagement.

There are differences in the way tax is managed in large institutional funds (at a group level) and by individuals in SMSFs. The complexity of superannuation taxation makes it difficult to evaluate these differences and the impact they have on member balances, but each type of fund is likely to have advantages and disadvantages. These differences (even when merely perceptual) may be influencing member behaviour, and the Commission

intends to look at survey data on the extent to which tax is a motivator for setting up an SMSF.

One area in particular where differences arise is when members move into retirement (and go from paying some tax on fund earnings to zero tax). Typically, in an institutional fund, the benefit accruing from the decline in tax liabilities is spread across the entire membership base. However, SMSFs and some products offered by institutional funds (for example SunSuper (nd) and QSuper (nd)) allow individual members to capture all or some of the resulting tax benefit. The Commission will look at case study or survey evidence on whether funds target tax benefits to individual members during transition (and the administration costs incurred in doing so), and evidence for the prevalence of such practices across funds and market segments. This could be a useful indicator of how institutional funds are responding to the competitive pressures exerted by SMSFs, which may have implications for efficiency in the system more broadly.

Table 6.5 Managing tax: criterion and indicators

<i>Indicators</i>	<i>Assessment methods</i>	<i>Evidence sources</i>
Is the system effectively managing tax for members, including in transition?		
• Use of tax strategies by funds for members in transition (input)	• Qualitative	• Case studies
• Average effective tax rates across market segments (output)	• Trend analysis	• Industry data
• Tax advantages as a motivation for setting up an SMSF (input)	• Qualitative	• Surveys
• Take-up rates of co-contributions and offsets (input)	• Trend analysis	• Regulator data

6.2 The system meets member preferences and needs

A core objective of the superannuation system is that it meets member preferences and needs, in relation to information, products and risk management, over the member's lifetime (chapter 4). Assessment of this objective is closely aligned with allocative and dynamic efficiency. An efficient system would provide the products and services people most value and want, and members would make decisions in order to maximise their wellbeing. This objective is equally relevant to the accumulation, transition and retirement phases, although the specific inputs and outputs may change.

Undertaking this assessment from a system perspective is challenging in practice. The system is made up of millions of individual members, each with their own preferences and circumstances, while products and services are not homogenous (ACTU, sub. 18; ASFA, sub. 42; Dixon Advisory, sub. 23; Mercer, sub. 31). Indicators which focus on the 'median' or the 'average' user will not necessarily reflect what is allocatively efficient for all or even most members. Optimal member behaviour may also deviate from optimal system

outcomes at times (for example, minimising the risk of negative returns). Adding to these complexities, the superannuation system interacts with other areas of policy, such as taxation and regulatory arrangements, in a range of complex ways (Treasury 2014).

An assessment of this objective must therefore proceed flexibly. It is difficult, if not impossible, to assess whether *outcomes* are optimal. But the Commission can assess whether *inputs*, *processes* and *behaviours* are consistent with allocative efficiency.

In evaluating whether this system-level objective is being met, the Commission proposes to apply three assessment criteria:

- are member preferences and needs being met by:
 - minimising unpaid contributions and lost accounts
 - funds collecting relevant information to ensure their product offerings are suitable for their diverse member bases
 - the system providing high-quality information and financial advice to members to help them make decisions
 - the system providing products and information to help members optimally consume their retirement incomes
 - member balances being allocated in line with their risk preferences and needs?
- is the system using lessons from behavioural finance to design products and ‘lean’ against well-known biases in how people make decisions?
- are trustees acting in the best interests of members?

Does the system meet member preferences and needs?

There are many facets to this assessment criterion, and it involves analysing both supply and demand-side behaviours. Behaviours on the supply-side pertain to funds and fund trustees, as well as other service providers who (directly or indirectly) provide services to members. Employers can also play an important role in the supply of products to members as an intermediary, while governments, regulators and information aggregators are a further source of information about products and services. Behaviours on the demand-side pertain to the behaviour of members and their intermediaries. Many of the criteria and indicators discussed in chapter 5 are therefore directly relevant to an assessment of allocative efficiency.

A challenge in undertaking the assessment outlined below will be that while behaviours and inputs in the system can be observed, they are not necessarily measured in a systematic way.

Minimising unpaid contributions and lost accounts

Some study participants have raised issues of equity and whether the superannuation system is meeting the needs of members with low incomes or irregular work patterns (Queensland Nurses' Union, sub. 16). Most of the criteria proposed in this chapter, such as minimising costs and providing relevant information, implicitly consider these equity concerns — a system that is efficient is more likely to be fair and adequate than one that is not (chapter 4).

There are some inefficiencies that are more likely to arise with low-income members, such as unpaid or delayed Superannuation Guarantee (SG) contributions. Members with irregular work patterns may also be more likely to lose track of their superannuation. ISA (sub. 38) notes research which indicates SG non-compliance by employers is significant and it is difficult for employees to recover unpaid SG contributions. The ATO oversees if employers meet SG obligations, and can impose a range of penalties or charges for non-compliance. Regulators (as well as other system participants) also have processes to reunite members with their lost superannuation. The extent to which SG contributions are made, and in a timely way, is thus a clear indicator of system performance, as are trends in lost member accounts.

Table 6.6 Minimising unpaid contributions and lost accounts: criterion and indicators

<i>Indicators</i>	<i>Assessment methods</i>	<i>Evidence sources</i>
Are member preferences and needs being met by minimising unpaid contributions and lost accounts?		
• Unpaid Superannuation Guarantee contributions (input)	• Trend analysis	• Regulator data
• Delayed Superannuation Guarantee contributions (input)	• Trend analysis	• Regulator data
• Number and value of lost accounts (output)	• Trend analysis	• Regulator data

Do funds collect relevant information to ensure their product offerings are suitable for their diverse member bases?

In principle, the collection of relevant information from members is a key input that would enable funds to design and refine their products and services to meet the diverse needs of their member base. All funds are likely have basic information about their members, such as age, asset balance and income (to the extent it can be inferred from employer contributions). The pertinent questions are: what additional member data would be relevant for designing products, are funds collecting it and, if so, are they using it effectively?

The most relevant additional member data would likely differ depending on a member's phase in their life cycle. For example, in the *accumulation* phase, additional member data may include a member's investment risk preferences, projected retirement balance and

what ancillary member support and education services they place the most value on (Fiduciary's Friend, sub. 7). In the *transition and retirement phase* additional information relevant to the design of retirement income products becomes important, such as assets outside of superannuation and how much income the member requires in retirement (which could be influenced by health, life expectancy and household composition) (appendix D).

As far as the Commission is aware, there are no systematic publicly available data on the extent to which funds collect additional member information or how this influences their product and service design. That said, there are indications some funds are striving to find new ways to engage with members and collect additional member data (combined with techniques such as data analytics) to design more tailored default products, retirement income products and higher-quality member services (ASFA, sub. 42). Participants noted that greater tailoring of life-cycle products is currently inhibited by a lack of information about members, although barriers to the collection of more information were not elucidated (appendix D; Fiduciary's Friend, sub. 7).

As an indicator, the Commission will examine 'best practice' behaviours employed by funds to gain more relevant information about their members and how they are using it in product design. This information can be gathered from surveys and case studies. Member response rates to funds' surveys is a potential indicator of the effectiveness of information collection. The Commission will also examine any barriers to the collection of additional member data, including policy or regulatory barriers and market barriers (such as member disengagement) to provide relevant context for the analysis.

The Commission recognises that better member data and more innovative product design are not guaranteed to lead to better member outcomes. The prospect of continued evolution towards smart default products combined with high-quality intrafund financial advice may overcome some of these issues (discussed further below).

Table 6.7 Funds collecting information: criterion and indicators

<i>Indicators</i>	<i>Assessment methods</i>	<i>Evidence sources</i>
Are member preferences and needs being met by funds collecting relevant information to ensure their product offerings are suitable for their diverse member bases?		
• Information collection by funds on key member characteristics* (input)	• Qualitative	• Surveys; case studies
• Response rates to funds' member surveys (behaviour)	• Trend analysis	• Surveys; industry data

* Indicators marked with an asterisk are common to both competition and efficiency.

Does the system provide high-quality information and financial advice to members to help them make decisions?

The provision of high-quality, easy-to-understand information and education to members about products, services and risks at key stages of their life cycle (such as the transition to retirement) is a key input to better member outcomes. There are three channels through which the system provides information to members:

- *direct from a superannuation fund* — such as through product disclosure statements (PDSs), annual reports, call centres, product dashboards, annual member statements, online calculators, member education services, product advertising and intrafund financial advice services
- *direct from a central information resource* — such as rating agencies or industry research firms, or independent online resources (for example, ASIC's Retirement Income Planning sources or the financial advice line offered by National Seniors Australia (ASIC nd; NSA nd))
- *through a fee-for-service intermediary* — such as a financial adviser or accountant (the quality of these third-party services is out of scope in considering this criterion).

Members require different information at different stages. For example, early in the accumulation phase, product information about asset allocations, returns, risk and fees is most important. The information needs of members are arguably greater as they approach retirement, when members face a complex set of financial decisions (appendix D; Murray et al. 2014a ISA, sub. 38; Queensland Nurses' Union, sub. 16). Assessing most of the information about retirement income products requires proactive behaviour by members, such as the use of online calculators and education resources, or a decision to utilise financial advice.

Study participants note there have been improvements in the quality of information provided to members in recent years, such as through shorter PDSs and product dashboards for MySuper products (ASFA, sub. 42; ASIC, sub. 35; Mercer, sub. 31). However, several participants considered there is scope for improvement in multiple areas, such as more comparable information on insurance, more consistent reporting on fees and returns across a wider range of products, and more granular reporting of costs and fees (AIST, sub. 30; ASIC, sub. 35; Hartley, sub. 12; ISA, sub. 38; Third Horizon Consulting, sub. 3).

Most superannuation funds offer some level of intrafund financial advice to members, ranging from general product advice to limited forms of personal advice (ASFA, sub. 44). Participants submitted the majority of members want access to simple, lower-cost advice (rather than comprehensive advice), and that funds are embracing new technologies (such as robo-advice) to deliver these services (for example, ASFA, sub. 42). However, there is limited information on the take-up and quality of intrafund advice, with most of the published survey-based research focusing on financial advice more generally (appendix B).

The Commission proposes to assess the above criterion by using indicators on inputs to the system and observed member behaviour. First, the availability, cost and quality of information provided by the system on fees, investment risks, returns and products is an important input into the system. This could either be examined by analysing industry data or by surveying members. A complementary indicator focuses on the financial costs incurred by funds in offering various services (such as online calculators or robo-advice) to their members.

A second set of indicators focus on member behaviours and actions, such as member account monitoring activity (for example, hit rates on websites, call centre enquiries, and use of online calculators), members acting on intrafund financial advice provided by their fund, and take-up rates of co-contributions and offsets.

In interpreting these indicators, the Commission will remain mindful that the quality of information provided to members is not a panacea for better member outcomes. As noted by ASIC (sub. 35), disclosure through PDSs, product dashboards, and improved fee and cost disclosure are useful, however, these mechanisms cannot deliver investor protection and effective competition on their own. As such, other information on member engagement and financial literacy will be needed to inform interpretation. Finally, the Commission will also consider whether there are any barriers to the provision of transparent and high-quality information to members to provide relevant context for the analysis.

Table 6.8 Provision of information and advice: criterion and indicators

<i>Indicators</i>	<i>Assessment methods</i>	<i>Evidence sources</i>
Are member preferences and needs being met by the system providing high-quality information and financial advice to members to help them make decisions?		
• Availability, cost and quality of information on fees and investment risks at product level* (input)	• Trend analysis; qualitative	• Surveys; industry data
• Members acting on intrafund financial advice (behaviour)	• Trend analysis	• Surveys
• Member account monitoring activity (use of websites, call centre enquiries)* (input, behaviour)	• Trend analysis	• Surveys; industry data
• Cost of funds' member engagement activities (input)	• Trend analysis	• Surveys
• Take-up rates of co-contributions and offsets (input)	• Trend analysis	• Regulator data

* Indicators marked with an asterisk are common to both competition and efficiency.

Does the system provide products and information to help members optimally consume their retirement incomes?

From a member perspective, the ultimate outcome of the superannuation system is the retirement income they receive. The transition to retirement presents members with a new set of choices, risks and trade-offs — with the selection and utilisation of a retirement income product or products central to how these issues are managed.

At a system level, it is challenging to define what ‘optimal’ consumption of retirement income looks like. The needs and preferences of individuals are highly diverse and will be influenced by a range of factors, including retirement lifestyle expectations, the value placed on non-consumption activities (such as the ability to make bequests), personal circumstances (such as marital status or dependents), and other income sources (such as from assets outside superannuation) (ACTU, sub. 18; Dixon Advisory, sub. 23).

As such, the above criterion focuses on whether the system provides products and information to help members optimally consume their retirement income. A well-functioning and efficient market would provide retirement products that allow members to consume retirement income in a manner best suited to their individual needs and risk preferences.

Relative to the market for accumulation products, there is much less choice and higher market concentration in the retirement income product market (chapter 5 and appendix D). Most members still derive retirement income from an account-based pension (which does not provide explicit protection for longevity or sequencing risk) and the take-up of guaranteed income products is low, including by international standards (Murray et al. 2014a).

Concerns about an underdeveloped market for retirement income products in Australia have featured in several reviews of the superannuation system (for example, Cooper et al. 2010a, 2010b; Murray et al. 2014a). Most recently, a key recommendation of the Financial System Inquiry (Murray et al. 2014a) was the introduction of a default comprehensive income product for retirement to balance the objectives of flexibility, risk management and high income, and to address the inadequate use of risk pooling (appendix D).

There is currently very limited provision and uptake of longevity insurance products, and a nascent market for post-retirement life-cycle products. On the available evidence, it is challenging to draw strong conclusions as to the reasons for this and the implications for efficiency (appendix D). Individual circumstances and preferences (including for account-based pension products and lump-sum options) cannot be discounted, although suboptimal outcomes may arise due to behavioural and cognitive constraints of members. Policy distortions or barriers to the supply and take up of a more diverse range of retirement income products are also relevant. In response to the Financial System Inquiry, the Australian Government (2015a) has signalled that it will move to address some of the policy barriers to the provision and take-up of annuities which were identified.

Indicators to assess the above criterion would focus on the supply of products and information, and on observed member behaviour.

Supply of products and information

The first indicator will focus on product diversity and take-up rates for different types of retirement income products (and how this is changing over time, and compared to take up in other countries). There are recognised limitations with this type of indicator. For example, low levels of take up of annuities are not necessarily reflective of inefficiency, international comparisons may struggle to account for differences in policy settings across countries, and evidence of product evolution and pricing at the firm-level will only provide partial insights into trends across the system. As such, the interpretation of this indicator would need to be contextualised to take into account other factors which influence product diversity and take-up rates (chapter 5).

The above indicator would be complemented with a second indicator focusing on how new retirement income products are evolving. The complementary indicator would focus on the extent to which providers are seeking to discover the circumstances and preferences of current and prospective consumers and subsequently using this information to better tailor products.

To provide further context, the Commission will consider the extent to which there are market and policy barriers to retirement income product development on the supply side (for example, a lack of competition or relevant member data (appendix D)) and the demand side (for example, cognitive constraints and behavioural biases). In its stage 3 review, the Commission will also take account of the progress and impact of measures taken by the Australian Government to address policy barriers to the provision and take-up of annuities.

Drawdown rates and unclaimed superannuation

Once members reach preservation age, there are few limits in the way they can draw down their superannuation (aside from minimum drawdown requirements for account-based pensions). Of interest is evidence of how members choose to draw down their retirement income within each product category. Recent research on drawdown behaviour in the superannuation system suggests that retirees are very conservative in their behaviour, potentially to the detriment of their living standards (ACFS 2015a; PC 2015b).

The Commission proposes to examine drawdown rates and patterns as an indicator of how efficiently the system facilitates the consumption of retirement incomes. Some context will be derived from a more granular analysis of specific products and patterns. For example, comparisons could be made between actual drawdown rates and minimum drawdown rates (for account-based pensions), whether drawdown rates change for higher age categories (which would be expected), between males and females (based on different life expectancy) and whether rates change substantially when the minimum rates are adjusted (potential evidence that people are still tracking the default rather than making active choices about their consumption of income).

The Commission will also examine the magnitude and trends of unclaimed superannuation within the system. Unclaimed superannuation refers to superannuation benefits that are eligible to be withdrawn, but where the member cannot be contacted.²⁴ High and rising levels of unclaimed superannuation (and therefore members not accessing the benefits they are entitled to) would be a clear indicator of inefficiency.

Table 6.9 Retirement income: criterion and indicators

<i>Indicators</i>	<i>Assessment methods</i>	<i>Evidence sources</i>
Are member preferences and needs being met by the system providing products and information to help members optimally consume their retirement incomes?		
• Introduction of new retirement income products and development of more tailored default products* (output)	• Trend analysis; qualitative	• Surveys; industry data
• Take up of different retirement income products (output)	• Trend analysis	• Surveys; regulator data
• Drawdown rates in transition and retirement phases (output)	• Trend analysis	• Regulator data
• Unclaimed superannuation (output)	• Trend analysis	• Regulator data

* Indicators marked with an asterisk are common to both competition and efficiency.

Are member balances being allocated in line with their risk preferences and needs?

As noted in section 6.1, investment decisions involve trade-offs between risk and return. This trade-off is primarily managed through the investment strategy and asset allocation. At the system level, it is impossible to define what optimal asset allocation looks like given the diversity of preferences and circumstances of individual members. However, it is relevant to consider how the system allocates investments over the course of a member's life cycle, and how product design aims to address this.

Life-cycle and target-date investment products are aimed at addressing investment risks (including sequencing risks) that are specific to a person's age or stage in the life cycle. The intuition underpinning this strategy is the desire to minimise sequencing risk — a person's high sensitivity to short-to-medium term investment volatility on the downside as their retirement balances reach their peak and the fact they have less time to recover from negative investment returns (chapter 2).

The merits of life-cycle and target-date products are a source of ongoing debate in the literature. One concern expressed (including by participants in this study) is that in adopting a more conservative asset allocation based on age (in order to manage sequencing risk), members forgo higher investment returns, which may inhibit a member from

²⁴ For the purposes of this criterion, the Commission is interested in unclaimed superannuation for members aged 65 and over, non-member spouses and deceased members.

effectively managing other risks, such as longevity risks (CPA Australia, sub. 14; Drew Walk and Co, sub. 26).

A further set of criticisms are targeted at current product design. These include that conventional products tend to base asset allocation adjustments on age only, when a range of other factors (for example projected retirement balances) are also relevant. Others suggest that when constructing an asset portfolio for the transition and retirement stages, a focus on age is less instructive than a focus on the person's consumption needs (appendix D). Moreover, asset allocation is not the only way to manage sequencing risk; it can also be managed via product design that targets the timing of withdrawals or some transfers.

Notwithstanding the above issues, the Commission considers member age is still a useful lens for looking at asset allocation at the system level. Pertinent questions may include how is the system changing asset allocation as members get older, how significant differences in asset allocation are, and the consistency of difference across fund types and similar types of products (such as default products). This analysis may offer some insight into how the system is managing sequencing risk.

The Commission intends to apply three sets of indicators to assess the above criterion. First, it will undertake comparisons of asset allocations for specific age cohorts across different segments of the market and for different products (such as choice and MySuper products). These indicators could also be examined over time to test how asset allocation (by age) is changing within the system. In interpreting these indicators, the Commission will be mindful of key differences between market segments — for example, fund trustees may be more constrained in their asset allocation decisions with respect to choice products (where members have made an active decision) compared to default products (where trustees make these decisions) (CIFR, sub. 10; FSC, sub. 29; ISA, sub. 38).

Second, the Commission will examine the introduction of new retirement income products and the development of more tailored default products. As discussed earlier, greater customisation of products may indicate the system is moving to better align asset allocation with member risk preferences and needs.

The third indicator will focus on member awareness of investment, sequencing and longevity risks. Higher levels of awareness of these risks would tend to indicate that market outcomes are more in line with member preferences.

Table 6.10 Allocating member balances: criterion and indicators

<i>Indicators</i>	<i>Assessment methods</i>	<i>Evidence sources</i>
Are member preferences and needs being met by member balances being allocated in line with their risk preferences and needs?		
• Introduction of new retirement income products and development of more tailored default products* (output)	• Trend analysis	• Surveys; regulator data
• Asset allocations by age cohort (across different market segments and products) (output)	• Trend analysis	• Industry data; regulator data
• Member awareness of investment, sequencing and longevity risk (input)	• Qualitative	• Surveys
* Indicators marked with an asterisk are common to both competition and efficiency.		

INFORMATION REQUEST

Are there benchmarks for optimal asset allocation by age cohort? Do these benchmarks have widespread support in the financial literature?

Is the system using lessons from behavioural finance?

Individuals face many challenges and trade-offs when making long-term saving, investment and consumption decisions. Some of these arise from a combination of behavioural biases, cognitive limitations and informational constraints (appendix B). Research from behavioural finance offers insights about how even small changes to the framing of a decision, the reference point used, or the way information is provided (collectively known as ‘nudges’) can lead to disproportionately large behavioural changes (Thaler and Sunstein 2009).

To a large extent, the superannuation system already addresses behavioural biases and constraints. For example, there is extensive use of defaults for funds, investment options and insurance products. Some funds use further techniques to nudge members towards certain products or choices, such as by providing projected retirement balances or incomes on annual statements (rather than just current account balances). Study participants submitted that there is scope for funds to make greater use of such techniques (Drew Walk and Co, sub. 26; Fiduciarys Friend, sub. 7; Hartley, sub. 12; IPA, sub. 22). Further, the Financial System Inquiry (Murray et al. 2014a) recommended that funds publish retirement income projections on member statements using Australian Securities and Investments Commission (ASIC) regulatory guidance. The Australian Government (2015a) agreed to implement this recommendation where practical and cost effective.

The pertinent question in this study is whether the system is using lessons from behavioural finance to lean against systematic biases in member behaviour to promote outcomes that are in members’ best interests. Assessing this will largely rely on case study

evidence of what funds have done, the effectiveness of the intervention, and evidence of lessons being transmitted across the system more broadly. The Commission also welcomes participant input on whether there are regulatory or market impediments to the use of such practices.

Table 6.11 Behavioural finance lessons: criterion and indicators

<i>Indicators</i>	<i>Assessment methods</i>	<i>Evidence sources</i>
Is the system using lessons from behavioural finance to design products and ‘lean’ against well-known biases in how people make decisions?		
<ul style="list-style-type: none"> Funds’ application of the lessons from behavioural finance to design products, the effectiveness of fund strategies and whether lessons are being transmitted to other parts of the system (behaviour, output) 	<ul style="list-style-type: none"> Qualitative 	<ul style="list-style-type: none"> Case studies

Are trustees acting in the best interests of members?

As discussed in chapter 5, the superannuation system is characterised by various principal–agent relationships at different levels of the supply chain that can have a bearing on competitiveness. This is also relevant for efficiency. An important question is whether the system is ensuring that trustees are acting in the best interests of members — in other words, whether there is good governance within the system. In their review of the superannuation system, Cooper et al. (2010a) argued that improving governance practices and structures is key to improving member outcomes. A number of changes to governance arrangements in the system have been implemented since that review (chapter 1).

Based on the existing literature, there are two aspects of good governance that have a demonstrated impact on member outcomes (appendix H):

- effective management of conflicts of interest — including the identification, mitigation and disclosure of conflicts
- adequate capacity of trustees to act in the best interests of members — including sufficient collective skills, expertise, experience, and appropriate processes for selection, renewal and performance assessment of trustees.

In assessing these components, the Commission will have a dual focus: trustee boards and investment committees (which report to trustee boards). As SMSF trustees are also members of their own fund (and there is a much narrower principal–agent divide), the assessment will focus only on institutional funds.

There are several sources of information the Commission could draw on to inform its choice of governance indicators. For example, APRA’s and ASIC’s standards and guidelines outline what is expected from trustees on various elements of governance. APRA also regularly assesses the quality of governance in individual APRA-regulated

funds using its Probability and Impact Rating System. APRA is in the process of updating its governance standards and has signalled that it will undertake a review of director appointments and board performance assessment processes in 2016. Governance standards have also been established by others, such as the Financial Services Council and the Australian Institute of Superannuation Trustees (appendix H), with the latter initiating a review of best-practice governance in the not-for-profit superannuation sector ('The Fraser Governance Review').

Several studies have also benchmarked the quality of governance across superannuation funds using a mix of qualitative and quantitative evidence (a summary of some of these studies is provided in appendix E).

Assessing the quality of governance at a system-wide level is a complex exercise, and the Commission will draw on a range of indicators (table 6.12). The Commission will seek to leverage existing processes — such as APRA's review of director appointments and board performance assessment processes — as much as possible in both refining this assessment framework and as an input to the stage 3 review. The Commission will also draw on participant input and case study evidence. It may also consider asking specific questions on governance as part of a survey of superannuation funds (chapter 7). The Commission is aware of the potential limitations of using self-reported survey data in this type of exercise, but these can be managed through survey design and validation of results against other information sources. Regardless of the data sources, the interpretation and ultimate assessment will inevitably require a significant degree of judgment.

Table 6.12 Trustees acting in member interests: criterion and indicators

<i>Indicators</i>	<i>Assessment methods</i>	<i>Evidence sources</i>
Are trustees acting in the best interests of members?		
• Existing ratings of system-wide quality of governance* (input)	• Qualitative	• Reviews by others
• Accurate disclosure of trustee directors' and investment committee members' qualifications and relevant skills/experience, remuneration structures, and potential conflicts of interest due to related-party dealings and competing duties* (behaviour)	• Qualitative	• Reviews by others
• Contraventions of regulator governance standards by trustees, employers, service providers and financial advisers* (behaviour)	• Trend analysis	• Regulator data
• Level of skills and standard of performance for trustee boards and investment committees, including review processes* (input)	• Qualitative	• Surveys; reviews by others
• Member satisfaction and trust* (outcome)	• Trend analysis	• Surveys

* Indicators marked with an asterisk are common to both competition and efficiency.

6.3 The superannuation system complements a stable financial system

Australia's superannuation system has about \$2 trillion in assets, and accounts for a growing share of Australia's financial system. Stability of the system itself is a core objective (chapter 4). However, views on the risk to system stability differ, as do views on the relationship between the superannuation system and stability in Australia's financial system more broadly. These largely stem from different perspectives on the nature and materiality of systemic risks in the superannuation system, how they are being managed, and the interplay of competition and long-term efficiency (appendix F and H). The Commission will thus assess the extent of systemic risks in the superannuation system.

System stability is important for dynamic efficiency. As noted at the start of this chapter, the Commission will also consider changes in operational and allocative efficiency over time to assess dynamic efficiency. The Commission is also interested in who or what influences the scope for dynamic efficiency in the superannuation system. For example, the AIST (sub. 30) noted the importance of technological neutrality and a regulatory system that does not discriminate against innovation and quality improvement.

Are there material systemic risks in the superannuation system?

Based on issues raised by participants (and in the literature), the Commission will apply two indicators to assess whether there are material systemic risks in the superannuation system: market concentration in upstream service provider markets and leverage within the SMSF sector. The interpretation of these indicators will be complemented by consideration of how regulators deal with systemic risks.

Market concentration in upstream service provider markets

As noted in chapter 5, there are low levels of market concentration at the retail level of the superannuation system, as reflected by a large number of institutional funds. However, some stakeholders have expressed concern that the high level of concentration in some upstream service provider markets (such as asset consultant and custody services) is a potential systemic risk within the system over the longer term (Donald et al. 2016).

The level of market concentration in upstream service provider markets over time is a potential indicator for understanding the extent of any systemic risks in the system. However, interpretation would need to account for three factors. First, market concentration estimates can be influenced by the market boundary definitions applied to these markets, which would need to take account of insourcing and outsourcing practices (chapter 5). Second, high concentration in these specific markets may be otherwise efficient given economies of scale, and could lead to lower costs than if the market was more fragmented. Third, while firm failure at this upstream level could lead to significant

inconvenience for various funds, further analysis would be required to assess whether this creates material risks which would propagate more broadly across the superannuation system.

A qualitative understanding of the level of interconnectedness within the system (both between wholesale and retail, and across wholesale levels, of the market) could also assist with interpreting these indicators (appendix F).

Impact of risk exposure in the SMSF sector

The growth of the SMSF sector is viewed by some as a potential source of systemic risk in the superannuation system (appendix F). A key area of concern raised has been borrowing by SMSFs to fund property investments through limited-recourse borrowing arrangements (which are not available to institutional funds) and that this could, at the margin, introduce new vulnerabilities in the financial system over time. This issue was considered in the Financial System Inquiry (Murray et al. 2014a) with some participants (such as the RBA and APRA) favouring greater restrictions on SMSF borrowing. The Australian Government has commissioned the Council of Financial Regulators and the ATO to monitor this issue (appendix F).

The Commission will consider the rate of growth in the borrowing activities of SMSFs in its assessment of systemic risk. This will need to be supported by a qualitative assessment of: the potential for this activity to generate risks for other parts of the financial system, and the materiality of those risks; and the quality of reported data to inform the regulators' ability to understand and monitor these risks over time.

INFORMATION REQUEST

Are there any other indicators of systemic risks in the superannuation system that should be incorporated into the assessment of this criterion? Are there any useful indicators that capture the impact of regulation and regulators on systemic risk?

Are there any other ways the Commission could assess dynamic efficiency in the superannuation system (in addition to looking at changes over time in operational and allocative efficiency)?

Do regulators significantly influence the scope for dynamic efficiency? How can this be measured and assessed?

Table 6.13 Systemic risks: criterion and indicators

<i>Indicators</i>	<i>Assessment methods</i>	<i>Evidence sources</i>
Are there material systemic risks in the superannuation system?		
• Market concentration (Herfindahl-Hirschman Index and market shares of largest providers) in upstream service provider markets (input)	• Trend analysis	• Industry data; regulator data
• Levels of leverage in SMSFs (input)	• Trend analysis	• Regulator data

6.4 The system provides insurance that meets members' needs at least cost

Many Australians hold insurance through their superannuation. Funds are legally required to offer life and total and permanent disability (TPD) insurance with MySuper products on an opt-out basis; and other (choice) superannuation products are also commonly bundled with insurance. Members are typically able to 'top up' their insurance cover, and add income protection (chapter 2) (ASIC, sub. 35). The most prevalent types of insurance within APRA-regulated funds are life insurance, followed by TPD and income protection (chapter 2) (APRA 2016c).

The bundling of insurance within superannuation (including multiple insurance products) raises questions from an efficiency perspective. In principle, bundling could either promote efficiency (by addressing underinsurance levels in society, and/or provide members with lower premiums than they could otherwise access) or detract from efficiency (by placing people into products that do not meet their specific needs, or leading people to assume their default cover is sufficient).

The premiums members pay for insurance detract from their retirement income balances. There are, in effect, two components to the costs of insurance which may be reflected in the price paid by members: the premiums charged by insurers, and the costs funds incur in administering these arrangements (Mercer, sub. 31).

Given the majority of members are defaulted into life and TPD insurance products on an opt-out basis, two assessment criteria are relevant:

- do funds offer insurance products that meet members' needs?
- are the costs of insurance being minimised given the type and level of cover?

Do funds offer insurance products that meet members' needs?

The bundling of insurance with superannuation is *prima facie* likely to lead to allocative inefficiency.²⁵ However, study participants submitted that default insurance in superannuation is a vital mechanism for addressing underinsurance in society (for example, ASFA, subs. 42, 44; FSC, sub. 29). People may not have insurance cover for various reasons, including personal choice, behavioural biases, affordability, or a lack of quality information or advice. Several studies have estimated the size of the 'underinsurance gap' in Australia for different forms of insurance (box 6.5).

Box 6.5 Estimates of underinsurance

KPMG

KPMG (2013) was commissioned by the Financial Services Council to conduct an investigation into the level of underinsurance in Australia with respect to life insurance. The approach involved first identifying the component of Australia's population who have insurance needs (the analysis focused on employed individuals aged 18–64, who earned over \$200 per week and had dependent children and/or a partner living with them). Estimates of a desired level of insurance (in the event of death) were then compared to existing levels of insurance for this group by combining data collected from industry with survey data. The study found that the typical person targeted in the analysis required cover of \$570 000, that 19 per cent of families did not have cover, and that underinsurance levels varied significantly by age group, gender and geographical location. Australians in the 18–29 age bracket were the most underinsured for this cover.

Rice Warner

Rice Warner (2014b) was commissioned by the Association of Superannuation Funds of Australia to assess the costs of providing insurance benefits within superannuation. As part of the analysis, Rice Warner estimated the 'mean' and 'median' insurance need for life, total and permanent disability (TPD), income protection and income replacement cover compared to current insurance levels and found:

- the mean underinsurance gap (in dollar terms) was 5 per cent for (basic) life, 38 per cent for (income replacement) life, 78 per cent for TPD, and 71 per cent for income protection cover
- the median underinsurance gap (in dollar terms) was 36 per cent for (basic) life, 58 per cent for (income replacement) life, 86 per cent for TPD, and 84 per cent for income protection cover.

Rice Warner (2014b, p. 6) noted that the 'underinsurance gap is large, but would be much larger if cover was not provided through superannuation funds'.

Bundling insurance with superannuation has likely led to higher levels of cover in Australia, and there are potential spillover benefits to society where the costs of (some

²⁵ There is an extensive literature on the potential for bundling to lead to poor outcomes for consumers, and as a tool to be used for anticompetitive purposes (chapter 5). These inefficiencies can potentially become amplified in a market with compulsion and defaults.

forms of) underinsurance would otherwise be passed on to governments and taxpayers (ASFA, sub. 42). The pertinent question for designing criteria and indicators in this study is, given the default arrangements, whether the system is working as effectively as it could to meet members' insurance needs.

There are challenges in assessing this question at the system level. Funds offer different levels of default insurance cover, even within MySuper products. Members may have different insurance needs, such that 'mean' or 'median' measures do not necessarily reflect what is efficient for all or even most members (Mercer, sub. 31). And what constitutes 'optimal' cover is open to debate, even for member cohorts with similar characteristics. People may also have access to other forms of insurance outside superannuation, including self-insurance, which may not be easily accounted for in a top-down benchmarking analysis of insurance cover versus estimated needs.

To assess this criterion, the Commission will apply a mix of quantitative and qualitative indicators focused on member actions (mostly outputs) and fund activities (mostly inputs).

Observed member actions

Available data indicate that many people have the same type of insurance cover across multiple superannuation accounts (duplicate insurance policies). The persistence of duplicate insurance suggests that some people have more cover than they require and are unnecessarily eroding their retirement balance (ASIC nd; Murray et al. 2014a). This risk is greater where there is member disengagement and/or a lack of knowledge about cover, including due to poor disclosure of information (ASIC, sub. 35) (discussed below).

In an efficient system, the extent of duplicate insurance policies would be low and stable over time, or would decline as better information is provided to members and account consolidation becomes easier. There is no clear regulator or industry dataset to examine the prevalence of duplicate policies. APRA (2016c) reports data on the total number of superannuation accounts and the total number of insurance accounts, but these data cannot necessarily be linked to establish the extent of, and trends in, duplicate insurance. SMSF data are even more limited. As an alternative, member surveys could provide insights on levels and trends of duplicate insurance in the system.

The rate of insurance take up in different types of products, such as default or choice products, could also be an insightful indicator. High rates of take up in default products (combined with low opt-out rates) relative to choice products may indicate that when members exercise choice they choose less insurance. However, the results would need to be interpreted carefully and complemented with other indicators. For example, higher insurance take up in default products could in part reflect occupational differences that result in higher insurance needs. Lower take up of insurance in SMSFs may reflect their lower buying power in insurance markets, among other things.

A lack of member awareness about their type and level of insurance cover exacerbates the risk that members retain insurance within superannuation that does not meet their specific needs — either in terms of too much cover or not enough. Various surveys have found that many members are unaware of whether they have insurance through superannuation, and even those that are aware tend to lack a good understanding of their cover (appendix B). A complementary indicator of member awareness could be the level of unclaimed life insurance in the system and whether this is increasing or decreasing over time, although there is no clear regulator or industry dataset to examine this.

Fund activities

Since many members are defaulted into insurance arrangements, an important indicator of allocative efficiency is the ease with which members can opt out. In a well-functioning and efficient system these processes could be expected to be simple for members to understand, easy and quick to progress, and low cost. Members would also be able to pick and choose the insurance offerings that suit them (such as TPD without life insurance).

APRA-regulated funds are required to have a process in place for members who choose to opt out of insurance in their superannuation (APRA 2012c). However, one participant (Duckett, sub. 37) submitted that the process of opting out can be cumbersome for members. It is valid to consider qualitative evidence on how well opt-out arrangements are working in practice, including whether there are any impediments imposed by the current rules and regulations, and any evidence of funds making it overly difficult for people to opt out.

To complement the assessment, consideration will also be given to the internal processes set up by superannuation funds to administer insurance more generally (such as response times for following up queries by members), and how they compare to the service standards offered by retail insurance providers. Evidence of complaints or contraventions of regulatory standards may also provide relevant context for the analysis.

In principle, member data collected by funds should form an important input into the insurance product(s) offered to members.²⁶ In some cases, there may be scope for greater tailoring of insurance products and pricing to meet members' needs — for example, by taking into account factors such as occupation, marital status and dependents (Chant West 2014b; Rice Warner 2015, 2016a; SuperRatings 2016).

As such, the Commission will examine the nature of the information collected by funds about their members along with best practice examples of funds using member data to tailor their insurance products, and how prevalent these approaches are across the industry. This will need to be balanced against consideration of the additional costs funds incur in offering and administering more tailored insurance products, and the possibility some

²⁶ Member data are also an important input into appropriate pricing of insurance cover, hence this indicator can also provide contextual information for the cost minimisation criterion.

members would face higher premiums as a result. The difficulties of funds engaging with otherwise disengaged members also cannot be discounted.

The quality and comparability of information disclosed to members by funds about insurance is a complementary indicator for assessing whether the system is meeting members' needs. Complex products and a lack of comparable product and pricing information are potential barriers to members making informed decisions and exerting competitive pressure on the demand side (chapter 5). Study participants considered that there is scope for significant improvement in the quality of disclosure for insurance products, and noted that disclosure standards vary across funds. Insurance is not part of the MySuper product dashboard (ASIC, sub. 35).

Table 6.14 Insurance products: criterion and indicators

<i>Indicators</i>	<i>Assessment methods</i>	<i>Evidence sources</i>
Do funds offer insurance products that meet members' needs?		
• Duplicate insurance policies by insurance type (output)	• Trend analysis	• Surveys
• Rates of insurance take up in choice products and SMSFs relative to default products (output)	• Trend analysis	• Surveys; regulator data
• Member awareness of key features of their superannuation, including insurance* (input)	• Trend analysis; qualitative	• Surveys
• Level of unclaimed insurance (output)	• Trend analysis	• Surveys
• Ease of members opting out of insurance (input)	• Qualitative	• Surveys
• Time to respond to members compared to retail provider benchmarks (input)	• Qualitative; trend analysis	• Surveys; industry data
• Information collection by funds on key member characteristics* (input)	• Qualitative	• Surveys; case studies
• Use of member information by funds to target insurance products (input)	• Qualitative	• Surveys; case studies
• Comparability of insurance product information disclosed by funds* (input)	• Qualitative	• Surveys; case studies

* Indicators marked with an asterisk are common to both competition and efficiency.

Are the costs of insurance being minimised given the type and level of cover?

From 2012, trustees have been under an explicit obligation to not allow retirement outcomes for members to be unreasonably eroded by insurance premiums (APRA, sub. 32). In an efficient and competitive system, it could be expected that the costs of delivering a given type and level of insurance would be minimised as trustees seek the best deal for their members from the most competitive insurance provider.

The premiums or 'price' of insurance within superannuation are typically considered to be significantly lower than for comparable cover obtained through retail products outside of superannuation. This is attributed to multiple factors such as: tax advantages; low-cost

distribution; simple product design; and bulk purchasing (ASFA, sub. 44; ASIC nd; FSC, sub. 29; Rice Warner 2014b). However, whether insurance prices are competitive from an individual member's perspective will depend on their circumstances and risk profile; while as noted above, duplicate insurance policies can erode any cost advantage otherwise received.

Study participants and recent studies have observed that insurance premiums within superannuation increased significantly in recent years, although there was considerable variation across different types of funds (box 6.6) (APRA, sub. 32; Chant West 2014b; SuperRatings 2016). These premium increases have been attributed to a range of factors, including a market correction or 'structural adjustment' following a period of intense price competition between insurance providers, poor underwriting practices, and increased member awareness of their rights to make claims (APRA 2015d; FSC, sub. 29; Rice Warner 2014b).

The Commission proposes to assess whether the cost of insurance is being minimised using quantitative indicators focused on member insurance costs and prices, and the loss ratio (defined below).

Member insurance costs and prices

The difference in the price of purchasing insurance within superannuation compared to outside superannuation is a relevant indicator in this study. There appears to be little systematic analysis of this differential in the public domain. In principle, the differential could be measured by comparing average premiums of life or TPD insurance purchased within superannuation for a notional member (for a given account balance and age) to the costs of an equivalent product on a retail basis. An understanding of how much any price discount is explained by differences in taxation treatment will provide relevant attributional context when interpreting this indicator.

However, a challenge will be ensuring like-for-like comparisons of insurance products which are often complex and subject to variable disclosure standards within PDSs (ASIC, sub. 35; Chant West 2014b). Some comparative information on insurance products within superannuation is available — for example, APRA publishes information on insurance within MySuper products (from 2013). However, it is likely that further information would need to be sourced from industry or through surveys.

The Commission will also examine which data or rules of thumb fund trustees use to determine whether insurance premiums are unduly eroding member balances.

The costs funds incur in *administering* insurance can be considered distinct from the insurance premiums negotiated with an insurance provider. In an efficient market, the fees associated with administration would decline over time as fund scale increases, or more efficient processing systems and technologies improve cost efficiency (although this would also need to take into account the incidence of claims and differences in membership base

between funds). APRA data on ‘insurance fees’ appear to be of poor quality, and further work will be needed to clarify their suitability for the stage 3 review.

Box 6.6 Recent analyses of insurance premiums in superannuation

SuperRatings (2016) examined recent trends in insurance premiums (death and total and permanent disability or ‘TPD’ cover) within superannuation funds. It found that there had been a substantial rise in premiums over the 12 months to May 2016, with the median increase being approximately 50 per cent. However, there was variation between types of funds. For example, over the last four years, average premium increases ranged from 29–45 per cent for not-for-profit funds, compared to increases of 2–4 per cent for retail master trusts, while premiums decreased 4–6 per cent for corporate funds.

Chant West (2014b) examined differences in death and TPD cover premiums for the major industry segments and presented them in the form of indices. The analysis (based on survey data) found that:

- public sector fund premiums were the lowest, partly due to the large number of white collar workers in these funds and the use of self insurance in some cases
- group retail premiums were the highest, due to the cost of underwriting every member and the fact that adviser commissions still applied for members who joined before July 2014 in about half of these products
- industry and corporate master trust premiums were in between.

A further observation was the degree of cross-subsidisation in the non-profit sector, largely because non-profit funds have attempted to simplify their insurance premiums, grouping members together rather than charging the ‘true’ premiums for different demographics.

A further issue identified by study participants is that funds using related-party insurance providers may not be getting the best deal for their members (AIST, sub. 30; ISA, sub. 38). Earlier research by Liu and Arnold (2012) found evidence of higher cost insurance for funds that used related parties (chapter 5). That said, under prudential regulations, funds must be able to demonstrate the selection process for an insurance provider was appropriate and that the engagement of the provider was at arms length and in the best interests of members (APRA 2012c).

The Commission has proposed an indicator of the costs of insurance purchased by funds through related versus unrelated parties. Applying this indicator would require comparing premiums charged to members for similar insurance products by funds that utilise related and non-related parties, over time. The interpretation would need to examine the extent to which funds face constraints in choosing their insurance provider. As noted above, there will also be practical challenges in aligning like-for-like insurance products.

Loss ratio

A relatively simple way to measure the cost effectiveness of insurance within superannuation is comparing premiums paid to benefits received for the system as a whole

(or for segments of the market). This is known as the ‘loss ratio’ (Mercer, sub. 31), and is calculated as total claims divided by total premiums. It indicates the proportion of premiums returned to members by way of claims, and can also be viewed as a quasi-measure of provider profitability.

In an efficient insurance market, average premiums should be proportional to average claims over time (though not necessarily equivalent given other costs of providing insurance). Mercer (sub. 31) submitted that over the longer term the loss ratio is typically in the order of 85 per cent for life and TPD cover and 80 per cent for income protection cover which, in its view, reflects an efficient system which makes allowance for the insurers expenses and costs of setting aside capital to support any excess insurance claims. APRA reports data on insurance premiums and claims at the system level and by fund type, which would allow loss ratios to be calculated.

There are, however, limitations with this indicator which will need to be taken into account when interpreting results. Measures in any one year are of little interpretive value, as year-to-year measures will depend significantly on the pricing cycle, the timing of significant events and time lags between when claims are made and premiums paid out (ASFA, sub. 42; Mercer, sub. 31; FSC, sub. 29). This suggests loss ratios (for the system and across market segments) would need to be considered over a sufficiently long time period, such as 5 or 10 year periods at a minimum. Participants also noted that it may be difficult to get consistent data on (or make robust assumptions about) the percentage of claims incurred but not reported, suggesting data may not be strictly comparable across different cohorts of members and funds and would require standardisation (ASFA, sub. 42; FSC, sub. 29). Focusing on loss ratios aggregated at the system level or across market segments may overcome some of these difficulties.

Table 6.15 Costs of insurance: criterion and indicators

<i>Indicators</i>	<i>Assessment methods</i>	<i>Evidence sources</i>
Are the costs of insurance being minimised given the type and level of cover?		
• Insurance premiums inside and outside of superannuation (output)	• Trend analysis	• Industry data
• Insurance expenses (incurred by funds) (input)	• Trend analysis	• Regulator data; surveys
• Erosion of member balances due to insurance premiums (output)	• Trend analysis	• Industry data
• Ratio of claims to premium revenue (loss ratio) within superannuation over 5 and 10 year periods (output)	• Trend analysis	• Regulator data; industry data
• Fee and premium differences from outsourcing insurance services to related versus unrelated parties (output)	• Trend analysis	• Regulator data; surveys

DRAFT REPORT

This draft report is no longer open for consultation. For final outcomes of this project refer to the research report.

Draft

7 Bringing it all together

Key points

- In this study, the Commission is developing system-level objectives, assessment criteria and indicators. These are designed to be applied as part of a future review of the efficiency and competitiveness of Australia's superannuation system.
- The assessment criteria represent the questions the Commission will seek to answer, and the corresponding indicators the evidence base to draw upon, in the future review.
- Applying the criteria and indicators to review the superannuation system will be challenging. It will collectively require the synthesis of quantitative and qualitative evidence, as well as interpretation and considerable judgment, given gaps in the evidence base and potentially contradictory indicators.
- This study seeks to establish the requisite evidence base to inform the development of indicators and the later system-wide review, and in doing so identify any material issues in the efficacy of indicators or the ease of evidence collection.
- The Commission has therefore used this study as an opportunity to highlight any potentially useful additional data or research that can be obtained ahead of (or as part of) the system-wide review without creating unnecessary burdens on the superannuation system.
 - Regulators publish a large amount of administrative data on superannuation funds. Where there are gaps, the Commission will work with regulators to access data that are collected but not reported, and will seek additional information from other sources.
 - Private research firms hold considerable data on superannuation funds. The Commission will consider purchasing proprietary data where other sources are not available.
 - Surveys provide a rich source of information on members' behaviour and funds' activities. The Commission intends to draw on available survey evidence and, potentially, undertake its own surveys of members and funds as part of the future review.
 - The Commission intends to undertake the bulk of the analysis in the future review itself. However, on occasion it may also seek out analyses conducted by other parties, such as academics, research firms and regulators.
- Inevitably, not all data and information issues can be identified in advance of undertaking the actual review. The Commission will therefore need to revisit the state of the evidence base at the time of the future review and consult with relevant parties.

In this study, the Productivity Commission is developing system-level objectives and corresponding criteria (with supporting indicators) to assess the efficiency and competitiveness of the superannuation system. These criteria are designed to be applied in a future review of efficiency and competitiveness of the system, to be conducted following the full implementation of MySuper (stage 3, as set out in chapter 1).

This study is also intended to flag to the superannuation system how it will be assessed in the future review. This will provide both an opportunity for consultation now, and time for system participants and other interested parties to collect and analyse relevant evidence ahead of the full assessment.

This concluding chapter sets out the path ahead. It summarises the criteria the Commission has developed, how these can be applied in future, and the key challenges that will be involved (section 7.1). The chapter also identifies what evidence will need to be collected to inform the future review, as well as who is best placed to develop the evidence base (section 7.2). It finishes with the overall assessment framework (section 7.3).

7.1 The Commission's assessment methodology

Developing assessment criteria

The first step in this study has been to define system-level objectives for the superannuation system. These are specific objectives from the perspective of the competitiveness and efficiency of the system, and which are linked to the Australian Government's overarching policy objective for superannuation ('to provide income in retirement to substitute or supplement the Age Pension').

The second step has been to develop one or more assessment criteria that relate to each system-level objective. These criteria are conditions that the superannuation system would be expected to meet if it was achieving the relevant objective. Essentially, the criteria represent characteristics of a competitive and efficient superannuation system which are under the control or influence of parties within the system. They are intended to be broad in scope and flexible enough to accommodate changes in the superannuation system over time.

The third step has been to propose a set of specific, corresponding indicators that can be used in future to evaluate whether the assessment criteria are being met. Both quantitative and qualitative indicators have been identified. These have been designed to reflect the corresponding assessment criteria and system-level objectives as closely as possible, given the constraints imposed by:

- evidence — where evidence of outcomes is unlikely to be available, indicators focus on behaviours, outputs and inputs for which evidence exists (or could feasibly be collected)
- attribution — where outcomes or outputs are influenced by factors outside of the superannuation system's control, indicators focus on behaviours and inputs that can be linked to the outcomes (where possible)
- measurability — some aspects of competitiveness and efficiency are difficult or impossible to measure in a quantitative way; in these cases, qualitative indicators have been constructed.

In developing assessment criteria and corresponding indicators, the Commission has taken current policy settings as given. This has been done by excluding some outcomes that are beyond the system's influence, and by recognising the influence of external factors when proposing criteria and indicators. The Commission has also sought to strike a balance between specificity and flexibility. As far as possible, the indicators are intended to be flexible to changes in market structure, policy settings and the evidence base over time.

Summary of objectives, assessment criteria and indicators

The system-level objectives, assessment criteria and indicators that have been developed throughout this report are summarised in the two tables in section 7.3. The majority of assessment criteria and indicators relate to the products offered by superannuation funds, their performance and how well they meet members' needs. Associated indicators relate to upstream suppliers (such as administrators, asset managers and asset custodians) and to the provision and uptake of insurance. Other criteria and indicators are focused on members themselves (and their intermediaries), including their behaviour and extent of interaction with the superannuation system.

There are four main types of indicators: input and process indicators, output indicators, behaviour indicators and outcome indicators. The majority of indicators are based on inputs and outputs, driven to a large extent by what aspects of superannuation are relatively more straightforward to measure and assess.

There is a mix of quantitative and qualitative indicators. Relevant empirical data are available and can provide objective and specific evidence for some indicators (for example, long-term net returns). Quantitative indicators can be assessed by examining trends over time, or through more sophisticated econometric techniques. Such indicators can also be benchmarked (for example, against other countries or sectors).

However, in other cases suitable data do not exist or quantitative measures may not reflect all relevant aspects of performance (for example, the tailoring of retirement products to members). Qualitative assessments will be essential for applying these kinds of indicators. And, as discussed below, judgment will be a key part of how such indicators are interpreted.

Finally, there is an inevitable overlap between the assessment criteria and indicators set out for competition and efficiency. As explained in chapter 4, competition and efficiency often go hand in hand: healthy competition is generally a good indicator of efficiency. Where competition indicators can provide insights into efficiency, these will also be applied to assessment criteria relating to efficiency (and vice versa). However, sometimes there can be trade-offs between competition and efficiency — for example, rising market concentration may be an outcome of competition, but may not be in the interests of long-term efficiency if it increases systemic risks. The ultimate assessment will need to weigh up all the different elements that lead to an efficient and competitive superannuation system.

Undertaking the assessment

Collectively, the assessment criteria and indicators developed in this report are intended to provide a detailed picture of competitiveness and efficiency within the superannuation system, both at a given point in time and over time. However, applying the indicators to draw conclusions about the superannuation system overall will be challenging.

Good evidence will be crucial. A large amount of data and research already exist on Australia's superannuation system. However, some data are collected but not made public, some data are only available over a short time horizon, some data are not of appropriate quality, some evidence is dated, and some aspects of system performance are not currently measured. New evidence will be required (section 7.2). There may also be scope to rely on proxy measures where an indicator cannot be directly measured or applied.

Importantly, the indicators alone will not always paint a complete picture. Sometimes the correct interpretation will be ambiguous. To give one example, an indicator that shows declining long-term trends in costs could reflect strong competition in the superannuation system, but could also be consistent with funds focusing on more easily managed investments at the expense of long-term net returns (thereby compromising efficiency).

In cases such as this, supplementary evidence and judgment will be needed. This will be especially important where an indicator could have multiple explanations, there are data quality problems or performance could be subject to factors outside the system's control (such as policy settings). On occasion, a more 'in depth' examination of an indicator or criterion will be required — for example, by looking at a range of contextual evidence or by applying the indicator for different member or industry sub-groups. In other cases, indicators may be contradictory — for example, where one indicator suggests an increase in efficiency but another implies a decrease. This highlights the importance of interpreting indicators collectively, rather than in isolation, and of exercising judgment in drawing conclusions.

Finally, the assessment criteria and indicators need to be considered as a whole. While some indicators will be more significant than others, no single indicator will be determinative of overall performance against an objective. Ultimately, drawing conclusions based on the suite of indicators will require the synthesis of both quantitative and qualitative evidence, as well as considerable judgment.

7.2 What evidence is needed?

In undertaking the future review of Australia's superannuation system (stage 3), the Commission envisages relying predominantly on three types of evidence: its own analysis (based on currently available data and evidence), analysis obtained from other sources (including inquiry participants), and new evidence to be collected following the current study (chapter 3).

This study seeks to establish the requisite evidence base to inform the development of indicators and the later system-wide review, and in doing so identify any material issues in the efficacy of indicators or the ease of evidence collection. Accordingly, this study is intended to highlight any potentially useful additional data or research that would inform the future review, and to outline how new evidence will be sought without creating unnecessary burdens on the superannuation system.

In undertaking the future review, the Commission will draw on a range of available data and research. This includes:

- quantitative measures of fund performance — including product offerings, costs, fees, investment returns, insurance arrangements, supplier relationships and regulatory compliance
- qualitative evidence of fund behaviour — including governance arrangements, supplier relationships, market conduct, product development and tailoring, member engagement and information disclosure
- evidence of fund members' behaviour, attitudes, preferences and opinions — including member engagement with superannuation, fund switching and consolidation, insurance cover, use of information and financial literacy
- measures of regulatory compliance and impact — including funds' compliance activities and breaches of relevant regulations
- benchmark measures for comparison — including benchmark returns for specific asset classes and specific investment management fees in other countries.

The tables in section 7.3 set out the assessment methods and evidence sources that the Commission envisages using as part of its future review. Table 7.1 provides an illustrative overview of what evidence is currently available (either wholly or partially) and where additional data or research will need to be obtained (because it is not available, or because what exists is not of sufficient quality). Obtaining additional evidence will sometimes require accessing data that have already been collected (for example, by regulators or private research firms) but have not been made public. In other cases, the Commission may need to gather its own data, such as through surveys of members or funds, or initiate its own research. The following sections discuss potential sources of evidence in greater detail.

Table 7.1 Evidence needed for the stage 3 review: summary

<i>Topic</i>	<i>State of the evidence (in public domain)</i>	<i>Additional evidence required</i>
Investment returns	Reasonably complete data on historical net returns at system level, for SMSF sector, individual APRA-regulated institutional funds, and MySuper products (though figures for APRA-regulated institutional funds and SMSFs may not be directly comparable). Good data on long-term returns for asset class benchmarks and some funds in other countries.	Historical long-term net returns by asset class at the system level (for benchmarking). Historical long-term net returns for specific product classes (default, choice).
Asset allocation	Reasonably complete data on actual asset allocations (for APRA-regulated institutional funds and SMSF sector) and strategic asset allocations (for MySuper products).	Actual asset allocation at product level (for choice products). Asset allocations by age cohort.
Costs and fees	Data on costs and fees by category for APRA-regulated institutional funds (and expenses for SMSFs) at system level, though data may be subject to gaps, inconsistencies or misreporting. Data on fee discounts for corporate MySuper products. One-off reviews of quality of fee disclosure by funds. Limited data on fund expenses with related/unrelated parties. Some data on investment management costs and fees in other countries (for benchmarking). Some data on cost savings from SuperStream. Data on investment management fees by size of investment, including minimum transaction values.	Historical data on fees charged at a product level (including legacy products). Fee dispersion between and within products (within and across funds). Indirect investment costs at a system and product level. Structure of fees and costs for individual products. Costs and fees associated with outsourcing to related/unrelated parties. Costs and margins at system, market segment and wholesale service levels. Fund expenditure on marketing, member retention and member engagement. Fund and product switching costs. Quality of disclosure of fees and investment risks.
Market share	Good time series data on market shares (membership and funds under management) of individual APRA-regulated institutional funds (and SMSF sector as a whole) over time, and on entry/exit of funds. Ad hoc and anecdotal evidence of specific barriers to entry.	Concentration in upstream markets. Height of barriers to entry arising from default rules and market impediments to funds accessing distribution channels. Impacts of the APRA scale test.
Governance and regulation	Some simple measures of board composition. One-off surveys and reviews of fund governance practices. Few systematic data on regulatory compliance activities of APRA, ASIC or ATO. Dispersed information (from trust deeds) on whether individual funds are required to outsource to related party providers.	Specific measures of board and investment committee capability (including disclosure) and conflict-of-interest management. Processes funds use to make outsourcing decisions. Contraventions of governance standards and inducements rules. Mergers prevented by bulk transfer rules.

(continued next page)

Table 7.1 (continued)

<i>Topic</i>	<i>State of the evidence (in public domain)</i>	<i>Additional evidence required</i>
Insurance	Some fund-level and aggregated data on insurance premiums, claims and administrative costs/fees, though data may be subject to gaps or misreporting. Some detailed data on insurance provided through MySuper products, including member characteristics.	Insurance expenses and loss ratios at system level. Levels of insurance cover across choice and SMSF segments. Ability of members to opt out of insurance. Types of information funds collect from members, and provide to members, to target insurance. Level of unclaimed insurance. Insurance premiums outside of superannuation. Time to respond to members (insurance via superannuation and retail channels).
Fund behaviour	Ad hoc (case study) evidence on information funds collect on members. Limited evidence on development of retirement income products. Limited evidence on quality of administration services at system level. Aggregate data on amount of tax paid by individual APRA-regulated institutional funds. Limited data on use of tax strategies by funds for members in transition.	Types of information that funds collect on members and response rates to funds' member surveys. Cost and take-up of retirement income products. Quality of administration services. Funds' use and disclosure of performance attribution analysis. Fund strategies to manage tax liabilities. Amount of tax paid by SMSFs. Use of behavioural finance in product design (case studies). Evaluations of strategies used to engage members or tailor products.
Member behaviour	Some data on account consolidation over time. Limited evidence on use of financial advisers and intra-fund advice. Ad hoc evidence on member account monitoring activity. Ad hoc survey evidence on switches between funds and investment options, and switches to/from SMSFs. Some evidence on drawdown behaviour in retirement. Good aggregate data on voluntary consumption of services, unclaimed superannuation and take-up rates of co-contributions and offsets.	Member account monitoring activity and active member ratios (at system level). Default and switching rates for funds, investment and retirement income products, and insurance. Member awareness of investment, sequencing and longevity risk. Overlapping insurance cover inside and outside of superannuation. Existence and consolidation of duplicate insurance policies. Rate of insurance take-up across market segments.
Member attitudes	Ad hoc survey metrics on financial literacy, member engagement, member satisfaction and trust, and member awareness of key features of their superannuation.	Member knowledge, engagement and behaviour, especially in relation to insurance.
Other	Data on leverage in SMSFs in aggregate. Data on unpaid and delayed employer contributions, and on number and value of lost accounts.	Capacity and willingness of employers to select a default fund.

In drawing together relevant data and evidence for the future review, a guiding principle will be to use information that is already collected from the sector as much as possible. Where data are collected but not publicly reported, the Commission will seek access to such data (and take necessary measures to protect confidentiality). Where there are data quality problems (such as missing values), data may still be used (subject to qualifications) provided they are fit-for-purpose.

New data or evidence will be sought only where it is feasible to collect within the short to medium term (that is, within the timeframe of the future review) and the benefits of collection are likely to exceed the costs.

While the availability of much data is already clear, the full extent of data availability and quality will not become apparent until the future system-wide review. There could also be changes in data quality or reporting practices in the meantime that impact the usefulness of data. And ultimately there may be some specific data gaps that cannot be overcome, meaning that other information needs to be drawn on to reach conclusions.

In a number of instances, data from multiple sources may need to be combined to create a reasonably complete picture. Where multiple sources of data may exist, these can be used to cross-check data sources to gauge the robustness of the results (for example, regulators and private research firms both report on the fees and returns of specific superannuation products). Discrepancies would flag areas where further investigation is warranted.

Regulator data

A large amount of administrative data on the superannuation system is already collected by regulators. Specifically, the Australian Prudential Regulation Authority (APRA) collects and reports detailed data on individual institutional superannuation funds, including their assets, investments, returns, costs and number of members, among other things. Such data on institutional funds are published in aggregate on a quarterly basis and for individual funds on an annual basis. APRA has also reported on individual MySuper products since September 2013, including detailed fee information. APRA regularly reviews and updates its reporting standards.

In addition, the Australian Taxation Office (ATO) collects and reports data on self-managed superannuation funds (SMSFs), including account balances, investment allocation and some member characteristics (such as age and gender). It also holds data on account consolidation and 'lost' superannuation balances. Further, the ATO publishes aggregate statistics on institutional funds and SMSFs annually, as well as a sample file of data from individual taxation returns (covering 2 per cent of taxpayers).

As regulators, APRA, the ATO and the Australian Securities and Investments Commission (ASIC) also hold some information about their compliance and enforcement activities. This includes data on contraventions of regulations as well as one-off reviews that have

been undertaken on particular themes (such as institutional fund governance). Some of this information is not publicly released.

A further source of data from regulators (and government departments) is Regulatory Impact Statements, Post Implementation Reviews and performance reporting. These sources may contain useful evidence, especially in terms of the impact of current regulations on the performance of the superannuation system (chapter 5).

While datasets held by APRA and the ATO cover many of the indicators set out in this report, further refinement may be necessary to address specific gaps or areas where there are problems with data quality. In some cases, data have only recently started to be reported and comparable figures for past periods are not published (APRA, sub. 32). There may also be instances of missing data and cost misattribution in some APRA system-level datasets (chapter 5).

The Commission intends to work with APRA and the ATO in the course of the future review to clarify data definitions, understand how data could be made more comparable, and access data that are already collected but not publicly reported. This may include more disaggregated data on superannuation funds than are currently released, subject to legal requirements to protect confidentiality and privacy. The Commission will also consult with APRA to better understand the methodology used for the scale test and to draw on its thematic review of director appointments and board performance assessment processes (appendix H).

Where there are key data gaps that cannot be addressed in this way — such as specific aspects of fund performance or behaviour — the Commission intends to draw on data from other sources, such as private research firms and surveys (discussed below).

Industry data

Superannuation funds themselves produce, collect and report a substantial amount of data, including through marketing material, product disclosure statements and annual reports. In addition, private research firms collect and analyse a large amount of data, drawing on fund disclosures, regulator datasets, their own proprietary surveys and other sources.

These kinds of industry data provide an especially rich source of information on some aspects of the superannuation system. Among other things, these data cover investment performance and fees at the individual product level, and the development and sale of retirement income products.

As part of the future review, the Commission will explore the possibility of constructing its own datasets by drawing on product disclosure statements, annual reports and other information disclosed by individual funds. However, such a task will be challenging, given the dispersed nature of these data and differences in reporting methods. In addition, some

funds report data about their products and performance in a more detailed and/or timely way than others.

On occasion, individual superannuation funds have made their member account data available to academic researchers (on a confidential basis). This has allowed researchers to examine the behaviour of individual members over time and other phenomena (such as asset allocations by age cohort) that are not possible to investigate using data published by regulators. However, there is a risk that any conclusions drawn from these data are germane to the individual fund's member base, which may not be representative of Australian superannuation members at large. On this basis, the Commission would prefer to use system-wide data (across multiple funds) to inform the future review, rather than member account data sourced from individual funds.

At this stage, the Commission sees merit in purchasing proprietary data held by private research firms to inform its assessment of investment returns, fees and costs, where such data have wide coverage over the system and are not otherwise available. These firms may also hold data relevant to indicators on insurance, upstream supply relationships, retirement income products and other aspects of the superannuation system. Some may also hold relevant data on fund investment performance and costs in other countries, which could prove useful for benchmarking exercises. (The Commission will consider purchasing data from research firms in other countries.)

There are several benefits to purchasing proprietary data. Many research firms hold large amounts of data covering long time periods (including data that are only partially included in regulator datasets). Much of the data have been drawn from industry surveys or individual fund disclosures, which would be difficult and time consuming to replicate (and likely impossible to do so retrospectively). Further, many private research firms have devoted considerable effort to cleaning up data to improve comparability across funds and over time (especially in terms of fees and returns).

Where appropriate, the Commission may also outsource analysis to organisations that own proprietary data. This will mainly be considered where confidentiality restrictions mean that the Commission cannot directly analyse fund-level or product-level data itself.

Survey data

Many aspects of the superannuation system are incompletely represented — or not captured at all — in most regulator and industry datasets. This includes the behaviour and attitudes of fund members, members' insurance arrangements across different funds and insurers, the collection and use of member data by superannuation funds, and how people draw down their balances in retirement. Surveys are often the best available tool to glean insights into these kinds of topics.

Member surveys

Past surveys of superannuation members have collected many kinds of information that could directly inform some of the Commission's indicators. This includes member engagement, financial literacy, awareness of funds and products, investment behaviours, default and switching behaviour, and the take-up of specific retirement income products (appendix B). While some surveys have been periodic exercises (annual or biannual), others have been ad hoc and only provide results at a single point in time. Few longitudinal surveys have asked questions about superannuation.

Surveys offer a large degree of flexibility to obtain information about superannuation members. Surveys are a particularly valuable source of evidence on how well Australians engage with the superannuation system and their motivations for engagement and making decisions. More broadly, surveys have been instrumental in developing a detailed understanding of financial literacy in Australia over the past two decades (Worthington 2013).

The Commission sees merit in conducting (or commissioning) its own survey of fund members (including SMSF members) as part of the future review. This would provide an opportunity to collect evidence on member attitudes and behaviours in a consistent manner, as well as to gather evidence on specific topics that have not been widely covered in past surveys (such as fund service quality, insurance coverage and fund/investment switching costs). The results could be compared to past surveys as a validity check and to identify changes over time.

Any decision about whether to conduct a new survey will not be made until the time of the future system-wide review. It is possible that, in the meantime, surveys conducted by others may cover specific indicators of interest to the Commission.

Superannuation fund surveys

There could also be benefit in surveying superannuation funds. This would be a useful way to gather data on residual indicators that are not currently reported to regulators or collected by private research firms, and to collect evidence relevant to specific qualitative indicators in the Commission's assessment framework.

A fund survey would provide an opportunity to collect information on upstream supply relationships, product development, fund behaviour (such as the information funds gather on their members) and regulatory compliance. It would also provide scope to ask funds specific questions about their governance arrangements and risk management practices. Further, such a survey may prove a useful means to better understand how funds select insurance products and target these to individual members (including the prevalence of bundling).

Such a survey could potentially build on earlier surveys of funds by APRA, such as the surveys on historical investment performance and governance arrangements conducted in 2006 (Liu and Arnold 2010b). While it would inevitably impose costs on funds (for example, the time required to collate data and respond to the survey), the survey would be voluntary and the Commission would seek to minimise burdens on funds by following the processes set by the Australian Government's Statistical Clearing House (NSS 2016). The survey results could be de-identified in ways that protect the confidentiality of individual funds. As with a survey of members, any decision on whether to proceed with a survey of funds would be made as part of the future review.

Empirical and qualitative research

Data do not provide conclusions on their own. Analysis is required to extract meaningful evidence. The Commission intends to undertake the bulk of the analysis for the future review itself. However, on occasion it may also seek out analyses conducted by other parties, such as academics, research firms and regulators.

Empirical and qualitative research will be key inputs to the future review. Much research on Australia's superannuation system has already been conducted — and continues to be conducted — by academics, regulators, private research firms and others.

Recent examples from academia include an analysis of the supply relationships of 200 superannuation funds (Donald et al. 2016), a study of why people choose default funds and investment products (Butt et al. 2015), and research on the characteristics of people that choose to set up an SMSF (Bird et al. 2016). These and other research projects have been sponsored by research institutions that focus on superannuation, including the Centre for International Finance and Regulation, the Australian Centre for Financial Studies and the CSIRO–Monash Superannuation Research Cluster.

The Commission will draw on the existing body of research in gathering evidence for particular criteria and indicators and in interpreting this evidence. It will also undertake its own analysis using data and evidence gathered from the sources listed earlier. In some of these cases, specialist expertise or resources are likely to be required to undertake a detailed assessment, and such analyses may be sought from others. The way forward will be decided as part of the future system-wide review, and will be informed by new research conducted by others in the meantime.

Participant input

In keeping with the Commission's well-established consultation and evidence-gathering processes, the Commission will draw on information it receives from inquiry participants as part of the future review. This could include quantitative or qualitative evidence, as well as views on the performance of the superannuation system, appropriate assumptions to use

in empirical work (such as econometric analysis) and ways to address specific data challenges.

At this stage it is difficult to definitively and comprehensively state where existing evidence sources are likely to prove sufficient for the future review and where further evidence will need to be collected or purchased. In some cases, it may simply not be possible to obtain the desired evidence (for example, where data were not collected in the past), and other indicators may need to be used instead. In other cases, the available data may not be sufficiently complete or of good enough quality to lead to robust conclusions (as set out in table 7.1), and thus further evidence will need to be sought.

Inevitably, not all data and information issues can be identified in advance of undertaking the actual review. The Commission will therefore need to reassess the state of the evidence base at the time of the future review and consult with relevant parties.

In the meantime, the Commission requests study participants' views on the feasibility of applying the assessment criteria and indicators set out in this draft report — as well as on specific aspects of the evidentiary requirements — as it prepares the final report for this current study (stage 1). Submissions should be provided to the Commission no later than **9 September 2016**.

There will be opportunities to make submissions to the stage 2 and stage 3 projects as part of future consultation processes. The Commission intends to release an issues paper for the stage 2 inquiry (developing alternative models for a formal competitive process for allocating default fund members to products) in late September 2016.

INFORMATION REQUEST

What other sources of data and evidence could be used to report on the assessment criteria and indicators the Commission has developed? What are the strengths and weaknesses of these sources? What new sources of evidence should be pursued to supplement what is already available?

7.3 Competitiveness and efficiency of the superannuation system: proposed assessment framework

Competition: system-level objective, assessment criteria and indicators

Assessment criteria	Indicators	Assessment methods	Evidence sources
Objective: Competition in the superannuation system that drives efficient outcomes for members through: <ul style="list-style-type: none"> a market structure and other supply and demand-side conditions that facilitate rivalry and contestability suppliers competing on aspects of value to members across the accumulation, transition and retirement phases 			
Is there sufficient member engagement to exert competitive pressure?	<ul style="list-style-type: none"> Member account monitoring activity (use of websites, call centre enquiries)* (input, behaviour) Member awareness of key features of their superannuation, including insurance* (input) Active member ratio (input) Switching rate between and within default and choice funds and between institutional funds and SMSFs, by age and wealth (behaviour) Default rates for funds, investment and retirement income products, and insurance (behaviour) Duplicate accumulation accounts and insurance policies (output) Information collection by funds on key member characteristics* (input) 	<ul style="list-style-type: none"> Trend analysis Trend analysis; qualitative Trend analysis Trend analysis Trend analysis Trend analysis Qualitative 	<ul style="list-style-type: none"> Surveys; industry data Surveys Surveys; industry data Surveys; regulator data Surveys Surveys Surveys; case studies
Are members and member intermediaries able to make informed decisions?	<ul style="list-style-type: none"> Availability, cost and quality of information on fees and investment risks at product level* (input) Financial literacy and numeracy compared to an 'adequate' standard (input) Use of advisers by members and/or member intermediaries (input) Capacity and willingness of employers to select a default fund (input) 	<ul style="list-style-type: none"> Trend analysis; qualitative Trend analysis Trend analysis Qualitative 	<ul style="list-style-type: none"> Surveys; industry data Surveys Surveys Reviews by others

(continued next page)

Competition (continued)

<i>Assessment criteria</i>	<i>Indicators</i>	<i>Assessment methods</i>	<i>Evidence sources</i>
Is there low market segmentation along member engagement lines?	<ul style="list-style-type: none"> • Fund expenditure on member retention relative to overall marketing expenditure (input) • Fee dispersion (between default and choice products, comparable products within a fund, and within products) (output) 	<ul style="list-style-type: none"> • Trend analysis • Trend analysis 	<ul style="list-style-type: none"> • Surveys • Industry data
Do active members and member intermediaries have sufficient countervailing power?	<ul style="list-style-type: none"> • Fund and product switching costs (administrative, search and learning costs) (input) • Size of the SMSF sector (funds and members) relative to institutional sector (output) • Switching rate from institutional funds to SMSFs (behaviour) • Changes in market shares of funds (output) • Corporate fee discounts (output) 	<ul style="list-style-type: none"> • Trend analysis • Trend analysis • Trend analysis • Trend analysis • Trend analysis 	<ul style="list-style-type: none"> • Surveys; industry data • Regulator data • Surveys; regulator data • Regulator data • Regulator data; industry data
Are principal-agent problems being minimised?	<ul style="list-style-type: none"> • Existing ratings of system-wide quality of governance* (input) • Accurate disclosure of trustee directors' and investment committee members' qualifications and relevant skills/experience, remuneration structures, and potential conflicts of interest due to related-party dealings and competing duties* (behaviour) • Contraventions of regulator governance standards by trustees, employers, service providers and financial advisers* (behaviour) • Level of skills and standard of performance for trustee boards and investment committees, including review processes* (input) • Member satisfaction and trust* (outcome) 	<ul style="list-style-type: none"> • Qualitative • Qualitative • Trend analysis • Qualitative • Trend analysis 	<ul style="list-style-type: none"> • Reviews by others • Reviews by others • Regulator data • Surveys; reviews by others • Surveys
Is there rivalry among incumbent providers?	<ul style="list-style-type: none"> • Market concentration (Herfindahl-Hirschman Index and market shares of largest providers) (output) • Number of institutional funds (input) 	<ul style="list-style-type: none"> • Trend analysis • Trend analysis 	<ul style="list-style-type: none"> • Regulator data • Regulator data

(continued next page)

Competition (continued)

<i>Assessment criteria</i>	<i>Indicators</i>	<i>Assessment methods</i>	<i>Evidence sources</i>
Is the market contestable?	<ul style="list-style-type: none"> • Height of barriers to entry — effect of default rules on market entry (input) • Height of barriers to entry — market impediments to funds accessing distribution channels (input) • Mergers prevented by bulk transfer rules (behaviour) • New entries into and exits from the market (behaviour) • Capacity and willingness of employers to select a default fund (input) • Prosecutions of fund trustees for contraventions of SIS Act on inducements (output) 	<ul style="list-style-type: none"> • Qualitative • Qualitative • Trend analysis; qualitative • Trend analysis • Qualitative • Trend analysis; qualitative 	<ul style="list-style-type: none"> • Surveys; case studies • Surveys; case studies • Surveys; case studies • Regulator data • Reviews by others • Regulator data
Are there material anticompetitive effects of vertical and horizontal integration?	<ul style="list-style-type: none"> • Alignment in the structure of member fees and underlying costs (output) • Proportion of funds required (by trust deed) to outsource to related-party providers (input) • Process used by funds to make outsourcing decisions (input) • Cost and member fee differences from outsourcing administrative and insurance services to related versus unrelated parties (output) • Transparency and efficacy of fee disclosure by funds, including for distinct services (behaviour) 	<ul style="list-style-type: none"> • Econometrics • Trend analysis • Qualitative • Trend analysis • Qualitative 	<ul style="list-style-type: none"> • Regulator data; industry data • Surveys • Surveys; case studies • Surveys • Surveys; reviews by others
Do funds compete on costs?	<ul style="list-style-type: none"> • Costs relative to assets and member base: wholesale (by service) and retail (by segment)* (input) • Margins: wholesale (by service) and retail (by segment)* (output) • Investment management fees by asset class compared to other countries* (output) • Alignment of the structure of member fees and underlying costs (output) • Transparency and efficacy of fee disclosure by funds, including for distinct services (behaviour) 	<ul style="list-style-type: none"> • Trend analysis • Trend analysis • Trend analysis • Econometrics • Qualitative 	<ul style="list-style-type: none"> • Regulator data; industry data • Regulator data; industry data • Industry data • Regulator data; industry data • Surveys; reviews by others

(continued next page)

Competition (continued)

<i>Assessment criteria</i>	<i>Indicators</i>	<i>Assessment methods</i>	<i>Evidence sources</i>
Are economies of scale utilised and the benefits passed through to members?	<ul style="list-style-type: none"> • Unused scale economies at wholesale level (administration and investment management) and at retail level (output) • Effectiveness of scale test (number of fund consolidations and magnitude of realised benefits) (output) • Mergers prevented by bulk transfer rules (behaviour) • Pass through of benefits from scale economies (wholesale and retail) to members* (output) • Improvements in service quality in administration due to growing scale (output) • Increased diversification due to growing scale (input) 	<ul style="list-style-type: none"> • Econometrics • Trend analysis; qualitative • Trend analysis; qualitative • Econometrics • Qualitative • Econometrics • Trend analysis 	<ul style="list-style-type: none"> • Regulator data; industry data • Regulator data • Surveys; case studies • Industry data • Surveys • Regulator data; industry data • Surveys
Do funds compete on relevant non-price dimensions?	<ul style="list-style-type: none"> • Fund marketing expenditure (size, composition and share of operating expenses) (input) • Information collection by funds on key member characteristics* (input) • Availability, cost and quality of information on fees and investment risks at product level* (input) • Comparability of insurance product information disclosed by funds* (input) • Member awareness of key features of their superannuation, including insurance* (input) 	<ul style="list-style-type: none"> • Qualitative • Trend analysis; qualitative • Qualitative • Trend analysis; qualitative 	<ul style="list-style-type: none"> • Surveys; case studies • Surveys; industry data • Surveys; case studies • Surveys
Is there innovation and quality improvement in the system?	<ul style="list-style-type: none"> • Declining number of products over time (accumulation) (output) • Introduction of new retirement income products and development of more tailored default products* (output) 	<ul style="list-style-type: none"> • Trend analysis • Trend analysis; qualitative 	<ul style="list-style-type: none"> • Regulator data • Surveys; industry data
Are outcomes improving at the system level?	<ul style="list-style-type: none"> • Growing voluntary consumption of superannuation services (investment, retirement products, advice, insurance) (output) • Member satisfaction and trust* (outcome) 	<ul style="list-style-type: none"> • Trend analysis • Trend analysis 	<ul style="list-style-type: none"> • Regulator data • Surveys

* Indicators marked with an asterisk are common to both competition and efficiency.

Efficiency: system-level objectives, assessment criteria and indicators

Assessment criteria	Indicators	Assessment methods	Evidence sources
Objective: The superannuation system maximises net returns on member contributions and balances over the long term			
Are net investment returns being maximised over the long term, taking account of service features provided to members?	<ul style="list-style-type: none"> Long-term (5, 10 and 20 year) historical net returns from the system and market segments compared to benchmarks (output) Long-term (5, 10 and 20 year) historical net returns to specific asset classes at system level compared to asset-class benchmarks (output) Dispersion of funds and products from a frontier of best-performing funds and products (based on historical long-term net returns) (output) 	<ul style="list-style-type: none"> Trend analysis Trend analysis Econometrics 	<ul style="list-style-type: none"> Regulator data; industry data Industry data Regulator data; industry data
Are costs incurred by funds and fees charged to members being minimised, taking account of service features provided to members?	<ul style="list-style-type: none"> Investment costs and fees across equivalent products and between market segments (input, output) Investment management fees by asset class compared to other countries* (output) Relationship between investment fees and returns (output) Use and disclosure of performance attribution by funds (behaviour) Administrative costs and fees at system level and for market segments (input, output) Cost savings from SuperStream (output) Relationship between level of administrative fees and quality of member services (output) Costs relative to assets and member base: wholesale (by service) and retail (by segment)* (input) Margins: wholesale (by service) and retail (by segment)* (output) Pass through of benefits from scale economies (wholesale and retail) to members* (output) 	<ul style="list-style-type: none"> Trend analysis Trend analysis Econometrics Qualitative Trend analysis Trend analysis Qualitative Trend analysis Trend analysis Econometrics 	<ul style="list-style-type: none"> Regulator data; industry data Industry data Regulator data; industry data Surveys; case studies Regulator data; industry data Regulator data Surveys; case studies Regulator data; industry data Regulator data; industry data Industry data
Do all types of funds have opportunities to invest efficiently in upstream capital markets?	<ul style="list-style-type: none"> Asset allocation in SMSFs compared to institutional funds (input) Retail investment management costs compared to wholesale (input) Minimum transaction values (input) 	<ul style="list-style-type: none"> Trend analysis Trend analysis Trend analysis 	<ul style="list-style-type: none"> Regulator data Industry data Industry data

(continued next page)

Efficiency (continued)

<i>Assessment criteria</i>	<i>Indicators</i>	<i>Assessment methods</i>	<i>Evidence sources</i>
Is the system effectively managing tax for members, including in transition?	<ul style="list-style-type: none"> • Use of tax strategies by funds for members in transition (input) • Average effective tax rates across market segments (output) • Tax advantages as a motivation for setting up an SMSF (input) • Take-up rates of co-contributions and offsets (input) 	<ul style="list-style-type: none"> • Qualitative • Trend analysis • Qualitative • Trend analysis 	<ul style="list-style-type: none"> • Case studies • Industry data • Surveys • Regulator data
Objective: The superannuation system meets member preferences and needs, in relation to information, products and risk management, over the member's lifetime			
Are member preferences and needs being met by:			
<ul style="list-style-type: none"> • minimising unpaid contributions and lost accounts? 	<ul style="list-style-type: none"> • Unpaid Superannuation Guarantee contributions (input) • Delayed Superannuation Guarantee contributions (input) • Number and value of lost accounts (output) 	<ul style="list-style-type: none"> • Trend analysis • Trend analysis • Trend analysis 	<ul style="list-style-type: none"> • Regulator data • Regulator data • Regulator data
<ul style="list-style-type: none"> • funds collecting relevant information to ensure their product offerings are suitable for their diverse member bases? 	<ul style="list-style-type: none"> • Information collection by funds on key member characteristics* (input) • Response rates to funds' member surveys (behaviour) 	<ul style="list-style-type: none"> • Qualitative • Trend analysis 	<ul style="list-style-type: none"> • Surveys; case studies • Surveys; industry data
<ul style="list-style-type: none"> • the system providing high-quality information and financial advice to members to help them make decisions? 	<ul style="list-style-type: none"> • Availability, cost and quality of information on fees and investment risks at product level* (input) • Members acting on intrafund financial advice (behaviour) • Member account monitoring activity (use of websites, call centre enquiries)* (input, behaviour) • Cost of funds' member engagement activities (input) • Take-up rates of co-contributions and offsets (input) 	<ul style="list-style-type: none"> • Trend analysis; qualitative • Trend analysis • Trend analysis • Trend analysis • Trend analysis 	<ul style="list-style-type: none"> • Surveys; industry data • Surveys • Surveys; industry data • Surveys • Regulator data
<ul style="list-style-type: none"> • the system providing products and information to help members optimally consume their retirement incomes? 	<ul style="list-style-type: none"> • Introduction of new retirement income products and development of more tailored default products* (output) • Take up of different retirement income products (output) • Drawdown rates in transition and retirement phases (output) • Unclaimed superannuation (output) 	<ul style="list-style-type: none"> • Trend analysis; qualitative • Trend analysis • Trend analysis • Trend analysis 	<ul style="list-style-type: none"> • Surveys; industry data • Surveys; regulator data • Regulator data • Regulator data

(continued next page)

Efficiency (continued)

<i>Assessment criteria</i>	<i>Indicators</i>	<i>Assessment methods</i>	<i>Evidence sources</i>
• member balances being allocated in line with their risk preferences and needs?	<ul style="list-style-type: none"> • Introduction of new retirement income products and development of more tailored default products* (output) • Asset allocations by age cohort (across different market segments and products) (output) • Member awareness of investment, sequencing and longevity risk (input) 	<ul style="list-style-type: none"> • Trend analysis • Trend analysis 	<ul style="list-style-type: none"> • Surveys; regulator data • Industry data; regulator data
Is the system using lessons from behavioural finance to design products and 'lean' against well-known biases in how people make decisions?	<ul style="list-style-type: none"> • Funds' application of the lessons from behavioural finance to design products, the effectiveness of fund strategies and whether lessons are being transmitted to other parts of the system (behaviour, output) 	<ul style="list-style-type: none"> • Qualitative • Qualitative 	<ul style="list-style-type: none"> • Surveys • Case studies
Are trustees acting in the best interests of members?	<ul style="list-style-type: none"> • Existing ratings of system-wide quality of governance* (input) • Accurate disclosure of trustee directors' and investment committee members' qualifications and relevant skills/experience, remuneration structures, and potential conflicts of interest due to related-party dealings and competing duties* (behaviour) • Contraventions of regulator governance standards by trustees, employers, service providers and financial advisers* (behaviour) • Level of skills and standard of performance for trustee boards and investment committees, including review processes* (input) • Member satisfaction and trust* (outcome) 	<ul style="list-style-type: none"> • Qualitative • Qualitative • Trend analysis • Qualitative • Trend analysis 	<ul style="list-style-type: none"> • Reviews by others • Reviews by others • Regulator data • Surveys; reviews by others • Surveys
Objective: The superannuation system complements a stable financial system and does not impede long-term improvements in efficiency			
Are there material systemic risks in the superannuation system?	<ul style="list-style-type: none"> • Market concentration (Herfindahl-Hirschman Index and market shares of largest providers) in upstream service provider markets (input) • Levels of leverage in SMSFs (input) 	<ul style="list-style-type: none"> • Trend analysis • Trend analysis 	<ul style="list-style-type: none"> • Industry data; regulator data • Regulator data

(continued next page)

Efficiency (continued)

Assessment criteria	Indicators	Assessment methods	Evidence sources
Objective: The superannuation system provides insurance that meets members' needs at least cost			
Do funds offer insurance products that meet members' needs?	<ul style="list-style-type: none"> • Duplicate insurance policies by insurance type (output) • Rates of insurance take up in choice products and SMSFs relative to default products (output) • Member awareness of key features of their superannuation, including insurance* (input) • Level of unclaimed insurance (output) • Ease of members opting out of insurance (input) • Time to respond to members compared to retail provider benchmarks (input) • Information collection by funds on key member characteristics* (input) • Use of member information by funds to target insurance products (input) • Comparability of insurance product information disclosed by funds* (input) 	<ul style="list-style-type: none"> • Trend analysis • Trend analysis • Trend analysis; qualitative • Trend analysis • Qualitative • Trend analysis • Qualitative • Qualitative • Qualitative 	<ul style="list-style-type: none"> • Surveys • Surveys; regulator data • Surveys • Surveys • Surveys • Surveys; industry data • Surveys; case studies • Surveys; case studies • Surveys; case studies
Are the costs of insurance being minimised given the type and level of cover?	<ul style="list-style-type: none"> • Insurance premiums inside and outside of superannuation (output) • Insurance expenses (incurred by funds) (input) • Erosion of member balances due to insurance premiums (output) • Ratio of claims to premium revenue (loss ratio) within superannuation over 5 and 10 year periods (output) • Fee and premium differences from outsourcing insurance services to related versus unrelated parties (output) 	<ul style="list-style-type: none"> • Trend analysis • Trend analysis • Trend analysis • Trend analysis • Trend analysis 	<ul style="list-style-type: none"> • Industry data • Regulator data; surveys • Industry data • Regulator data; industry data • Regulator data; surveys

* Indicators marked with an asterisk are common to both competition and efficiency.

DRAFT REPORT

This draft report is no longer open for consultation. For final outcomes of this project refer to the research report.

Draft

A Public consultation

In keeping with its standard practice, the Commission has actively encouraged public participation in this study.

- Following receipt of the terms of reference on 17 February 2016, an advertisement was placed in a national newspaper and a circular was sent to identified interested parties.
- An issues paper was released on 16 March 2016 to assist those wishing to make a written submission. A total of 46 submissions were subsequently received (table A.1). These submissions are available online at <http://www.pc.gov.au/inquiries/current/superannuation/competitiveness-efficiency/submissions>.
- As detailed in table A.2, consultations were held with Australian Government departments and agencies, academics and superannuation industry participants.
- A technical roundtable was held on 28 June 2016 in Melbourne. Participants are noted in table A.3.

The Commission thanks all parties who have contributed to this study and now seeks additional input for its final report. The Commission welcomes further submissions to discuss the substance of the draft report, including responses to the information requests.

Table A.1 Submissions^a

<i>Individual or organisation</i>	<i>Submission number</i>
Actuaries Institute	34, 46
Asher, Anthony	21
Association of Independent Retirees	6
Association of Superannuation Funds of Australia (ASFA)	42, 44 #
Australian Chamber of Commerce and Industry (ACCI)	24
Australian Council of Trade Unions (ACTU)	18
Australian Institute of Superannuation Trustees (AIST)	30 #
Australian Municipal Administrative Clerical and Services Union	4
Australian Prudential Regulation Authority (APRA)	32
Australian Securities and Investments Commission (ASIC)	35
Centre for International Finance and Regulation (CIFR)	10
Chartered Accountants Australia and New Zealand (CAANZ)	27
Corporate Superannuation Association (CSA)	8
Council of Small Business Organisations of Australia (COSBOA)	33
CPA Australia	14
Depository Trust and Clearing Corporation	15
Dixon Advisory	23
Drew Walk and Co	26
Duckett, Stephen	37
Energy Super	19
Fiduciarys Friend Pty Ltd	7 #
Financial Planning Association of Australia (FPAA)	28
Financial Services Council (FSC)	29 #
Finch, Alex	2, 43
Hall, Peter	1 #
Hartley, David	12
Independent Contractors Australia (ICA)	40
Industry Super Australia (ISA)	38
Institute of Public Accountants (IPA)	22
Knight, Michael	25
Law Council of Australia	17
Mercer	31, 45
MLC	39 *
Pemberton, Michael	41
PricewaterhouseCoopers	11
Taylor, Dr Sue and Asher, Associate Professor Anthony	9
Third Horizon Consulting	3
Smith, Luke	5
SMSF Owners' Alliance (SMSFOA)	20
Queensland Nurses' Union	16
Vanguard	36 *
Wilson, Bruce	13

^a An asterisk (*) indicates that the submission contains confidential material NOT available to the public. A hash (#) indicates that the submission includes attachments.

Table A.2 Consultations*Individual or organisation*

Actuaries Institute
 Ambachtsheer, Keith
 Assistant Treasurer's Office
 Association of Superannuation Funds of Australia (ASFA)
 Australian Competition and Consumer Commission (ACCC)
 Australian Institute of Superannuation Trustees (AIST)
 Australian Prudential Regulation Authority (APRA)
 Australian Securities and Investments Commission (ASIC)
 Australian Taxation Office (ATO)
 BT Financial Group
 CEM Benchmarking
 Centre for Efficiency and Productivity Analysis (CEPA), University of Queensland
 Centre for International Finance and Regulation (CIFR)
 Centre for Market Design (CMD), University of Melbourne
 Chant West
 Cooper, Jeremy
 Corporate Superannuation Australia (CSA)
 Costello, Paul
 Council on the Ageing (COTA)
 Deloitte
 Donald, Scott (University of New South Wales)
 Drew Walk and Co
 Empirics
 Financial Conduct Authority (UK)
 Faff, Robert, Gray, Stephen and Benson, Karen (University of Queensland)
 Frontier Advisors
 Financial Services Council (FSC)
 Grattan Institute
 Industry Super Australia (ISA)
 Link Group
 Mercer
 National Seniors Australia (NSA)
 Officer, Bob
 PricewaterhouseCoopers
 QSuper
 Rainmaker Group
 Ralston, Deborah (Monash University/Australian Centre for Financial Studies)
 Ramwell, Roslyn
 Reserve Bank of Australia (RBA)
 Reeson, Andrew (Commonwealth Scientific and Industrial Research Organisation)
 Rice Warner
 SMSF Owners Association (SMSFOA)

(continued next page)

Table A.2 (continued)

Individual or organisation

SunSuper
 SuperRatings
 TAL Life
 Thorp, Susan and Foster, Douglas (University of Sydney)
 Treasury
 Trowbridge, John
 Vanguard

Table A.3 Roundtable participants (Melbourne, 28 June 2016)

<i>Individual</i>	<i>Organisation</i>
Bonarius, Nathan	Rice Warner
Bowater, Kim	Frontier Advisors
Chant, Warren	Chant West
Donald, Scott	University of New South Wales
Galbraith, Fiona	ASFA
Gee, Adam	SuperRatings
Hartley, David	
Holzberger, Brad	QSuper
Minifie, Jim	Grattan Institute
Nance, Catherine	PricewaterhouseCoopers
Sirault, Penny	Treasury
Stevens, Alun	Rice Warner
Thorp, Susan	University of Sydney
Warren, Geoff	CIFR

B Member decision making

Key points

- Planning for retirement involves a number of financial decisions, including how much to save, which superannuation fund and investment strategy to use, when to retire and how to draw down account balances.
- These decisions can be subject to considerable complexity and uncertainty. Even individuals that are rational, financially literate and willing to invest time and effort in retirement planning can find decision making to be very difficult.
 - Information is sometimes incomplete or confusing, making it difficult to compare options.
 - Research has found that a significant minority of Australians have low financial literacy, with levels lower on average for females, the young and people with lower incomes.
 - People are subject to behavioural biases, including a reluctance to make active decisions when the benefits are distant, sensitivity to how choices are framed, and a strong aversion to realising short-term losses.
- Most evidence on superannuation decision making is derived from surveys. It suggests that:
 - many people put off planning for retirement until they are close to the retirement age
 - less than a third of Australians have actively chosen their superannuation fund, and a similar proportion have changed the investment strategy within their fund
 - of the 45 per cent of members holding multiple accounts, many intend to consolidate their accounts but have not yet done so
 - many members are unaware whether they have insurance through their superannuation; those that are tend to lack a good understanding of their cover
 - most retirees draw down their wealth slowly, with many self-insuring for longevity risk.
- Member decisions are subject to a wide range of influences. Based on the available evidence, it is rarely possible to determine whether people are making good decisions. However, the collective evidence seems to suggest that people get engaged when it matters (when they are older and/or have larger balances).
- It is also difficult to link specific decisions to member outcomes. While some members appear disengaged with superannuation, they may still attain reasonable outcomes; conversely, active engagement does not always lead to better outcomes.
- There are some key gaps in the evidence on member decisions, especially in terms of individuals' behaviour over the life cycle and how they respond to external events.

Superannuation is complicated, and there is considerable diversity in how people make decisions about superannuation. The decisions that people make directly and indirectly bear on the competition and efficiency of the superannuation system, as explained in chapters 5 and 6. This appendix examines why many people find superannuation and retirement planning to be challenging. It reviews the literature on factors that shape decision making (section B.1) and sets out evidence on Australians' superannuation knowledge and behaviour (section B.2). It also sets out limitations and gaps in the available evidence (section B.3).

B.1 Superannuation is challenging for many Australians

Planning for retirement involves a significant number of financial decisions. These include:

- what proportion of income to save (beyond the Superannuation Guarantee)
- whether to save in an institutional fund or manage investments directly through a self-managed superannuation fund (SMSF)
- selecting a fund(s) and investment product within the fund
- the intended age of retirement and any transition path
- the desired standard of living in retirement (for example, dollars per year)
- how to draw down balances in retirement (for example, account-based income stream, annuity product or lump sum)
- how to structure other investments and tax affairs that interact with super
- whether to take out insurance through a superannuation fund and, if so, what type and level of cover.

While some decisions are made only at specific points in the life cycle (for example, how to draw down a retirement balance), many need to be made or updated — or at least considered — well in advance of retirement. In some cases, decisions are constrained (for example, not all employees can choose which fund their Superannuation Guarantee contributions are directed to) and, in others, defaults within the system mean that people who do not make an active decision are allocated to particular funds or products.

Retirement planning is difficult for many Australians. Several reasons for this are explored further below.

Retirement planning is complex

Many mainstream economic theories assume people make rational and foresighted decisions about their retirement. These theories are premised on individuals or households accumulating and then decumulating assets to maximise their lifetime wellbeing (or utility)

(Benartzi and Thaler 2007). In doing so, they calculate their expected longevity, future earnings and investment returns; seek out the best risk–return trade-offs in their investment strategies; and calculate the optimal way to draw down their savings in retirement (Clark et al. 2013).

In the real world, however, this is no mean feat. People typically need to take account of very long time spans and considerable uncertainties — for example, in relation to the timing of retirement (and death); future income, expenses and health; and the circumstances and needs of other household members. These all depend heavily on individual characteristics, and so what is optimal for one person may look very different to what is best for another (Butt et al. 2015).

Decision making can be further complicated by other factors, including:

- finding the investment and retirement income products that best match individual risk preferences and discount rates
- long delays between making an investment decision and experiencing its impact, meaning there is little scope to learn from experience
- high transaction and search costs, including the time, money and effort involved in researching complex products and switching between funds
- difficulty obtaining reliable and comparable information on funds and products
- reliance on decisions made by fund trustees (such as how assets are invested) or employers (choice of superannuation fund), which may be hard for members to assess against their individual circumstances and needs (Butt et al. 2015; Cooper et al. 2010a; ISA, sub. 38; PC 2012, 2015b).

Further complexity arises from a wide range of regulatory and policy arrangements, which play a key role in shaping the economic incentives and constraints within which people make decisions. The most influential measures include the Superannuation Guarantee, default fund arrangements, taxation rules and the asset and income tests that govern access to the Age Pension. There is also a range of regulatory measures that apply to superannuation products, including information disclosure requirements, constraints on fees and investment strategies for MySuper products, and the prudential regulation of funds. In general, more policy constraints apply to the accumulation than to the retirement phase (chapter 2).

Many of these regulations are designed to protect members and improve how markets function. While some may reduce complexity in particular areas, in general they increase the range of factors that members need to consider when making decisions about retirement saving.

With all this complexity, it is hardly surprising that there is widespread evidence that many people experience considerable difficulty in making decisions about superannuation and retirement, and that some make poor choices (Benartzi and Thaler 2007; Clark et al. 2013; Cooper et al. 2010a; Murray et al. 2014a). Even individuals that are rational, financially

literate and willing to invest time and effort in retirement planning may fail to make optimal decisions given the difficulty of doing so. Indeed, a large amount of complexity may be leading to many people failing to engage with superannuation at all (ACCI, sub. 24; AIST, sub. 30).

While estimates vary, most research has found that only about a third of working-age Australians have undertaken any active form of retirement planning; most put off such decision making until they are close to their retirement age (box B.1).

Box B.1 Many Australians put off planning for retirement

A number of recent surveys have found that about one third of Australians have actively planned for their retirement. One found that 32 per cent of respondents (who were not retired) had attempted to work out how much they needed to save, and these people tended to have higher levels of financial literacy on average (Agnew, Bateman and Thorp 2013). Another reported that only 29 per cent of respondents said they had planned enough to be financially secure in the future, and 27 per cent felt that retirement was too far away for them to plan for now (Roy Morgan Research 2015b).

People have also been asked whether they have estimated how much savings or income they will need for retirement. Findings vary. For example, Colmar Brunton (2010) estimated that just over half of people have thought through how much superannuation they will need when they retire. Mercer (2013) found that only 18 per cent of its survey respondents reported having made preparations for retirement, up from just 11 per cent in a similar survey in 2011.

However, surveys have also found that a higher proportion of people who are closer to retirement age have planned for their retirement. Agnew, Bateman and Thorp (2013) found that the likelihood of planning for retirement increases significantly among people aged 40 and older. ANZ (2015) found that over half of respondents aged 55–64 had identified a target income for retirement, compared to 28 per cent across the full sample. It also found that people aged 45 or older were much more likely to have used a financial planner or adviser (22 per cent) compared to younger age groups.

Researchers have also examined who makes voluntary contributions to their superannuation (in addition to compulsory contributions from their employer). ANZ (2015) reported that 27 per cent of respondents had made voluntary contributions, down from 35 per cent in 2011. A more recent survey found a clear age effect, with 31 per cent of people under age 30 reporting that they are saving for their retirement outside of compulsory super, compared to 61 per cent of 50–64 year olds (ANU College of Arts & Social Sciences 2016). A more detailed (but preliminary) analysis of individual members of a single fund over a 10-year period found that men were more likely to make voluntary contributions than women (Feng, Gerrans and Clark 2014).

Useful information is not always available

Information is an essential input to decision making. To successfully compare superannuation products and select the one that best meets their individual needs, members need reliable information on fees, long-term expected returns and risks, among other

things. Good information about the product attributes that matter can support competition and efficiency in the superannuation system.

Useful information is often lacking when people need to make retirement planning decisions. This can be because it is not collected or disclosed, is costly to access (for example, financial advice), is presented in an inconsistent or confusing manner, is untrustworthy or highly uncertain, or is simply irrelevant.

The state of information in Australia's superannuation system has long been criticised. While funds disclose a large volume of information about fees and returns, many study participants argued that — despite the MySuper reforms — this information is not being disclosed in a consistent way (and some is not being disclosed at all), which makes it difficult for members to meaningfully compare products (ACTU, sub. 18; AIST, sub. 30; APRA, sub. 32; David Hartley, sub. 12; IPA, sub. 22; Third Horizon Consulting, sub. 3). In one survey, two thirds of respondents stated that superannuation funds, their fees and the way they work are not transparent enough (FSC 2013a). While a number of ratings websites allow members to compare products, they typically draw on the information that individual funds disclose. Members can face significant search costs when researching different products.

Sometimes information does not exist because it is not known (for example, future investment returns) or because the costs of collecting and reporting it exceed the benefits. But in other cases, markets fail to provide good information because those in a position to do so do not have an incentive to collect or disclose it. And sometimes information is available, but members lack the means to verify its accuracy or to understand it.

In these cases, government intervention can be justified where the benefits to the community (such as better ability to compare products) outweigh the costs (such as compliance burdens). This is especially likely to be the case where there is a high degree of complexity or where impartiality is important (such as information on the detail of government policies or on housing and aged care options during older age (PC 2015a)).

Both the Australian Prudential Regulation Authority (APRA) and Australian Securities and Investments Commission (ASIC) set requirements for what information superannuation funds must disclose and how. Recent regulatory changes include the introduction of 'product dashboards' for MySuper products, which are intended to help members compare products. However, there are widespread concerns that these dashboards omit some information that would be of value to members, and that the fee structures that funds report are often complex and lack transparency, especially for choice products (AIST, sub. 30; ASIC, sub. 35; ISA, sub. 38). Information disclosure is discussed in more detail in chapter 6 and appendix H.

Levels of financial literacy vary

Even when clear and reliable information is available, people may find it difficult to understand and act on it. As noted above, the sheer complexity of retirement planning can mean that people find decision making highly challenging, even when they have a good understanding of financial concepts and access to relevant information. These problems are amplified for the significant proportion of Australians that do not have high levels of financial literacy.

Financial literacy is a broad concept, and can be interpreted in different ways. Essentially, it is the ability and willingness to make good financial decisions. ASIC (2014c, p. 6) has defined it as:

... a combination of financial knowledge, skills, attitudes and behaviours necessary to make sound financial decisions, based on personal circumstances, to improve financial wellbeing.

A number of surveys and academic studies have investigated Australians' financial literacy over the past 15 years. While the evidence suggests that financial literacy is high overall and improving, a significant proportion of people lack understanding of basic concepts — especially in relation to superannuation. In addition, financial literacy tends to be lower *on average* for certain groups, especially females, younger people, Indigenous Australians and those with lower levels of income or wealth (box B.2).

A large number of policy initiatives and programs have been deployed to improve financial literacy in Australia. A recent stocktake by ASIC found over 100 financial literacy programs, though the effectiveness of these programs has not been systematically evaluated (PC 2015b).

Some surveys have also focused on attitudes and behaviours in relation to superannuation. Collectively, they provide evidence that a considerable number of people have low engagement with, and awareness of, their own superannuation affairs (box B.3). (However, as discussed in section B.3, these attitudes and behaviours have typically not been linked to the outcomes that members attain.)

Box B.2 Financial literacy in Australia

A large number of surveys have been undertaken to gauge Australians' level of financial literacy. Most have found that while many Australians have a good grasp of financial concepts and are capable of making informed decisions, a large number encounter difficulties.

Some basic concepts are poorly understood

Among respondents to various surveys:

- only 43 per cent of males and 22 per cent of females said they understood the concept of a risk–return trade-off (ASIC 2015b)
- over a quarter did not consider diversification of investments to be 'very' or 'quite' important (ANZ 2015) and, in another survey, only 40 per cent said they even understood the principle of diversification (ASIC 2015b)
- 29 per cent rated themselves as having no or minimum understanding of how share market movements can affect their superannuation balance (Mercer 2013)
- 29 per cent said they had no or minimal knowledge about superannuation (Mercer 2013).

One study found that Australians' financial literacy in regards to superannuation is, on average, no better — and in some respects worse — than in selected other developed countries, many of which do not have compulsory defined contribution systems (Bateman et al. 2012).

Certain groups have lower financial literacy, on average

Some studies have found that financial literacy is lower, *on average*, for some groups in the population (PC 2015b). A consistent finding is that women tend to have lower financial literacy than men, lower levels of knowledge about superannuation, and are more likely to report that they find dealing with money to be stressful (ANZ 2015; Mercer 2013).

Such studies have also found that young people tend to have less knowledge of the superannuation system. For example, Ali et al. (2014) found that knowledge of basic facts about superannuation (such as the age at which funds can be accessed) was generally low among 25–34 year olds. Worthington (2008) found that persons aged 60–69 were over four times more likely to have 'adequate' knowledge of the fees and charges on superannuation compared to persons aged 25–29. However, there is evidence that financial knowledge and capabilities tend to decline in older age (Earl et al. 2015; Finke, Howe and Huston 2016).

Australian studies have also found that financial literacy tends to be higher among people who have higher levels of education, are employed, or have higher levels of income or wealth (Agnew, Bateman and Thorp 2013; ANZ 2015; Bateman et al. 2012). Other studies have found that Indigenous Australians have relatively low levels of financial literacy on average (Agnew, Bateman and Thorp 2013).

A recent study found preliminary evidence that members with high levels of financial literacy are less likely to be SMSF members compared to those with lower levels of financial literacy (Bird et al. 2016). This contrasts with earlier survey evidence that SMSF members have above-average levels of financial literacy (ANZ 2015). Researchers have also found a positive link between cognitive ability and financial literacy among older trustees of SMSFs (Earl et al. 2015).

Box B.3 **Disengagement with superannuation**

There is widespread evidence that a considerable number of Australians are disengaged with superannuation and even have low levels of awareness of their own financial situation.

One in four members do not know their balance

In a recent survey, 26 per cent of respondents did not know the value of their main superannuation fund (excluding respondents in SMSFs), and a further 40 per cent only had a rough idea (ASIC 2015b). The proportion of people who did not know their balance even roughly was higher among females (35 per cent) and people aged under 35 (43 per cent). Two earlier surveys also found that about a quarter of people did not know their balance even approximately (ASFA and Suncorp 2012; FSC 2013a).

Well over half do not read statements in detail

Several surveys have found evidence that many respondents do not read the statements sent to them from their superannuation fund. One found that while about half of respondents 'flicked through' their annual statement, only a third read it thoroughly and 7 per cent did not read it at all (Colmar Brunton 2010). Others found that as many as one in five people receive statements but do not read them (ANZ 2015) and, among people aged 25–34, only a third read most or all of their statements (Ali et al. 2014).

Surveys have also found that many people find their statements difficult to understand. About a third of respondents in two separate surveys said that they found the information they receive from their fund difficult to understand (ANZ 2015; ASFA and Suncorp 2012). In one, 40 per cent said that the information they receive from their fund is too long and complicated (ASFA and Suncorp 2012).

Many pay little attention to fees

One survey found that half of respondents were unaware of how much they were charged in fees on their superannuation, even approximately (FSC 2013a). Another found that 70 per cent of respondents who knew the investment returns on their superannuation (over the past year) had not compared the fees and charges against other funds (Colmar Brunton 2010). When asked why, one in five said they did not care.

Many do not engage

In one survey, 43 per cent of people reported feeling inadequate when it comes to superannuation, and 41 per cent said they do not like to think about superannuation after they have set it up (ASFA and Suncorp 2012). In another, only 38 per cent rated their level of interest in superannuation as 7 or greater out of 10 (Colmar Brunton 2010). And among 25–34 year olds, only a third agreed that they paid a sufficient amount of attention to superannuation, with most regarding it as not being a major priority at their current stage in life (Ali et al. 2014).

One in ten cannot name their fund

Two surveys asked respondents if they knew the name of their superannuation fund. In one, 8 per cent said they did not (FSC 2013a); in the other, it was 12 per cent (ASFA and Suncorp 2012).

People are subject to behavioural biases

When people face considerable complexity, such as found in retirement planning, they can resort to mental rules of thumb — commonly termed heuristics — to simplify problems and make decisions. Heuristics can be rational when they reduce the transaction costs of decision making. Indeed, in many cases people exercise ‘bounded rationality’, where they make decisions that are reasoned and logical given the time constraints, available information and their cognitive abilities. However, heuristics can also introduce systematic biases to decision making.

Internationally, there is a large and growing body of experimental evidence on the heuristics people use to make retirement savings decisions and the biases that these can introduce (box B.4). These biases can lead to people failing to appropriately take account of all relevant and available information, or failing to make an active decision at all. As a result, people may act in ways that are not in their own best long-term interests. While much of the research has been conducted in the United States, where superannuation contributions are voluntary, many of the conclusions are likely to hold in Australia too.

Box B.4 Behavioural biases

Status quo bias

Researchers have observed that many people display a tendency towards procrastination (delaying decision making) and inertia (failing to revise decisions in future) when it comes to retirement saving. This can be exacerbated by the very long time lags between saving today and receiving the benefits in retirement.

Studies have found that automatically enrolling people in a retirement savings scheme and allowing them to opt-out — a form of ‘default’ — leads to substantially higher enrolment rates than schemes where people need to actively decide to participate in the first place by opting in (Choi et al. 2001; Madrian and Shea 2001). In the United States, researchers have also found that the majority of people tend to stick with the default contribution rate and investment product, even where these may be changing over time (Beshears et al. 2009; Choi et al. 2001; Thaler and Benartzi 2004).

A bias towards the status quo can also arise due to ‘choice overload’. There is evidence that when people are presented with a greater menu of superannuation investment options to select from they are less likely to participate in a retirement savings plan (Iyengar, Huberman and Jiang 2004 cited in Benartzi and Thaler 2007). In other words, when decisions appear to become too complex, people may defer making a choice or not make one at all.

(continued next page)

Box B.4 (continued)**Framing biases**

Experiments have shown that the way a menu of investment options (such as shares, bonds or cash) is presented has a strong effect on the investment portfolio that people choose — even though traditional economic theories imply that the framing of options should have no bearing on preferences or choices (Benartzi and Thaler 2007).

Several kinds of framing effects have been detected. People sometimes focus on salient but irrelevant features when making a decision, or neglect relevant information that is not immediately to hand (Kahneman 2011). Sometimes they appear willing to accept a greater level of risk when presented with investment returns aggregated over a longer period (Clark et al. 2013). Graphical representations of risk tend to resonate better with people of lower financial literacy than numerical measures (Bateman, Lai and Stevens 2012). When presented with a number of investment options, people tend to allocate their assets evenly among them regardless of what those options are — a naïve form of diversification known as the ‘1/N strategy’ (Benartzi and Thaler 2001) — or tend to cluster their choices around a pre-selected (default) mix (Bateman et al. 2016).

Loss aversion and risk preferences

People tend to be more sensitive to financial losses than gains of the same amount, relative to a given starting point. Experiments suggest that people are more willing to take risks to avoid realising losses already incurred than they are to realise gains of an even greater magnitude — in other words, many are risk averse in respect of gains but risk loving in respect of losses (Kahneman 2011). In addition, researchers have observed that people are generally reluctant to accept short-term risks with their retirement savings, even where there can be considerable (and less risky) gains over the long term (Benartzi and Thaler 2007).

These effects may explain observations (mainly in other countries) that many people hold too much of their retirement savings in safe assets such as bonds, and too little in higher-return assets such as shares, relative to what economic models would predict is optimal (Clark et al. 2013). Such effects might also be one explanation for why people are (perversely) more likely to move retirement savings into shares during a market boom and out of shares following a market crash (Benartzi and Thaler 2007).

Present bias

People appear to focus on near-term consumption to the detriment of longer-term consumption to a greater degree than conventional economic theories predict, and thus may be undervaluing future benefits when making saving decisions (Goda et al. 2015; Kahneman 2011; Mitchell and Utkus 2004). This could in part explain why some people struggle to voluntarily set aside money for retirement.

Salience and familiarity biases

People may be less aware of their retirement savings contributions (and less sensitive to fees) because they are generally not paid for ‘out of pocket’ and can only be accessed after a long time period (Cooper et al. 2010a; PC 2012). There is also evidence that individuals tend to favour certain investments they are familiar with — such as term deposits, ‘blue chip’ shares or shares in their employer — because they believe them to be less risky, even though they present greater risk over time than a more diversified portfolio (ASFA, sub. 42; Clark et al. 2013).

Australia's superannuation system already accommodates behavioural biases, including by compelling employees to contribute to superannuation and by selecting default funds for members who do not actively choose a fund themselves. However, more generally, discerning the impact of behavioural biases in the real world can be difficult. For example, evidence suggestive of irrational behaviour could simply reflect changes in an individual's preferences or circumstances over time (leading to seemingly inconsistent behaviour) or an optimal response to complex tax or policy settings (for example, acting to minimise tax burdens).

The implication is that intervention to counteract biases must proceed carefully, as it can potentially lead to worse outcomes, especially where members' choices are constrained or there is diversity in individual circumstances. For example, the use of 'soft' default options can lead to poor outcomes where individuals do not seek out better options because they do not feel they have the skill to make their own decision, or because they perceive the default as an explicit endorsement of a particular action. In other words, there is a risk the soft default could end up being too effective — by resulting in greater take up of the soft default but that rate of take up not being optimal for member outcomes (PC 2015b).

B.2 What decisions do Australians make?

Australians make a wide range of decisions when it comes to superannuation. Most surveys and research to date have looked at behaviour in terms of choosing superannuation funds and investments. Other areas have received less focus, such as decisions about life insurance within superannuation and how members draw down balances in retirement, though some recent evidence sheds light in these areas.

Some members choose their superannuation fund, but many do not

While estimates vary, the available evidence indicates that most Australian employees do not actively choose a superannuation fund, with up to two thirds using the default fund selected by their employer (box B.5). The evidence also suggests that very few people switch funds in any given year, with less than 2 per cent likely to be doing so voluntarily. (Switching from institutional funds to SMSFs is discussed further below.) This evidence is drawn mostly from surveys, since there are almost no official system-level data on fund switching behaviour.

A handful of studies have looked in greater detail at what informs members' choice of superannuation fund. In one survey, 16 per cent of respondents said they chose their fund based on recommendations from others (financial planners, friends, family or colleagues); 2 per cent cited advertising and only 5 per cent cited detailed research (FSC 2013a).

A more recent survey found that many people who switch do not consider more than one option: just over half of respondents who said they had chosen their own fund had made

comparisons between options (with 42 per cent considering funds from different companies and 12 per cent considering different funds offered by the same company) (ANZ 2015). Another survey found that about 70 per cent of people who switched funds sought some form of advice when doing so (Roy Morgan Research 2016).

Also drawing on survey data, researchers have found that a quarter of members who were in a default fund deliberately chose to remain in that fund (Butt et al. 2015). Many indicated that they trusted their fund and the way the superannuation system is regulated. Respondents were more likely to actively choose a fund or investment option if they had a higher level of financial knowledge and skill or if they regarded the default fund as unsuitable for them.

Box B.5 How many members choose their superannuation fund?

Default rates are high

Australian Prudential Regulation Authority data show that, as of June 2015, about 51 per cent of all superannuation accounts were in MySuper (default) products — equivalent to 21 per cent of assets in the superannuation system (APRA 2016c, 2016e). It is not clear from these data how many *people* are in a default fund, since many people have more than one account and funds do not have to move existing default members to MySuper products until 30 June 2017.

Several surveys have found that about two thirds of employees are in a default fund. In a recent survey, 58 per cent of members said they were in the default fund chosen by their employer (Butt et al. 2015). This result is somewhat lower than the 68 to 74 per cent of respondents who indicated as such in three earlier surveys (Colmar Brunton 2010; FSC 2013a; PC 2012).

However, these figures are likely to be overestimates of how many people do not choose their superannuation fund. Butt et al. (2015) found that 26 per cent of respondents who were in a default fund said they had actively chosen to remain in that fund, suggesting that only 43 per cent of respondents (across all funds) did not make an active choice of fund.

Switching rates are low

Other evidence shows that only a small proportion of members switch funds. In the three years to November 2015, an average of 3.2 per cent of superannuation products were switched annually (including switches to SMSFs), according to Roy Morgan Research (2016). A 2012 survey found that 7 per cent of respondents changed superannuation providers in the preceding year (ASFA and Suncorp 2012), and a 2010 survey put the rate at 9 per cent (Colmar Brunton 2010).

However, not all switches may be voluntary. There is evidence that of the 3–4 per cent of people who switched funds in 2008, up to half may have done so because they changed employer or their employer changed default funds (Fear and Pace 2008). A survey in 2010 found that about 80 per cent of people who switched did so because they changed jobs or their employer changed the default fund (Roy Morgan cited in Cooper et al. 2010a). Using this latter statistic, the Grattan Institute estimated that at most 2 per cent of people switched funds in 2013 for other reasons (Minifie, Cameron and Savage 2015).

Not all members change their investment options

Estimates of the proportion of people who switch their investment options within their superannuation fund vary, though most suggest that it is less than a third. There is evidence that men are more likely than women to actively choose their investment options within their fund, and that older people are more likely to do so than younger members (box B.6).

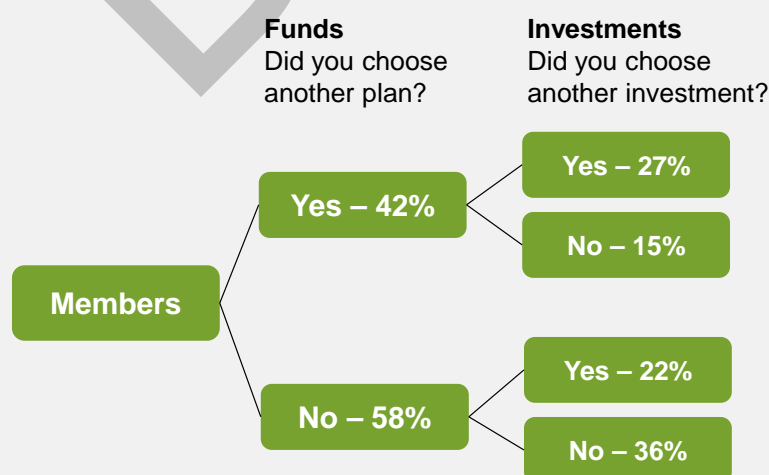
Box B.6 How many members change their investment options?

Less than half of members switch investment options, but estimates vary

Estimates of how many members have selected investment options other than the default vary. An early survey put the figure at 54 per cent (ASFA 2010). Others have found much lower rates. Drawing on several sources, Cooper et al. (2010a) estimated that about 80 per cent of people in a default fund are also in the default investment option. The Financial Services Council (2013a) reported that 33 per cent of survey participants had at some time changed their investment options (and 27 per cent did not know they could do this). Suncorp and the Association of Superannuation Funds of Australia (2012) reported that 15 per cent of survey respondents had changed investment options in the past year (and 5 per cent did not know they could do this), and Colmar Brunton (2010) reported 10 per cent.

Two recent studies have looked at investment switching in greater detail. Gerrans et al. (2015) found that only 19 per cent of members of a retail fund had changed their investment options over a ten year period. This is a much lower figure than that reported by Butt et al. (2015), who found that 49 per cent of survey respondents had switched investment options in their current superannuation fund, with a further 5 per cent having actively chosen the default option. The latter study also found that members who switched funds were also more likely to switch investment options.

Member fund and investment switching



Source: Butt et al. (2015).

(continued next page)

Box B.6 (continued)**Some members are more likely to switch than others**

Several studies have found that, on average, men are more likely than women to make changes to their superannuation investments (Clark et al. 2013; Gerrans et al. 2015). There is also evidence that women tend to select lower-risk investments (Gerrans and Clark-Murphy 2004) and that members with higher balances or contributions are more likely to change investment options (Gerrans et al. 2015). Other studies have found age-related effects, with older members more likely to make changes to their investment options (Clark et al. 2013).

These findings are supported by a recent study on defaulting in superannuation, which found that people relying on defaults were likely to be younger and have lower incomes, but performed only slightly worse on tests of financial literacy and numeracy (Butt et al. 2015). The study also found that people in the default investment option tended to have significantly lower risk tolerance, and this was not related to age. Older, more knowledgeable and higher-income respondents were more likely to switch their investment options.

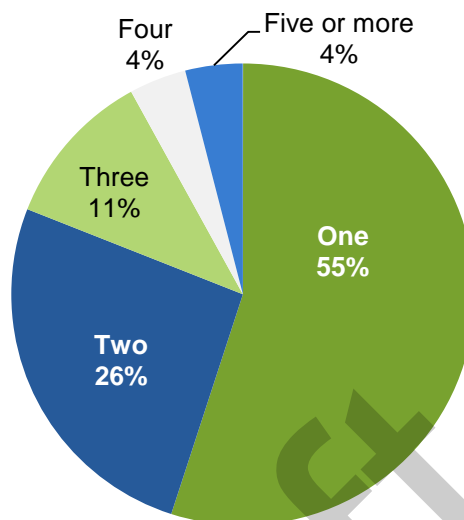
Some researchers have also looked at whether members who switch investment options are relatively more engaged with superannuation. One study compared the actions taken by members of a large industry fund with their self-reported levels of involvement and interest in superannuation (Bateman et al. 2014). It found that while those expressing a high level of interest in superannuation were more likely to register for online services, they were not significantly different to less-engaged members in terms of choosing non-default investment options or purchasing additional insurance.

Few studies have examined how members in Australia switch investment options in response to external events. Gerrans (2012) found that only about 6 per cent of members (from a sample of five funds) changed their investment options between 2006 and 2009, with the proportion peaking around the time of the global financial crisis. Most members who made a change during the crisis reduced their exposure to shares as the market reached a low point, thereby crystallising losses. Further, older and wealthier members — especially women with large balances — were more likely to make changes to their investment options.

Many members hold multiple accounts

A significant number of Australians have more than one superannuation account. The Australian Taxation Office has reported that, of approximately 14 million people with superannuation, about 45 per cent have more than one account (figure B.1). The proportion of people with multiple accounts is fairly even across age groups, though the rate is much lower for people aged under 25 and over 60 (ATO 2016c).

Figure B.1 Number of superannuation accounts held
Percentage of fund members, 30 June 2015



Data source: ATO (2016c).

Surveys provide additional insights into who holds multiple accounts. A recent survey found that more males held multiple accounts than females (36 versus 31 per cent) (ANZ 2015). This survey also found that the proportion of people with multiple accounts had fallen by 4 percentage points compared to a decade earlier.

While some people may hold multiple accounts for good reasons (such as restrictions on choice of fund or to maintain insurance cover), others may be unnecessarily paying multiple sets of fees (and insurance premiums), which can erode balances over time. Survey evidence suggests that many people do not intend to hold multiple accounts. In one survey, few participants reported having made a conscious choice to hold multiple superannuation accounts; most were in this situation because they had changed jobs (FSC 2013a). In another, almost a quarter of respondents with multiple accounts said they could not be bothered merging their accounts or that they felt it was not worth doing so (Colmar Brunton 2010). A further quarter said they did not have time or had not gotten around to merging their accounts, and 7 per cent said they did not know how to.

However, some people can and do consolidate multiple accounts. In one survey, 17 per cent of respondents reported having consolidated their superannuation accounts in the past year (ASFA and Suncorp 2012). An earlier survey found that 12 per cent of respondents had done so (Colmar Brunton 2010). Official statistics on how many members consolidate their accounts across funds each year are not published, though 1.7 million accounts in APRA-regulated institutional funds (about 6 per cent of the total) were closed due to funds being rolled over to another fund in 2014-15 (APRA 2016c).

Sources of advice are varied

The available evidence indicates that members often draw on advice from others in making decisions about their superannuation. A recent survey found that 72 per cent of people who had switched funds in the past year had sought some kind of advice. Thirty-five per cent of the total used a financial professional (planner, adviser or accountant), with members holding higher account balances more likely to do so (Roy Morgan Research 2015a). Others drew on advice from employers (19 per cent), friends or family (12 per cent) and financial institutions (9 per cent). These rates are higher than in an earlier survey, which found that only 24 per cent of respondents had sought advice regarding their superannuation affairs over the previous year, with two-thirds having relied on professional sources (Colmar Brunton 2010).

Recent research has looked in greater detail at the financial advice members seek from their superannuation funds. In examining members of a single retail fund over a 10-year period, Gerrans, Fiaschetti and Clark (2014) found that members who were female, older or had higher account balances were more likely than others to seek advice by telephone (although the gender and age differences were smaller for website-based advice). Related research found that members aged under 40 mostly sought advice on administrative matters, whereas retirement planning was the most commonly sought form of advice for members aged over 55 (Clark, Fiaschetti and Tufano 2016).

Other surveys have looked at the use of financial advice more broadly. For example, ANZ (2015) reported that 39 per cent of respondents had ever consulted a financial planner or adviser, with young people and those with lower incomes or savings significantly less likely to have done so. This survey also found that, of respondents using a planner or adviser, 29 per cent had selected them based on a recommendation from a friend or family member, and 57 per cent did not consider other planners from the same or different companies. Thirty-four per cent said they did not consider whether their planner had any conflicts of interest.

Over one million members are in self-managed superannuation funds

While a large portion of Australians are members of institutional superannuation funds, a significant minority have elected to manage their own superannuation by setting up an SMSF (sometimes with professional assistance). As of June 2015, approximately 7 per cent of Australians with a superannuation account were in an SMSF, with 1.05 million members in 557 000 SMSFs (an SMSF can have up to four members). In 2015, about 31 000 new SMSFs were established (ATO 2015p).

Researchers have investigated why some people choose to establish SMSFs. Commonly cited reasons are to have greater control over savings, to choose specific investments and to reduce tax burdens (ASIC 2014a; Bird et al. 2016; Rice Warner 2012). Others have noted that perceptions of poor performance by institutional funds have also been a driver, especially following the global financial crisis. And while there are indications that over

half of SMSF members decided to self-manage their superannuation following advice from an accountant or financial adviser, there is also preliminary evidence that members with high levels of financial literacy are less likely to be SMSF members compared to those with lower levels of financial literacy (Bird et al. 2016). Appendix G explores the motivations for self-managing superannuation in greater detail.

Some members are unaware they hold insurance

Insurance policies — covering life, total and permanent disability (TPD) and income protection — are often bundled with superannuation. Default funds are required to offer life and TPD cover to their members, who retain the ability to opt out (chapter 2). As of June 2015, 15.3 million accounts in APRA-regulated institutional funds had life insurance (53 per cent of all accounts), with 13.2 million (46 per cent) having TPD cover and 5.3 million (18 per cent) having income protection insurance (APRA 2016c).

Estimates vary on how many members (rather than accounts) have insurance cover through their superannuation. In one survey, 52 per cent of respondents indicated that they held life insurance through superannuation, and 6 per cent were unsure (Zurich Australia 2014). In another, 57 per cent indicated that their fund included a life insurance policy (FSC 2013a), though it is not clear how many of these actually held such insurance themselves. In the same survey, nearly a quarter of respondents did not know whether their fund included a life insurance policy.

While various other estimates are available for how many people hold life, TPD or income protection insurance, most do not indicate whether these kinds of insurance are held through superannuation funds.

There is also little evidence on how well members understand their insurance policies. In one survey, about four-fifths of respondents said they had never analysed the type and amount of insurance that suits their own circumstances (Zurich Australia 2014). Another survey found that two-thirds of policy holders did not know how much they were covered for (MetLife and Financial Services Council 2014).

Most retirees draw down their wealth slowly

An emerging body of research has examined how people choose to draw down their superannuation balances in the retirement phase. Recently, the Commission found that the majority of retirees use income stream products (mainly account-based income streams), with only 16 per cent of benefits taken as lump sums (PC 2015b). Evidence suggests that less than 5 per cent of balances are converted into guaranteed income products (such as lifetime annuities) (appendix D).

The evidence points to retirees drawing down accounts slowly, often at or near to the minimum rates required by law (PC 2015b; Wu et al. 2015). This likely reflects that

individuals are highly risk-averse, and are effectively self-insuring against longevity risk and other uncertain future expenditures (such as health or aged care costs) (appendix D). Low draw-down rates could also reflect an excessive level of precautionary savings (PC 2015a) or behavioural biases, such as ‘anchoring’ to the minimum drawdown rates or interpreting these as a recommended level of consumption.

Some research has examined how people choose between different retirement income products. In a survey by ANZ (2015), only 28 per cent of respondents with a retirement income product said that they had considered several products offered by different companies. About half said that they did not consider any products other than the one that they chose. This may indicate that many retirees may simply opt for the product offered to them by their superannuation fund without carefully examining the alternatives.

Other evidence indicates reluctance to invest in guaranteed income products that offer longevity risk protection. There are many potential reasons for this, such as an underdeveloped market, tax disincentives and access to other sources of income or wealth (including the Age Pension) (appendix D). Behavioural and cognitive explanations have also been put forward, including difficulty weighing up the long-term costs and benefits of different retirement income products, a perception that annuity products are a gamble on longevity, and a failure to fully take account of the long-term benefits of such products relative to more salient upfront costs.

B.3 Limitations in the evidence base

The evidence presented above indicates that there is no typical superannuation member: decisions and preferences vary considerably. While some Australians are highly engaged in selecting funds, investment options and retirement products (or even self-managing their superannuation), others are relatively disengaged and rely on defaults.

In many cases, the drivers of member behaviour are difficult to observe. For example, low rates of switching between funds could indicate member inertia, high satisfaction with current funds, low employment turnover, high switching costs, or any combination of these factors. Disentangling the causes is important for understanding whether people are making good decisions given their circumstances, and for assessing how efficiently the system is meeting members’ needs using the factors under its influence (chapters 5 and 6).

There are also limitations and gaps in the evidence base that make it difficult to assess the impact of member decisions on the *long-term outcomes* they attain from the superannuation system.

Sometimes the evidence provides a strong indication that people may be making poor decisions: for example, members who fail to consolidate accounts in three or more funds or who are simply unaware of whether they have (and are paying for) insurance through their

superannuation are unlikely to be acting in their own best interest: their retirement incomes will be lower than otherwise.

But beyond these extreme cases, it is much harder to discern the link between decisions and outcomes. This may be for several reasons.

- Parts of the superannuation system help members to achieve better outcomes. These include protections such as default arrangements (for funds and investment options) and the legal obligation for trustees to act in members' best interests. Members can also be assisted by information disclosure requirements, financial advice and other services (table B.1).
- Members in default funds or investments are not necessarily disengaged: some actively choose the default option after careful consideration of the alternatives (section B.2).
- In any case, disengagement may not always lead to bad outcomes. Some members trust their fund to make decisions in their best interests, which can be sensible for members who lack the skills to make good investment decisions themselves, or who are young and thus many years from retirement. Indeed, the collective evidence seems to suggest that people get engaged with their superannuation when it matters (when they are older and/or have larger balances).
- Conversely, there is evidence that member engagement does not always lead to better outcomes — for example, where members make investment choices that unnecessarily reduce their superannuation balances (CIFR, sub. 10; Gerrans 2012) — especially where members lack access to relevant information or have poor financial literacy.

Table B.1 What can help members to make better decisions?

<i>Reason for difficulty</i>	<i>Potential sources of assistance</i>
Complexity	Default arrangements (funds and investment options) Advice (formal or informal) MySuper product dashboards
Lack of useful information	Product disclosure statements MySuper product dashboards Information and reviews provided by superannuation fund rating companies Advice (formal or informal) Government-provided information, including on retirement incomes, aged care options and health costs
Low financial literacy	Educational materials and financial literacy schemes Government-provided information (such as websites) Default arrangements (funds and investment options) Advice (formal or informal)
Behavioural biases	Default arrangements (funds and investment options) Tailored default investment options ('smart' defaults) Careful design and presentation of options Advice (formal or informal)

Further evidence is needed

While there is a large amount of evidence available on how Australians make decisions about their superannuation, most is derived from ad hoc surveys or administrative data (for example, the transaction records of a single superannuation fund). Some experimental economic evidence (where people make decisions in a simulated setting in a laboratory) is also available.

These sources have strengths and weaknesses. While surveys offer considerable flexibility in the kinds of questions that can be asked, they may not always elicit reliable responses and have generally not been conducted in a way that allows longitudinal analysis (box B.7). To date, most have been cross-sectional. While administrative datasets are generally more objective and sometimes allow individual members to be tracked over time, they can be difficult to access (due to confidentiality) and generally only contain information on the outputs of decision making (rather than the reasons why someone made a particular decision). And experiments allow researchers to investigate specific behaviours in highly controlled conditions, yet they are costly to run and — for practical reasons — are generally conducted in a simulated environment.

Further evidence is needed to better understand how Australians make decisions about superannuation and to link these decisions to specific outcomes (such as accumulation balances, retirement incomes or insurance cover). Key gaps in the evidence base include:

- how decisions and behaviour vary by age, gender, income levels, occupations and migration status
- changes in behaviour and risk preferences over the course of an individual or household's life cycle
- how members change their behaviour in response to new information, changes to policy settings or external events (such as movements in share markets)
- the relationship between long-term outcomes (such as balances at retirement) and decisions made much earlier in life (such as investment decisions or whether to move away from default options)
- how people make decisions about insurance cover in superannuation, including how many have overlapping insurance policies both inside and outside of their superannuation
- how people decide to draw down superannuation balances in retirement, including the choice of account-based and annuity products
- the effectiveness of communication by funds in inducing people to be more engaged with their superannuation and make better decisions
- the effectiveness of specific financial literacy programs.

In many cases this will involve collecting new data, but in some cases data may already be collected but have not yet been analysed.

Box B.7 Superannuation surveys can be subject to biases

A number of large surveys have been conducted in Australia in relation to superannuation. Some of these have been specifically about superannuation, whereas others have inquired into financial knowledge and behaviours more broadly.

All surveys referred to in this appendix have been based on large samples (typically over 1000 respondents), with researchers taking steps to target a representative snapshot of the population in terms of age, income, gender and other demographic characteristics. Most have been conducted online, though some have been based on telephone interviews.

While these surveys provide a wealth of information on Australians' financial literacy and some aspects of superannuation, at times the results can be difficult to interpret. The way that questions are phrased is highly variable, making it hard to interpret responses (if some participants interpreted the question differently to others) and to compare the results from one survey to another.

Worthington (2013) has also criticised the types of questions asked in some surveys of financial literacy, observing that some surveys tend to draw on participants' self-reported behaviour or perceptions, rather than using objective questions that are linked to the ability to make good financial decisions. Researchers that have compared self-reported capabilities with objective questions of financial knowledge have often found that many people overstate their ability (for example, Bird et al. 2016; Finke, Howe and Huston 2016).

The validity of survey results can be further compromised by biases arising from participant fatigue (respondents may not answer all questions carefully in a very long survey), erroneous responses (participants may not have information on the details of their financial affairs to hand), or self-selection (only some types of people may be willing to participate in surveys — such as those who are relatively more engaged with superannuation — which can systematically bias some results). While these biases can be minimised, they are difficult to eliminate.

Finally, most surveys to date have been ad hoc exercises that only provide a single 'snapshot'. Those that have been conducted at multiple points in time appear to draw new samples on each occasion (ANZ 2015; ASIC 2015b). While this means that the responses are directly comparable, they are not longitudinal: it is not possible to assess how individual members' decisions or outcomes may be changing over time.

Econometric techniques are valuable for distilling the influence of multiple individual factors on decisions and outcomes. While several recent studies have examined member behaviour using such methods, the vast majority of survey data are simply reported via descriptive summaries. There is scope for more robust analysis of survey data using econometrics.

Chapters 5 and 6 further explore the evidence base in relation to specific indicators that can be used to assess the competitiveness and efficiency of the superannuation system. This includes discussion of evidence that system participants (including funds and regulators) can draw on to improve member engagement or to better tailor products to members. Chapter 7 provides further detail on what new evidence may be required to support the competitiveness and efficiency assessment.

DRAFT REPORT

This draft report is no longer open for consultation. For final outcomes of this project refer to the research report.

Draft

C Corporate tenders

Key points

- Corporate tenders are a method of selecting a default superannuation fund where an employer (or an agent of the employer) invites superannuation funds to compete for the right to provide default services to their employees. In the tender process, funds compete on product features such as fees, investment governance and member services.
- Where tenders are well-run, they can apply competitive pressure on funds to reduce fees, offer better services and improve investment governance. However, data are not available on whether these competitive benefits flow through to the broader market.
- While corporate tenders are a competitive mechanism, more evidence is needed to draw conclusions about the benefits of outcomes for members and for the overall competitiveness and efficiency of the superannuation system as a whole.
- Evidence that corporate tenders achieve consistently lower fees could be evidence of the benefits of corporate tenders to the employees involved, or evidence that the broader market for default superannuation is not competitive (or both).

This appendix considers how corporate tenders are run, the criteria that may be used to decide between competing bids, and what outcomes are achieved for members. At one level, these corporate tender processes may provide useful lessons for *developing appropriate criteria and indicators* to assess the efficiency and competitiveness of the superannuation system as a whole. At another level, corporate tender *outcomes* themselves may also tell us something about the nature of competition and efficiency in the system.

C.1 What are corporate tenders?

There are two primary motivations for corporate tenders in superannuation. First, where an employer is choosing a default fund for their workforce, and second, where a corporate superannuation fund trustee is merging with a public-offer fund (also known as corporate outsourcing).

Employers are required to select a default superannuation fund for those employees who do not exercise their own choice. Most employers choose default funds from those available under awards or generally available in the market. However, rather than just choosing from among publicly available offers, large employers can invite superannuation funds to make better offers, including in the form of competitive tenders, and then choose the offer that best suits their employees.

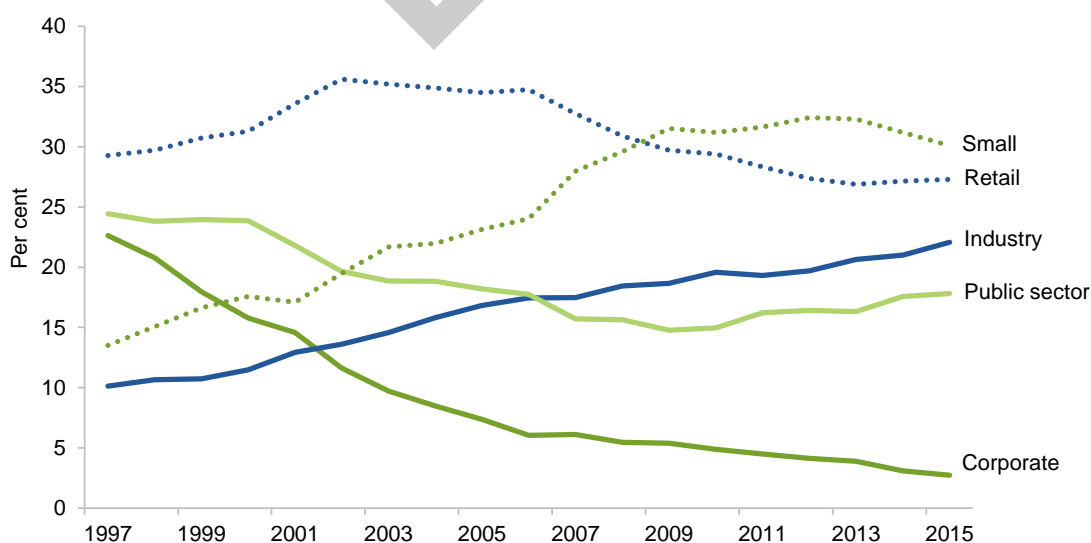
Corporate tenders appear to be more commonly run by very large companies where the number of employees (and therefore the size of the funds under management) is large enough to encourage funds to compete for the right to be the default provider. Employer size is also relevant for the ability of the company to invest resources and develop in-house expertise (or outsource expertise) to be able to design a tender and analyse the offers. Corporate funds are declining in popularity in line with the growth of industry and other funds (figure C.1), from over 4000 funds and \$60 billion under management in 1997 to 34 funds and \$54 billion under management in 2015 (APRA 2014a, 2016c).

The process of rolling up a corporate fund and transferring members to a public-offer fund is similar to running a corporate tender, whereby offers are made by other funds, and trustees of the corporate fund assess those offers on the basis of the best interests of members.

There are various reasons why an employer may choose not to continue sponsoring a corporate fund, leading to a tender process to transfer members to another fund. Reasons include:

- administrative inefficiencies
- the growing complexity of running a fund
- closure of defined benefit schemes to new members
- company mergers or other restructures
- a desire for a greater range of services than can be offered by a small corporate fund (such as the ability to report daily balances).

Figure C.1 Proportion of superannuation assets by fund type



Data sources: APRA (2014a, 2016c).

C.2 The corporate tender process

There is no set format for a corporate tender, and the process can vary significantly. The main steps are set out in figure C.2. Tenders can be run by professional firms (for example, some accounting and consulting firms offer this service) or by the company itself. Where a corporate fund is no longer being supported by an employer, a similar tender process can be run by the fund trustee, with possible input from the employer and/or a professional firm assisting the tender. The Commission is not aware of any public data on the size of the corporate tender market (an information request in chapter 5 follows up on this data gap).

The design of each tender, as well as the process by which a successful tender is chosen, can be different in every case, as companies place different weight on various aspects of the tender.

Tenders can be designed in multiple rounds, with only the funds shortlisted in earlier rounds invited to make formal tenders. Contracts may be of several years' duration, and arrangements may remain in place even longer, in order to outweigh the fixed costs of running a tender and transfer costs for all parties.

Regulatory hurdles for transferring members between funds

'Successor fund transfer' is the process whereby a member is transferred, without the member's direct consent:

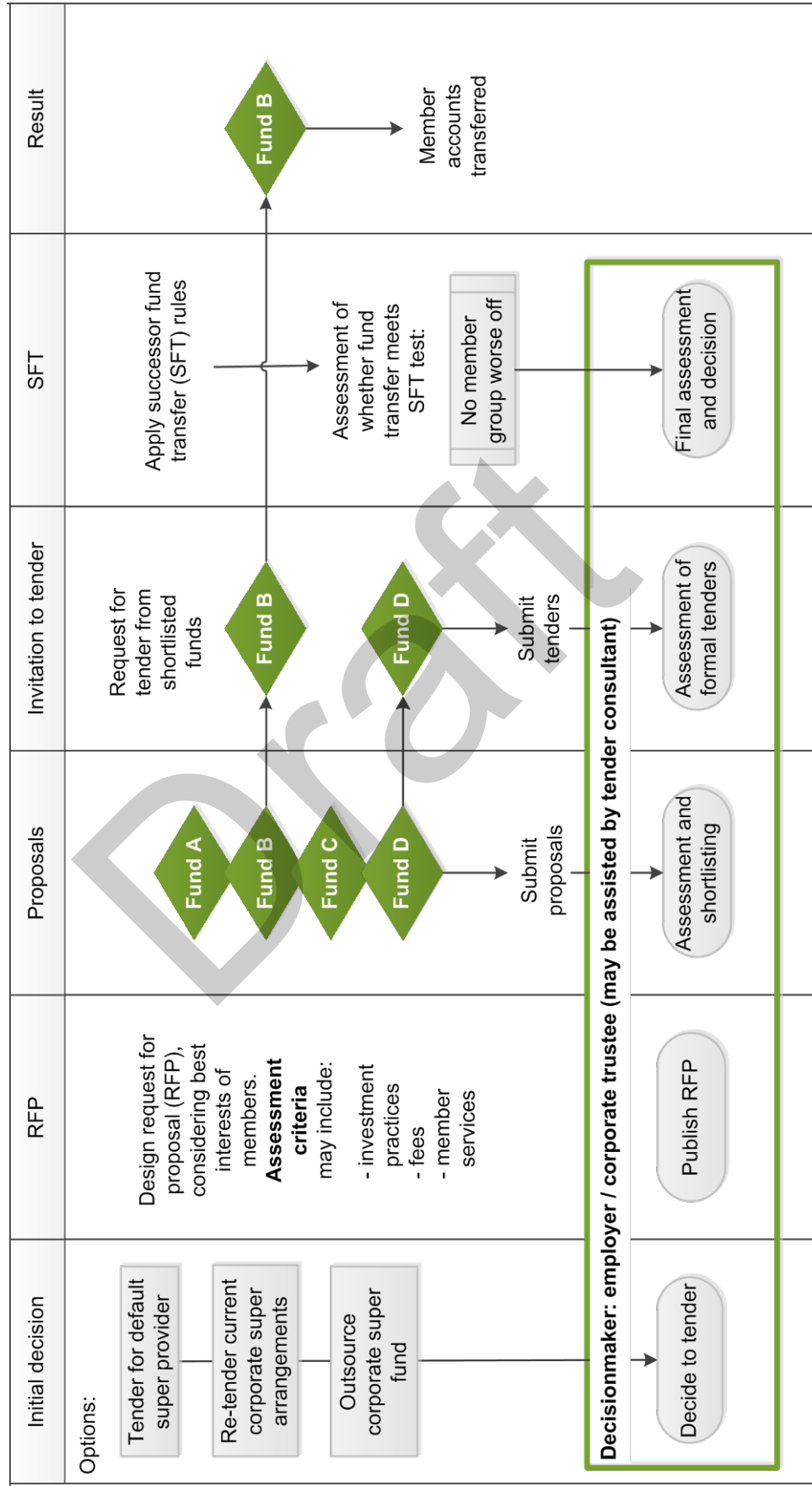
- to a different superannuation fund by the trustee of the fund being wound up (in the case of corporate outsourcing)
- from one default fund to another (in the case of a corporate tender where a different default provider is selected).

When members are being transferred without consent, the trustee of the new fund must agree with the trustee of the original fund that it will confer equal rights on the member. That is, 'the member's rights (in respect of benefits) in the new fund should be equivalent in value, measure, force and effect to their rights (in respect of benefits) in the original fund' (APRA 2001, p. 5).

Overall, the test for approving successor fund transfers is one of the more material hurdles for an employer considering a corporate tender. Mercer suggested that:

The current application of these requirements is that it discourages some potential successor fund transfers which, in turn, restrict fund mergers which could otherwise provide a better outcome to members. (sub. 31, p. 33)

Figure C.2 Stylised sample of a corporate tender process



For example, providing ‘equivalent rights’ in a successor fund includes equivalent provision and conditions of insurance and method of calculating insurance benefits. The difficulty in comparing insurance products (and thus, the difficulty of satisfying the successor fund transfer rule) often results in insurance being excluded from a corporate tender, and members not transferring to the insurance provider of the new fund but keeping their previous insurance arrangements.

What factors are considered in a tender?

In principle, a simple tender might focus on the fees and historic returns that each tenderer can demonstrate, as well as requiring trustees to compare the basic rights and benefits for members in the original and successor funds. More complex tenders might rank funds by a mix of hard metrics and qualitative evaluations.

Well-run tenders typically focus mainly on performance and fees, as well as insurance, investment strategy, administration and services to members and employers. Particular employers may also require funds to address other issues, for example corporate governance. (ISA, sub. 38, p. 37)

Past investment returns do not guarantee future returns, so investment capability, philosophy and governance will be important as a means of understanding future expected performance. Asset allocation is another key driver of investment returns. A more sophisticated assessment will typically consider issues such as the asset allocation strategy, the quality of underlying assets within each category, the asset diversification strategy as a means of improving risk-adjusted returns over time, and how adjustments to the strategy may be made over time. Box C.1 contains some sample assessment criteria.

A number of corporate funds have legacy defined benefit schemes — 9 per cent of all corporate fund member accounts are defined benefit accounts (APRA 2016c). These can complicate a corporate tender, for example, a tender might be a good deal for defined contribution members but not for defined benefit members. All member classes have to be better off in the new superannuation fund in order to pass the successor fund transfer test (above).

Weighting various aspects of a bid is difficult, however if done well, it can reflect the specific needs and wishes of a particular workforce.

Box C.1 Corporate tender assessment criteria

Based on Mercer's experience with large corporate tenders, the following are the key decision-making criteria, in order of importance.

- **Investment arrangements and expected investment returns** — such as the design and quality of the default (MySuper) investment option, and how life stages and sequencing risks are managed. The range and quality of options available to members who wish to exercise investment choice is also a key consideration.
- **Quality of member services** — such as helpline services, including availability of limited advice at no additional fee, and website and online resources, including retirement income calculators and member education material and services, for example, webinars (noting that the use of these services can increase fees relative to other funds).
- **Fees** — evaluated against breadth and quality of services, including investment arrangements.
- **Insurance premium rates and terms and conditions** — customised to suit the makeup of the employer's workforce as these rates and conditions can vary considerably.
- **Administrative capability** — track record of delivery and depth of resources.
- **Governance quality** — this includes trustee and policy committee arrangements.

Mercer concluded that ultimately, these criteria are all about generating the best possible outcomes for members, not just minimising fees.

Source: Mercer (sub. 31, pp. 22–23).

C.3 Outcomes of corporate tenders

The Commission heard many examples of successful corporate tender outcomes where high quality products were identified through a careful tender process and a high level of competition resulted in lower fees or better services for members. However, without further data, it is difficult to make broad conclusions about benefits for members.

There is some anecdotal and empirical evidence of corporate tenders delivering lower fees (box C.2). Australian Prudential Regulation Authority (APRA) statistics include details of fee rebates and discounts, such as a discount of 85 per cent (on total fees that would otherwise be paid) offered by AMP Superannuation (the default fund for Woolworths' employees) to 415 000 members. However, across the 84 funds reporting to APRA on discounts, the median discount was only 2 per cent (APRA 2016b). APRA (2016c) has recommended caution when using this fee data, saying that the data collection is relatively new and, 'It will therefore take time for the information reported to APRA to reach an appropriate level of quality and consistency'.

It has also been argued that it may not be in the interest of funds to report corporate tender outcomes, as it can make their standard default products look less attractive. Industry Super Australia (ISA) has voiced concerns about the lack of transparency and regulatory

oversight of corporate tenders.

While corporate tenders have the potential to increase competition, problems including cost, lack of transparency, conflicts of interest and flipping²⁷ need to be addressed. There is no effective regulatory oversight of corporate tenders. (sub. 38, p. 37)

Box C.2 The tender process by large employers can reduce fees

There is evidence that the tender process used by some large employers can reduce fees charged by superannuation funds. The Association of Superannuation Funds in Australia (2014, p. 39) noted that:

Fee-based competition has always been strong in the tender processes for default funds that have been undertaken by large employers.

The Grattan Institute (Minifie, Cameron and Savage 2015, p. 24) added that:

Large corporate tenders also pay relatively low investment fees, averaging 0.45 per cent ... Fees are often significantly below the fees of equivalent products offered to smaller customers. For example, one large corporate product has an investment fee of 0.45 per cent. It and a MySuper product with an investment fee of 0.61 per cent per year are managed by the same fund invested identically.

Murray et al (2014a, p. 115) noted that some large corporations and governments within and outside of Australia already run successful tender processes for retirement income products.

Large corporate funds successfully run tenders. A number of other jurisdictions use competitive tendering in pension funds; for example, New Zealand, Chile, and Sweden. Governments around Australia run successful tenders, including the Future Fund, and the Northern Territory Government for its public sector superannuation scheme.

Industry Super Australia (sub. 38, p. 20) cited two sources of benefits for members.

Corporate tenders have the potential to improve competition and efficiency in two main ways. A well-run tender can result in an employer replacing their default fund with a new fund which performs better for members. Secondly, the process results in the retention of the incumbent fund, but the employer extracts a better offering from that fund, particularly in relation to fees.

Lower fees for corporate clients could be the result of scale economies or ease of administration. Large corporations tend to have more sophisticated payroll systems, and corporate funds (which may deal with only one employer) have cleaner and cheaper contribution collection systems, making them relatively more efficient than other fund types. By comparison, industry funds often deal with a large number of very small employers, some with paper-based accounting systems. However, there are insufficient data available to make conclusions about the size of companies that run corporate tenders. The ISA (sub. 38, p. 54) gave an example of a corporate tender run by an employer with fewer than 80 employees, and one with over 6000 employees.

More detailed data on fees and costs are needed to determine where the cost savings are coming from. Under MySuper rules, cross-subsidies are not permitted, and any fee discounts must be offered only in relation to administrative fees, while investment fees

²⁷ Flipping is described below.

must be uniform across all MySuper members in a particular fund (*Superannuation Industry (Supervision) Act 1993* (Cwlth)).

Another area where corporate tenders can achieve benefits for members is by overcoming behavioural biases such as inertia (appendix B). Corporate tenders may improve outcomes for members by comparing products at a level of detail that would be too costly for an individual member to engage in. This overcomes inertia by taking the decision out of the hands of individual members and pooling the effort and decision-making process, and can also result in allocative efficiencies where a product is tailored to meet the specific needs and preferences of a particular workforce.

However, there are costs and possible disadvantages associated with corporate tenders. The tender process itself can be costly for employers and superannuation funds. For example, employers can face ‘significant cost if a third party consultant is engaged’ (ISA, sub. 38, p. 26) and submitting tenders can also be costly: ‘one large Industry SuperFund reports having to submit tender documents that run to 140 pages’ (p. 55).

Further, due to the presence of principal–agent relationships — whereby the employer is making decisions on behalf of the employee — there is a risk that the corporate tender could consider features that are valuable to the employer but not members (such as compatibility with payroll systems). The ISA has also suggested that employers can face conflicts of interest.

In some cases, following a corporate tender process, the employer selects a fund with which they have an association. For example, the fund is part of a corporate group which is also a key client of the employer or provides banking services to the employer. (sub. 38, p. 55)

Another practice that can disadvantage members is ‘flipping’, where members are transferred without their knowledge from a discount product into a full-fee product after leaving a particular employer.

... anecdotal evidence suggests that the practice of retail funds offering fee discounts as part of a corporate tender on the expectation that members will cease employment with the employer, enabling the fund to flip the member into a higher-fee fund without their informed consent continues to occur. (ISA, sub. 38, p. 20)

C.4 What lessons can be applied from corporate tenders?

One of the key lessons from the corporate tender process is that, even where outcomes can be clearly articulated and understood (corporate tenders are generally run by one employer for a specific set of employees), it is very difficult for tender consultants to make comparisons and determine which provider is the most ‘efficient’. Significant judgment is required to balance competing considerations. These issues are proportionally more difficult to overcome for a system-wide analysis.

Corporate tenders can be difficult to design and adjudicate because they involve trade-offs between costs, quality of service, financial sustainability, and other characteristics of the service providers and their offers. This may be more difficult where tenderers try to mask particular costs and the bids are very heterogeneous and difficult to compare.

However, where corporate tenders appear to achieve better results for members, these results seem to be driven by features unique to large and highly-motivated corporations that typically have:

- a large number of employees (and a stable workforce)
- employees with larger account balances
- accounts that are more efficient to administer
- motivated employers who are able to tailor a product that suits their workforce
- employers with in-house expertise — or who are prepared to spend the money on outsourcing — and who can conduct the complicated process of designing a tender and comparing quantitative and qualitative measures to make the best decision.

In summary, the *process* of running corporate tenders provides some useful lessons for developing criteria and indicators to assess the efficiency and competitiveness of the superannuation system as a whole. The expertise and judgement needed to develop criteria and to evaluate the quality of the information (indicators) underpinning any assessment are similar for a specific tender and a systemic review.

Furthermore, the *outcomes* of corporate tenders themselves may be useful for assessing competitiveness and efficiency. If there is evidence that corporate tenders can consistently achieve lower fees, it could be an indicator of competitiveness, or an indicator that default members who do not have the benefit of a corporate sponsor are not benefitting from competition, or both. However, greater cost and fee transparency is required to properly assess the *source* of efficiency and cost savings in corporate tenders.

DRAFT REPORT

This draft report is no longer open for consultation. For final outcomes of this project refer to the research report.

Draft

D Retirement income products

Key points

- Concerns about an underdeveloped market for retirement income products and low uptake of private longevity insurance have featured in several reviews of the Australian superannuation system, including the Financial System Inquiry.
- While there is currently very limited provision and uptake of longevity insurance products and only a nascent market for customised post-retirement investment products, it is challenging to draw strong conclusions from this evidence. Many factors are at play.
- Individual preferences and circumstances matter. Where people do not attach a great value to additional longevity risk protection, have a desire for flexibility, or a strong bequest motive, low uptake of longevity insurance is not a symptom of a problem.
- Some policy distortions that lead to inefficient outcomes arise outside of the superannuation system, and could not be resolved within it. They include the availability and size of the Age Pension and the exemption of the family home from means tests for social security support.
- Some policy distortions within the system — in particular the non-neutral treatment of account-based and some longevity-protected income streams — may be a barrier to competition and dynamic efficiency. However, the Australian Government has committed to effectively remove those barriers by July 2017.
- Suboptimal outcomes may also arise due to behavioural and cognitive constraints of members. There may be a greater role for more customised default products, underpinned by robust information about members. The effectiveness of policies to address behavioural and cognitive constraints — such as information provision, financial education and advice — could also be examined as a complementary indicator.
- Ultimately, an assessment of the sector needs to go beyond a simple examination of product diversity and levels of uptake. It should also focus on information, market and policy barriers to product development and the implication of those barriers for competition and efficiency.

Several recent reviews of the superannuation system have focused on the supply and uptake of retirement income products (Henry et al. 2010).²⁸

The Financial System Inquiry (FSI) concluded that low uptake and a lack of diversity in the products that would allow retirees to manage their longevity and other risks was evidence of overall inefficiency of the market.

²⁸ The 2010 Cooper Review recommended that MySuper products include at least one product that spans the entire life cycle of members, including retirement. The Australian Government (2010, p. 18) noted this recommendation and committed to ‘consult with relevant stakeholders on whether post-retirement products should be mandated for MySuper products at some time in the future’.

A well-functioning market would be expected to provide a wider range of products that meet different needs and preferences. This would allow people to combine products to achieve their desired levels of income, risk management and flexibility. However, there are tax, regulatory and other impediments to developing innovative retirement income products. (Murray et al. 2014a, p. 120)

The FSI recommended that to increase retirement incomes and facilitate the development of the market, members should be offered a default ‘comprehensive income product for retirement’ that includes a ‘regular and stable income stream, longevity risk management and flexibility’ (Murray et al. 2014a, p. 117). This recommendation was accepted by the Australian Government (2015a).

This appendix will look at the current status of the market for retirement income products, examine barriers to further product development and draw out any implications for efficiency and competitiveness.

D.1 Overview of the market

What are the different options for withdrawing super?

At a high level, members that meet the preservation rules can access their superannuation in the form of a lump sum, income stream or a combination of the two.

Most superannuation funds allow single and/or multiple lump sum withdrawals for retirees of preservation age and members who are over 65. Depending on fund rules, those members can also convert an existing income stream to a lump sum (commutation). There are no regulated minimum or maximum requirements for lump sum withdrawals for retirees. The superannuation benefit can also be received as a series of regular payments and be in the form of an **account-based** income stream or a **guaranteed** (non-account-based) income stream.

Account-based income streams

Account-based products are the dominant income stream product in Australia (discussed below). These products are essentially managed investments with a minimum annual drawdown required by regulation (Australian Government 2014c). A key feature of this type of product is that members bear the full extent of their investment and longevity risks. Nevertheless, they retain scope to manage some of those risks through asset allocation.

Life-cycle and **target date** investment products are an example of a service growing in popularity in Australia and overseas, which are aimed at addressing the investment risks that are specific to the person’s age or stage in the life cycle. In Australia, the development of these products was stimulated by Stronger Super reforms, which allowed trustees to register a life-cycle product as their fund’s default investment strategy. While the reforms

only covered the accumulation stage of superannuation, several life-cycle products try to cater to older (post-retirement) member cohorts (discussed below).

The concept behind life-cycle products is that the investment risk in the allocation of assets should reflect the investment and decumulation horizons of the member. Under the *Superannuation Industry (Supervision) Act 1993* (Cwlth) (s. 29TC (2)) and Regulations (r. 9.47), the factors that may be considered in designing a life-cycle product include the member's age, account balance, current salary, gender and estimated time before retirement. While life-cycle products tend to differ across providers, the general approach is to make the investment portfolio increasingly conservative as the investor ages (Basu, Doran and Drew 2012).

Guaranteed and hybrid income stream products

In contrast, guaranteed income stream products, which are typically offered by life insurers, provide the member with a guaranteed income for a defined period or for life. Over the term of the product, the member is insured for investment and longevity risks. The sequencing risk is crystallised at the time of purchase, and thereafter the member is insured for any future sequencing risks. Guaranteed income products can take various forms and a large number of variants exist around the world (box D.1). The distinction between such products and standard investment products can become blurred, and some products share characteristics from both sides of the spectrum.

Box D.1 Types of guaranteed income stream products

There is a diverse range of types and payoff structures of guaranteed income stream products that exist around the world.

- Lifetime annuities — provide a guaranteed payment conditional on the survival of the annuitant.
- Term annuities — provide a guaranteed payment over a contracted term.
- Guaranteed annuities — provide a guaranteed income throughout the annuitant's life conditional on the survival of the annuitant to the payment date, and the payments are also guaranteed for a particular term, regardless of the annuitant's survival.
- Joint life and last survivor annuities — a lifetime annuity payable until the first or last death in a group.
- Deferred annuities — provide a guaranteed payment conditional on the survival of the annuitant to the payment date throughout the annuitant's life (deferred lifetime annuities) or for a maximum term (deferred term annuities); the commencement of payments is, however, deferred.

(continued next page)

Box D.1 (continued)

- Variable annuities — investment accounts, typically held with an insurance company, that provide some guarantees for decumulation, for example, a minimum income, duration of payments or value on termination (capital protected accounts).
- Pooled annuities and group self-annuitisation schemes — members of a group pool their investment and longevity risks, with the size of the payout to surviving members dependent on actual mortality of the group and investment performance.

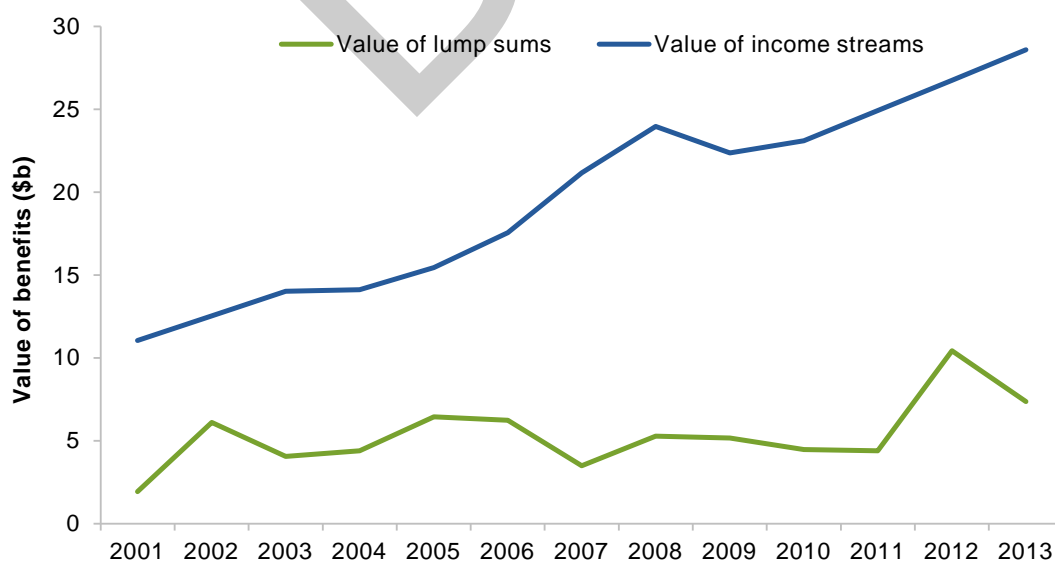
Sources: Fung and Shevchenko (2015); Ralston and Maddock (2015).

Recent trends in the composition of retirement benefit products

Most decumulation is through income stream products

Recent analysis by the Commission demonstrated that most of the decumulation of superannuation balances in Australia occurs through income stream products, rather than lump sums, with some estimates suggesting that the share of income stream products was over 80 per cent. Moreover, a substantial proportion of lump sums are subsequently invested, with over 30 per cent of lump sums being used to purchase financial assets (PC 2015b). And the share of income stream products appears to be growing over time (figure D.1).

Figure D.1 Total superannuation benefits over time



Source: PC (2015b).

Guaranteed income streams are a minority

While there are limited data on the size of the market for guaranteed income retirement products, most estimates suggest that it has traditionally been small, and that most income stream withdrawals have been in the form of account-based pensions. In a review of the history of the annuities market in Australia, Bateman and Piggott (2010) concluded that uptake of longevity insurance has always been low irrespective of the policies in place. They noted that lifetime annuities held a niche place in the market between 1998 and 2004, when they were exempt from the Age Pension means test. After the exemption was phased out, uptake of lifetime annuities virtually disappeared, with a 90 per cent decline in value between 2007 and 2008, and only 17 annuities purchased in the first three quarters of 2009.

More recently, the market for guaranteed income streams may have grown slightly but is still small and highly concentrated, with one provider (Challenger) accounting for over 95 per cent of the annuity market flows in 2013 on its own estimates (Challenger 2014)

Mercer (2014) estimated that guaranteed income and hybrid products comprised about 5 per cent of the retirement income market, with the vast majority of those products being term annuities. Similarly, DEXX&R (2016) estimated that annuities recently accounted for about 6 per cent of the retirement incomes market in superannuation. Recent financial reporting data from Challenger indicate that lifetime annuity products account for a relatively minor share of its total sales of annuities — about 15–25 per cent depending on the period (Benari 2015; Challenger 2016a).

The low level of voluntary uptake of annuities is not unique to Australia. Around the world, there are very few examples of pension schemes that have achieved significant uptake of privately provided annuities in the absence of mandatory longevity insurance (Brown et al. 2016; James and Song 2001). This has led the researchers studying the phenomenon to coin the term ‘the annuity puzzle’.²⁹

Life-cycle products are simplistic and generally not used post-retirement

For people that choose to remain invested in their superannuation fund after preservation age there are few default investment options that are calibrated to their age and other circumstances. Life-cycle investment products account for a minor share of superannuation balances — about 12 per cent of all assets under management of APRA-regulated funds (APRA 2015f). Only about one third of those products are explicitly tailored for post-retirement age groups, with most products either not specifying a maximum age, or prescribing a maximum age of about 65–70. An early assessment of MySuper life-cycle products found that the focus on ‘to retirement products’ rather than ‘through retirement

²⁹ Some studies, including the FSI (Murray et al. 2014a) have claimed that Australia's uptake of annuities was low by international standards. However, most comparisons of this nature fail to account for the role of policy. In most countries that have a high uptake of annuities, investment in this product is either mandatory, or subject to heavy policy incentives (such as tax concessions).

products' ignored retirement income needs of members (Chant, Mohankumar and Warren 2014).

Furthermore, there is currently little evidence of tailoring of life-cycle products to individual circumstances of members. Chant, Mohankumar and Warren (2014) reported that in the vast majority of cases, life-cycle products were calibrated purely to the age of the member and that greater tailoring of products by funds was inhibited by lack of information about members. Fiduciary's Friend (sub. 7) argued that incorporating factors such as current income and projected retirement balances into life-cycle products was essential to ensuring allocatively efficient outcomes. Others suggest that when constructing an asset portfolio for the transition and retirement stages, a focus on age is less instructive than a focus on the person's consumption needs. The concept of goals-based investment suggests that the investment portfolio of a newly retired person should comprise separate buckets to reflect the various purposes for the funds, such as immediate expenditure, longer term income and emergency expenses (Cooper, Minney and Sainsbury 2014; Rice 2014).

Moreover, even on the age criterion there is little consistency in the level of investment risk in the life-cycle products offered by different funds. For example, the Commission's analysis of products offered to 65 year old members³⁰ in 2015 shows that the allocation to cash and fixed interest assets varied between about 40 and 90 per cent of the overall portfolio (APRA 2015f).

Notwithstanding the above, some funds are beginning to adopt more sophisticated life-cycle products that draw on information about their members. For example, QSuper's accumulation life-cycle product is calibrated to both member age and investment balance (QSuper 2016). Members' investment balances are regularly assessed, and their asset allocation can be automatically updated if the balance reaches a particular threshold. In its submission to the FSI, QSuper (2014) also indicated that other member characteristics, such as Age Pension entitlements, contribution rates and gender will be incorporated into its life-cycle product over time.

Some members manage longevity risk through slower draw down of their savings

While account-based pensions do not provide an explicit protection for longevity risk, this risk can be managed by members through controlling drawdown rates. In a longitudinal study of age pensioner saving patterns, Wu et al. (2015) found that age pensioners typically drew down 2.5 per cent of their assets per year until death, with lower wealth pensioners being net savers from an early stage of their retirement. That study found that the median pensioner who passed away during the survey period (1999–2007) left about 90 per cent of their wealth from the beginning of the period. CSIRO research (CSIRO Super Cluster 2016) of retirees aged in their 60s and 70s, shows that they draw down their

³⁰ Depending on the fund, the products are either tailored to an age band that incorporates this age or to the particular age.

account-based pensions at very conservative rates. Many are using the legislated minimum draw down rates as their default strategy.

There are several potential reasons for conservative spending in retirement, including lower private consumption needs in old age (coupled with greater reliance on publicly funded services). Nevertheless, the Commission and others (for example, Murray et al. 2014a; PC 2015a; Ralston and Maddock 2015) recently found that precautionary saving was a key driver of spending decisions of older Australians and that this might be resulting in lower than optimal consumption and unintended bequests.

D.2 Barriers to further product development

Demand-side barriers

The role of consumer preferences

The preferences of members play a significant part in the demand for income stream products that provide investment and longevity insurance. There are several trade-offs that could constrain demand for protection against longevity, investment and sequencing risks.

First, to the extent that such protection involves a switch to a more conservative portfolio (as with life-cycle products) or a transfer of all downside and *upside* investment risks (as with annuities), it has a cost in the form of foregone creation of wealth. In this context, the conventional life-cycle investment approach of dealing with sequencing risks might not always provide superior protection against inadequate retirement incomes (Drew, sub. 26; Estrada 2014). Similarly, modelling by the Australian Centre for Financial Studies (ACFS) demonstrated that lifetime annuities generally deliver a lower return on investment than account-based pensions (ACFS 2015b). ACFS concluded that for some retirees, investing all of their savings into an account-based pension is the optimal strategy even after accounting for explicit longevity protection from the annuity (discussed below).

Second, there is a trade-off between a preference for a guaranteed stream of income and flexibility in being able to withdraw lump sums for unexpected one-off expenditure, for example an adverse health event. In contrast to account-based pensions, annuities generally do not provide such liquidity. Several studies have noted that such flexibility is important to members (for example, Murray et al. 2014a; PC 2015a; Ralston and Maddock 2015).

Third, products such as lifetime annuities are typically less well-suited to accommodating a preference for bequests. While there is evidence that this motive is in decline with the recent cohorts of retirees, it is still an important consideration (PC 2015a). In the past, lifetime annuity products were offered with no value on termination. There are products emerging that retain some residual capital value, but these are still relatively new.

Fourth, while lifetime annuities offer protection for future investment and longevity risks, their price at purchase is typically locked by current or short-run market conditions. This

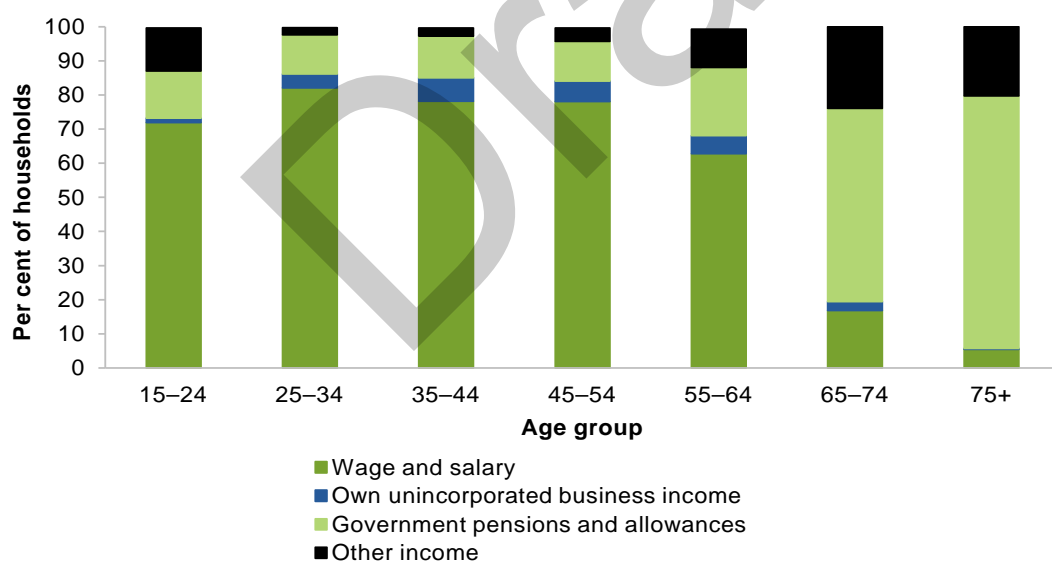
makes them vulnerable to their own form of sequencing risk, where factors such as a low interest rate environment would make the product unattractive to a prospective purchaser (ACFS 2015b).

Ultimately, the desired level of longevity and investment risk protection depends on the person's tolerance for those risks and the value they attach to managing or transferring them.

Tax and social security settings

Demand for longevity insurance through superannuation savings cannot be viewed in isolation from other forms of longevity insurance already available to retirees. The Age Pension offers a form of longevity insurance and is the dominant source of income for the majority of retirees, with nearly 75 per cent of those aged over 75 relying on it for most of their income (figure D.2). The availability and size of the Age Pension is a natural constraint on the demand for privately provided longevity insurance.

Figure D.2 Main source of weekly household income, by age group^{a,b}
2011-12



^a Observations are only captured if income is positive. ^b Age of household is defined as age of household reference person.

Data source: Commission estimates based on ABS (*Survey of Income and Housing, Australia, 2011-12 Basic CURF*, Cat. no. 6541.0.30.001).

The ACFS (2015b) modelled several representative scenarios to examine the relative wealth and longevity risk implications of alternative retirement income products. It concluded that for low wealth and low income retirees the Age Pension provided sufficient longevity protection, and the optimal strategy was to convert the entire superannuation

savings into an account-based pension. The modelling showed a stronger case for using lifetime annuities for a part of the savings, as the wealth of the person increased and they became less reliant on the Age Pension. Similarly, Knox (2016) argued that the case for annuitisation was weaker for those with very low or very high superannuation balances.

Current disincentives in the tax and social security settings for some types of annuities

Several reviews have argued that deferred annuities, pooled annuities and variable annuities are disadvantaged by the current tax and social security arrangements relative to other income stream products (Murray et al. 2014a; Treasury 2016a).

Currently, tax exemptions apply to income derived from assets supporting superannuation income streams during decumulation. However, eligibility for the earnings tax exemption is limited to income stream products that meet a set of rules contained in the Superannuation Industry (Supervision) Regulations 1994. There are two key rules.

- Superannuation income streams must make payments at least annually.
- For non-account-based products, payments cannot vary from year to year, other than to increase consistently by a certain percentage, or vary with the consumer price index or average wages.

The first requirement effectively disqualifies deferred annuities from the exemption, because by design payments do not commence on purchase. The second requirement affects the eligibility of variable annuities and of pooled annuitisation schemes, because payments for those products could vary over time. For the former, this would be a function of investment returns, while for the latter it could be affected by mortality of group members.

The Treasury's review of retirement income stream regulation recommended that separate tax exemption rules should be introduced for non-account-based income stream products (Treasury 2016a). Under the new rules, such products would qualify for exemptions. The Australian Government accepted this recommendation (O'Dwyer 2016a).

Other sources of wealth also play a role

The Commission recently examined the role of owner-occupied housing in financial decisions of retirees and found that the family home played a key role as a vehicle for precautionary saving of older Australians (PC 2015a). Moreover, housing is a significant part of consumption for the majority of older Australians — so home ownership offers a form of consumption annuitisation in and of itself (Lloyd 2014). There are some disadvantages to using the family home in this manner, in particular the illiquidity and high transaction costs in drawing out equity whether through outright sale or via an equity release product. However, the incentives of retirees, and their attitudes to using the family

home as a form of financial insurance in retirement, have been entrenched by decades of policy settings. Specifically, the family home is exempt from the Age Pension means test and is also subject to various exemptions or concessional treatment in the means tests for aged care support.

Demand can be affected by cognitive constraints and behavioural biases

While lifetime annuities and their variants deliver a simple and transparent stream of income to the purchaser, the annuity valuation process is a complex exercise, both for the suppliers and for the purchasers. There is emerging behavioural research indicating that cognitive constraints and behavioural biases distort the demand for lifetime annuities (appendix B; Lloyd 2014). Consumers face challenges in making decisions with long-term horizons, while assessing their longevity risks as well as balancing the trade-offs with other risks. Brown et al. (2016) concluded that this complexity and bounded rationality of consumers was one of the key reasons behind low international demand for annuities. There is also evidence of ‘framing’, where demand for annuities is sensitive to how the information is presented to the consumer. In this context, Hu and Scott (2007) applied a behavioural economics model to longevity insurance and concluded that consumers tend to perceive annuities as a gamble on their longevity, rather than an income product. Loss aversion and overweighting of small probabilities provide a powerful disincentive to uptake of such products.

In Australia, these issues may be amplified by constraints on the purchase options for retirement income products. Specifically, members are unable to spread their purchase of a retirement income product over time through multiple premiums.³¹ Treasury, in its review of Retirement Income Streams (2016a), recommended that this constraint be removed, and the Australian Government accepted that recommendation (O’Dwyer 2016a).

Adverse selection

Longevity insurance products may be vulnerable to the problem of ‘adverse selection’ (Murray et al. 2014a). The issue arises where prospective purchasers have more information about their life expectancy than providers of insurance, who would find it difficult to accurately tailor premiums to individual circumstances. This could lead to a tendency for self-selection bias on the demand side, where those who expect to live longer are more likely to purchase longevity protection. This bias would be reflected in higher prices making it unattractive for those with a shorter life expectancy. It would also limit the ability of providers to diversify longevity risk.

³¹ The only exception is if the income stream had not commenced payments yet.

The FSI cited Challenger estimates of the cost of adverse selection:

Challenger estimates that for a 65-year-old male buying an annuity in the current environment, adverse selection lowers indexed annuity payments by around 7 per cent (from around \$6000 annually per \$100 000 premium to \$5600). (Murray et al. 2014b, p. 4.17)

Henry (2010) observed that the most effective way of overcoming the adverse selection problem in lifetime annuities was through a mandatory scheme. However, the FSI (Murray et al. 2014a) cited experimental behavioural research by Bateman et al. (2013) that found default allocations to annuities could also overcome adverse selection (by creating a quasi-mandatory system), because most people tended to stay close to their default allocation. The above discussion illustrates the multitude of demand-side considerations that could compromise simple conclusions about the need for significantly greater uptake of private longevity insurance products.

Supply-side barriers

Regulatory and policy barriers to product development

The tax and social security disincentives on the demand side for deferred, variable and pooled annuities are also a barrier on the supply side. Several stakeholders in the Treasury (2016a) review, as well as participants in this study (for example, PWC, sub. 11) argued that those arrangements hindered the development of new products.

Beyond that, two inter-related supply-side barriers have been raised by participants in this and past reviews. First, stakeholders argue that there is a lack of clarity on how new and innovative products would subsequently be treated in the social security means test.

Second, several participants in the FSI (Murray et al. 2014a) and Treasury (2016a) reviews argued that administrative duplication and lack of coordination between responsible regulating agencies was leading to confusion and excessive compliance costs. Treasury noted that providers need to approach a number of government agencies including:

- the Australian Taxation Office on compliance with the *Income Tax Assessment Act 1936* (Cwlth) definition of a superannuation income stream and eligibility for the earnings tax exemption
- the Department of Social Services on the treatment of the product under the social security means tests
- the Australian Prudential Regulation Authority on the prudential rules for managing the product within the provider's business
- the Australian Securities and Investment Commission on licensing.

In its response to the Treasury review, the Australian Government committed to clarify the treatment of the new deferred and pooled annuity products under the Age Pension means test, before July 2017 (O'Dwyer 2016a).

Lack of competition

The general lack of demand-side competitive pressures in the superannuation system is well documented (chapter 5). Moreover, the transition and retirement phases of superannuation have not traditionally been the focus of policy makers and are not explicitly targeted by MySuper regulations. Low levels of supply and innovation by funds and other providers of retirement income products could, in part, be a consequence of a market that has not been subject to sufficient competitive pressure.

One area for examination will be the extent to which account-based products are evolving to reflect the needs of members in retirement. This assessment could be informed by evidence of providers seeking to discover the circumstances and preferences of current and prospective consumers and subsequently tailoring the products to those circumstances and preferences.

A similar assessment would need to be undertaken for non-account-based products, but this would need to be cognisant of the other policy and regulatory constraints on the market to date. A separate issue for the supply of guaranteed income stream products is whether the current market concentration is a symptom of a lack of competition and contestability. This would involve testing the provision of those products for exercise of market power, analysis of barriers to entry into the market and looking at whether the current market structure is generating benefits for retirees due to economies of scale.

Information demands on providers

The above discussion illustrates the informational challenges for providers trying to specify a comprehensive income product for retirement as recommended by the FSI. A key factor in the development of well-calibrated retirement products is the extent to which providers collect and utilise information about their members, particularly where member disengagement and cognitive constraints are preventing those market signals from emerging naturally.

As noted by the ACFS (2015b), ideally providers would need information on:

- what sources of retirement income are available to the member, including income from the Age Pension and other assets
- how much income is required — which could be influenced by life expectancy, health, household composition, and would also need to account for preferences
- what are the member's risk preferences, and the extent to which they could trade off their desire to minimise longevity and investment risk against flexibility and a bequest motive.

The Commission recognises that collecting very detailed information about members is not costless, and that in some cases information gaps may be very difficult for a provider to overcome, irrespective of cost. For example, while superannuation funds might have (or be

able to collect) information at an individual member level, retirement income decisions are typically made at the household level.

The Commission's early research indicates that the extent to which providers collect and draw on important information about members will be an important matter for assessment in the future review.

D.3 Implications for assessment

The above discussion illustrates the challenges for drawing simple conclusions about the competitiveness and efficiency of the superannuation system from evidence of low supply and uptake of income products that seek to manage investment and longevity risks of retirees. Many potential reasons could be at play. Some could relate to individual preferences and circumstances, in particular where people do not attach a great value to additional longevity risk protection, have a desire for flexibility or a strong bequest motive. In such situations, a low level of demand for longevity insurance is not symptomatic of inefficiency of the system.

Other barriers could stem from policy distortions and incentives formed outside of the superannuation system, in particular the availability and size of the Age Pension and the exemption of the family home from the means tests for various forms of social security support. The combined impact of those factors is a potential barrier to the efficiency of the retirement incomes market, but not one that could be resolved within the superannuation system.

There are also some policy distortions within the system — in particular the non-neutral treatment of account-based and some longevity-protected income streams — that may be a barrier to competition and dynamic efficiency. However, the Australian Government has committed to effectively remove those barriers by July 2017.

And there are some non-policy barriers, in particular the behavioural and cognitive constraints that may be leading to suboptimal outcomes, and should be examined as a potential barrier to system efficiency. In this context, there may be a greater role for more customised default products, underpinned by robust information about members. The effectiveness of policies to address behavioural and cognitive constraints — for example, information provision, financial education and advice — could also be examined as a complementary indicator.

Ultimately, an assessment of the sector needs to go beyond a simple examination of product diversity and levels of uptake, and focus on market and policy barriers to product development and the implication of those barriers for competition and efficiency.

DRAFT REPORT

This draft report is no longer open for consultation. For final outcomes of this project refer to the research report.

Draft

E International approaches

Key points

- Globally, pension systems have assets of over US\$25 trillion (OECD 2015b). There are wide differences in funds under management as a percentage of GDP and coverage across countries. This is mainly due to design differences on key aspects such as participation requirements and contribution rates.
- Most developed countries are embracing private, defined contribution pension schemes as an increasingly important part of multi-pillar retirement income systems. Mandatory or quasi-mandatory settings tend to be preferred, and default arrangements are moving towards centralised competitive tenders or large scale sovereign funds.
- The OECD produces publications analysing the performance of retirement income systems. This work provides guidance on system design and (more recently) compiles some information relating to the performance of private pension systems.
- There is a degree of consensus regarding some key factors that drive operational efficiency across jurisdictions. These include gaining economies of scale, both at the fund and system level, as well as the quality of governance practices at individual funds.
- Benchmarking funds or systems internationally, or simply just making comparisons, is fraught with difficulty due to differences in policy settings and data standards. However, limited benchmarking (across countries not systems) is possible and credible by collecting data directly and carefully unbundling it into comparable components.

This appendix seeks to explore what lessons can be learnt from looking at pension systems overseas. Section E.1 assesses the broad global trends in pension systems and the challenges ahead. This is followed by section E.2, an overview of the key takeaways with regard to assessment frameworks and the common drivers of efficiency. Last, section E.3 examines work that has been done on cross-country comparisons — both at the system and fund level — and details the many difficulties in attempting such work and how these have been overcome in some cases.

E.1 Global trends

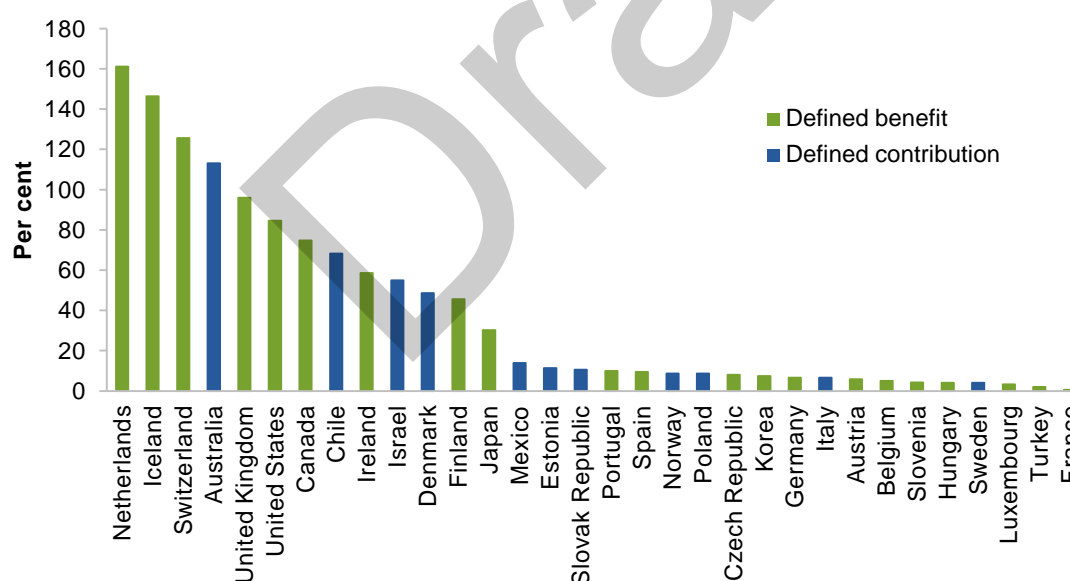
Design and participation

Developed countries' pension systems have grown at a significant pace in recent times. The broad reform trend is characterised by an increasing focus on private defined contribution schemes and a declining use of public pensions and defined benefit schemes.

There are several factors driving these trends. These include ageing populations putting pressure on the sustainability of public pension schemes, and increased labour mobility undermining the ability of defined benefit funds to deliver adequate retirement incomes (Aaronson and Coronado 2005).

Despite these broad global trends, there is wide variation in the size (figure E.1), and coverage (figure E.2) of pension systems across OECD countries. This is primarily attributable to design differences on aspects such as contribution rates and participation requirements. At present, 18 OECD countries have mandatory or quasi-mandatory pensions, and a further eight have voluntary schemes. For example, New Zealand has an auto-enrolment with an opt-out option to new employees, as is the case for some employees in the United Kingdom's recently launched National Employment Savings Trust. However, not all countries are embracing the defined contribution approach, with many European countries maintaining large scale defined benefit schemes, and other countries, such as Poland and Hungary, reducing or closing down defined contribution schemes in recent years (OECD 2013).

Figure E.1 Pension system assets as a percentage of GDP^{a,b}
By system design (defined contribution / defined benefit), OECD countries

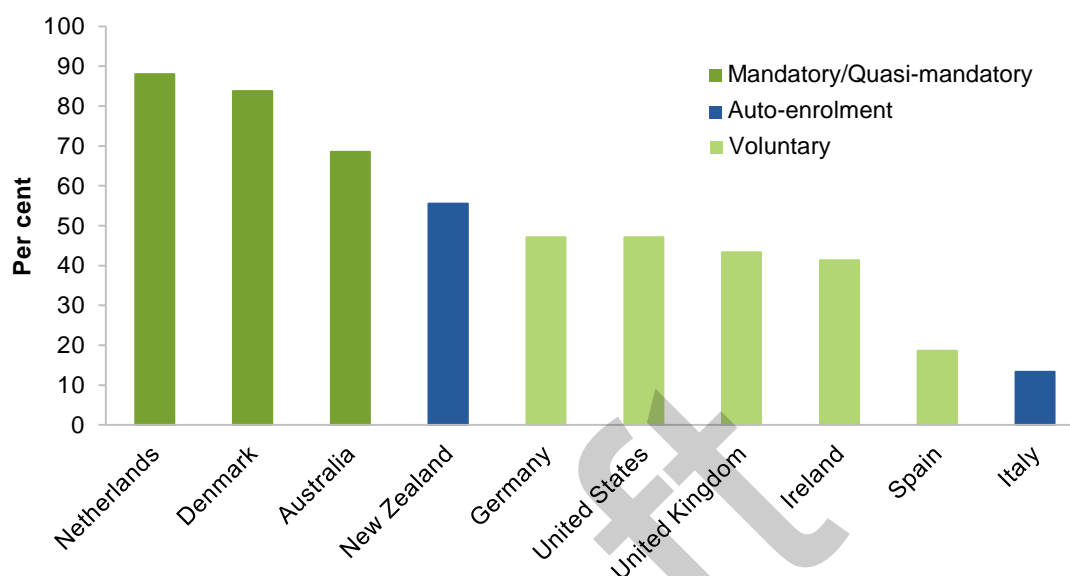


^a Systems are classified as defined contribution or defined benefit based on the dominant arrangement in each country. ^b Defined contribution includes notional defined contribution, in which the rate of return is determined by government guarantee not market returns.

Data sources: OECD (2015a, 2015b).

Figure E.2 Private pension system coverage

As a percentage of the working-age population, select OECD countries



Data source: OECD (2013).

There is broad consensus that defined contribution plans are preferable to defined benefit plans from a society-wide perspective (OECD 2012b, 2013, 2015b). An analysis of the risks in pension systems shows that relative to defined benefit schemes, defined contribution schemes carry fewer risks and transfer some of the key risks to the ultimate beneficiary — the individual (table E.1). There are some hybrid schemes, and the distribution of risks in such schemes depends on which elements of defined contribution and defined benefit models have been incorporated.

Pension system challenges

One of the key motivating factors driving the shift to private pension schemes is the ageing of the population. Globally, the percentage of the population aged over 65 is expected to increase from 8 per cent currently to 15 per cent by 2050. As the proportion of the population living in retirement increases, the sustainability of public pension schemes is increasingly compromised. However, across OECD countries, it has also been argued that private pension systems have not adequately addressed longevity risk and that middle- and low-income earners continue to require public pensions (OECD 2013).

Citibank (2016) contended that both public sector pensions and private sector defined benefit schemes face growing challenges in the future. The total value of unfunded or underfunded public defined benefit liabilities for 20 selected OECD countries is estimated to be \$78 trillion. Currently, the Australian Government's underfunded public defined

benefit liabilities total \$168 billion (Commonwealth of Australia 2016). Further, Citibank identified substantial shortcomings in private defined benefit schemes, arguing that ‘corporations have also not consistently met their pension obligations and most US and UK corporate pension plans remain underfunded with an aggregate fund status in the US of just 82 per cent’ (Citibank 2016).

More broadly, the OECD (2013) argued that private pensions have come under strong pressure due to distrust of the financial sector and a prolonged low interest rate environment. Further, they also contend that there is scope to improve the operational efficiency of private pension providers worldwide via more competitive processes, particularly for default contributions.

Table E.1 Who bears the risks in different pension systems?

<i>Risk</i>	<i>Details</i>	<i>Defined benefit</i>	<i>Defined contribution</i>
Investment	The risk that the market produces lower than expected returns	Employer	Employee
Longevity	Uncertainty regarding the period of time an individual will need retirement income	Employer	Employee
Wage-path	Uncertainty regarding wage changes over a career	Employee ^a	na
Inflation	The risk that inflation will reduce the purchasing power of benefits	Employer / employee ^b	Employee
Accrual	The risk that benefits are not transferable from one employer to another	Employee	na
Insolvency	The risk that the plan sponsor declares bankruptcy and the plan is underfunded	Employee / government ^c	na
Sequencing	The risk that poor returns just before or early in retirement heavily impact final income	Employer	Employee
Salary replacement	The risk that working-life savings will produce an inadequate replacement rate in retirement	Employer	Employee

^a In defined benefit schemes, benefits are often calculated using the employees final salary. ^b In defined benefit schemes, it is not uncommon for final benefits to be only partially indexed to inflation, or not indexed at all. ^c Some governments guarantee employee benefits in the case of employer insolvency.

Sources: Bodie, Marcus and Merton (1988); Broadbent, Palumba and Woodman (2006).

E.2 Lessons

International frameworks

The OECD conducts commissioned assessments of member countries’ pension systems. These are guided by the *OECD Best Practices in Pension Design* — a collection of objectives, recommendations and indicators spread across different publications. Although the OECD framework typically looks at the policy settings of retirement income systems

as a whole, some of the criteria and indicators relate to the efficiency and competitiveness of private schemes similar to Australia's superannuation system (box E.1).

Box E.1 The OECD roadmap for the good design of defined contribution pension plans

In 2012, the OECD's *Working Party on Private Pensions* approved a list of 10 criteria to be added to the *OECD Best Practices in Pension Design* that would characterise a well-performing defined contribution pension plan. Some criteria relate to goals regarding **allocative efficiency**. For example, the following criteria are all aimed at ensuring products achieve high quality outcomes for members by ensuring benefit settings have a life-cycle orientation:

Ensure the design of defined contribution pension plans is internally coherent between the accumulation and payout phases and with the overall pension system.

Consider establishing default life-cycle investment strategies as a default option to protect people close to retirement against extreme negative outcomes.

For the payout phase, encourage annuitisation as a protection against longevity risk.

Develop appropriate information and risk-hedging instruments to facilitate dealing with longevity risk.

Promote the supply of annuities and cost-efficient competition in the annuity market.

The following criterion is aimed at increasing demand-driven **competitiveness** by improving consumer engagement, access to information and financial literacy:

Ensure effective communication and address financial illiteracy and lack of awareness.

One criterion relates to **operational efficiency**:

Promote low-cost retirement savings instruments.

Some criteria relate to aspects more directly connected to policy settings than the competitiveness and efficiency of the superannuation system, such as ensuring participation and adequacy of retirement outcomes. For example:

Encourage people to enrol, to contribute, and contribute for long periods.

Improve the design of incentives to save for retirement, particularly where participation and contributions to defined contribution pension plans are voluntary.

Last, the following criterion relate to **competitiveness** (via competitive defaults), and **allocative efficiency** (via ensuring consumers can allocate themselves based on personal preferences):

Establish appropriate default investment strategies, while also providing choice between investment options with different risk profile and investment horizon.

Source: OECD (2012b).

Further to this, the OECD publication, *Pensions at a Glance*, proposed a collection of performance indicators for private pension systems. These include coverage rates, funds under management and asset allocation, real net returns, operating expense ratios, and average administration fees (OECD 2013). However, there is a lack of specificity, as the framework is used simply to illustrate the overall state of a given retirement income system rather than to rank systems or to assess them against a particular benchmark.

Common drivers of efficiency

Researchers have identified a number of factors driving operational efficiency in pension systems globally (table E.2). Two factors that stand out as having a broad consensus and/or empirical evidence backing their importance are governance arrangements at the fund level, and economies of scale at both the fund and system level.

Governance arrangements

Governance is essentially all mechanisms and processes in which firm decisions are made. Donald and Le Mire (2016) reviewed the literature and concluded that research into the impact of governance on the investment performance of pension funds globally is underdeveloped. However, the review did identify some studies with noteworthy empirical findings linking governance with costs and returns. The aspects of governance that most commonly related to improved performance were the extent to which boards undertook performance targeting and evaluations of their fund, as well as board composition (independence) and board size.

A key issue with these studies relates to the measurement of governance. Some of the work involved creating indexes of governance quality in order to make regression analysis tractable (Ambachtsheer, Capelle and Lum 2008; Ammann and Zingg 2008). Constructing an index from a collection of indicators invariably involved some degree of judgment of what aspects are relatively important. Further, even for those that did not construct an index, there were large discrepancies in what was included in the regression equation. For example, Albrecht, Shamsub and Giannatasio (2007) focused on board-level information such as the number of independent directors, whereas others included variables such as whether particular information is publicly reported (Mitchell and Yang 2005). Another measurement consideration relates to data collection. Although most researchers were able to utilise publicly available data, some relied on self-reported data (Ambachtsheer, Capelle and Lum 2008).

Another issue relates to sample size and selection. Ammann and Zingg (2008) noted that information on larger funds was more readily available, potentially biasing their sample as it may be easier for larger funds to implement good governance practices. Further, Ambachtsheer, Capelle and Lum (2008) and Iglesias and Palacios (2000) conceded that their samples may be too small to robustly identify a relationship between governance and performance.

Table E.2 Identified drivers of operational efficiency in international studies

<i>Driver</i>	<i>Source</i>	<i>Notes</i>
Governance	Romano (1993)	Used a US panel dataset and concluded that there is an inverse relationship between public pension fund returns and the degree of political involvement (measured as the proportion of independent directors).
	Iglesias and Palacios (2000)	Used international data and identified positive relationships between private schemes (compared with public) and performance, as well as between governance quality and performance.
	Useem and Mitchell (2000)	Used US public pension fund data and found a positive relationship between 'good' governance practices and performance-enhancing investment strategies. Independent evaluations had a particularly strong impact.
	Mitchell and Yang (2005)	Used a panel dataset on US public pension plans and identified a positive relationship between particular governance practices and fund performance. Board independence stood out as a strong predictor of high returns.
	Albrecht, Shamsub and Giannatasio (2007)	Used a panel dataset of US public pension funds and identified a positive link between 'good' governance practices and fund performance. In particular, funds whose boards had authority over asset allocation performed relatively poorly.
	Ambachtsheer, Capelle and Lum (2008)	Used CEM Benchmarking data covering funds across different countries and identified a positive correlation between self-reported governance standards and performance.
	Ammann and Zingg (2008)	Used Swiss data and found a positive relationship between governance (target setting in particular) and returns.
	Kowalewski (2011)	Used Polish fund data and found a positive relationship between the number of independent directors and returns.
Scale	Lum (2006)	Used global panel data and identified a link between system scale and gross real returns.
	Bikker and De Dreu (2009)	Used US data and concluded that economies of scale largely explained cost differences between pension and mutual funds.
	Bauer, Cremers, and Frehen (2010)	Used CEM Benchmarking data to show that (internationally) investment management cost declines by over one-half from 33 basis points for funds under US\$1b to 16 basis points for funds over US\$50b.
	Musalem and Pasquini (2012)	Used a panel dataset on Dutch pension funds and found that economies of scale explain the strong dispersion in both administrative and investment costs across pension funds.
Design	Bikker and De Dreu (2009)	Used the same data as above and found that defined contribution operating costs were lower than those of defined benefit.
	Musalem and Pasquini (2012)	Used global panel data and found that closed and/or defined benefit schemes performed better than open and/or defined contribution schemes.
Passive investment	Lum (2006)	Used CEM Benchmarking data and found a positive relationship between active management, high-cost asset classes and costs.
Active investment	Beath (2015)	Also used CEM Benchmarking data, and contradictory to Lum (2006) above, found a positive relationship between active management and net returns.
Internal management	Miller and Flynn (2010)	Used CEM Benchmarking data on 363 defined benefit funds from around the world and concluded that internally managed non US equities outperformed (in net returns) those that were externally managed.

Scale

Scale has been cited as important at both the fund and system level. Indeed, much of the literature on governance outlined above controlled for fund or system size and estimated statistically significant positive coefficients. At the fund level, there have been a number of studies finding links between economies of scale and operational efficiency in the Australian superannuation system (chapter 5). Globally, Lum (2006) used CEM Benchmarking data to find a global negative correlation between investment costs and funds under management.

At the system level, empirical work by Musalem and Pasquini (2012) concluded that higher gross returns were observed in systems that are larger as a percentage of GDP. Centralisation measures are also often cited as a means toward improving economies of scale and operational efficiency. Such measures include a single default fund for all new employees, or streamlined payment flows and clearinghouses. The Grattan Institute (2014) and the OECD (2012b, 2013) argued that a key lesson from international experiences is that central defaults and administration systems can reduce fees by increasing economies of scale. For example, Denmark created a centralised payment processing institution in 2012, while Chile first held a competitive tender for default status in 2010.

E.3 Benchmarking and comparisons

Attempts at benchmarking and comparing Australia internationally

There have been several attempts to benchmark Australian outcomes to those in other countries. Most of these revolve around fees. For example, the Grattan Institute (2014) analysed OECD countries and concluded that the fact that Australia has higher fees than most other OECD countries — in particular those with private pension systems of a similar size — indicated a shortfall of operational efficiency.

Deloitte (2014) attempted a similar project looking at fees and returns across Australian superannuation funds and came to a number of conclusions using international experiences as a benchmark. The report found that there may be scope for lower fees in the Australian system, but also noted that the Australian system delivered relatively high gross returns over an extended period before the global financial crisis. However, the report did note that fees may not be directly comparable across jurisdictions.

Lum (2006) used CEM Benchmarking data to compare the investment management costs of a collection of European funds to a collection of Australian funds. The paper concluded that the substantially lower investment management fees of European funds (0.19 per cent compared with 0.44 per cent for Australian funds) were likely attributable to asset allocation. Australian funds had a stronger preference for high-cost assets such as private equity, real estate and hedge funds, while European funds opt for larger allocations of low-cost assets such as fixed income. Inderst (2014) also argued that the Australian

superannuation system's allocation to infrastructure is well above the international average, which could explain higher management costs. However, Tang (2013) used data from consulting firm Preqin and estimated that the allocation to private equity among Australian funds was only 1.2 per cent (compared with the 9 per cent for private equity and hedge funds combined estimated by Lum (2006)).

As part of the *OECD Working Papers on Insurance and Private Pensions*, the OECD attempted to benchmark the investment performance of private pension systems from select OECD countries against a hypothetical portfolio that achieves the highest return possible for a given level of risk. The conclusions drawn from the analysis were that the performance of funds in most countries was below their potential, and that countries subject to stricter quantitative investment restrictions underperformed by a larger margin than those without such restrictions. However, the author cautioned against uncritical acceptance of these results (outlined in the following section) (Antolin 2008).

Composite measures have been used to compare systems internationally (box E.2). However, they typically focus on public and private pension systems combined, rather than the efficiency of the private system alone (although some of the sub-indexes relating to integrity are broadly relevant to governance-related criteria (chapter 6)).

Difficulties in making international comparisons

Differences in policy, regulation and market settings

Different policy and market settings are critical factors when trying to compare fundamentals like returns and fees across countries. For example, a substantial component of fees for any private pension fund are administration fees. These are likely to vary across countries with different regulatory landscapes and compliance costs, without necessarily reflecting the efficiency of the system or individual funds. Furthermore, the level of competition in the upstream market for investment management is likely to affect final fees, and is also outside of the fund's control.

Antolin (2008) provided a detailed description of the differences in regulatory approaches that make like-for-like comparisons difficult. Looking across various OECD and Latin American countries, he identified three main sources of difference. First, the level of development of the system, and capital markets more broadly, matters. Systems that are less developed, or based in countries with underdeveloped financial markets, tend to have stricter investment regulation. Second, countries with mandatory systems tend to have stricter controls on investment as governments assume a higher degree of responsibility, and therefore risk-aversion is likely to factor in policy formulation. Third, defined contribution schemes are often subject to stricter controls on investment than defined benefit ones. This is because the latter is guaranteed by the employer, whereas the former's value depends more closely on fund performance.

Several submissions also noted the difficulties in making international comparisons related to different policy landscapes (box E.3).

Box E.2 **Some composite measures of pension system performance**

Melbourne Mercer Global Pension Index

The Melbourne Mercer Global Pension Index (MMGPI) has been produced annually from 2009. In 2015, the MMGPI measured 25 retirement income systems against more than 40 indicators. These comprise a collection of ‘yes’ or ‘no’ questions, percentages, and other values, which are transformed and aggregated into scores out of 100 for three sub-indexes, comprising:

- adequacy (40 per cent) — the capacity of the system to generate adequate retirement incomes (indicators include the minimum and average pension relative to wages, and whether contributions are taxed concessionally)
- sustainability (35 per cent) — the long-term viability of the system in the face of fiscal and demographic considerations (indicators include the proportion of the working age population that are members of private pension plans, overall pension assets as a percentage of GDP, and current and projected life expectancy relative to the state pension age)
- integrity (25 per cent) — whether the system is operating primarily for members’ benefit (indicators include whether private pensions need regulatory approval and supervision, and whether or not industry data are publicly available).

However, with regards to the index’s relevance to this study, Mercer (sub. 31, pp. 19–20) noted in their submission that:

... the provision of data and comparable information is problematic in the pension space, particularly when one is comparing 25 countries with a range of languages, legislative backgrounds and societal expectations. In addition, the use of pension terminology is not consistent around the world.

The only indicator that the MMGPI uses that considers efficiency or competition is the assessment of costs which was discussed earlier in this chapter. However, the two proxies used for this indicator are not perfect and are merely indicative. Obtaining hard, reliable and truly comparative data for the pension industry around the world is very, very difficult.

Allianz Pension Sustainability Index

The Allianz Pension Sustainability Index was created in 2004, and has been produced sporadically in various forms since. The latest release was in 2014. The Pension Sustainability Index differs from the MMGPI in that it does not address adequacy or integrity. However, it uses similar indicators to assess sustainability, separating them into three sub-indexes: demographics, pension system, and public finances. Indicators are transformed into scores out of 10, which are used to give each country an overall score out of 10.

Sources: Allianz (2014), Mercer and the ACFS (2015).

Box E.3 Submission comments relating to international comparisons

The broad consensus among study participants is that making international comparisons should not be a top priority for the study given the issues outlined above.

The **Centre for International Finance and Regulation** (sub. 10, p. 5) argued that ‘... obtaining a clean comparison (between funds from different countries) would seem problematic given differences across systems’.

Mercer (sub. 31, p. 18) noted the ‘... great difficulty in obtaining comparable international data and thereby making valid comparisons of quite different pension systems’, and that a ‘... lack of data across the whole pension industry hinders the validity of the international comparisons that are often made’.

APRA (sub. 32, p. 11) contended that ‘[c]omparisons of fee or cost levels between RSEs and international equivalents ... may therefore not be reliable or appropriate due to the different methodology used to calculate and/or attribute fees or costs or different regulatory approaches’.

The **Financial Services Council** (sub. 29, p. 26) claimed that a system-level benchmarking exercise ‘raises a number of challenges as Australia’s superannuation system is more complex than most international pension systems and requires superannuation trustees to deliver higher degrees of member services, insurance coverage and administrative support’.

Industry Super Australia (sub. 38, p. 35) submitted that ‘... there are very distinct aspects of the Australian system which impact the validity of (international) comparisons’.

University of New South Wales academic **Anthony Asher** (sub. 21, pp. 7–8) reasoned that to make international comparisons ‘[c]osts must be divided into administration, investments and advice.’ And therefore ‘[i]t will be difficult for the Commission to undertake an international comparison of costs’.

Last, the **Institute of Public Accountants** (sub. 22, p. 3) suggested that ‘... the application of international composite benchmark indexes to test efficiency in the system is limited given the different institutional settings and characteristics of pension funds that exist in different countries’.

Reporting and data

A further consideration is the fact that data reporting practices and standards are likely to differ across jurisdictions. Fees and returns reported for one country may not be directly comparable with another, and simply collating datasets from various regulators is not likely to lead to valid conclusions. For example, most Latin American countries report returns gross of fees, while other countries report them net of fees. Further to this, the netting of fees is often inconsistent, with some subtracting administration fees, some management, and some both (Antolin 2008). This means that for truly valid cross-country comparisons, only a dataset compiled by directly surveying the participating funds, such as that from CEM Benchmarking used by Lum (2006), can be used.

Chant West (2014c) argued that the Grattan Institute’s (2014) conclusion, that the fees of Chile’s default fund were one third those of MySuper, was based on an invalid comparison of the data. According to that analysis, the Grattan Institute compared fees that were just

administration (Chile), with administration and investment together (MySuper). When taking this into account and re-comparing the two products, Chant West argued the difference was negligible and that the small discrepancy in investment fees was due to the highly conservative asset allocation preferred by the Chilean default fund.

In addition to differences in fee reporting standards, Antolin (2008) identified several key problems often present in pension fund performance data that make the comparison of investment performance across countries particularly difficult (box E.4).

Taking all these issues into account, the author concluded:

As a result of differences in reporting frameworks and valuation methodologies, as well as differences in the regulatory environment, in the time-frame of their pension systems and, most importantly, because of differences in investment efficiency and idiosyncratic characteristics of each country pension system, it is meaningless to compare investment performance across countries using just reported returns. (Antolin 2008)

Overcoming these difficulties

International benchmarking can be credible if undertaken in a careful and considered way and focuses on very specific aspects of performance that can be compared irrespective of policy settings and market structure. These include:

- investment management fees and performance broken down by asset class
- the efficiency of specific administrative services.

By focusing on a single, well-defined metric, such an approach can overcome the issues caused by differences in policy settings outlined above. It also requires collecting fit-for-purpose data directly to overcome data comparability issues. CEM Benchmarking is an example of a firm that maintains a proprietary dataset to undertake benchmarking of pension funds. The necessity of these two steps essentially means that only the benchmarking of funds across countries, rather than systems, is credible.

Box E.4 Issues with pension fund performance data

Performance bias

When calculating the aggregate performance of a group of pension funds in a country, some regulators use the relative weight (i.e. funds under management) of each pension fund at the end of the period. This leads to a bias in favour of funds that experience a higher performance over the observation period. This is because the funds with higher returns over a period will by definition have higher growth in their value over that period. The aggregate result is then a potentially significant positive bias in the system-level result.

Overlapping returns

Some countries will only report overlapping data (for example, a 12 month moving average), from which other data forms cannot be deduced easily. Further, these metrics are often weighted inappropriately, leading to performance bias as detailed above.

Inconsistent methodology control

Some countries, such as those in Latin America, and Central and Eastern Europe, have detailed regulations defining the methodology for calculating returns. However, other countries, such as those in Western Europe, North America and the Asia-Pacific allow for firm-level methodology when calculating returns.

Inconsistent asset classification and valuation

Subtle differences in the meaning of 'short-term' or 'long-term' in bonds, 'domestic' or 'foreign' in shares, as well as what is captured by the 'alternative' category mean that trying to measure the returns of a specific product relative to a hypothetical portfolio benchmark is particularly difficult. Further, although most countries in the OECD used a typical 'market value' approach, several countries used alternative methods, such as 'book value' for certain bonds.

Survival bias

Using only funds that are in operation at the end of a period to assess aggregate performance causes upward bias by failing to account for 'failed' funds that exited the sample during the period before the end of the observation period.

Gross versus net returns

When comparing purely the investment performance of funds or systems across countries, what really matters is returns net of investment costs. This is made difficult by the fact that there is a lack of consistent and publicly available data on investment costs in most countries.

Source: Antolin (2008).

DRAFT REPORT

This draft report is no longer open for consultation. For final outcomes of this project refer to the research report.

Draft

F Systemic stability and risk

Key points

- The long-term stability of the superannuation system, and its potential impact on the financial system more generally, is an important consideration when assessing the system's efficiency and competitiveness. System stability is an important aspect of dynamic efficiency.
- There are distinctly differing views on the extent of systemic risk in the superannuation system.
 - Some experts have expressed concern about high levels of concentration in markets providing services to superannuation funds, such as administrative, funds management and custodial services.
 - The growth of the self-managed superannuation fund sector is also seen by some as a potential source of systemic risk in superannuation.
 - Others see superannuation as *adding* to financial system stability, particularly as it represents a major source of bank deposits and has a (relatively) long-term investment perspective.
- The relationship between competition and systemic stability is a complex one. Competitive processes within the financial sector typically lead to more efficient resource allocation but could also potentially create incentives for excessive risk taking.
- The criteria for assessing the efficiency and competitiveness of the superannuation system must reflect this complex relationship, and any potential trade-offs over the long term.

With about \$2 trillion of assets, the superannuation system accounts for about one quarter of financial institution assets in Australia (RBA 2016a), a share expected to increase significantly as the system matures. It is therefore important to focus on the likely impacts of the superannuation system on financial stability.

Moreover, in the context of this study, the stability of the superannuation system, and its potential impact on the financial system more generally, is an important consideration when assessing the system's efficiency and competitiveness. In reaching conclusions about whether the system is efficient, it is important to assess the superannuation system's long-term stability. Similarly, in assessing the competitiveness of the system it is important to consider whether levels of competition impact on stability. The relationship between competition and systemic stability is complex, and the subject of considerable debate (Allen and Gale 2004). Most of the academic research on the topic relates to the banking system, and might not always be translatable to superannuation.

There are distinctly differing views on the impact of superannuation on financial stability. Some experts are concerned about high levels of concentration in markets providing services to superannuation funds, such as administrative, funds management and custodial services. Others see superannuation as *adding* to stability, particularly as it represents a major source of bank deposits and has a (relatively) long-term investment perspective. This appendix discusses these differing perspectives, and consequent implications for assessing the competitiveness and efficiency of the superannuation system.

F.1 What is systemic risk?

Systemic risk can be defined as the risk that an event at an individual firm or fund level could threaten stability of the overall system (Caruana 2010). Companies considered a systemic risk are sometimes referred to as ‘too big to fail’. This is not always necessarily because of the company’s disproportionate size, but also potentially because of its interconnectedness with other companies or funds. If a large number of funds rely on one provider, that provider could be a potential source of systemic risk. These companies have been described as ‘too connected to fail’ (Donald et al. 2016).

Related to systemic risk is ‘systematic risk’ (sometimes also called market risk). This risk is inherent to the entire market (Kazi 2008). It is unpredictable, unavoidable and unable to be mitigated through diversification, although individual entities may be able to use hedging and diversification strategies to mitigate some impacts.

At 31 March 2016, there were 136 licensees of Australian Prudential Regulation Authority (APRA)-regulated institutional superannuation funds (APRA, sub. 32). No one licensee has a market share of more than about 6 per cent (APRA 2016b). In addition, there are about \$0.6 trillion of assets (or about 30 per cent of total superannuation assets) in self-managed superannuation funds (SMSFs) (APRA, sub. 32). Ownership and control of the sector is therefore quite diverse, possibly providing reassurance about systemic risks arising from market concentration.

However, the largest superannuation funds are still large in absolute terms (with the largest having just under \$95 billion in assets) (APRA 2016b), and will become significantly larger as the system grows. Moreover, their *combined* behaviour could have consequences for local asset prices and financial volatility if they pursue similar strategies.

‘Black swan’ and ‘butterfly’ events

In finance markets, a black swan event is one that comes as a major shock to market participants and is considered highly significant. Such events are therefore likely to have a major impact on financial markets. The most recent black swan event was the global financial crisis (GFC).

Superannuation funds generally came through the GFC without major liquidity issues, although there were liquidity strains for some funds as listed and unlisted asset values moved disparately (and materially so) while some members moved into more conservative investment options such as cash. Overall, the Cooper Review (Cooper et al. 2010b, p. 174) concluded:

It is noteworthy that though short-term liquidity of some significant funds was challenged, most funds did not have liquidity problems and there was not a large scale flight toward what was perceived as the most liquid, or safe, fund or investment option.

Much of the concern expressed in Australia about systemic risk is focused not on major catastrophic financial events but on relatively minor shocks with the potential to reverberate throughout the system (so called ‘butterfly effects’) (Donald et al. 2016).

F.2 Where could stability issues emerge?

There are a number of areas where it has been suggested stability issues could emerge in the superannuation system. These areas, their likely significance, and the ways in which regulatory agencies are dealing with them are summarised below.

Industry concentration at the service provider level

As noted above, the major area of concern for those who see systemic stability issues in the superannuation system is the high level of industry concentration in some provider markets, and the linkages between many of the entities within the system. High rates of concentration in these provider markets are unsurprising, as one of the key reasons for outsourcing these services is to obtain economies of scale. In other cases, superannuation funds will be looking to specialised providers with expertise in particular areas. Concentration in these markets is likely to be consistent with promoting short-term efficiency.

Some observers have, however, questioned the potential long-term implications of this with regard to stability. Recent work in Australia (Donald and Nicholls 2015; Donald et al. 2014, 2016) has explored the level of concentration and interconnectedness in the Australian superannuation system, and sought to determine the implications for systemic risks and stability. Findings from this work include that:

- there are high levels of concentration in a number of upstream service provider markets (including asset consulting, auditing, custody, insurance and actuarial services).³² Donald et al. 2014 found the largest five providers of asset consulting services to

³² These estimates of market concentration must be considered against the backdrop that much of the work done by organisations such as asset consultants could alternatively be done in house, so they do not necessarily reflect the competitive dynamics for such services.

superannuation funds held 96 per cent of the market, while for auditing services the equivalent figure was 92 per cent, and 84 per cent for custody services

- a small number of service providers are highly interconnected. Some are also part of large financial conglomerates
- the failure of an upstream provider (particularly custodians or member benefit administrators) with many linkages and interdependencies could become a disruptive issue for funds, due to the likely difficulties in finding an alternative provider in a realistic timeframe
- the question of who bears the risk in the event of an upstream provider failing depends in part on the legal form of the relationship between the parties (that is, whether contract, trust, agency or fiduciary), and in turn, how widely a local failure might resonate. Such a failure could result in financial loss and delay (for example, funds being temporarily frozen) for many people.

The impact of a service provider unexpectedly closing would vary from case to case, but any such closure would cause disruption and short-term losses or inconvenience to potentially many members. This could reduce confidence in the superannuation system and have flow-on effects for other participants.

Many of the upstream providers involved in the administration of the superannuation system are not formally within APRA's supervisory jurisdiction, with the licensees of superannuation funds effectively responsible for the outsourcing decisions they make. The absence of direct regulation of many service providers is seen by some as a cause for concern.

APRA's licensee-focused prudential regulation has also been criticised, with some suggesting its focus on the system as a whole and systematic stability is inadequate. APRA notes it seeks to determine whether there are broader issues influencing the entire industry or system which may require action. However, concerns remain.

Notwithstanding the statement ... in APRA's Supervision Blueprint that APRA does have regard for 'broader industry or process issues', it is clear that APRA still regards systemic issues in the superannuation system as a matter for ad hoc enquiry and not continuous attention. (Donald et al. 2016, p. 76)

The forthcoming concentrated shift to the decumulation/retirement phase for many members

Many have suggested the superannuation system will come under pressure as a large number of 'baby boomers' shift from the accumulation phase of superannuation to the decumulation (or retirement) phase. Rice Warner (2014a) has estimated that members in the decumulation phase will account for 44 per cent of total superannuation assets in 2043, up from about 30 per cent in 2013.

The Financial Services Council (sub. 29, p. 6) has noted that this period of transition is now commencing.

The industry, however, is undergoing a period of transition as the baby-boomer generation begins to retire, shifting the balance between inflows of contributions and outflows of benefits for most trustees.

Industry Super Australia (2014a, p. 149) has highlighted the potential consequences for liquidity.

As demographic changes bite, it is quite possible that superannuation flows will be outward on a net basis, excluding investment returns. In such circumstances, superannuation funds may need to actively liquidate positions on an ongoing basis to meet obligations to the extent that those obligations exceed inflows plus crystallised investment gains. This will drive a system-wide shift toward greater liquidity.

Rice Warner (2014a, p. 33) has suggested that growth in superannuation balances and the drawdowns in the retirement phase are likely to cancel each other out.

While the shift of many fund members from the accumulation phase to the decumulation phase will put pressure on trustees, and potentially cause them to change investment strategies, it is unlikely that this issue would, of itself, create issues from a system stability perspective. While funds can never know the precise timing of superannuation payouts, superannuation is a long-term saving vehicle and ageing is predictable. Trustees should know the timing of the transition phase and adjust their investment strategies accordingly.

This is very different to the type of scenario that typically leads to liquidity concerns in the finance sector, such as a ‘run’ on banks.³³ Moreover, preservation rules and restrictions on maximum drawdowns also mean the superannuation system is not subject to ‘runs’ in the same way as banks.

Industry Super Australia (2014a, p. 150) noted that funds should be prepared for pension payouts.

Payment obligations to beneficiaries in the form of pension payments must be in cash and reasonably on demand or as scheduled. This form of payment can be monitored and forecasted with a certain level of confidence based on a fund’s demographics and other information.

The conclusion that trustees should be prepared for the decumulation phase is supported by regulatory arrangements explicitly requiring trustees to consider liquidity. Liquidity management plans are required, incorporating procedures for monitoring and managing liquidity, identifying circumstances that would represent an adverse liquidity event and outlining how a licensee would respond when such an event occurs. Each licensee must also have a risk management framework that incorporates liquidity considerations,

³³ Superannuation funds are not entirely immune from similar customer behaviour, and are potentially subject to liquidity problems if they have invested heavily in illiquid assets.

identifying the level of risk the fund is prepared to tolerate, the strategy for monitoring that risk and the policies and procedures for managing it.

Overall, it is likely that the shift to the decumulation phase for many members will somewhat restrict the strategies open to trustees³⁴, which could see the ‘liquidity premium’³⁵ available to members decrease, but is unlikely to present major liquidity problems for funds.

The increasing significance of SMSFs

The growth of the SMSF sector has been seen by some as a potential source of systemic risk in superannuation, particularly as it is not regulated by APRA and there are many ‘mum and dad’ trustees who might not be highly skilled in making investment decisions. Pruge (2015) suggested that the growth of SMSFs and the subsequent potential for poor investment decisions could lead to losses that are material to the overall superannuation system. This risk is significant for taxpayers, who would potentially face higher liabilities in future if retirees’ reliance on the age pension increases due to superannuation losses.

The Reserve Bank of Australia (RBA) (2015, p. 21) has noted that increased borrowing — particularly by SMSFs — for property investment could, at the margin, introduce new vulnerabilities in the financial system by encouraging property speculation. Similarly, APRA (2014b, p. 32) has stated that it:

... remains of the view that the risks associated with direct leverage are incompatible with the objectives of superannuation and cannot adequately be managed within the superannuation prudential framework.

The potential for speculative investments in property (funded by borrowing) is one reason why the RBA, APRA and the Financial System Inquiry (FSI) suggested the limited recourse borrowing exception to the general prohibition introduced in 2007 should be removed (APRA 2014b; Murray et al. 2014a; RBA 2015). While the level of borrowing is relatively small, the FSI noted if the trend continued it could, over time, pose a risk to the financial system.

Although the level of borrowing is currently relatively small, if direct borrowing by funds continues to grow at high rates, it could, over time, pose a risk to the financial system ... In addition, such direct borrowing could also compromise the retirement incomes of individuals. (Murray et al. 2014a, pp. 87–88)

This recommendation was not adopted by the Australian Government, which instead commissioned the Council of Financial Regulators and the Australian Taxation Office to

³⁴ To the extent these more conservative strategies involve increasing the proportion of assets held as bank deposits, this would increase the interconnectedness between the superannuation and banking systems. However, as will be discussed in section F.4, this could add to the overall stability of the financial system by providing banks with a reliable stream of deposits.

³⁵ That is, the additional return sought when investing in relatively illiquid assets.

monitor leverage and risk in the superannuation system and report back after three years (Australian Government 2015a).

Notably, the FSI considered the implications of SMSF growth more broadly and the implications for systemic risk. While some FSI participants argued for SMSFs to be brought within scope of prudential regulation by APRA, this call did not win support from the FSI which noted that ‘the defining characteristic of the SMSF sector is that trustee members are directly responsible for each fund and must take responsibility for their own decisions’ (Murray et al. 2014a, p. 234).

Lower returns encouraging greater risks

The RBA (2014) has noted anecdotal evidence that an environment of low returns has prompted some Australian funds to increase the risk profile of their portfolios in order to maintain higher returns to members, possibly exposing members’ retirement incomes to an undesirable level of risk (and, from the perspective of this study, potentially causing asset allocations to be inconsistent with members’ risk preferences, thereby reducing the efficiency of the system). It has also expressed concern that such behaviour ‘could potentially lead to asset prices outstripping market fundamentals’ (RBA 2014, p. 185), potentially contributing to financial instability by amplifying asset price cycles.

The RBA has particularly expressed concern about defined benefit funds. In a defined contribution system, risks relating to factors such as longevity, investment and inflation are borne by individual fund members. However, in a defined benefit system, these risks lie with superannuation funds and employers. Sponsors of annuity-based ‘whole of life’ income products confront similar issues. The RBA (2015, p. 17) has said:

In response to the persistent low-yield environment and the associated pressures on their funding ratios and cash flows, life insurance firms and defined benefit pension funds have altered their business models significantly. ... Firms in both industries have ... adjusted their asset allocations ... These shifts in asset allocation may have increased expected returns at the cost of greater exposure to credit risk, liquidity risk and asset price volatility.

The International Monetary Fund (IMF) (2015) has noted that pension funds in the United States could pose systemic risks to the financial system because pressure to improve returns could spur undue risk taking.³⁶ In the United States, 50 per cent of pension funds are defined benefit schemes, with 20 per cent being unfunded.

³⁶ The IMF also noted some of this risk has effectively been transferred to the insurance industry through ‘longevity swaps’ and other insurance.

However, as Australia's superannuation system is predominantly defined contribution in nature (about 95 per cent of member accounts) (chapter 2), and annuity-based products have only a low take-up rate, the nature of these risks is likely to be significantly lower. Industry Super Australia (2014b, p. 12) has noted that:

One benefit of [Australia's defined contribution] structure is that superannuation should not be a transmission mechanism of financial risks. In countries where defined benefit schemes dominate, decreasing asset values due to financial market downturns (or increasing liability values due to falling interest rates) can adversely impact sponsoring employers, including threatening their viability. In such systems, pensions are one mechanism by which financial market crises are transferred to the wider economy.

As noted by the RBA (2015), fund managers and regulators must always be cautious in ensuring an appropriate risk profile for portfolios. Similarly, as noted earlier, APRA prudential standards require licensees to have risk management frameworks that incorporate the articulated level of risk the fund is prepared to tolerate, the strategy for monitoring that risk and the policies and procedures for managing it.

From the perspective of this study, to the extent lower returns might influence the decisions of trustees, they need to be factored into considerations about the efficiency of the superannuation system. Were the decisions of trustees inconsistent with the risk preferences of fund members, this would reduce the efficiency of the system. However, the risk–return preferences of members might change in a low-return environment given the need to ensure the overall adequacy of retirement incomes.

F.3 The nexus between competition and stability

While the benefits of increased competition in the financial sector are widely recognised, there are some tensions between increasing competition and financial stability. For example, competitive processes within the financial sector can create incentives for excessive risk taking as entities seek higher performance relative to their competitors, potentially creating systemic risks (IMF 2013). Various studies have explored the trade-off between financial stability and competition in financial markets and there is no consensus view on the relationship (Allen and Gale 2004; APRA 2014c).

APRA's (2014c, p. 16) initial submission to the FSI distinguished between sustainable and unsustainable competition in the financial sector.

As the global financial crisis showed emphatically, weak prudential regimes can foster unsustainable competition and unsafe financial institutions cannot be relied upon to deliver on their financial promises over time.

Increased competition may provide a more challenging environment for prudential regulators. For example, in the context of the Australian superannuation sector, Donald et al. (2016, pp. 76–78) note the possibility that a more widely dispersed market is harder for APRA to supervise. Conversely, an industry made up of a small number of very large

players might be relatively easy to supervise, but could lead to the presence of institutions considered ‘too big to fail’ because of their impact on the broader local market or economy more generally (IMF 2013).

The FSI, in discussing the possibility of introducing a new, formal competitive process for default funds, noted that such a process would need to be ‘carefully designed and implemented’ (Murray et al. 2014a, p. 114) in response to concerns it could lead to market disruption and instability.

Importantly, as noted by APRA (2014c, p. 23), financial stability and increased competition are not always in conflict.

The global financial crisis has dispelled any simplistic notion that there is a trade-off between financial stability and sustainable competition. It is often forgotten that the pursuit of financial stability and of competitive and efficient outcomes has the same ultimate goal, viz. to facilitate the efficient allocation of resources. The crisis fall-out ... has confirmed that stability is a prerequisite for a competitive and efficient financial industry; the objectives are not mutually exclusive.

This is important when considering the nexus between competition and financial stability. To the extent that competition leads to more efficient resource allocation, this is likely to enhance the stability of the financial system. Similarly, for competition to be sustainable in the long term, superannuation funds and other players need to be financially viable. Policy makers and regulators must balance the competition and stability objectives without undermining either.

As is common worldwide, Australia’s prudential regulator (APRA) must explicitly balance competition considerations with financial stability and a range of other objectives. Under the *Australian Prudential Regulation Authority Act 1998* (Cwlth), APRA’s mandate is to balance the objectives of financial safety and efficiency, competition, contestability and competitive neutrality, with an overarching requirement to promote financial system stability.

The IMF (2013, p. 13) has suggested two potential ways of ensuring that the interplay between competition and systemic risk is adequately considered by regulators:

- assign traditional powers of competition policy to the prudential authorities
- ensure adequate coordination and consultation between the prudential and competition authorities, and introduce financial stability as a secondary objective of the latter.

In Australia, the Australian Competition and Consumer Commission is the main body responsible for competition law. Given APRA’s involvement in competition regulation for the finance sector, there is a memorandum of understanding between APRA and the Australian Competition and Consumer Commission to facilitate policy coordination and information sharing between the organisations. The effectiveness of the coordination between the two bodies has the potential to influence the efficiency and competitiveness of the superannuation system.

The FSI expressed concern that current arrangements can lead to complacency on the issue of promoting competition.

The Inquiry believes there is complacency about competition, and that the current framework does not systematically identify and address competition trade-offs in regulatory settings ... It is not always clear how APRA and [the Australian Securities and Investments Commission] balance their core regulatory objectives against the need to maintain competition. Policy makers and regulators need to take increased account of competition when making regulatory decisions. (Murray et al. 2014a, p. 237)

To address these concerns, the FSI recommended three-yearly reviews be undertaken of the state of competition in the financial sector, improved reporting of how regulators balance competition against their core objectives, identification of barriers to cross-border provision of financial services, and the inclusion of competition considerations in the Australian Securities and Investments Commission's mandate (Murray et al. 2014a).

F.4 Is the superannuation system a stabilising influence overall?

Various studies and reports consider that there are features of superannuation (or pension) systems which make them inherently less risky than the rest of the financial system and therefore, in effect, the likelihood of systemic risk is low. This is a view shared by the RBA (2014) — which is responsible for monitoring financial stability — and the prudential regulator APRA. APRA (2014c, p. 58) has said that:

Generally, the superannuation industry poses less significant risks to financial stability than the banking and insurance industries. This is due to the largely defined contribution and preserved nature of superannuation. ... However, material losses or changes in asset allocation by a large proportion of superannuation funds over a short period could have system-wide impacts.

A number of reasons have been put forward to suggest that systemic risks in the superannuation system are lower than in other financial services (Antolin, Schich and Yermo 2011; ISA 2014b; Price and Schwartz 2015). These include:

- lower liquidity risk due to the compulsory nature of superannuation and the inability of investors to access their superannuation until they reach the preservation age. There are also relatively low levels of switching between funds, which further lowers liquidity risk
- the long-term investment focus of superannuation funds, which reduces the potential for riskier investments to boost short-term returns
- the lack of direct leverage in the superannuation sector
- the low degree of concentration and interconnectedness among superannuation funds when compared with sectors such as banking. APRA (sub. 32, p. 14) noted that 'the superannuation industry is the least concentrated of the industry sectors that APRA supervises'

-
- the dominance of defined contribution funds in the sector, which potentially have less incentive to search for yield compared with defined benefit funds, because defined contribution funds do not currently offer a guaranteed income stream.

The view that superannuation funds may pose lower systemic risks than other financial institutions is also supported internationally. Indeed, the IMF (2013, p. 18) has stated that non-bank sectors in which credit provision and investment does not involve leverage or liquidity mismatch potentially provide greater resilience by providing an alternative funding source.

Further, the Financial Stability Board and the International Organisation of Securities Commissions (2015) are seeking to determine which non-bank, non-insurer (NBNI) entities should be classified as systematically important financial institutions. In their most recent consultation paper, they proposed to exclude pension funds from the NBNI definition on the basis that:

- they pose low risk to global financial stability and the wider economy due to their long-term investment perspective
- in general, they are indirectly covered through contractual relations with asset managers or use of investment funds (which are captured by the NBNI definition).

This decision is preliminary and subject to ongoing debate. Some stakeholders continue to argue for the inclusion of pension funds on the basis that they are part of a broader financial services market, and that decisions about the level of risk they present are probably best determined by policy makers (Lokhandwala 2015).

A number of stakeholders have suggested that the superannuation system actually reduces systemic risk to the overall financial system. For example, Industry Super Australia (2014b, p. 12) has stated that:

In Australia, instead of adding to financial system risks, superannuation reduces them. Super funds can absorb losses, and their lack of leverage means they do not pass on losses to counterparties through defaults on obligations. Indeed, super funds are largely free from leverage ... [In] the absence of significant leverage, super funds can absorb market volatility without risk to themselves or other institutions. In contrast to other types of financial institutions, superannuation funds effectively are entirely capitalised.

Former Treasury Secretary Martin Parkinson (2012, p. 5) has also suggested that the Australian superannuation system adds to stability.

Superannuation's large pool of stable and unleveraged superannuation assets contributes to financial stability by adding depth and liquidity to financial markets; providing an alternative source of finance for other sectors; and acting as an important buffer against external shocks.

While noting the superannuation system still needs to be constantly monitored, the RBA (2014, p. 185) has said that:

The Australian superannuation sector appears to have supported the stability of the financial system by adding depth to financial markets, and providing a stable source of finance for other sectors. In particular, since the global financial crisis Australian superannuation funds have provided an alternative source of finance to Australian firms and banks, allowing them to raise equity in the domestic share market, and alleviating some of the funding pressures associated with the increase in global risk aversion and the pull-back from domestic and global debt markets. Around half of net equity financing for banks and private non-financial corporations since the financial crisis has been sourced from superannuation funds.

The FSI noted financial stability advantages of Australia's largely unleveraged superannuation system.

The GFC highlighted the benefits of Australia's largely unleveraged superannuation system. The absence of leverage in superannuation funds meant that rapid falls in asset prices and losses in funds were neither amplified nor forced to be realised. The absence of borrowing benefited superannuation fund members and enabled the superannuation system to have a stabilising influence on the broader financial system and the economy during the GFC. (Murray et al. 2014a, p. 87)

In a paper prepared for the Financial Services Council, Maddock (2014) noted that banks have a propensity to see superannuation funds as a significant source of deposits, although perhaps at higher cost than other sources.

While there is no unanimity regarding whether the superannuation system potentially adds to or threatens the overall stability of the financial system, there is agreement that superannuation can potentially have a significant impact in this area. This highlights the importance of having a well-performing, efficient superannuation system.

F.5 Summary

In reaching conclusions about the performance of the Australian superannuation system, it is important to consider the system's long-term stability and, by extension, its potential impact on the stability of the broader financial system. In developing criteria for assessing the efficiency and competitiveness of the Australian superannuation system, the Commission is therefore incorporating systemic stability considerations, taking account of the potential trade-offs between short- and long-term efficiency. The Commission is also cognisant that the relationship between competition and systemic stability is a complex one, and that the assessment criteria must reflect this.

G Self-managed superannuation funds

Key points

- In Australia, at latest count, there were 572 000 self-managed superannuation funds (SMSFs) with over one million members that collectively hold 30 per cent of total superannuation assets. An assessment of competition and efficiency of the superannuation system therefore needs to incorporate this sector.
- There is significant member heterogeneity within the SMSF sector. However, some key SMSF trends provide relevant context for examining the efficiency and competitiveness of the broader superannuation system.
 - On average, SMSF members are older, earn higher incomes, and have much larger superannuation balances than members of other super funds. However, the average age of members establishing new SMSFs has been on a downward trend.
 - Relative to other funds, on average, SMSFs have a higher allocation to cash, Australian shares and real property; and a lower allocation to international shares and fixed-income.
 - Most people setting up an SMSF cite a desire to have greater control over their superannuation balances, and tax advantages.
- The evidence base on the SMSF sector has improved. The Australian Taxation Office collects and reports information, and various surveys have been conducted. However, the scope and granularity of published data is less than that reported for APRA-regulated funds. This raises potential issues for the application of some indicators to the SMSF sector.
- SMSF growth is an indicator of competition in the retail level of the system, however, assessing efficiency requires consideration of a broader range of factors.
- Many indicators designed to assess whether investment returns are being maximised over the long term, and costs minimised, in the superannuation system (operational efficiency) can be applied to the SMSF sector, despite some data challenges.
- The assessment of allocative efficiency needs to account for the institutional differences between the SMSF and APRA-regulated sectors (in particular, SMSF members and trustees being one and the same, and members actively choosing to manage their own retirement money).
- Criteria and indicators on whether insurance meets member needs at least cost will not be applied to SMSFs (given default insurance is not a feature), but the criteria and indicators on system stability (an element of dynamic efficiency) will take into account the SMSF sector.
- The Commission does not propose additional collection of information on the SMSF sector to apply the criteria and indicators proposed in this study in the stage 3 review.

Over one million Australians use a self-managed superannuation fund (SMSF), where the members are the trustees of the fund. This number has grown rapidly in recent years.

This appendix outlines how trends in the SMSF sector will be factored into the Commission's framework to assess competition and efficiency in the superannuation system. Specifically, it outlines: how SMSFs are different to other types of funds (G.1); trends evident in this sector (G.2); the evidence base (G.3); the implications for the Commission's assessment framework (G.4); and where the Commission's evidence base for SMSFs could be improved (G.5).

G.1 How do SMSFs differ from other types of funds?

Institutional structure

As with other superannuation funds, SMSFs are structured as a trust. But unlike funds regulated by the Australian Prudential Regulation Authority (APRA), all members of an SMSF must also be the trustees and therefore bear the full responsibility of managing the fund for themselves. By law, an SMSF can have no more than four members, though the majority of funds comprise couples or individuals. SMSF assets can be held either in the members' own names (individual trustee) or under a company name (corporate trustee). About three quarters of SMSFs use an individual trustee structure (ATO 2015j).

SMSFs outsource a range of functions to external service providers. A Rice Warner (2012) survey of SMSF members found 52 per cent of respondents had paid for financial advice from a planner. Anecdotal evidence indicates the extent and type of outsourcing varies widely across the SMSF population, however there are limited data. A sizable industry of financial advisers, investment managers, fund administrators, accountants and auditors has arisen around SMSFs (with many having links to banks and other large financial services corporations).

Regulatory landscape

Study participants note SMSFs are a unique feature of the Australian system (ASFA, sub. 42; Mercer, sub. 31). SMSF trustees have considerable freedom to administer their balances as they see fit. They are not subject to prudential regulation by APRA. They also fall outside the direct purview of the Australian Securities and Investments Commission (ASIC), although ASIC is responsible for licensing and supervising SMSF auditors, financial advisers and other financial services providers that SMSF trustees engage with.

As with all superannuation funds, SMSFs are subject to legal requirements relating to how superannuation contributions can be accumulated and drawn down. They are also subject to tax law. As such, the Australian Taxation Office (ATO) is the primary regulator of SMSFs. Funds are required to lodge an annual return with the ATO, pay an annual supervisory levy and arrange an annual audit by a registered auditor. Auditors are required to report any contraventions of superannuation or taxation rules to the ATO and play a key

role in managing legal compliance. The ATO publishes statistics on SMSFs (section G.3). More detail on the regulatory arrangements applying to SMSFs is in appendix H.

Why do people set up SMSFs?

A range of factors have been put forward to explain the rapid growth of SMSFs, including (ASIC 2014a; Law Council of Australia 2014; SMSF Owners Alliance, sub. 20):

- a desire for greater control over superannuation balances
- decreased satisfaction with the returns, services and fees of APRA-regulated funds
- taxation advantages
- estate/succession planning
- access to a wider range of investment opportunities.

These factors are also reflected in results of a 2012 survey conducted by Rice Warner (table G.1). More recent research has also indicated a desire for greater control over investments is a primary reason for setting up an SMSF (Bird et al. 2016; FSC 2015).

Table G.1 Main benefits of SMSFs as perceived by members

<i>Benefit</i>	<i>% respondents considering this to be important</i>
Control over investing fund's money	95
Flexible investment choices	75
Lower cost	62
Better tax management	58
Easy transition from accumulation to pension	48
Estate planning	44
Able to borrow to invest in some assets	18

Source: Rice Warner (2012).

The growth of SMSFs has also been fuelled by legislative changes that allowed employees choice of fund (in 2005), a temporary increase in the after-tax contributions cap (in 2007) and permitted limited-recourse borrowing arrangements (in 2007) (RBA 2014).

Recent studies also pointed to the influence of financial advisers in encouraging people to set up an SMSF. Bird et al. (2016) estimated the catalyst for establishing an SMSF for *over half* the SMSF population sampled was the advice of an accountant or financial adviser. AIST (sub. 30) notes evidence which suggests *most* people operating an SMSF or making investment decisions are doing so under advice.

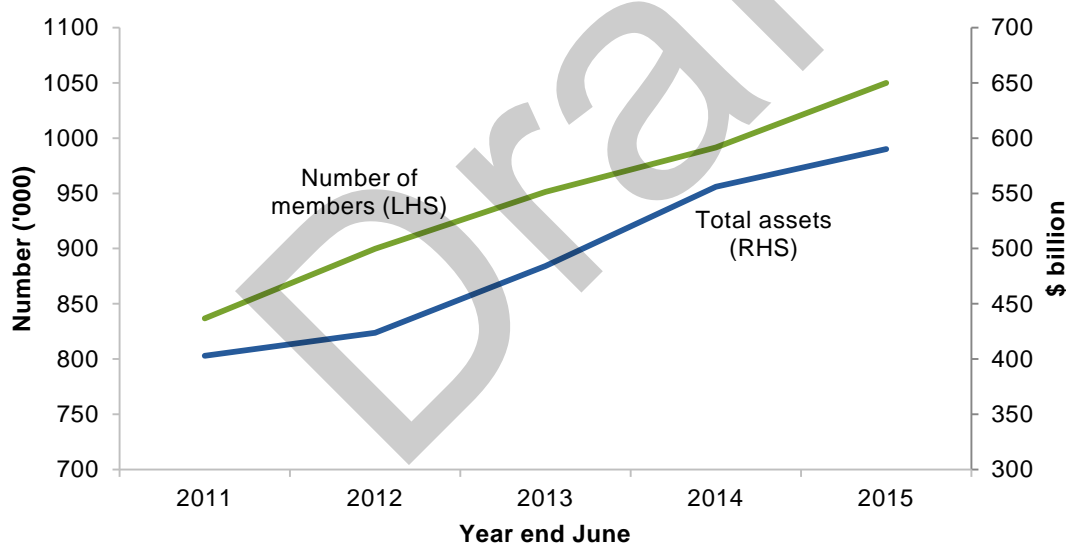
By and large, SMSF members are satisfied with their funds. For example, in a 2012 survey of SMSF members, 87 per cent of respondents indicated the performance of their fund met their expectations (Rice Warner 2012).

G.2 What trends are evident?

Fund size and members

As at March 2016, there were about 572 000 SMSFs in Australia, with 1.08 million members and total assets of approximately \$590 billion (ATO 2016b). Total membership and assets have grown significantly in recent years (figure G.1). SMSFs now hold about 30 per cent of all superannuation assets, up from 9 per cent in 1995 (APRA 2015g; RBA 2013).

Figure G.1 Number of SMSF members and total assets by year



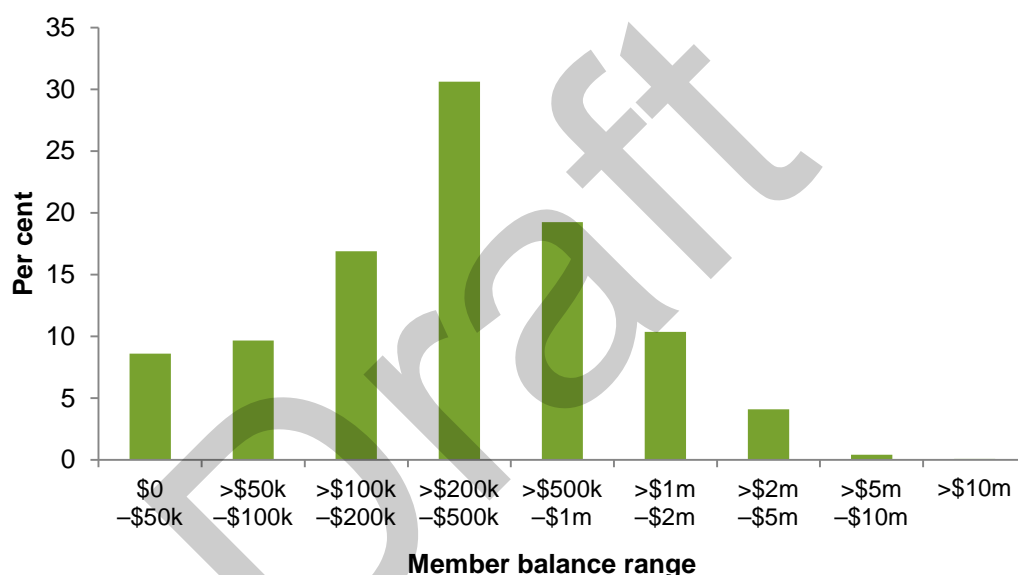
Data source: ATO (2015j).

The net annual growth rate of SMSF accounts has consistently exceeded growth in APRA-regulated fund accounts in recent years. There are a range of views on whether SMSF growth will continue as strongly as in the past or stabilise in the future (Maddock 2014).

As at June 2014, the average assets per SMSF member was \$564 000 (with a median of \$338 000) (ATO 2015j). The average member account balance for APRA-regulated funds was \$42 000 at June 2015 (2014 data were not reported in APRA's 2015 Annual Bulletin) (APRA 2016c).

The high average balance in SMSFs is driven by a skewed distribution: 65 per cent of members had an account balance above \$200 000 in 2014, and 15 per cent had a balance exceeding \$1 million (figure G.2). In 2013-14, the average ‘assets per member’ of a newly established SMSF was about \$187 000 (estimated by dividing the total assets for newly established funds by the total number of new members, for the year). These large balances in part reflect the fact that SMSF members have higher incomes: at \$108 600, their average taxable income was close to double that of members of APRA-regulated funds in 2014 (at \$57 800) (ATO 2015j).

Figure G.2 Proportion of SMSF members by member balance range
Year end June 2014



Data source: ATO (2015j).

Another distinguishing features of SMSFs is the relatively high proportion of member contributions. For example, member contributions comprised around three-quarters of contributions in 2013-14, with employer contributions making up the rest (ATO 2015j). In comparison, the majority of contributions for members of large APRA-regulated funds were made by employers (APRA 2015g).

Member profile

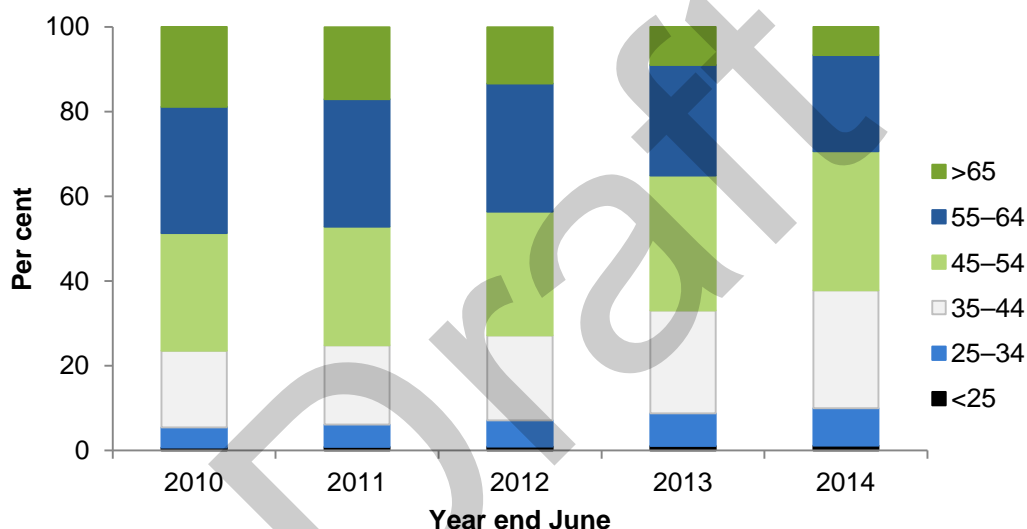
Age profile and retirement income

SMSF members are, on average, older than other superannuation fund members. The average age of an SMSF member was 58 in 2015. However, in recent years there has been

a growing share of younger members establishing SMSFs (figure G.3). Nevertheless, 33 per cent of members are aged over 65, and only 15 per cent are under 45 (ATO 2015j). On average, SMSFs have around two members reflecting that many are spousal unions (AIST, sub. 30; Arnold et al. 2014).

Just under half of SMSFs were in full or part pension phase in 2014, compared with 8 per cent of large APRA-regulated member accounts (APRA 2016c; ATO 2015j). Over 80 per cent of benefit payments from SMSFs were in the form of income streams, compared with just 6 per cent in lump sums (and 13 per cent in ‘transition to retirement benefits’) (ATO 2015j).

Figure G.3 Age distribution of members, by establishment year of SMSF



Data source: ATO (2015j).

Occupation type

No official data are available on the occupations of SMSF members. However, some submissions to the Financial System Inquiry noted (anecdotally) that SMSF ownership is popular among small-business owners and farmers. Among respondents to a 2012 survey, 81 per cent held a tertiary qualification (Rice Warner 2012).

Member engagement and education

Some study participants noted SMSF growth is a sign of members engaging more with their superannuation, and many SMSF members check their fund frequently, have a high awareness of financial products, and above average financial literacy (Anthony Asher,

sub. 21; Fiduciary's Friend, sub. 7; SMSF Owners Alliance, sub. 20). AIST (sub. 31) submitted that member disengagement also exists in the SMSF sector.

There is mixed evidence from recent survey-based studies on the level of financial literacy within the SMSF sector compared to members of other types of funds (appendix B).

As noted above, some studies indicate many people set up an SMSF under advice. Recent reforms to financial advice laws aim to better align the interests of providers and clients, including SMSF members (appendix H).

Asset allocation

Relative to other superannuation funds, SMSFs (on average) have a higher proportion of assets held in cash, Australian listed shares, trusts and real property; and lower allocations to international equities and fixed income products (figure G.4). That said, differences in asset allocation categories reported for SMSFs and APRA-regulated funds make direct comparisons difficult. For example, some asset allocation categories reported for SMSFs (such as unlisted and listed trusts) do not permit 'see through' to the underlying asset type, whereas APRA reporting is based on the type of underlying asset.

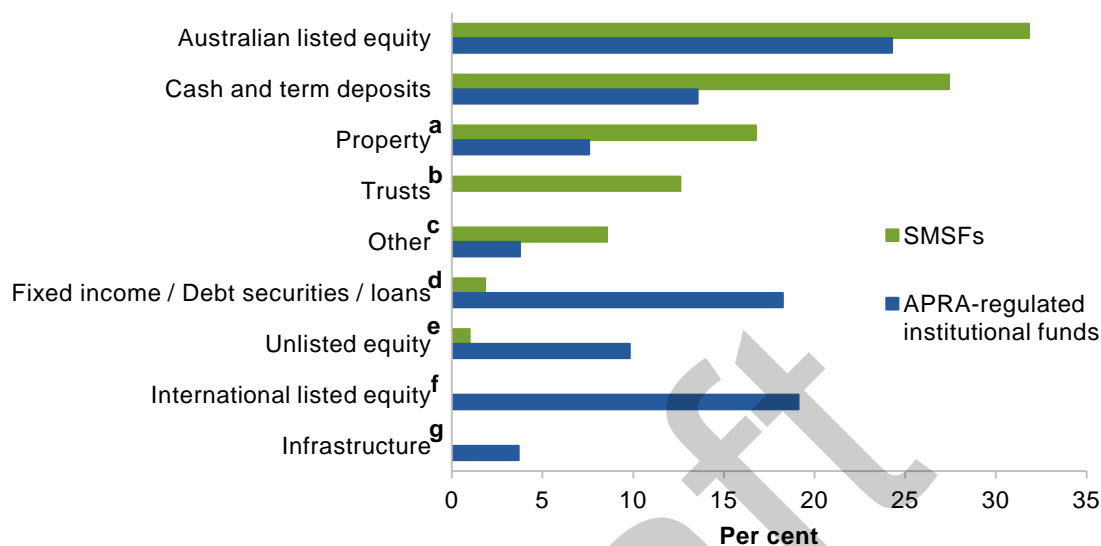
Some SMSFs are highly concentrated in a few asset classes. For example, over 2010–14, 86 per cent of SMSFs had over 50 per cent of their total assets in a single asset class, and around 10–12 per cent had all assets in a single asset class (ATO 2015j).

Asset allocations in the SMSF sector remain broadly consistent across the accumulation and retirement phases, on average, with the main exception of a greater allocation to Australian listed shares in retirement.

Differences in asset allocation are observed by SMSF fund size. For example, ATO data indicate larger funds tend to have a lower proportion of assets in cash and term deposits and a greater proportion in unlisted trusts and non-residential real property (ATO 2015j).

Figure G.4 Asset allocation of SMSF and APRA-regulated institutional funds

As at June 2014



^a SMSF-held 'property' includes residential, non-residential and overseas real property, and also real property held under limited recourse borrowing arrangements (2.31% of assets). APRA-regulated fund 'property' includes listed and unlisted property. ^b SMSF listed and unlisted trusts (this category is not reported by APRA-regulated funds). The underlying assets attributed to listed and unlisted trusts is not clear from the available data. ^c 'Other' SMSF assets include: non-property limited recourse borrowing, insurance policy, collectables and personal use assets, overseas managed investments, other overseas assets, other managed investments and other assets (other category used in ATO statistics). 'Other' APRA-regulated fund assets as used in APRA statistics. ^d SMSF categories for debt securities and loans are added here. For APRA-regulated funds, Australian and international fixed income are included here. ^e SMSF 'unlisted shares' does not include international unlisted shares as they are not reported separately from international listed shares. ^f SMSF data do not separate international listed and unlisted shares, so SMSF international shares (0.31% of assets) have been included in 'other'. ^g SMSF data do not list infrastructure investments separately. APRA-regulated fund 'infrastructure' includes listed infrastructure, Australian unlisted infrastructure and international unlisted infrastructure.

Data sources: APRA (2016d); ATO (2015j).

Performance

Investment performance

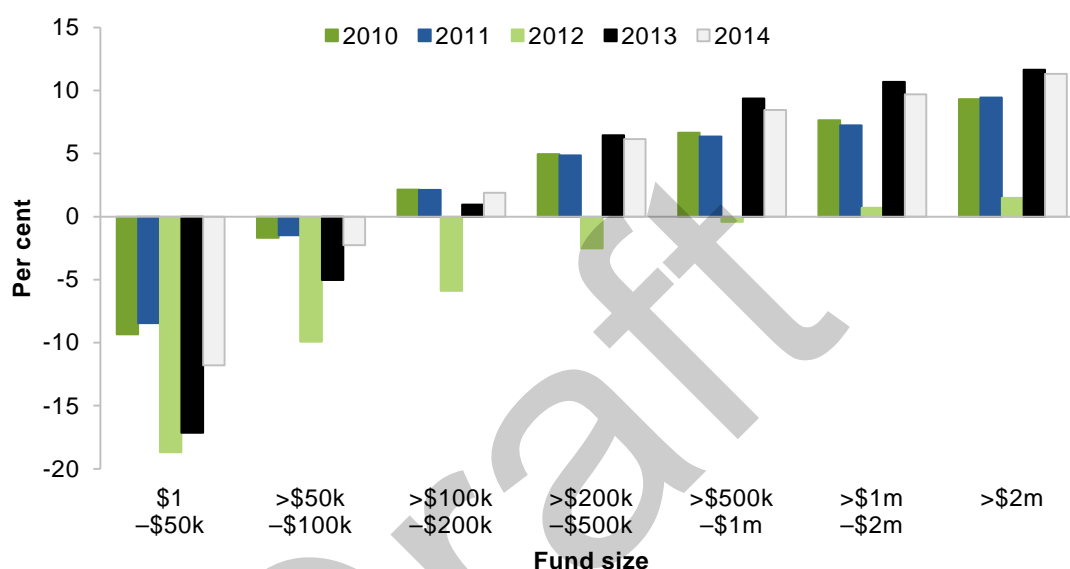
The 'returns on assets'³⁷ for the SMSF sector has, on average, been positive over the 2010–14 period, however performance has varied significantly depending on fund size with larger funds recording relatively better investment performance (figure G.5).

³⁷ The ATO (2015j) notes the average return on assets is calculated by determining the net earnings, and comparing this to average assets during the financial year to determine the percentage return on assets.

ATO data indicate that average returns on assets in the SMSF sector have been below, but have followed a broadly similar trend to, net returns for the APRA-regulated sector over the 2010–14 period (ATO 2015j, 2015l). Issues associated with the comparability of ATO and APRA data are discussed further in section G.3.

Figure G.5 Average return on assets, by fund size, by year

Year end June



Data sources: ATO (2015j, 2015l).

Operating expenses

The ATO (2015m) notes that the estimated average operating expense ratio for SMSFs was 1.06 per cent (operating expenses as a proportion of assets).³⁸ ATO data indicate that smaller SMSFs (by fund size) have higher average operating expense ratios than larger ones. For example, over the 2010–14 period, the average operating expense ratio was in the range of 4 to 12 per cent for SMSFs with less than \$100 000 compared with less than 1 per cent for SMSFs with over \$1 million (ATO 2015j).

Past studies have examined the impact of SMSF scale on their cost competitiveness. For example, a report commissioned by ASIC (Rice Warner 2013) found that SMSFs with balances of \$200 000 or more are likely to be cost competitive with APRA-regulated funds provided trustees undertake some or all of the administration themselves; and balances over \$500 000 can provide equivalent value for money on a full service basis where

³⁸ The ATO further notes that the estimated operating expense ratio in the year ended 30 June 2014 increased to 1.06 per cent, largely due to new data collection on non-deductible expense items. By comparison the average operating expense ratio over the three years to 2012 was 0.65 per cent.

administration has been outsourced. This report also observed SMSFs potentially become less cost competitive in the retirement phase, as member's draw down on their balances.

Arnold et al. (2014) found, on average, that SMSFs are a cost competitive means to save for retirement. Issues associated with the comparability of ATO and APRA operating expenses data are discussed further in section G.3.

Participants to this study and previous inquiries (such as the Financial System Inquiry) emphasise that costs and fees are only part of the story: some people want the flexibility to pick their own investment options, some start with small funds but expect to expand them with asset transfers in the future, and some keep their costs to a minimum by doing much of the administrative work themselves (for example, ASIC 2014a; SMSF Owners' Alliance 2014; SPAA 2014; SMSF Owners Alliance, sub. 20). Proposals to impose a minimum size for SMSFs (or regulate asset diversification) have occasionally surfaced but were rejected by the Financial System Inquiry (Murray et al. 2014a) and many of its participants.

G.3 What is the evidence base for SMSFs?

The Cooper Review (2010b) noted there was scope to improve the level and quality of information available on SMSFs and the SMSF sector. The information base on SMSFs has expanded in recent years and consistency with APRA superannuation data appears to have improved. Broadly, there are two key sources of information: surveys and ATO data.

Survey-based information

Several surveys of SMSF members have been undertaken either in their own right or as an input into a wider study (box G.1). These surveys reveal a range of useful information about SMSFs, including attitudes for their establishment, comparative costs and their use of external service providers. That said, use of such survey data is not necessarily a basis on which the Commission can conduct a systematic analysis of the SMSFs over time or compared with other segments of the superannuation system.

Box G.1 Some recent SMSF studies

- Rice Warner (2012) surveyed 384 SMSFs (with 279 completed returns) on a range of questions about the financial concerns and needs of SMSF members.
- As part of an ongoing research project, researchers (Bird et al. 2016) undertook an online survey of 1019 superannuation funds members, 50 per cent of which were SMSF members. The survey explored the reasons why members start an SMSF, ongoing member interactions, the influence of financial professionals, and drew comparisons between SMSF and non SMSF members based on skills, attitudes and demographics.
- Using a proprietary sample of ATO data, Arnold et al. (2014) documented the size, asset allocation and expenses for a sample of 209 420 SMSFs for the three years to June 2010. This study aimed to address concerns about the paucity of research on the costs associated with running an SMSF. Among other things, it found heterogeneity amongst SMSFs in terms of both size and asset allocation and, on average, cost advantages in running an SMSF.

Published ATO data

The ATO collects regular data from individual SMSFs as part of its regulatory functions which it uses to publish statistics on the SMSF sector on a quarterly and annual basis. From 2011, the ATO has published an annual statistical report — the latest one contains 2013-14 data (ATO 2015j). The latest quarterly statistics report is for March 2016 (ATO 2016b). Separately, the ATO publishes a report which contains some high-level tax information related to superannuation, including for SMSFs (ATO 2016e).

Less comprehensive data than for APRA-regulated funds

The scope and granularity of the data published on SMSFs has evolved from 2011 and efforts have been made to improve comparability with APRA data (ATO 2015j; ISA, sub. 38, 2015k, 2015l, 2015m). However, for various reasons — many of which relate to institutional differences — the data on SMSFs are narrower in scope and less granular compared with data reported for APRA-regulated funds (table G.2).

Table G.2 Comparing some reported data categories on SMSFs and APRA-regulated funds

<i>Data item</i>	<i>SMSF-sector</i>	<i>APRA-regulated funds^a</i>
Asset allocation	<ul style="list-style-type: none"> Actual asset allocations (aggregate, accumulation and pension phases, by fund size) Limited recourse borrowing type Asset concentration 	<ul style="list-style-type: none"> Actual asset allocation (aggregate, by fund type, individual funds, member accounts by age category) Asset allocation targets for MySuper products (not actual allocations)
Investment performance	<ul style="list-style-type: none"> Average return on assets by fund size 	<ul style="list-style-type: none"> Annual average rate of return (by fund type, individual funds, MySuper products) Return target for MySuper products
Expenses	<ul style="list-style-type: none"> Total operating expenses (aggregate) and ratios (aggregate and by fund size) Expenses by type (including 'investment' and 'management and administration' expenses) 	<ul style="list-style-type: none"> Total expenses (aggregate, by fund type, individual funds) Total 'administration and operating expenses' (as above plus for MySuper products) Total 'investment expenses' (as above), plus split of internal/external providers Expenses by service provider type (aggregate, by fund type)
Fees	<ul style="list-style-type: none"> Average and median auditor fees No reporting of 'fees' in other categories 	<ul style="list-style-type: none"> Fees by source of payment (aggregate, by fund type, individual funds) Investment fees (aggregate, by fund type, individual funds, MySuper products) Administration fees (aggregate, by fund type, individual funds, MySuper products)
Insurance	<ul style="list-style-type: none"> Insurance premiums Number of members and amount paid 	<ul style="list-style-type: none"> Net insurance flows (by fund type, individual funds, MySuper products) Insurance fees (by fund type, individual funds, MySuper products) Insurance premiums (aggregate, by fund type) Claims paid, number and dollar amounts (aggregate, by fund type)
Retirement income / Benefit payments	<ul style="list-style-type: none"> Total, average, median benefit payments in each financial year Type of benefit payments (lump sum, income stream, transition to retirement, combined lump sum/income stream) SMSF members receiving benefit payments (%) by age range and opening account balance SMSF income stream payments compared to total income stream payments for APRA funds and SMSFs 	<ul style="list-style-type: none"> Lump sum benefit payments and pension accounts open – total benefit payments, number of accounts and average payment per member account (aggregate, by fund type, individual funds) Lump sum benefit payments and pension benefit accounts open by condition of release (aggregate, by fund type, individual funds)

^a Some statistics from APRA quarterly publications do not include data for funds that have less than 50 million in assets under management.

Data sources: APRA (2014a, 2015f, 2015g); ATO (2013a, 2015j, 2015n, 2016e).

Data on retirement outcomes and benefit payments

A key matter of interest in this study is not only investment returns but also how they influence and are converted into retirement income (chapter 6). This is an area where SMSF data have greater scope and granularity than APRA data (although much of the detailed data collected by the ATO is not published).

As indicated above (table G.2), the ATO publishes aggregate data on: SMSF benefit payments each year; the types of retirement income products consumed; average income payments by age range (including <55 category) and opening account balance; and the proportion of SMSF members receiving benefit payments in each category. The ATO also compares the level of income stream payments between SMSF and APRA-regulated funds for each year.

Data comparability remains an issue

Even where ATO data are available and appear comparable to APRA data, use of different underlying metrics and methodologies means comparisons would need to be made with caution (ATO 2015k; ISA, sub. 38). The sections below outline some of the issues that would need to be taken into account in applying indicators to assess efficiency and competitiveness as part of the stage 3 review (chapters 5, 6).

Asset allocation

The information reported by the ATO on asset allocation (table G.2) is less detailed and more opaque than for APRA-regulated funds. As noted above, some ATO asset allocation categories do not permit full 'see through' to the type of underlying asset, and are different to the categories used by APRA. This makes direct comparisons between SMSFs and institutional funds difficult.

Investment performance

The ATO has reported information on return on assets for SMSFs (table G.2). While the ATO attempts to follow APRA's methodology in estimating investment performance, it acknowledges that the data collected are not the same (ATO 2015j, 2015k, 2015l).

Other issues may also make comparing net returns between the SMSF and APRA-regulated sectors problematic. For example, SMSFs have only been required to value all assets at their market value (including property) from 2012-13, making data prior to this period potentially inconsistent with APRA data (ATO 2015j, 2015k). Further, the SMSF sector has a proportionately higher number of members in the retirement phase (where funds do not have to pay income tax on investment earnings in respect of retirement phase assets) which means identical investments will result in higher net after tax returns for SMSFs compared with APRA-regulated funds (ISA sub. 38).

Expenses and fees

The ATO publishes annual and quarterly information on SMSF ‘operating expenses’ in aggregate and by fund size, and separately in its Tax Statistics publication (2016e) broken down into sub-categories, which include ‘investment expenses’ and ‘management and administration expenses’ (table G.2). Recent changes to the ATO data collection may have improved comparability to APRA data — for example, from 2013, SMSFs have been required to report non-deductible operating expenses (previous years did not include these expenses) (ATO 2015m).

However, the ATO notes while the methodology it uses to estimate operating expenses is as close as possible to APRA’s method, the data collected are not the same (ATO 2015m). Notably, the costs of setting up an SMSF and members conducting their own administration (which has an opportunity cost) are not reflected in reported operating expenses, whereas these costs are more likely to be reflected in data for APRA-regulated funds (ATO 2015k, 2016e; ISA, sub. 38).

This raises the issue of the appropriate basis for comparing costs (and fees) in the SMSF and APRA-regulated sectors. The simplest approach would be to use reported SMSF operating expenses. However, this would only be a partial measure of true SMSFs costs given it would not capture the extent to which (some) members expend time and effort in operating their SMSF. This issue is not easily resolved.

G.4 How will the Commission’s assessment framework incorporate the SMSF sector?

The SMSF sector is a substantial component of Australia’s superannuation system. Ideally, the indicators developed in this study (chapters 5 and 6) would be applied consistently across all the elements of the superannuation system, including the SMSF sector. In some instances, comparisons between the SMSF and APRA-regulated sectors may be useful for assessing system-wide efficiency and competitiveness.

Notwithstanding several data comparability issues and challenges discussed in section G.3, the Commission considers they are not significant enough to warrant excluding use of SMSF data as part of a review of the competitiveness and efficiency of the superannuation system. That said, it will be important to be aware of these issues and to take them into account in stage 3 and for the interpretation of results. Nevertheless, in some areas incorporating the SMSF sector may not be possible due to a lack of data. In other cases, specific criteria and indicators established in chapters 5 and 6 of this report are not relevant to the SMSF sector given its unique characteristics.

This section explains how the Commission will apply its assessment framework (including criteria and indicators developed to assess competition and efficiency) to the SMSF sector.

Implications for assessing competitiveness

SMSF growth is an indicator of competition

The growth of SMSFs is an indicator of competition at the retail level in the superannuation system. The impact may spill over to members of APRA-regulated funds through the introduction of new products and services which replicate SMSF-like features (ASFA, sub. 42; chapter 5; Smith, sub. 5).³⁹ However, the impact of pro-competitive trends arising from SMSF growth would also need to be balanced against an assessment of efficiency which takes into account a broader range of factors.

Some competition criteria and indicators are not relevant to the SMSF sector

The criteria to assess competitiveness in the superannuation system focus in part on supply-side barriers to competition (chapter 5). Without pre-empting the evaluation in stage 3, the rapid growth of SMSFs and the relatively low set-up costs indicates the height of any barriers to entry and exit in this market are likely to be quite low, and hence would not be a central focus in the competition assessment.

On the other hand, some competition criteria and indicators are relevant to SMSFs. For example, the nature and extent of competition in upstream service provider markets (including potential effects of vertical and horizontal integration) is relevant given SMSFs outsource extensively. More broadly, it will be relevant to consider the extent to which the rapid growth in the SMSF sector is symptomatic of competition and efficiency problems and distortions elsewhere in the system.

Implications for assessing efficiency

Maximising net returns on member balances over the long term

This system level objective is closely linked to an assessment of operational efficiency (chapter 4). Some participants submit it is not necessary to consider operational efficiency of the SMSF sector (or it should be excluded) because individuals have made a deliberate choice to conduct their superannuation this way, and should be allowed to operate this in a manner they see fit, including the payment of any costs (ASFA, sub. 42; Mercer, sub. 31). The counter-view is that an understanding of the operational efficiency of the SMSF sector remains relevant, particularly given it is a large and growing component of the overall system (even if just to better understand sources of difference).

Under the Commission's assessment framework, consideration of the system-level objective of maximising net returns on members balances over the long term would seek in

³⁹ For example, members having the option of directly choosing investments, direct share options and managed investment schemes that allow taxation to be assessed on an individual member basis rather than on a fund-wide basis.

stage 3 to incorporate (as far as possible given available and comparable data) the SMSF sector, with appropriate caveats in place. Consideration will also be given to whether SMSFs face any unique barriers or impediments to accessing particular investment markets due to, for example, a lack of scale (chapter 6). Similarly, the Commission will also look at how taxation is managed in SMSFs compared with institutional funds, and what implications this has for member balances (including as members transition to retirement).

Meeting member preferences and needs

This system level objective is closely linked with an assessment of allocative efficiency (chapter 4). Assessing this objective in the context of the SMSF sector will need to take account of its unique characteristics — namely the lack of separation between members and trustees and the fact members take an active decision to establish an SMSF and bear the financial consequences of the outcomes directly. For these reasons, some criteria and indicators to assess this objective are not relevant to the SMSF sector (chapter 6).

That said, two criteria remain particularly relevant to the SMSF sector. First, an examination of whether the system is using lessons from behavioural finance to design products and lean against well-known biases in how people make decisions. While members who establish SMSFs may be more engaged, behavioural biases and cognitive constraints could still influence their decisions. While the Commission has formed no preliminary judgements, it considers this issue to be within scope of the framework to assess allocative efficiency.

Second, an understanding of how well the system is providing retirement incomes in the transition and retirement phases remains relevant to the SMSF sector. In principle, comparisons between how income is drawn down in this phase in different segments of the system may provide useful insights.

The system complements a stable financial system and does not impede long term improvements in efficiency

An assessment of this system-level objective is linked with assessment criteria on whether there are material systemic risks in the superannuation system (chapter 4). An issue raised in previous inquiries is the ability of SMSFs to undertake limited recourse borrowing to finance investments (appendix F). The Commission's assessment framework will include an indicator on this issue.

Providing insurance that meets members' needs at least cost

An assessment of this system-level objective will not be applied to the SMSF sector. SMSFs are required under law to consider their insurance needs when drafting their

investment strategy, but there are no default arrangements or obligations. There are also limited data available on insurance within SMSF funds.

G.5 Further developing the evidence base

The Commission notes participant's views on the risks of imposing more onerous data requirements on the SMSF sector (Smith, sub. 5; SMSF Owners Alliance, sub. 20).

While data on the SMSF sector are not perfect, there appear to be no material data gaps. One of the main comparability issues arises for asset allocation data given differences in the categories reported by the ATO (compared to APRA), although this is no clear way to overcome this. At this stage, the Commission does not propose any additional collection of information on the SMSF sector to apply the criteria and indicators proposed in this study.

The Commission will continue liaising with the ATO to understand what further data are available within their databases, and what can be made available for the stage 3 review. The Commission will also continue to liaise with the ATO and APRA to further clarify data comparability issues across the SMSF and APRA-regulated sectors, to understand how reporting requirements and practices are continuing to change over time, and to ensure that appropriate caveats are applied when data are ultimately used to inform the assessment of efficiency and competitiveness in the system.

DRAFT REPORT

This draft report is no longer open for consultation. For final outcomes of this project refer to the research report.

Draft

H The regulatory environment

Key points

- The superannuation system has many unique characteristics, which may contribute to market or government failures, reducing the system's competitiveness and efficiency. In particular, the number and diversity of participants has led to many principal-agent relationships, increasing the importance of adequate governance and corollary regulatory oversight.
- The Australian Government *regulates governance arrangements* to manage conflicts of interest between parties and ensure that agents are qualified to act on behalf of members. Regulators also have a role in *improving information transparency*. Good quality information is an important condition for competitive markets.
- The system is highly regulated by a number of regulators with different, and sometimes overlapping, roles, creating a complex regulatory environment. APRA, ASIC and the ATO are the primary regulators of the superannuation system, given their prudential, conduct and compliance roles, respectively. Several other regulators also have roles within the system.
- APRA has many regulatory instruments under its prudential framework, such as prudential and reporting standards. Some instruments provide useful indicators of the competitiveness and efficiency of the system, such as conflicts of interest standards, an annual scale assessment requirement and bulk transfer rules.
- ASIC regulates the conduct and disclosure obligations of superannuation trustees and financial service providers, including providers of life insurance. ASIC gives guidance to all service providers on how to adequately manage conflicts of interest. Its role also extends to requiring adequate disclosure to improve transparency, including regulations for product disclosure statements, product dashboards and portfolio holdings disclosure.
- The ATO has a general administrative role over several aspects of the superannuation system. It administers compliance of employer contributions and manages lost, inactive and unclaimed accounts. The ATO is also the primary regulator for self-managed superannuation funds, ensuring trustees (who are also members) comply with tax law.
- There are several ways that regulators of the superannuation system work together to coordinate regulation and minimise regulatory burden, for example, through high-level forums and bilateral agreements.

The superannuation system operates within a complex regulatory environment. While the Commission will take current policy settings as given in its task, much of regulation (especially how it is implemented) is within the influence of system participants and therefore within the scope of this study. The degree to which this regulation (and its implementation) improves or impedes efficiency and competitiveness will need to be assessed as part of the stage 3 review (chapter 3).

This appendix describes the system's regulatory framework (section H.1). This involves a description of the key regulatory agencies in the system, as well as a discussion on the *objectives* of regulating the system. Second, the appendix describes how the main regulators go about achieving these objectives, and the implications this has for the Commission's task to develop criteria and indicators to assess the competitiveness and efficiency of the system (section H.2).

The purpose of this appendix is to identify the key regulatory settings that affect the efficiency and competitiveness of the superannuation system. This will be done on an exception basis (for example, issues that may be raised in consultations and submissions). The key issues identified here underpin the selection of governance criteria and indicators proposed in chapters 5 and 6.

H.1 A complex regulatory framework

The design of the superannuation system is fundamentally driven by government policy. However, the system also has many unique characteristics that may contribute to market failures or create government failures, reducing the system's competitiveness and efficiency (chapter 2). Several aspects of the system are regulated to address these failures, improving the competitiveness and efficiency of the system.

A key characteristic of the superannuation system is the number and diversity of participants operating under principal-agent relationships. Therefore, regulation of the superannuation system has a strong focus on managing these relationships, using rules and incentives to promote adequate governance standards and information transparency within the system. Regulation of governance arrangements can aim to ensure trustees and service providers are adequately representing the best interests of members. Further, transparency and availability of information across all participants can facilitate members' ability to act in their own best interests and achieve more efficient outcomes overall.

The superannuation system is highly regulated

The regulatory environment of the superannuation system is made up of both legislation and regulators. Legislation lays the foundations of the system, giving legal effect to the rules of the system and conferring certain powers on regulators. Regulators use their legislated powers to enforce the system's design and promote desired market behaviour. However, there may be costs associated with regulation, such as regulatory burden and unintended consequences.

The foundations of the superannuation system lie in several different pieces of legislation. However, the system is primarily built on the *Superannuation Industry (Supervision) Act 1993* (Cwlth) (SIS Act) and the *Superannuation Guarantee (Administration) Act*

1992 (Cwlth) (SG Act). In particular, the SIS Act gives many unique powers and responsibilities to different regulators.

Australia's financial regulatory system is described as a 'twin peaks' model, where regulators 'focus on particular outcomes across the system, rather than particular sectors' (Murray et al. 2014a, p. 233). The twin peaks include:

- the Australian Prudential Regulation Authority (APRA), which specialises in prudential regulation and supervision of financial institutions, such as superannuation, banking and insurance
- the Australian Securities and Investments Commission (ASIC), which has a broader conduct oversight and integrity role as the corporate, markets and financial services regulator.

A number of other agencies, such as the Australian Tax Office (ATO) and the Superannuation Complaints Tribunal (SCT), have responsibilities for regulating specific aspects of the superannuation system (box H.1). For example, the SCT is an independent dispute resolution body which deals with superannuation-related complaints. The SCT publishes time series data on the number of inquiries or complaints received, withdrawn and resolved as well as the nature of complaint and trends by fund type. These data may become useful quantitative indicators of trends in governance at the system level, such as member satisfaction or trust (SCT 2015). While these roles and responsibilities may differ, there is potential for counterproductive overlap between regulators, increasing regulatory complexity. However, some coordination exists (section H.2).

The majority of institutional superannuation funds are regulated by APRA (chapter 2). However, almost one third of all superannuation assets are held in self-managed superannuation funds (SMSF), which are regulated by the ATO. There are also a number of public sector superannuation funds that are exempt from regulation under the SIS Act and are instead regulated under other government legislation (chapter 2).

Regulators are generally funded by the finance industry through supervisory levies. APRA imposes a levy on the financial services sector designed to cover the majority of its own costs as well as specific costs for other organisations, such as the ATO, ASIC and the Department of Human Services (Australian Government 2013). The ATO also collects a supervisory levy from SMSFs (ATO 2013b). These levies are generally passed through to members as fees. The Financial System Inquiry recommended an industry funding model for ASIC (Murray et al. 2014a); the Australian Government (2015b) has consulted with industry on a proposed industry funding model for ASIC.

Box H.1 Regulator involvement in the superannuation system

Australian Prudential Regulation Authority (APRA) — the prudential regulator of the Australian financial services industry, including superannuation and life insurance. APRA supervises most institutional superannuation funds.

Australian Securities and Investments Commission (ASIC) — oversees conduct and integrity of corporations, markets and financial services. ASIC licenses and monitors financial service providers that interact with superannuation funds as well as funds themselves.

Australian Tax Office (ATO) — provides administrative oversight of employer contributions, regulates compliance of self-managed superannuation funds (annual returns and auditing requirements) and manages some reporting by APRA-regulated funds.

Reserve Bank of Australia (RBA) — uses monetary policy and administers the monetary and payments system to maintain a strong financial system. The RBA is not directly involved in the regulation of participants in the superannuation system.

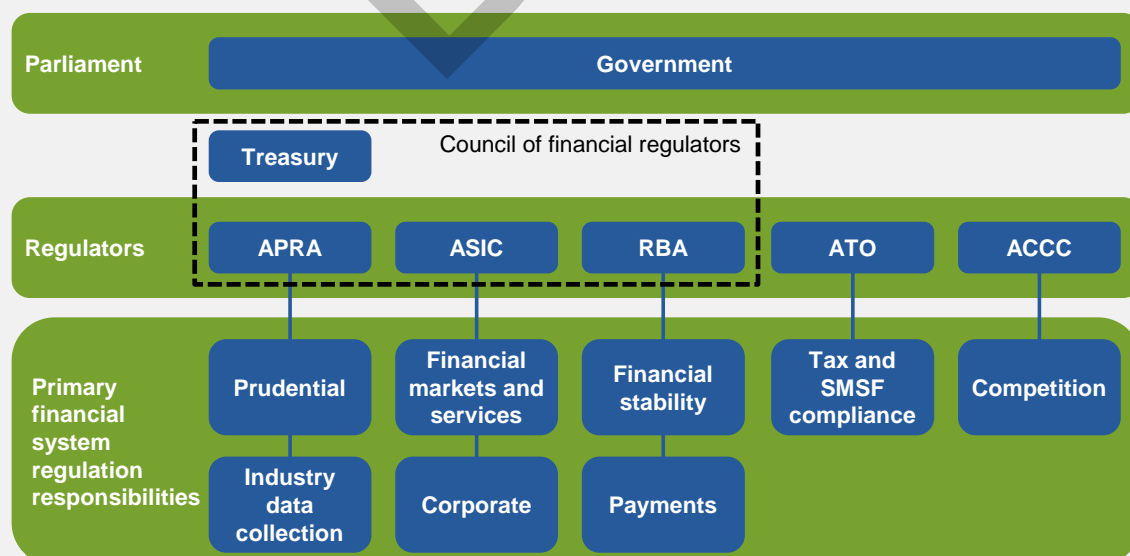
Council of Financial Regulators (CFR) — the coordinating body for Australia's main financial regulatory agencies, operating as a high-level forum for co-operation and collaboration among members. Membership includes APRA, ASIC, the RBA and the Treasury.

Australian Competition and Consumer Commission (ACCC) — the competition regulator, promotes fair trade in markets to benefit the wider community. The ACCC regulates participants in the superannuation system as part of a broader mandate to ensure that individuals and businesses comply with competition, fair trade and consumer protection laws.

Superannuation Complaints Tribunal (SCT) — an independent dispute resolution body that deals with complaints relating to decisions and conduct of trustees, insurers and other decision makers within the superannuation system.

Department of Human Services (DHS) — assesses applications for early release of superannuation in certain circumstances as determined by legislative requirements.

The Australian financial system regulatory framework



Sources: ACCC (2012); APRA (2016a); ASIC (2016e); ATO (2015o); CFR (2016a); DHS (2016); SCT (2016); Treasury (2016b). Figure adapted from Murray et al (2014b).

Regulating governance can improve member outcomes

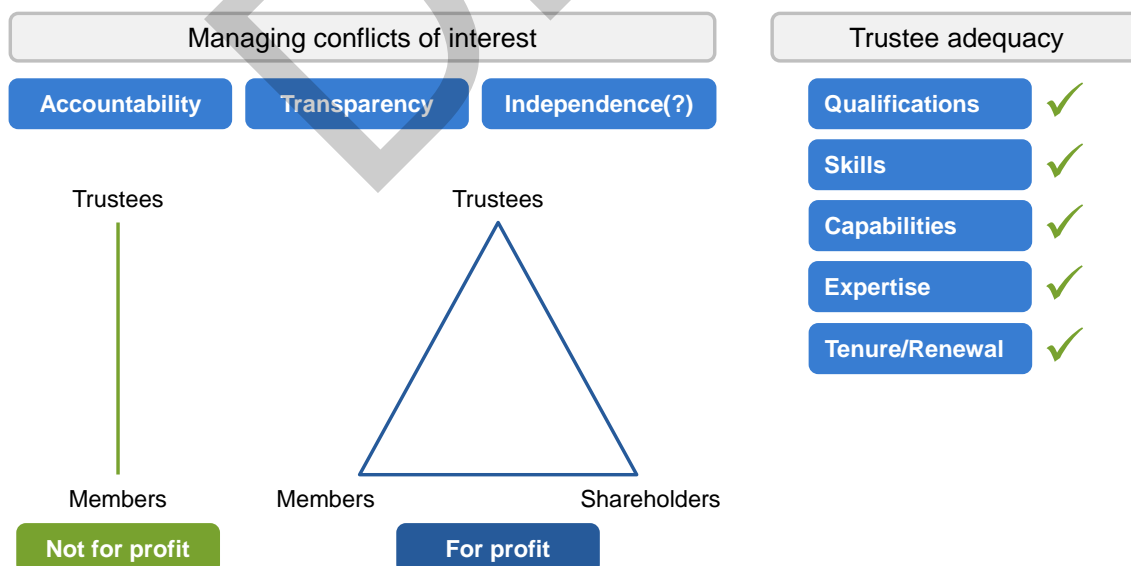
The superannuation system is characterised by myriad principal–agent relationships (chapter 2). An important example is the relationship between members and trustees of institutional superannuation funds, where a small number of trustees make decisions for many members.

To address issues arising from these principal–agent relationships, trustees and service providers are regulated to promote adequate governance arrangements. There are two core principles to good governance arrangements:

1. effective management of conflicts of interest between parties
2. adequate capacity of trustees (usually trustee board members) to act in the best interests of members (figure H.1).

Conflicts of interest are managed differently depending on whether the trustees operate under a not-for-profit or for-profit structure. Governance arrangements for not-for-profit trustees rely on managing conflicts between the trustee and the member, whereas for-profit trustee arrangements must also manage the interests of shareholders. Conflicts of interest — and the principal–agent relationship more broadly — can be managed effectively when trustees have processes in place to manage them, can be held accountable for their actions and information is transparent.

Figure H.1 Principles of governance



The second dimension of governance focuses on the adequacy of trustees to fulfil their role and incorporates the process for appointing and removing board directors. This includes

the necessary qualifications, skills, capabilities and expertise of board members to undertake their duties and the process for renewal of board members over time.

In principle, independence of trustees (board members) can improve the quality of decision making and demonstrate this process to stakeholders. However, there is little empirical evidence concerning the relationship between the independence of trustees and institutional fund performance (Donald and Le Mire 2016). In 2015, the Australian Government attempted to mandate a minimum one third independent directors (and chair) on APRA-regulated superannuation boards, but the *Superannuation Legislation Amendment (Trustee Governance) Bill 2015* (Trustee Governance Bill) did not pass the senate.

Governance is not regulated by governments alone — there is also a role for self-regulation. For example, the Financial Services Council (2013b) requires that all of its superannuation trustee members comply with its self-imposed standards. In particular, Standard 20 aims to promote strong governance through a requirement that boards have a majority of independent directors and an independent chair. Further, the Australian Institute of Superannuation Trustees and Industry Super Australia initiated a review of best practice governance in the not-for-profit superannuation sector ('The Fraser Governance Review'). Submissions to this review closed in February 2016 and the process has now moved into a further consultation phase, with the appointment of a panel of experts to provide consultancy services to the review (ISA 2016).

Regulating information transparency can improve decision making

Good quality information is an important condition for competitive markets. However, the superannuation system is inherently complex (chapter 2). This complexity can limit the availability of information or obscure its understanding, leading to suboptimal outcomes for participants. For example, problems can arise due to the asymmetry of information between principals and agents.

Regulators, particularly APRA and ASIC, have a role to make information in the superannuation system transparent and easy to understand. Disclosure requirements and reporting standards are the main policy mechanisms for improving transparency and accountability of trustees and service providers.

Transparency through improved disclosure is critical to the efficiency and operation of Australia's market based superannuation system, as it improves understanding, awareness and engagement across the community. (O'Dwyer 2016b, p. 3)

A key element of transparency is relevant information that is presented in an accessible form for a broad range of participants. For example, superannuation product dashboards are designed to provide easily accessible and understandable information to aid in member decision making.

H.2 Regulatory implications for the Commission's task

This section describes the role and instruments of the three main regulators of the superannuation system — APRA, ASIC and the ATO — and how they coordinate. Each regulator has an important role in either regulating governance or improving transparency of the system. This section focuses on some of the key aspects of regulation that may have significant implications for the development of assessment criteria and indicators.

Australian Prudential Regulation Authority

As the prudential regulator of Australia's financial services industry, APRA has a key role in the superannuation system. In particular, APRA regulates and supervises superannuation funds, Approved Deposit Funds and Pooled Superannuation Trusts under the SIS Act. APRA is responsible for ensuring that registered funds act in a prudent and honest manner. Under its mandate, APRA is explicitly required to balance objectives of financial safety with competition and efficiency.

In performing and exercising its functions and powers, APRA is to **balance the objectives of financial safety and efficiency, competition, contestability and competitive neutrality** and, in balancing these objectives, is to promote financial system stability in Australia. (emphasis added) (*Australian Prudential Regulation Authority Act 1998* (Cwlth), s. 8(2)).

APRA further elaborated on guidance from the Minister's statement of expectations on the balancing of objectives, noting:

... it is important that the prudential regulation regime maintain a low incidence of failure of regulated institutions while not impeding continued improvements in efficiency or hindering competition. (APRA 2014c, p. 22)

Prudential framework for superannuation

APRA's prudential framework for superannuation seeks to ensure that trustees 'are undertaking their duties and responsibilities in the best interests of members' (APRA, sub. 32, p. 14). The framework incorporates legislation, prudential standards, a reporting framework, a supervision framework and other guidance material. Many of the instruments work to improve governance or information transparency.

APRA primarily receives its superannuation-related regulatory roles and powers from the SIS Act, and several other pieces of **legislation**, such as the *Retirement Savings Accounts Act 1997*. APRA's capabilities to fulfil its prudential mandate derive from its **licensing, registration and authorisation** powers.

APRA licenses trustees to ensure they have the appropriate qualifications and ability to manage a superannuation fund in the best interests of members. Applicants must provide evidence of likely compliance with prudential standards (APRA 2013a). For example, one

aspect of APRA's prudential standard for governance requires that registrable superannuation entity (RSE) licensees are adequately qualified, and another 'establishes requirements for the identification, avoidance and management of conflicts of duty and interest by an RSE licensee' (APRA 2012d, 2013b, p. 1). In addition, APRA registers superannuation funds (RSEs) and authorises MySuper products, giving APRA the ability to monitor funds and publish information to improve transparency. For example, APRA maintains a publicly available register of RSE licensees (trustees), RSEs, Retirement Savings Accounts, MySuper authorisations and eligible rollover fund authorisations on its website (APRA 2016f). As the regulatory body that registers and licenses superannuation trustees, APRA is responsible for the oversight of trustee conduct.

All RSEs are required to comply with 13 superannuation **prudential standards** set by APRA (2016h). The standards include requirements for trustees and funds to have appropriate frameworks and systems in place to manage various elements of their business, such as risk and conflicts of interest. APRA (2016g) also provides 22 prudential practice guides, which are not enforced, to assist superannuation funds by outlining prudent practices.

RSEs are also required to provide data to APRA under the *Financial Sector (Collection of Data) Act 2001* (Cwlth). Under its superannuation **reporting framework**, APRA collects data from RSEs through a set of superannuation reporting standards — revised in 2013. These standards require funds to report data on a range of business elements, such as asset allocation, membership profile and financial statements. APRA reports some collected data in various publications covering the superannuation system (APRA 2016i). APRA's data collection and publication improves transparency in the overall system, although APRA noted that its superannuation data have some limitations due to quality and comparability of data collected (APRA, sub. 32).

The objective of these collections and publications is to support APRA's prudential supervision and provide appropriate transparency and disclosure in relation to the operations of the industries it regulates. Achievement of these objectives benefits all industry stakeholders. (APRA 2013c, p. 9)

APRA **supervises** trustees' ability to manage risk prudently to ensure that the trustees are capable of managing risks on behalf of members, as well as maintaining the stability of the overall system. The framework uses two main tools to guide supervisors.

- Risk assessment — Probability and Impact Rating System (PAIRS).
- Supervisory response — Supervisory Oversight and Response System (SOARS).

In particular, PAIRS provides a useful measure of superannuation fund governance. Under a PAIRS risk assessment, supervisors assess 12 risk categories, giving a score between 0–4. Three of these categories assess areas of governance, such as board quality, independence and conflicts of interest (figure H.2). The PAIRS scoring ultimately provides an overall estimate of the risk of failure that feeds into APRA's supervisory response (SOARS). PAIRS data can provide a useful indicator for assessment of trustee adequacy

and conflict of interest management. While the Commission does not anticipate seeking access to PAIRS data at the fund level (due to confidentiality restrictions), it will seek access to any high level reports prepared by APRA that provide insights on governance standards at a system level.

Figure H.2 **Probability and Impact Rating System (PAIRS) categories**

PAIRS category	Risk score	
Board	(0–4)	Governance-related categories
Management	(0–4)	
Risk governance	(0–4)	
Strategy and planning	(0–4)	
Liquidity risk	(0–4)	
Operational risk	(0–4)	
Credit risk	(0–4)	
Market and investment risk	(0–4)	
Insurance risk	(0–4)	
Coverage/surplus	(0–4)	
Earnings	(0–4)	
Access to additional capital	(0–4)	

Source: Adapted from APRA (2012a).

APRA also regulates the life insurance industry. Its prudential framework for life insurance involves legislation, prudential standards and practice guides, reporting, publications and industry consultations. Given that many superannuation products provide life insurance by default, APRA's life insurance standards and data can provide useful information for the development of assessment criteria and indicators.

APRA also continues to revise and update elements of its prudential framework. In 2015, APRA (2015c, p. 1) commenced consultations to revise its prudential standards and practice guides for trustee governance arrangements, and intends to revise its governance standard (SPS 510) 'at the earliest opportunity' — this includes revisions to governance frameworks, director appointment processes and other board processes.

APRA has also signalled that during 2016 it will conduct a thematic review of director appointment and board performance assessment processes. This includes potential areas where the industry can improve performance — including board size, tenure limits and renewal policies, processes to identify skill gaps and board performance assessment processes. APRA has also indicated it will follow up its 2014 review of conflicts management (Rowell 2016).

The Commission will seek to better understand the methodology APRA will use for these reviews to ascertain what data and information may be relevant for use in both refining the assessment framework (as part of this study) and as an input to the stage 3 review.

Some implications for efficiency and competitiveness

Many of APRA's regulations have implications for the efficiency and competitiveness of the superannuation system, and may inform the development of assessment criteria and indicators. Specific elements are discussed below. More generally though, APRA assesses whether it unnecessarily impedes the efficient operation of regulated entities, including in its development of standards (APRA 2015h). Key indicators include the number of responses during consultation and number of Regulation Impact Statements undertaken.

Several of APRA's prudential standards are aimed at ensuring appropriate governance arrangements of superannuation funds, such as the **governance** (SPS 510) and **conflicts of interest** (SPS 521) standards (APRA 2012d, 2013b). In 2014, APRA reviewed the conflicts management frameworks for 37 superannuation funds and found that 'around one third of the [conflicts management frameworks] reviewed [were] assessed as vulnerable or weak' (APRA 2015d, p. 28). This conclusion is an important qualitative indicator of the current state of conflicts of interest management within the superannuation system. As part of the review, APRA determined good practices by entities with a robust framework, such as having consideration of conflicts of interest as a standing agenda item for board and committee meetings. These practices can also provide useful indicators for assessing the strength of superannuation fund governance more broadly. System-level reviews of governance, such as the example above, provide a good qualitative indication of trends in governance over time. While APRA does not publish data on its compliance and enforcement activities, information from its annual reports may provide an indication of trends in contraventions of governance standards.

From 2013, trustees that offer a MySuper product are also required to undertake an annual **scale assessment** under section 29VN of the SIS Act (APRA, sub. 32). The assessment requires trustees to consider whether members of their MySuper product are disadvantaged relative to members of other MySuper products as a result of scale.⁴⁰ If trustees determine that scale is insufficient, they are required to take appropriate action (Shorten 2012). For example, this might involve transferring those members to another superannuation fund.

... at times this will mean making difficult decisions, such as deciding that the strategy that is in the best interests of fund members is to transfer them to another fund. APRA expects boards to be prepared to take those hard decisions, acting in the best interests of their members rather than self-interest. (Rowell 2015, p. 14)

Although it is relatively new, the scale assessment is expected to have an impact on fund consolidation (chapter 5). This has important implications for the competitiveness and

⁴⁰ APRA observed this sort of assessment should not be limited to funds offering MySuper products (APRA, sub. 32).

operational efficiency of the system more broadly (chapters 5 and 6). There is little publicly available information on any scale assessments, so its impact on fund consolidation to date is unclear. However, APRA has noted that it ‘will be increasingly focusing on it as part of [its] regular supervision’ (Rowell 2015, p. 13).

The Commission will seek to better understand the APRA scale assessment methodology to ascertain what data and information may be relevant for use in both refining the assessment framework as part of this study and the stage 3 review.

APRA’s **bulk transfer rules** may also affect competitiveness of the superannuation system (chapter 5). Under the SIS Act, bulk transfers of members to successor funds must be made in the best interests of members (APRA, sub. 32). In fact, a successor fund must give the member equivalent rights to those they had in the original fund (SIS Regs). There is some concern that these requirements can act as a barrier to consolidation in the industry by discouraging potential successor fund transfers and restricting potential mergers (APRA, sub. 32; ASFA, sub. 42; Mercer, sub. 31). For example, the requirement to protect *all member interests* in a fund may prevent a merger that would benefit the member group on average, while leaving some members worse off. APRA has only recently begun to publish data on the number of new and closed member accounts as a result of successor fund transfers. However, APRA does not collect data for the number of attempted bulk transfers that were denied.

Australian Securities and Investments Commission

ASIC is Australia’s corporate, markets and financial services regulator. Its role is to ensure that ‘Australia’s financial markets are fair and transparent, supported by confident and informed investors and consumers’ (ASIC 2016e). ASIC’s roles span both the governance and disclosure aspects of competition and efficiency in the superannuation system. ASIC also leads the National Financial Literacy Strategy aimed at improving the financial literacy of Australians (ASIC 2016d).

Under its mandate, ASIC does have reference to promoting the efficiency of the economy (*Australian Securities and Investments Commission Act 2001* (Cwlth) (ASIC Act)). Nevertheless, the Financial System Inquiry noted that there is no explicit reference to competition in the ASIC Act and recommended for this to be included in ASIC’s mandate (Murray et al. 2014a). In response, the Australian Government (2015a) undertook to update ASIC’s mandate by the end of 2016.

ASIC regulates the conduct and disclosure obligations of superannuation trustees and financial service providers (including life insurance). ASIC assumes its regulatory role within the superannuation system primarily from the *Corporations Act 2001* (Cwlth) (Corporations Act) and the SIS Act. These powers give ASIC several instruments for administering its objectives, including: licensing and registration, enforcement, complaints management, stakeholder engagement, surveillance, guidance, education and policy advice.

Arrangements to address conflicts of interest

ASIC requires that all Australian Financial Service (AFS) licensees (including financial service providers and some institutional superannuation funds) have adequate governance arrangements to deal with **conflicts of interest** (Corporations Act, s. 912A(1aa)).

ASIC (2004) provides guidance (RG 181) to licensees for developing, or assessing the ‘adequacy’ of, arrangements for managing conflicts of interest, including mechanisms for controlling, avoiding and disclosing conflicts. In 2016, ASIC reviewed and provided further guidance for good governance principles and processes for managing conflicts of interest.

In general, we found that financial services organisations demonstrated a commitment to maintaining and reviewing policies and information barriers, with some focus on training. However, we found that on matters of outsourcing, product selection, remuneration and board membership, there may be areas where financial services organisations could better demonstrate a commitment to managing and, where appropriate, avoiding conflicts of interest. (ASIC 2016c, p. 4)

While ASIC imposes conflict of interest arrangements on AFS licensees under the Corporations Act, it is APRA that is ultimately responsible for regulating governance arrangements and conduct of RSE licensees.

While ASIC has a broad regulatory mandate with respect to Australian financial services providers and public companies, we do not have a specific regulatory role with respect to the governance of Australian superannuation funds. That role is performed by [APRA]. (ASIC 2015f)

Disclosure requirements to improve transparency

ASIC uses disclosure requirements to promote transparency and comparability of trustees and service providers (ASIC, sub. 35). Disclosure is also an important input for managing conflicts of interest.

Trustees must meet certain requirements for disclosing fees and costs in **product disclosure statements** (PDS) and other periodic statements (ASIC 2015d). In particular, the PDS for each MySuper and choice product of the superannuation fund must have a table of fees and costs. These include investment, advice, switching and exit fees, as well as indirect costs (any amount that a trustee knows will reduce member returns, but is not charged to the member as a fee). In particular, taking effect from 1 February 2017, ASIC has modified the definition of indirect costs and ‘clarified ... that superannuation trustees are expected to make reasonable estimates where they do not know or ought to know a cost’ (ASIC, sub. 35, p. 3). In 2010, ASIC produced a review of 200 superannuation PDSs, and found that some are hard to understand, could provide better information and were not up to date (ASIC 2010).

ASIC also has an important role in promoting and enforcing the use of **product dashboards** by superannuation trustees (although the dashboard measures are determined by APRA's reporting standards) (ASIC 2014b). From 31 December 2013, superannuation trustees offering MySuper products have been required to provide publicly available and easily accessible product dashboards under the Corporations Act (O'Dwyer 2016b). The dashboards are intended to provide members with key information about the product, facilitating comparisons between funds, using five separate measures.⁴¹

- Return target — net return of a representative member that exceeds the growth in the CPI over ten years.
- Return — net returns for a representative member for each of the 10 previous financial years.
- Comparison between return target and return.
- Level of investment risk — estimated number of annual negative returns over 20 years.
- Statement of fees and other costs (APRA 2015j).

Product dashboards for choice investment options were scheduled to be introduced on 1 July 2014, but have since been delayed by ASIC until 1 July 2017. The start date was deferred to give more time for consultation on the detail of the requirements and the passage of the stalled *Superannuation Legislation Amendment (Transparency Measures) Bill 2016* (Transparency Measures Bill) (ASIC 2016b).⁴²

Most trustees will also be required to publish their fund's **portfolio holdings** twice a year (Corporations Act, s. 1017BB(1)). The information must be sufficient to identify each financial product (or other property), and the value of each investment on a full 'look through' basis (including assets derived from assets) (O'Dwyer 2016b). However, like the choice product dashboards, these portfolio holdings disclosure requirements — initially due to begin on 31 December 2013 — have also been delayed until 1 July 2017 (ASIC 2016b).⁴³

These disclosure requirements — PDSs, product dashboards and portfolio holdings — are designed to improve transparency and their success will impact on the competitiveness and efficiency of the superannuation system. While it may be difficult to produce quantitative indicators of the success of these requirements, reviews and surveys may provide insight into the overall improvement in transparency. For example, consumer testing of both MySuper and choice product dashboards generally found the resource to be valuable, but more so for consumers that claimed to be financially engaged (ASIC 2013a, 2015c). In

⁴¹ APRA (2015b) is currently considering proposed amendments to product dashboard requirements that will split the statement of fees and other costs into its component parts and include a new measure of an investment mix pie chart reporting the benchmark asset allocation for each asset class.

⁴² The Transparency Measures Bill involved amendments to limit the choice product dashboards to a superannuation fund's ten largest choice investment options, among other measures.

⁴³ The Transparency Measures Bill involved amendments to remove certain portfolio holdings reporting obligations.

addition, ASIC's regular enforcement reports may provide an indicator of contraventions of disclosure arrangements.

ASIC (2015b) has also recently begun tracking general financial attitudes and behaviours of consumers, including potential indicators for superannuation member engagement. The tracker reports on the proportion of the population that owns a superannuation fund and if the member knows their account balance. The tracker also reports the level of life insurance cover across the population, compared with other types of insurance. While the survey is relatively high level and only has a short history, it may be a useful supplement to other research in the field (appendix B).

Australian Taxation Office

The ATO has a general administrative role over several aspects of the superannuation system. This includes oversight of employer contributions, collecting certain information from APRA and administering SuperStream. One of its main roles is to regulate SMSFs, which are not subject to prudential regulation by APRA because the trustee of the fund is also the member (Murray et al. 2014a). Therefore, the ATO focuses on regulating SMSFs by ensuring members comply with tax law.

General administration

The ATO provides guidance, monitors and enforces compliance by employers that are required to make Superannuation Guarantee contributions on behalf of their employees. If an employer fails to meet the Superannuation Guarantee obligations, they may be liable for a range of penalties or charges, such as an administrative penalty or general interest charge (ATO 2015h). The ATO also collects data on the number and value of superannuation guarantee charges and penalties for non compliance (ATO 2015d).

The ATO also administers **SuperStream** — a standard for electronically processing superannuation data and payments. SuperStream was designed to improve administrative efficiencies — for employers, superannuation funds and the Australian Government — in processing contributions, with estimates of almost \$1 billion in savings annually (AIST, sub. 30; Cooper et al. 2010b). Part of these savings is being tracked through RSE reporting requirements to APRA, which capture the number and cost of contribution transactions into RSEs (APRA 2015k). The ATO recently published its first quarterly report of these data for September 2015 — the total cost of contribution transactions from active employers was \$39 million (ATO 2016d). Further, an ATO-commissioned employer survey reported that businesses that had implemented SuperStream and completed more than one payment cycle saw a significant reduction in time taken to manage contributions (ATO 2015c). From 30 June 2016, all employers have been required to use SuperStream to make contributions to superannuation funds (ATO 2015e).

The ATO (2015q) also administers the Small Business Superannuation Clearing House — a free, optional service for employers with fewer than 20 employees or less than \$2 million in annual turnover.

APRA-regulated funds also have specific reporting obligations to the ATO. These funds must (among other things):

- lodge an annual *member contribution statement* that reports on the contributions received for each member during the financial year and the balance of the account held in the fund
- provide twice-yearly reports about the fund's *lost, inactive, found and transferred members*
- provide twice-yearly reports and payments of *unclaimed superannuation* of members aged 65 years or older, non-member spouses, deceased members, former temporary residents and small lost member accounts (ATO 2015b).

Further, these funds have certain administrative responsibilities regarding the management and payment of member benefits. The ATO (2016a) uses these elements to provide members with an overview of all of their superannuation accounts through its myGov online portal — including **lost or unclaimed accounts**. This simplified process has encouraged members to see and consolidate their accounts, potentially reducing fees paid on multiple accounts. In its annual reports and statistical publications, the ATO (2015d) publishes data for the number and value of lost, unclaimed and consolidated accounts. This information could inform indicators for measuring the number of members with multiple accounts.

The ATO's administrative and compliance roles have important implications for the operational efficiency of the superannuation system (chapter 6). Administrative and compliance costs ultimately reduce retirement incomes and indicators can be used to assess the operational efficiency of the system for employers, institutional funds and SMSFs. APRA's reporting standard for measuring SuperStream costs and ATO-reported data on account consolidations and superannuation guarantee penalties can be used to indicate changes in operational efficiency. In addition, the ATO plans to report a 'time-cost index for business and superannuation funds to prepare and complete key tax forms' as a measure of the reduction in compliance costs for taxpayers (ATO 2015i, p. 3).

Regulation of SMSFs

As the regulator of SMSFs, the ATO has a strong focus on **compliance with tax law**. Every year, SMSFs are required to lodge a return, pay a supervisory levy and arrange an audit by an approved auditor (Treasury 2014). Its main SMSF-related activities include:

- verifying that a fund's primary purpose is to pay retirement benefits to its members
- providing information and forms to help set up and manage a fund

-
- checking that the fund is managed in accordance with the super laws
 - implementing and maintaining systems to check the laws are complied with
 - taking enforcement action to correct matters when there is a breach of the law
 - checking that SMSF auditors perform their duties to the required standard. (ATO 2015g)

The ATO can also use several enforcement actions to deal with non compliance by SMSF trustees. These include:

education direction; enforceable undertaking; rectification direction; administrative penalties; disqualification of a trustee; civil and criminal penalties; allowing the SMSF to wind up; notice of non compliance; [and] freezing an SMSF's assets. (ATO 2015f)

Given that SMSFs are exempt from prudential regulation, they are also exempt from the statutory compensation that APRA-regulated funds can access in the event of theft or fraud (Treasury 2014). Consequently, financial advice laws and regulations on financial products (administered by ASIC) are the main forms of protection available to SMSF members.

Using these compliance tools, the ATO collects and reports on the performance of SMSFs more broadly. This information can be used to assess the competitiveness and efficiency of the SMSF market and the overall superannuation system (appendix G).

Coordination between regulators

As outlined above, there are a number of regulators with different, and sometimes overlapping, roles within the superannuation system. In cases where regulation overlaps, participants can be subject to unnecessary regulatory burden, reducing the system's efficiency. Under the Australian Government's regulator performance framework, a key performance indicator for all regulators relates to the streamlining and coordination of compliance and monitoring approaches (Australian Government 2014b).

There are several ways that regulators of the superannuation system work together to coordinate regulation and minimise regulatory burden. For example, many regulators, including APRA, ASIC and the ATO, follow the Standard Business Reporting (2015) approach to digital record-keeping to simplify business reporting obligations. This involves the standardisation of reporting taxonomy for business reporting.

An important method of coordination between financial regulators is through the Council of Financial Regulators (CFR), involving APRA, ASIC, the RBA and the Treasury. In addition to the CFR, these regulators coordinate bilaterally through memorandums of understanding covering operational matters such as information sharing and decisions likely to impact on other regulators (CFR 2016b).

Given the potential for regulatory overlap, coordination between APRA and ASIC is particularly important. For example, in some situations, superannuation trustees need to be licensed in two ways — they require both an APRA-issued RSE licence and an

ASIC-issued AFS licence to provide superannuation services. However, overlap has been at least partly addressed by both the legislation and the practice of both regulators — ASIC tends to require less information from APRA-regulated funds than other entities (ASIC 2015e). There are several examples of this coordination in practice.

- Under the Corporations Act, ASIC does not require an RSE licensee to provide information about its financial, technological or human resources, or risk management systems where the trustee also operates a registered managed investment scheme.
- If a trustee breaches both APRA- and ASIC-administered legislation, they may notify ASIC of the breach by reporting to APRA (ASIC 2015a).
- An RSE licensee could address the conflict of interest requirements of both APRA (2015e) (SPS 521) and ASIC (RG 181) by using one conflict management policy. ASIC noted that ‘both APRA and the Corporations Act impose a conflicts management obligation and, fundamentally, the principles of conflicts management are consistent’ (ASIC 2016c, p. 8).
- From 1 July 2013, ASIC has also been responsible for administering s. 29QC of the SIS Act (ASIC 2013b). This reform ensures that any information provided by a RSE licensee to an entity or person is calculated in the same way as information reported to APRA. This was designed to ensure that information is calculated consistently — such as product dashboards and advertising of investment returns — improving comparability of superannuation products.

H.3 In sum

This appendix describes some of the features of the complex regulatory environment that have direct implications for the competitiveness and efficiency of the superannuation system. The regulatory regime works to address governance problems arising from the many principal–agent relationships and improve transparency throughout the system. Regulators aim to promote good governance arrangements — through managing conflicts of interest or ensuring trustee adequacy — to ensure trustees act in the best interests of members. In addition, regulators impose disclosure requirements on participants to help manage conflicts of interest and make information more transparent and understandable so that members can act in their own best interests.

The key regulators — APRA, ASIC and the ATO — aim to address many of these issues. In doing so, these regulators collect a large amount of data and other information that can indicate competitiveness and efficiency within the superannuation system. The Commission will draw on some of those measurements in the development of its assessment criteria and indicators and as an input to the ultimate review of the superannuation system.

DRAFT REPORT

This draft report is no longer open for consultation. For final outcomes of this project refer to the research report.

Draft

References

- Aaronson, S. and Coronado, J. 2005, *Are Firms or Workers Behind the Shift Away from DB Pension Plans?*, Finance and Economics Discussion Series, Federal Reserve Board, USA.
- ABS (Australian Bureau of Statistics) 2013, *Employee Earnings, Benefits and Trade Union Membership (Table 10)*, 6310.0.
- 2016, *Household Income and Wealth, Australia 2013-14*, 6523.0.
- ACCC (Australian Competition and Consumer Commission) 2008, *Merger Guidelines*, Canberra.
- 2012, *About us*, <https://www.accc.gov.au/about-us> (accessed 28 April 2016).
- 2014, *Information and Informed Decision-Making: A Report to the Australian Senate on Anti-Competitive and Other Practices by Health Insurers and Providers in Relation to Private Health Insurance*.
- ACFS (Australian Centre for Financial Studies) 2015a, *CSIRO-Monash Superannuation Research Symposium*.
- 2015b, *Superannuation in the Post-Retirement Phase: The Search for a Comprehensive Income Product for Retirement*, Independent Report for AIST.
- Actuaries Institute 2014, *Self-insurance Arrangements and Superannuation Prudential Standard 160*, Discussion Note.
- 2015, *For Richer, For Poorer: Retirement Incomes*, White Paper.
- Agarwal, S., Driscoll, J., Gabaix, X. and Laibson, D. 2009, 'The age of reason: financial decisions over the life-cycle and implications for regulation', *Brookings Papers on Economic Activity*, vol. 2009, no. 2, pp. 51–117.
- Agnew, J.R., Bateman, H. and Thorp, S. 2013, 'Financial literacy and retirement planning in Australia', *Numeracy*, vol. 6, no. 2, pp. 1–25.
- Albrecht, W., Shamsub, H. and Giannatasio, N. 2007, 'Public pension fund governance practices and financial performance', *Journal of Public Budgeting, Accounting and Financial Management*, vol. 19, no. 2, pp. 246–268.
- Ali, P., Anderson, M., Clark, M., Ramsay, I. and Shekhar, C. 2014, *Superannuation Knowledge, Behaviour and Attitudes in Young Adults in Australia*, Research Report, Centre for International Finance and Regulation, Sydney.
- Allen, F. and Gale, D. 2004, 'Competition and financial stability', *Journal of Money, Credit, and Banking*, vol. 36, no. 3, pp. 453–480.

-
- Allianz 2014, *Allianz Pension Sustainability Index*.
- Ambachtsheer, K., Capelle, R. and Lum, H. 2008, 'The pension governance deficit: still with us', *Rotman International Journal of Pension Management*, vol. 1, no. 1.
- Ammann, M. and Zingg, A. 2008, 'Performance and governance of Swiss pension funds', *Journal of Pension Economics and Finance*, vol. 9, no. 1, pp. 95–128.
- AMP Capital 2015, *AMP Capital Core Property Fund: On Platform Class A*.
- Anderson, S.P. and Renault, R. 1999, 'Pricing, product diversity, and search costs: a Bertrand-Chamberlin-Diamond model', *RAND Journal of Economics*, vol. 30, no. 4, pp. 719–735.
- Antolin, P. 2008, *Pension Fund Performance*, OECD Working Papers on Insurance and Private Pensions, OECD.
- , Schich, S. and Yermo, J. 2011, *The Economic Impact of Protracted Low Interest Rates on Pension Funds and Insurance Companies*, OECD Journal: Financial Market Trends, OECD.
- ANU College of Arts & Social Sciences 2016, *Ageing and Money*, Report No. 20, Australian National University, Canberra.
- ANZ (Australia and New Zealand Banking Group) 2015, *ANZ Survey of Adult Financial Literacy in Australia*, Melbourne.
- APRA (Australian Prudential Regulation Authority) 2001, 'Equivalent rights' for members in successor fund transfers, Superannuation Circular, NO I.C.4, Canberra.
- 2007, *Insight: Celebrating 10 Years of Superannuation Data Collection 1996 - 2006*, Sydney.
- 2012a, *Probability and Impact Rating System*.
- 2012b, *Prudential Standard SPS 231: Outsourcing*.
- 2012c, *Prudential Standard SPS 250 - Insurance in Superannuation*.
- 2012d, *Prudential Standard SPS 510: Governance*, Sydney.
- 2013a, *Instruction Guide: Application Form - RSE Licence*.
- 2013b, *Prudential Standard SPS 521: Conflicts of Interest*, Sydney.
- 2013c, *Response to Submissions: Reporting Standards for Superannuation*.
- 2014a, *Annual Superannuation Bulletin June 2013*, Sydney.
- 2014b, *Financial System Inquiry: Response to the Interim Report*, Sydney.
- 2014c, *Submission to the Financial System Inquiry*, Sydney.
- 2014d, *Superannuation Fund-level Profiles and Financial Performance (Interim Edition)*, Sydney.
- 2015a, *Annual Report 2015*, Sydney.

-
- 2015b, *Draft Reporting Standard SRS 700.0 Product Dashboard*, Sydney.
- 2015c, *Governance Arrangements for RSE Licensees: Outcomes of Consultation*.
- 2015d, *Insight*, One, Sydney.
- 2015e, *Prudential Standards and Guidance - Frequently Asked Questions*, <http://www.apra.gov.au/Super/Pages/Prudential-Standards-Frequently-Asked-Questions.aspx> (accessed 21 June 2016).
- 2015f, *Quarterly MySuper Statistics*.
- 2015g, *Quarterly Superannuation Performance*, <http://www.apra.gov.au/Super/Publications/Pages/quarterly-superannuation-performance.aspx> (accessed 10 December 2015).
- 2015h, *Regulator Performance Framework*.
- 2015i, *Reporting Standard SRS 331.0 Services*, Sydney.
- 2015j, *Reporting Standard SRS 700.0 Product Dashboard*, Sydney.
- 2015k, *Reporting Standard SRS 711.0 SuperStream Benchmarking Measures*, Sydney.
- 2016a, *About APRA*, <http://www.apra.gov.au/AboutAPRA/Pages/Default.aspx> (accessed 28 April 2016).
- 2016b, *Annual Fund-level Superannuation Statistics June 2015*, Sydney.
- 2016c, *Annual Superannuation Bulletin June 2015*, Sydney.
- 2016d, *Quarterly Superannuation Performance December 2015*, Sydney.
- 2016e, *Quarterly Superannuation Performance March 2016*, Sydney.
- 2016f, *Register of RSE Licensees and RSEs*, <http://www.apra.gov.au/RSE/Pages/default.aspx> (accessed 2 May 2016).
- 2016g, *Superannuation Prudential Practice Guides*, <http://www.apra.gov.au/Super/PrudentialFramework/Pages/superannuation-ppts.aspx> (accessed 2 May 2016).
- 2016h, *Superannuation Prudential Standards*, <http://www.apra.gov.au/Super/PrudentialFramework/Pages/superannuation-prudential-standards.aspx> (accessed 2 May 2016).
- 2016i, *Superannuation Statistics*, <http://www.apra.gov.au/Super/Publications/Pages/Super-statistics.aspx> (accessed 2 May 2016).
- Aragon, G.O. and Ferson, W.E. 2006, 'Portfolio performance evaluation', *Foundations and Trends in Finance*, vol. 2, no. 2, pp. 83–90.
- Arnold, B., Bateman, H., Ferguson, A. and Raftery, A. 2014, *The Size, Cost and Asset Allocation of Australian Self-Managed Superannuation Funds*, Working Paper, 033/2014, Centre for International Finance and Regulation.

-
- ASFA (Association of Superannuation Funds of Australia) 2010, *Choosing to Choose*, The University of New South Wales Centre for Pensions and Superannuation, Sydney.
- 2014, *Response to the Financial System Inquiry Interim Report*.
- and Suncorp 2012, *Suncorp-ASFA Super Attitudes Survey*, Wave 3 Report, Sydney.
- ASIC (Australian Securities and Investments Commission) 2004, *Regulatory Guide 181, Licensing: Managing Conflicts of Interest*.
- 2010, *Review of Superannuation PDSs*.
- 2013a, *Consumer Testing of the MySuper Product Dashboard*, 378.
- 2013b, *Disclosure Requirements for Superannuation Trustees: s29QC*, Information sheet (167).
- 2014a, *Financial System Inquiry Interim Report: Submission by the Australian Securities and Investments Commission*, Sydney.
- 2014b, *MySuper product dashboard requirements for superannuation trustees*, Information Sheet (170).
- 2014c, *National Financial Literacy Strategy 2014–17*, Sydney.
- 2015a, *ASIC's role in super*, <http://www.asic.gov.au/regulatory-resources/superannuation-funds/asics-role-in-super/> (accessed 3 May 2016).
- 2015b, *Australian Financial Attitudes and Behaviour Tracker: Wave 3 March - August 2015*, Sydney.
- 2015c, *Consumer Testing of the Choice Product Dashboard*, 455.
- 2015d, *Disclosing fees and costs in PDSs and periodic statements*.
- 2015e, *How Do RSE and AFS Licensing Application Processes Work Together*, Information sheet (86).
- 2015f, *Superannuation Trustee Governance*, <http://asic.gov.au/about-asic/media-centre/asic-responds/superannuation-trustee-governance/> (accessed 21 June 2016).
- 2016a, *16-038MR Asic Guidance to Employers About Super*, <http://asic.gov.au/about-asic/media-centre/find-a-media-release/2016-releases/16-038m-r-asic-guidance-to-employers-about-super/> (accessed 22 July 2016).
- 2016b, *16-130MR Further Update on Stronger Super Regime*, <http://www.asic.gov.au/about-asic/media-centre/find-a-media-release/2016-releases/16-130mr-further-update-on-stronger-super-regime/> (accessed 6 May 2016).
- 2016c, *Culture, Conduct and Conflicts of Interest in Vertically Integrated Businesses in the Funds-Management Industry*, 474.
- 2016d, *National Financial Literacy Strategy home*, <http://www.financialliteracy.gov.au/> (accessed 14 June 2016).

-
- 2016e, *Our Role*, <http://asic.gov.au/about-asic/what-we-do/our-role/> (accessed 28 April 2016).
- nd, *Insurance Through Super*, ASIC's MoneySmart, <https://www.moneysmart.gov.au/superannuation-and-retirement/how-super-works/insurance-through-super> (accessed 8 June 2016a).
- nd, *Retirement Income Planning*, ASIC's MoneySmart, <https://www.moneysmart.gov.au/superannuation-and-retirement/retirement-income-planning> (accessed 21 June 2016b).
- ATO (Australian Taxation Office) 2013a, *Self-Managed Super Fund Statistical Report: June 2013*, www.ato.gov.au/Super/Self-managed-super-funds/In-detail/Statistics/Quarterly-reports/Self-managed-super-fund-statistical-report---June-2013/ (accessed 13 January 2016).
- 2013b, *SMSF Supervisory Levy - 2013 to 2016 Financial Years*, <https://www.ato.gov.au/rates/smsf-supervisory-levy---2013-to-2016-financial-years/> (accessed 28 April 2016).
- 2015a, *Accessing Your Super*, <https://www.ato.gov.au/Individuals/Super/Accessing-your-super/> (accessed 20 January 2016).
- 2015b, *APRA-regulated Funds*, <https://www.ato.gov.au/Super/APRA-regulated-funds> (accessed 3 May 2016).
- 2015c, *Australian Taxation Office Superannuation Reform*, Final Report.
- 2015d, *Commissioner of Taxation Annual report 2014-15 Volume 01*.
- 2015e, *Employers*, <https://www.ato.gov.au/super/superstream/employers/> (accessed 31 May 2016).
- 2015f, *How We Deal with Non-Compliance*, <https://www.ato.gov.au/Super/Self-managed-super-funds/Administering-and-reporting/How-we-help-and-regulate-SMSFs/How-we-deal-with-non-compliance/> (accessed 3 May 2016).
- 2015g, *How Your SMSF Is Regulated*, <https://www.ato.gov.au/super/self-managed-super-funds/administering-and-reporting/how-we-help-and-regulate-smsfs/how-your-smsf-is-regulated/> (accessed 3 May 2016).
- 2015h, *Penalties, Amendments and Objections*, <https://www.ato.gov.au/Business/Super-for-employers/Paying-super-contributions/Penalties,-amendments-and-objections/> (accessed 31 May 2016).
- 2015i, *Regulator Performance Framework*.
- 2015j, *Self-Managed Superannuation Funds: A Statistical Overview 2013-14: Appendix 1 – Data Tables*, www.ato.gov.au/Super/Self-managed-super-funds/In-detail/Statistics/Annual-reports/Self-managed-superannuation-funds--A-statistical-overview-2013-14/?anchor=Appendix1 (accessed 13 January 2016).
- 2015k, *Self-Managed Superannuation Funds: A Statistical Overview 2013-14: Appendix 2 - Data Issues*, <https://www.ato.gov.au/Super/Self-managed-super-funds/>

-
- In-detail/Statistics/Annual-reports/Self-managed-superannuation-funds--A-statistical-overview-2013-14/?page=53#Appendix_2___Data_issues (accessed 19 July 2016).
- 2015l, *Self-Managed Superannuation Funds: A Statistical Overview 2013-14: Investment Performance*, https://www.ato.gov.au/Super/Self-managed-super-funds/In-detail/Statistics/Annual-reports/Self-managed-superannuation-funds--A-statistical-overview-2013-14/?page=23#Investment_performance (accessed 19 July 2016).
- 2015m, *Self-Managed Superannuation Funds: A Statistical Overview 2013-14: Operating Expenses*, https://www.ato.gov.au/Super/Self-managed-super-funds/In-detail/Statistics/Annual-reports/Self-managed-superannuation-funds--A-statistical-overview-2013-14/?page=24#Operating_expenses (accessed 19 July 2016).
- 2015n, *Self-Managed Super Fund Statistical Report: Quarterly Reports*, <https://www.ato.gov.au/Super/Self-managed-super-funds/In-detail/Statistics/Quarterly-reports/> (accessed 18 December 2015).
- 2015o, *Self-managed super funds*, <https://www.ato.gov.au/Super/Self-managed-super-funds/> (accessed 28 April 2016).
- 2015p, *Self-Managed Superannuation Funds: A Statistical Overview 2013-2014*, www.ato.gov.au/About-ATO/Research-and-statistics/In-detail/Super-statistics/SMSF/Self-managed-superannuation-funds--A-statistical-overview-2012-2013 (accessed 1 December 2015).
- 2015q, *Small Business Superannuation Clearing House*, <https://www.ato.gov.au/business/super-for-employers/paying-super-contributions/small-business-superannuation-clearing-house/> (accessed 31 May 2016).
- 2015r, *The Self-Employed*, <https://www.ato.gov.au/business/super-for-employers/working-out-if-you-have-to-pay-super/the-self-employed/> (accessed 12 January 2016).
- 2015s, *Withdrawing Your Super and Paying Tax*, <https://www.ato.gov.au/Individuals/Super/In-detail/Withdrawing-and-paying-tax/Withdrawing-your-super-and-paying-tax/> (accessed 20 January 2016).
- 2015t, *Working Out If You Have to Pay Super*, <https://www.ato.gov.au/Business/Super-for-employers/Working-out-if-you-have-to-pay-super/> (accessed 11 January 2016).
- 2016a, *Australians Losing Thousands in Super Fees Annually: ATO*, <https://www.ato.gov.au/media-centre/media-releases/australians-losing-thousands-in-super-fees-annually--ato/> (accessed 6 May 2016).
- 2016b, *Self-Managed Super Fund Statistical Report: March 2016*, <https://www.ato.gov.au/Super/Self-managed-super-funds/In-detail/Statistics/Quarterly-reports/Self-managed-super-fund-statistical-report-March-2016/> (accessed 28 June 2016).
- 2016c, *Super Accounts Data Overview*, www.ato.gov.au/About-ATO/Research-and-statistics/In-detail/Super-statistics/Super-accounts-data/Super-accounts-data-overview (accessed 26 May 2016).

-
- 2016d, *Superstream Research - Employers and APRA Funds*, <https://www.ato.gov.au/About-ATO/Research-and-statistics/In-detail/General-research/SuperStream-research---employers-and-APRA-funds/#Benchmark> (accessed 9 June 2016).
- 2016e, *Taxation Statistics 2013-14*, <https://www.ato.gov.au/about-ato/research-and-statistics/in-detail/tax-statistics/taxation-statistics-2013-14/> (accessed 24 May 2016).
- Australian Government 2010, '*Stronger Super*' — *Government Response to the Super System Review*, Canberra.
- 2011, *Stronger Super Information Pack*, Canberra.
- 2013, *Financial Industry Supervision Levy Methodology*, Discussion Paper.
- 2014a, *Australian Securities and Investments Commission Statement of Expectations: April 2014*, <http://asic.gov.au/about-asic/what-we-do/our-role/statements-of-expectations-and-intent/statement-of-expectations-april-2014/> (accessed 8 July 2016).
- 2014b, *Regulator Performance Framework*.
- 2014c, *Review of Retirement Income Stream Regulation*, Discussion Paper.
- 2015a, *Improving Australia's Financial System: Government Response to the Financial System Inquiry*, Canberra.
- 2015b, *Proposed industry funding model for the Australian Securities and Investments Commission*, <http://www.treasury.gov.au/ConsultationsandReviews/Consultations/2015/Proposed-industry-funding-model-for-ASIC> (accessed 20 June 2016).
- 2016, *Objective of Superannuation*, Discussion Paper, Canberra.
- Australian Government Actuary 2014, *Towards More Efficient Retirement Income Products*, Paper prepared for the Financial System Inquiry, Canberra.
- Bain, J., S. 1968, *Industrial Organization*, Second Edition, John Wiley & Sons.
- Basu, A., Doran, B. and Drew, M. 2012, *Sequencing Risk: A Key Challenge to Creating Sustainable Retirement Income*, Research Report, Financial Services Institute of Australia.
- Bateman, H., Deetlefs, J., Dobrescu, L.I., Newell, B.R., Ortmann, A. and Thorp, S. 2014, 'Just interested or getting involved? An analysis of superannuation attitudes and actions', *Economic Record*, vol. 90, no. 289, pp. 160–178.
- , Eckert, C., Geweke, J., Louviere, J., Thorp, S. and Satchell, S. 2012, 'Financial competence and expectations formation: Evidence from Australia', *Economic Record*, vol. 88, no. 280, pp. 39–63.
- , —, Iskhakov, F., Louviere, J., Satchell, S. and Thorp, S. 2013, *Default and 1/N Heuristics in Annuity Choice*, Research Paper No. 2015ACTL09, UNSW Business School, Sydney.

-
- , ——, ——, ——, —— and —— 2016, ‘Default and naive diversification heuristics in annuity choice’, *Australian Journal of Management*, vol. June, pp. 1–26.
- , Lai, A. and Stevens, R. 2012, *Risk Information and Retirement Investment Choices Under Prospect Theory*, Working Paper 2012/25, ARC Centre of Excellence in Population Ageing Research, Sydney.
- Bateman, H. and Piggott, J. 2010, *Too Much Risk to Insure? The Australian (non-) Market for Annuities*, Pension Research Council.
- Bauer, R., Cremers, M. and Frehen, R. 2010, *Pension Fund Performance and Costs: Small Is Beautiful*, Discussion Paper, Pensions Institute, Cass Business School, City University.
- Beath, A. 2015, *Value added by large institutional investors between 1992–2013*, CEM Benchmarking, Toronto.
- Benari, B. 2015, *Challenger Annual Review 2015*, CEO’s Report.
- Benartzi, S. and Thaler, R.H. 2001, ‘Naive diversification strategies in defined contribution saving plans’, *American Economic Review*, vol. 91, no. 1, pp. 79–98.
- and —— 2007, ‘Heuristics and biases in retirement savings behavior’, *Journal of Economic Perspectives*, vol. 21, no. 3, pp. 81–104.
- Beshears, J., Choi, J.J., Laibson, D. and Madrian, B.C. 2009, ‘The Importance of Default Options for Retirement Saving Outcomes: Evidence from the United States’, in Brown, J., Liebman, J. and Wise, D.A. (eds), *Social Security Policy in a Changing Environment*, University of Chicago Press, Chicago, pp. 167–195.
- Bianchi, R.J., Drew, M.E., Evans, M.D. and Walk, A.N. 2014, ‘The two faces of investment and performance risk’, *JASSA The Finsia Journal of Applied Finance*, no. 1, pp. 6–12.
- Bikker, J., Shaffer, S. and Spierdijk, L. 2009, *Assessing Competition with the Panzar-Rosse Model: The Role of Scale, Costs and Equilibrium*, DNB Working Paper, 225, De Nederlandsche Bank.
- Bikker, J.A. and De Dreu, J. 2009, ‘Operating costs of pension funds: the impact of scale, governance, and plan design’, *Journal of Pension Economics and Finance*, vol. 8, no. 1, pp. 63–89.
- Bikker, J.A. and Haaf, K. 2002, ‘Competition, concentration and their relationship: an empirical analysis of the banking industry’, *Journal of Banking and Finance*, vol. 26, pp. 2191–2214.
- Bird, R., Gray, J., Foster, D., Raftery, A., Thorp, S. and Yeung, D. 2016, ‘SMSF members: Their attitudes, motivations and experiences’, presented at CIFR Research Showcase: Superannuation, Sydney, 7 April.
- Bodie, Z., Marcus, A. and Merton, R. 1988, *Defined benefit verses defined contribution pension plans: what are the real trade-offs?*, Pensions in the U.S. Economy, National Bureau of Economic Research.

-
- Boone, J. 2008, 'A new way to measure competition', *The Economic Journal*, vol. 118, no. 531, pp. 1245–1261.
- Broadbent, J., Palumbo, M. and Woodman, E. 2006, *The Shift from Defined Benefit to Defined Contribution Pension Plans - implications for Asset Allocation and Risk Management*, Working Group on Institutional Investors, Global Savings and Asset Allocation, Committee on the Global Financial System.
- Brown, J.R., Kapteyn, A., Luttmer, E.F.P. and Mitchell, O.S. 2016, *Cognitive Constraints on Valuing Annuities*, Financial Literacy Center Working Paper, WR-924-SSA.
- Bui, Y. 2013, 'Measuring efficiency of Australian superannuation funds using data envelopment analysis', Flinders University.
- Butt, A., Donald, S., Foster, D., Thorp, S. and Warren, G. 2015, *Delegation, Trust and Defaulting in Retirement Savings: Perspectives from Plan Executives and Members*, Working Paper No. 065/2015, Centre for International Finance and Regulation, Sydney.
- Byres, W. 2016, *Opening Statement to the Senate Economics Legislation Committee*, Canberra,
<http://www.apra.gov.au/Speeches/Pages/Opening-Statement-to-the-Senate-Economics-Legislation-Committee-.aspx> (accessed 8 July 2016).
- Carruthers, D. 2015, *The Use of Active Asset Allocation by Superannuation Funds*, Research Working Paper, 60, Centre for International Finance and Regulation, Sydney.
- Caruana, J. 2010, *Systemic Risk: How to Deal with It?*,
<http://www.bis.org/publ/othp08.htm> (accessed 5 May 2016).
- CEM Benchmarking 2016, *CEM Benchmarking / KPA Advisory Services*,
<http://www.kpa-advisory.com/cem-benchmarking> (accessed 3 May 2016).
- nd, *Investment Benchmarking*, CEM Benchmarking,
<http://www.cembenchmarking.com/services/investmentbenchmarking.aspx> (accessed 8 June 2016).
- CFR (Council of Financial Regulators) 2016a, *About the CFR*,
<http://www.cfr.gov.au/about-cfr/index.html> (accessed 28 April 2016).
- 2016b, *Memoranda of Understanding between Council Members*,
<http://www.cfr.gov.au/about-cfr/memoranda.html> (accessed 31 May 2016).
- Challenger 2014, *Investor Business Update*, Market Release, 4 June, Sydney.
- 2016a, *Assets and Funds Under Management, Net Flows and Sales*, Market Release, 21 April, Sydney.
- 2016b, *Rates: Liquid Lifetime*.
- Chant, W., Mohankumar, M. and Warren, G. 2014, *MySuper: A New Landscape for Default Superannuation Funds*, Research Report, Centre for International Finance and Regulation, Sydney.

-
- Chant West 2014a, *Active and Passive Management - Australian Super Industry Experience*, Research Paper, <http://fsi.gov.au/consultation/second-round-submissions/> (accessed 21 July 2016).
- 2014b, *At Last... a Simple Way to Assess the Competitiveness of Super Fund Insurance*, <https://www.chantwest.com.au/resources/simple-way-to-assess-super-fund-insurance> (accessed 22 July 2016).
- 2014c, *Chilean Pension System - Relevance for Australia: Comparing Apples with Apples*, Report for the Financial Services Council, Sydney.
- 2015, *Financial System Inquiry Final Report: Response to Superannuation Recommendation 10*, Sydney.
- nd, *Super Fund Returns - Growth Risk Profile (61-80%)*, <https://www.chantwest.com.au/investment-returns/super-fund-returns> (accessed 6 June 2016a).
- nd, *Super Ratings Methodology*, Chant West, <https://www.chantwest.com.au/fund-ratings/super-methodology> (accessed 19 June 2016b).
- Choi, J.J., Laibson, D., Madrian, B. and Metrick, A. 2001, *For Better or For Worse: Default Effects and 401(k) Savings Behavior*, Working Paper 03-34, National Bureau of Economic Research, Cambridge, United States.
- Citibank 2016, *The Coming Pensions Crisis: Recommendations for Keeping the Global Pensions System Afloat*.
- Clark, G., Duong, H., Gerrans, P., Lajbcygier, P., Moulang, C., Strydom, M., Vaz, J. and Wickramanayake, J. 2013, *A Review of Retirement Savings Investment Behaviours: Theory and Evidence*, Working Paper, CSIRO-Monash Superannuation Research Cluster, Melbourne.
- Clark, G.L., Fiaschetti, M. and Tufano, P. 2016, 'Approaching Retirement: The Categories, Timing and Correlates of Advice Seeking', presented at Financial Decision Making and Retirement Security in an Aging World, Wharton School, University of Pennsylvania, Philadelphia.
- Coleman, A.D.F., Esho, N. and Wong, M. 2003, *The Investment Performance of Australian Superannuation Funds*, Working Paper, 2003-01, Australian Prudential Regulation Authority.
- Colmar Brunton 2010, *Investigating Superannuation: Quantitative Investigation with Superannuation Consumers*, Final Quantitative Report, prepared for the Australian Taxation Office, Canberra.
- Commonwealth of Australia 2012, *Budget 2012-13: Budget Strategy and Outlook, Budget Paper No. 1*, Treasury, Canberra.
- 2016, *Budget 2016-17: Budget Strategy and Outlook, Budget Paper No. 1*, Treasury, Canberra.

-
- Cooper, J. 2014, *Caveat Emptor: Lifetime Annuities Versus Indexed Bonds*, Caveat Emptor.
- , Casey, K., Evans, G., Grant, S., Gruen, D., Heffron, M., Martin, I. and Wilson, B. 2010a, *Super System Review Final Report - Part One: Overview and Recommendations*, Final Report, Canberra.
- , ———, ———, ———, ———, ———, ——— and ——— 2010b, *Super System Review Final Report - Part Two: Recommendation Packages*, Final Report, Canberra.
- , Minney, A. and Sainsbury, P. 2014, 'Meeting the financial needs of retirees: a layering approach to building retirement income portfolios', *The Finsia Journal of Applied Finance*, no. 1, pp. 49–53.
- Cooper, W.W., Seiford, L.M. and Zhu, J. 2004, *Handbook on Data Envelopment Analysis*, Kluwer's International Series on Operations Research & Management Science, Kluwer Academic Publishers, USA.
- CSIRO Super Cluster (CSIRO-Monash Superannuation Research Cluster) 2016, *Superannuation Drawdown Behaviour: An Analysis of Longitudinal Data*.
- Cummings, J.R. 2012, *Effect of Fund Size on the Performance of Australian Superannuation Funds*, Working Paper, Australian Prudential Regulation Authority.
- and Ellis, K. 2011, *Risk and Return of Illiquid Investments: A Trade-Off for Superannuation Funds Offering Transferable Accounts*, Working Paper, Australian Prudential Regulation Authority.
- Deloitte 2013, *Performance Attribution: Investment Performance Under the Microscope*, 12, Performance, <http://www2.deloitte.com/tl/en/pages/financial-services/articles/performance-12.html> (accessed 21 July 2016).
- 2015, *Dynamics of the Australian Superannuation System, the Next 20 Years: 2015 - 2035*.
- Deloitte Access Economics 2014, *Financial Performance of Australia's Superannuation Products*, Report to the Financial Services Council, Sydney.
- DEXX&R 2016, *DEXX&R Analysis Market Share Report*.
- DHS (Department of Human Services) 2016, *Early Release of Superannuation: Australian Government Department of Human Services*, <https://www.humanservices.gov.au/customer/services/centrelink/early-release-superannuation> (accessed 28 April 2016).
- Dodgson, J., Spackman, M., Pearman, A. and Phillips, L. 2009, *Multi-Criteria Analysis: a Manual*, Department for Communities and Local Government, London.
- Donald, S., Arnold, B., Bateman, H., Buckley, R. and Liu, K. 2014, *The Implications of Complexity for Systemic Risk in the Superannuation System*, Research Paper No. 2014ACTL02, UNSW Australian School of Business, Sydney.
- , Bateman, H., Buckley, R., Liu, K. and Nicholls, R. 2016, 'Too connected to fail: The regulation of systemic risk within Australia's superannuation system', *Journal of Financial Regulation*, vol. 2, no. 1, pp. 56–78.
-

-
- Donald, S. and Le Mire, S.M. 2016, *Independence and the Governance of Superannuation Funds*, Working Paper, 097/2016, CIFS.
- Donald, S. and Nicholls, R. 2015, 'Bank custodians and systemic risk in the Australian superannuation system', *Journal of Banking and Finance: Law and Practice*, vol. 26, no. 1, pp. 25–38.
- Drew, M. and Stanford, J. 2003, *Principal and Agent Problems in Superannuation Funds*, Discussion Paper, Queensland University of Technology.
- Drew, M.E. and Stanford, J.D. 2004, 'Why is superannuation compulsory?', *The Australian Economic Review*, vol. 37, no. 2, pp. 184–190.
- Dukes, A.J. 2008, 'Advertising and Competition', *Issues in Competition Law and Policy*, ABA Section of Antitrust Law, Chicago, pp. 515–537.
- Earl, J.K., Gerrans, P., Asher, A. and Woodside, J. 2015, 'Financial literacy, financial judgement, and retirement self-efficacy of older trustees of self-managed superannuation funds', *Australian Journal of Management*, vol. 40, no. 3, pp. 435–458.
- Ellis, K., Tobin, A. and Tracey, B. 2008, *Investment Performance, Asset Allocation, and Expenses of Large Superannuation Funds*, Working Paper, Australian Prudential Regulation Authority.
- Ellison, G. and Wolitzky, A. 2009, *A Search Cost Model of Obfuscation*, NBER Working Paper, 15237, National Bureau of Economic Research.
- Elzinga, K., G. and Mills, D., E. 2011, 'The Lerner index of monopoly power: origins and uses', *American Economic Review*, vol. 101, no. 3, pp. 558–564.
- Estrada, J. 2014, 'The Glidepath Illusion: An International Perspective', *The Journal of Portfolio Management*, vol. 40, no. 4, pp. 52–64.
- Fear, J. and Pace, G. 2008, *Choosing Not to Choose: Making Superannuation Work by Default*, The Australia Institute and Industry Super Network, Sydney.
- Feng, J., Gerrans, P. and Clark, G. 2014, *Understanding Superannuation Contribution Decisions: Theory and Evidence*, Working Paper, CSIRO-Monash Superannuation Research Cluster, Melbourne.
- Finke, M.S., Howe, J.S. and Huston, S.J. 2016, 'Old age and the decline in financial literacy', *Management Science*.
- FSB and IOSCO (Financial Stability Board and International Organization of Securities Commissions) 2015, *Assessment Methodologies for Identifying Non-Bank Non-Insurer Global Systematically Important Financial Institutions*, Consultative Document (2nd).
- FSC (Financial Services Council and UBS) 2015, *SMSF Insights - FSC/UBS SMSF Report*.
- 2013a, *Superannuation - Australia's View: 2013 Report*, Sydney.
- 2013b, *Superannuation Governance Policy*, March, Standard No. 20.
- Fung, S. and Shevchenko, P. 2015, *Retirement Income products: A Concise Summary*, EP154026, CSIRO.

-
- Gerrans, P. 2012, 'Retirement savings investment choices in response to the global financial crisis: Australian evidence', *Australian Journal of Management*, vol. 37, no. 3, pp. 415–439.
- and Clark-Murphy, M. 2004, 'Gender differences in retirement savings decisions', *Journal of Pension Economics and Finance*, vol. 3, no. 2, pp. 145–164.
- , Fiaschetti, M. and Clark, G. 2014, *The Demand for Advice in Defined Contribution Pension Plans*, Working Paper, 2014-09, CSIRO-Monash Superannuation Research Cluster, Melbourne.
- , Strydom, M., Moulang, C., Feng, J., Fiaschetti, M. and Clark, G. 2015, *Retirement Savings Trajectories: An Analysis of the Experience of Fund Members - Part One: Experience*, Working Paper, 2015-07, CSIRO-Monash Superannuation Research Cluster, Melbourne.
- Goda, G.S., Levy, M.R., Manchester, C.F., Sojourner, A. and Tasoff, J. 2015, *The Role of Time Preferences and Exponential-Growth Bias in Retirement Savings*, Working Paper 21482, National Bureau of Economic Research, Cambridge, United States.
- Henry, K., Harmer, J., Piggott, J., Ridout, H. and Smith, G. 2010, *Australia's future tax system - Report to the Treasurer*, Commonwealth of Australia, Canberra.
- Higgs, H. and Worthington, A. 2012, 'Economies of scale and scope in Australian superannuation (pension) funds', *Pensions*, vol. 17, no. 4, pp. 252–259.
- Hu, W.-Y. and Scott, J.S. 2007, 'Behavioral Obstacles to the Annuity Market', *Financial Analysts Journal*, vol. 63, no. 6, pp. 71–82.
- Iglesias, A. and Palacios, R. 2000, *Public Pension Reserves Part 1: Evidence from the International Experience*, 21311, Social Protection Discussion Paper Series, World Bank.
- IMF (International Monetary Fund) 2013, *Key Aspects of Macprudential Policy*.
- 2015, *Financial System Stability Assessment*, IMF Country Report, 15/170.
- Inderst, G. 2014, 'Pension fund investment in infrastructure: lessons from Australia and Canada', *Rotman International Journal of Pension Management*, vol. 7, no. 1, pp. 40–48.
- Investment Trends 2015, *Member Sentiment and Communications Report*, Sydney.
- IPD MSCI 2014, *IPD Australia Quarterly Unlisted Infrastructure Index: Results for the Quarter to 31 December 2014*.
- ISA (Industry Super Australia) 2013, *Long term superannuation investment performance*, Research Report - Update.
- 2014a, *Financing Australia's Growth: Submission to the Financial System Inquiry*, Melbourne.
- 2014b, *Superannuation and the Financial System*, Melbourne.
- 2015, *From Wallis and Murray*.
-

-
- 2016, *The Fraser Government Review*, Industry Super Australia, <http://www.industrysuperaustralia.com/campaigns/governance-review/> (accessed 21 June 2016).
- ISN (Industry Super Network) 2010, *Supernomics - Addressing failures of competition in the superannuation market*.
- 2011, *Compare the pair - A comparison of long term superannuation investment performance*, ISN Research Report.
- James, E. and Song, X. 2001, *Annuities Markets Around the World: Money's Worth and Risk Intermediation*, Working Paper.
- Johnson, J. and Juru, S.G. 2015, *The Case for Index Fund Investing in Australia*, Vanguard Investments Australia.
- Jones, R. and Wermers, R. 2011, 'Active management in mostly efficient markets', *Financial Analysts Journal*, vol. 67, no. 6, pp. 29–45.
- Kahneman, D. 2011, *Thinking, Fast and Slow*, Allen Lane, New York.
- Kay, J. 2015, *Other People's Money*, Profile Books, London.
- Kazi, K.H. 2008, 'Systematic risk factors for Australian stock market returns: a cointegration analysis', *Australasian Accounting, Business and Finance Journal*, vol. 2, no. 4, pp. 89–101.
- Keppler, M. 1990, 'Risk is not the same as volatility', *Die Bank*, no. 11, pp. 610–614.
- Knox, D. 2016, 'What does success look like in a mature retirement income system?', presented at the *Committee for Sustainable Retirement Incomes Roundtable*, Sydney, 15 April.
- Kowalewski, O. 2011, 'Corporate governance and pension fund performance', *Contemporary Economics*, vol. 6, no. 1, p. 14.
- KPMG 2013, *Underinsurance - Death Protection Gap in Australia*, Report for the Financial Services Council.
- 2015, *Supertrends: The Trends Shaping Australia's Superannuation Industry*, Sydney.
- Kuksov, D. and Villas-Boas, J.M. 2005, 'When more alternatives lead to less choice', *Marketing Science*, vol. 29, no. 3, pp. 507–524.
- Law Council of Australia 2014, *Financial System Inquiry (submission)*, Canberra.
- Leland, H. 1999, 'Beyond mean-variance: risk and performance measures for portfolios with nonsymmetric return distributions', *Financial Analysts Journal*, vol. 55, no. 1, pp. 27–36.
- Lerner, A. 1934, 'The concept of monopoly and the measurement of monopoly power', *Review of Economic Studies*, vol. 1, no. 3, pp. 157–175.

-
- Van Leuvensteijn, M., Bikker, J.A., van Rixtel, A.A.R.J. and Kok Sørensen, C. 2007, *A New Approach to Measuring Competition in the Loan Markets of the Euro Area*, Working Paper 768, European Central Bank, Frankfurt.
- Liu, K. 2013a, 'Australian Superannuation: Operational Structure, Investment Performance and Trustee Governance', The University of Sydney, Sydney, Australia.
- 2013b, *Australian Superannuation: Operational Structure, Investment Performance and Trustee Governance*, Thesis, June, The University of Sydney.
- Liu, K. and Arnold, B.R. 2010a, *Australian Superannuation Outsourcing: Fees, Related Parties and Concentrated Markets*, Working Paper, Australian Prudential Regulation Agency, Sydney.
- and —— 2010b, *Australian Superannuation: The Outsourcing Landscape*, Working Paper, Australian Prudential Regulation Agency, Sydney.
- Liu, K. and Arnold, B.R. 2012, *Superannuation and Insurance: Related Parties and Member Cost*, Working Paper, Australian Prudential Regulation Authority.
- and Sy, W. 2009, *Investment Performance Ranking of Superannuation Firms*, Working Paper, Australian Prudential Regulation Agency.
- Lloyd, J. 2014, *New Annuity Era: Understanding Retirement Choices and the Annuity Puzzle*, Strategic Society Centre, London.
- Lokhandwala, T. 2015, *Asset Managers Criticise Pension Fund Exclusion in Systemic Risk Consultation*, Investment & Pensions Europe, <http://www.ipe.com/news/regulation/asset-managers-criticise-pension-fund-exclusion-in-systemic-risk-consultation/10008282.fullarticle> (accessed 12 February 2016).
- Lum, H. 2006, *The World's Lowest Cost Funds*, CEM Benchmarking.
- Maddock, R. 2014, *Superannuation Asset Allocations and Growth Projections*, Paper prepared for the Financial Services Council, Monash University and Victoria University.
- Madrian, B.C. and Shea, D.F. 2001, 'The power of suggestion: Inertia in 401(k) participation and savings behavior', *Quarterly Journal of Economics*, vol. 116, no. 4, pp. 1149–1187.
- Markowitz, H. 1952, 'Portfolio selection', *Journal of Finance*, vol. 7, no. 1, pp. 77–91.
- Mercer 2013, *Mercer Superannuation Sentiment Index Study: Returning to Better Times*, Sydney.
- 2014, *Post-Retirement Market Trends in Australia*.
- Mercer and ACFS (Australian Centre for Financial Studies) 2015, *Melbourne Mercer Global Pension Index*.
- MetLife and Financial Services Council 2014, *Apathy to Action: Understanding Consumer Barriers to Adequacy in Life Insurance in Australia*, Sydney.
-

-
- Miller, T. and Flynn, C. 2010, *Internal Management Does Better After Costs*, CEM Insights, CEM Benchmarking.
- Minifie, J. 2015, 'Super fees vary wildly, and it will hurt your retirement income', *The Conversation*.
- Minifie, J., Cameron, T. and Savage, J. 2014, *Super Sting: How to Stop Australians Paying Too Much for Superannuation*, Grattan Institute, Melbourne.
- , —— and —— 2015, *Super Savings*, Grattan Institute, Melbourne.
- Mitchell, O. and Yang, T. 2005, *Public Pension Governance, Funding and Performance: A Longitudinal Appraisal*, Working Paper, 2, Pension Research Council.
- Mitchell, O.S. and Utkus, S.P. 2004, 'Lessons from Behavioral Finance for Retirement Plan Design', in Mitchell, O.S. and Utkus, S.P. (eds), *Pension Design and Structure: New Lessons from Behavioral Finance*, Oxford University Press, Oxford, pp. 3–41.
- Morningstar 2010, *Identifying a Sponsor's Impact on Total Returns - Performance Attribution for the Total Portfolio*, White Paper.
- nd, *Performance Attribution*, <http://corporate.morningstar.com/au/asp/subject.aspx?xmlfile=6875.xml> (accessed 21 July 2016).
- Murray, D., Davis, K., Dunn, C., Hewson, C. and McNamee, B. 2014a, *Financial System Inquiry: Final Report*, Canberra.
- , ——, ——, —— and —— 2014b, *Financial System Inquiry: Interim report*, Canberra.
- Musalem, A.R. and Pasquini, R. 2012, *Private Pension Systems: Cross-Country Investment Performance*, Discussion Paper No. 1214, World Bank, Washington DC.
- Neal, D. and Warren, G. 2015, *Long-term Investing as an Agency Problem*, Research working paper, Centre for International Finance and Regulation.
- NSA (National Seniors Australia) nd, *National Seniors Australia - Financial Information Desk*, National Seniors Australia, <http://www.nationalseniors.com.au/be-informed/financial-information-desk> (accessed 21 June 2016).
- NSS (National Statistical Service) 2016, *Statistical Clearing House*, www.nss.gov.au/nss/home.NSF/pages/About+SCH?OpenDocument (accessed 8 June 2016).
- O'Dwyer, K. 2016a, 'Release of the Retirement Income Streams Review', Media Release.
- 2016b, *Superannuation Legislation Amendment (Transparency Measures) Bill 2016*, Explanatory memorandum, Canberra.
- OECD (Organisation for Economic Co-operation and Development) 2012a, *Market Definition*, Policy Roundtable.
- 2012b, *The OECD Roadmap for the Good Design of Defined Contribution Pension Plans*.
- 2013, *Pensions at a Glance*.

-
- 2015a, *Pension Funds in Figures*.
- 2015b, *Pensions at a Glance*, OECD Publishing.
- Officer, B. 2014, 'Centre for International Finance and Regulation Workshop Address'.
- Panzar, J.C. and Rosse, J. 1987, 'Testing for monopoly equilibrium', *Journal of Industrial Economics*, vol. 35, no. 4, pp. 443–456.
- Parkinson, M. 2012, *Future Challenges: Australia's Superannuation System Speech to the ASFA 2012 Conference - New Directions*, Sydney.
- PC (Productivity Commission) 2002, *Review of the Superannuation Industry (Supervision) Act 1983 and Certain other Superannuation Legislation*, Report no. 18, Canberra.
- 2012, *Default Superannuation Funds in Modern Awards*, Report no. 60, Canberra.
- 2013, *On Efficiency and Effectiveness: Some Definitions*, Staff Research Note, Canberra.
- 2015a, *Housing Decisions of Older Australians*, Commission Research Paper, Canberra.
- 2015b, *Superannuation Policy for Post-Retirement*, Commission Research Paper, Canberra.
- Podkaminer, E.L. 2013, 'Risk factors as building blocks for portfolio diversification: the chemistry of asset allocation', *Investment Risk and Performance*, no. 1.
- Price, F. and Schwartz, C. 2015, *Recent Developments in Asset Management*, RBA Bulletin, Sydney.
- Pruge, R. 2015, *Defining Pension Policy - the Risks Emerging in Super System*, <http://ioandc.com/defining-pension-policy-the-risks-emerging-in-super-system/> (accessed 6 June 2016).
- QSuper 2014, *QSuper Submission to Financial System Inquiry*.
- nd, *Income Account transfer bonus*, QSuper, <https://qsuper.qld.gov.au/our-products/superannuation/income-account/transfer-bonus/> (accessed 30 June 2016).
- Qu, J.Z. 2014, 'An efficiency study of the Australian superannuation industry'.
- Ralston, D. and Maddock, E. 2015, *Superannuation in the Post-Retirement Phase: the Search for a Comprehensive Income Product for Retirement*, Australian Centre for Financial Studies.
- RBA (Reserve Bank of Australia) 2013, *Financial Stability Review*, Sydney.
- 2014, *Submission to the Financial System Inquiry*, Sydney.
- 2015, *Financial Stability Review*, Sydney.
- 2016a, *Assets of Financial Institutions, Table B.1*, Sydney.
- 2016b, *Household and Business Balance Sheets, Table E.1*, Sydney.
- Rice, M. 2014, 'Investing for different phases of retirement'.

-
- Rice Warner 2012, *Survey of Financial Needs and Concerns of SMSF Members*, report for the SMSF Professionals' Association of Australia and Vanguard, Sydney.
- 2013, *Costs of Operating SMSFs*, report to the Australian Securities and Investments Commission, Sydney.
- 2014a, *Ageing and Capital Flows: Financial System Inquiry*.
- 2014b, *Insurance Administration Expenses*, Report for ASFA, <http://www.superannuation.asn.au/policy/reports> (accessed 21 July 2016).
- 2014c, *Superannuation Fees: Financial System Inquiry*, Sydney.
- 2015, *Australia's Persistent Life Underinsurance Gap*, Rice Warner, <http://ricewarner.com/australias-persistent-life-underinsurance-gap/> (accessed 8 June 2016).
- 2016a, *Addressing Superannuation Underinsurance*, Rice Warner, <http://ricewarner.com/addressing-superannuation-underinsurance/> (accessed 8 June 2016).
- 2016b, *Strategies for Surging Retirement Dollars*, <https://ricewarner.com/strategies-for-surging-retirement-dollars/> (accessed 22 April 2016).
- Romano, R. 1993, 'Public pension fund activism in corporate governance reconsidered', *Yale Law School Legal Scholarship Repository*, no. 1958.
- Rose, S. 2015, 'Independent directors tipped to drive wave of super fund mergers', *The Sydney Morning Herald*, 28 June, <http://www.smh.com.au/business/banking-and-finance/independent-directors-tipped-to-drive-a-wave-of-super-fund-mergers-20150628-ghzn93.html> (accessed 14 July 2016).
- Ross, J. 2014, *Statement: 2014 Review of Fund Terms*, Fair Work Commission.
- Rowell, H. 2015, 'Governing Superannuation in 2015 and beyond: Facts, fallacies and the future', APRA.
- 2016, *Governance and culture in superannuation*, Speech to the AFR Banking and Wealth Summit, Australian Prudential Regulation Authority.
- Roy Morgan Research 2015a, *Most Seek Advice When Switching Superannuation Provider but Gaps Remain*, www.roymorgan.com/findings/6331-most-seek-advice-when-switching-superannuation-201507090141 (accessed 4 January 2016).
- 2015b, *Superannuation Has Become a Political Football but a New Report Shows What the Members Think*, www.roymorgan.com/findings/6262-superannuation-political-football-but-new-report-shows-what-members-think-201505270222 (accessed 4 January 2016).
- 2016, *Over \$35 Billion in Superannuation Switched but Nearly One Third of Switchers Didn't Get Any Advice*, www.roymorgan.com/findings/6617-over-35-billion-in-super-switched-but-nearly-one-third-didnt-get-advice-201601052255 (accessed 11 January 2016).

-
- S&P Dow Jones Indices 2016a, *S&P Developed Ex-Australia LargeMidCap (AUD)*, <http://au.spindices.com/indices/equity/sp-developed-ex-australia-largemidcap-aud> (accessed 18 July 2016).
- 2016b, *S&P Global Infrastructure Index*, <http://au.spindices.com/indices/equity/sp-global-infrastructure-index> (accessed 18 July 2016).
- 2016c, *S&P/ASX 300 (AUD)*, <http://au.spindices.com/indices/equity/sp-asx-300> (accessed 18 July 2016).
- 2016d, *S&P/ASX Australian Fixed Interest Index*, <http://au.spindices.com/indices/fixed-income/sp-asx-australian-fixed-interest-index> (accessed 18 July 2016).
- Sathye, M. 2011, 'The impact of financial crisis on the efficiency of superannuation funds: Evidence from Australia', *Journal of Law and Financial Management*, vol. 10, no. 2, pp. 16–27.
- SBR (Standard Business Reporting) 2015, *What is SBR?*, <http://www.sbr.gov.au/about-sbr/what-is-sbr> (accessed 31 May 2016).
- SCRCSP (Steering Committee for the Review of Commonwealth/State Service Provision) 2016, *Report on Government Services 2016: Approach to Performance Reporting*.
- SCT (Superannuation Complaints Tribunal) 2015, *Annual Report 2014-15*.
- 2016, *Superannuation Complaints Tribunal*, <https://www.sct.gov.au/> (accessed 28 April 2016).
- Senate Economics Legislation Committee 2015, *Australian Securities and Investment Commission - Answers to Questions on Notice at 2014-15 Budget Estimates*, Canberra.
- Shorten, B. 2012, *Superannuation Legislation Amendment (Trustee Obligations and Prudential Standards) Bill 2012*, Explanatory memorandum, Canberra.
- Shughart II, W.F. 2008, 'Industrial Concentration', *The Concise Encyclopedia of Economics*, Second Edition, Liberty Fund.
- SMSF Owners' Alliance 2014, *Submission to the Financial System Inquiry*, Sydney.
- SPAA (SMSF Professionals' Association of Australia) 2014, *Financial System Inquiry Submission 2014*, Adelaide.
- Sparrow, M. 2000, *The Regulatory Craft*, Brookings Institution Press, Washington D.C.
- Spierdijk, L. and Shaffer, S. 2015, 'The Panzar-Rosse revenue test and market power in banking', *Journal of Banking and Finance*, vol. 61, pp. 340–347.
- Sunsuper nd, *Sunsuper Income accounts*, Sunsuper, http://www.sunsuper.com.au/products/pensions.cfm#.V1js2bF-_cs (accessed 9 June 2016).
- SuperRatings 2015, *Fee and Performance Analysis*, report to the Australian Institute of Superannuation Trustees, Sydney.
- 2016, *Insurance - When Is Enough, Enough?*, <http://www.superratings.com.au/media/media> (accessed 27 May 2016).
-

-
- nd, *Choice Super Methodology*, SuperRatings, <http://www.superratings.com.au/ratings> (accessed 14 June 2016).
- Swoboda, K. 2014, *Major Superannuation and Retirement Income Changes in Australia: a Chronology*, Research Paper Series 2013-14, Parliamentary Library.
- Sy, W. 2012, 'Scale and competition in Australian superannuation', *SSRN*, http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2374930 (accessed 14 July 2016).
- Tang, K.M. 2013, *Does Private Equity Have a Role in Superannuation Portfolios*, The Australian Private Equity and Venture Capital Association.
- Thaler, R.H. and Benartzi, S. 2004, 'Save more tomorrow: Using behavioral economics to increase employee savings', *Journal of Political Economy*, vol. 112, no. 1, pp. S164–S187.
- and Sunstein, C.R. 2009, *Nudge: Improving Decisions About Health, Wealth and Happiness*, Penguin, London.
- Treasurer and Minister for Small Business (Morrison and O'Dwyer) 2016, *A More Sustainable Superannuation System*, Media Release, http://sjm.ministers.treasury.gov.au/media-release/053-2016/?utm_source=wysija&utm_medium=email&utm_campaign=Media+Release+-+A+more+sustainable+superannuation+system (accessed 23 May 2016).
- Treasury 2001, *Towards Higher Retirement Incomes for Australians: A History of the Australian Retirement Income System Since Federation*, Canberra.
- 2006, *A Plan to Simplify and Streamline Superannuation*, Canberra.
- 2009a, *Australia's Future Tax System: Part Two Detailed Analysis*, Report to the Treasurer, Volume 1, Canberra.
- 2009b, *Australia's Future Tax System: The Retirement Income System Report on Strategic Issues*, Canberra.
- 2010, *Stronger Super*, Canberra, http://strongersuper.treasury.gov.au/content/publications/government_response/downloads/Stronger_Super.pdf (accessed 15 December 2015).
- 2012, *Superannuation Legislation Amendment (Further MySuper and Transparency Measures) Bill 2012*, Revised explanatory memorandum, Canberra.
- 2014, *The Department of the Treasury's Submission to the Financial System Inquiry*, Canberra.
- 2015a, *Extending superannuation choice to enterprise agreements and workplace determinations*, Explanatory statement, Canberra.
- 2015b, *Intergenerational Report*, Canberra.
- 2016a, *Retirement Income Streams Review*, Canberra.
- 2016b, *Superannuation and Retirement*, <http://www.treasury.gov.au/Policy-Topics/SuperannuationAndRetirement> (accessed 28 April 2016).

-
- US Department of Justice 2015, *Herfindahl-Hirschman Index*, <http://www.justice.gov/atr/herfindahl-hirschman-index> (accessed 22 January 2016).
- Useem, M. and Mitchell, O. 2000, 'Holders of the purse strings: governance and performance of public retirement systems', *Social Science Quarterly*, vol. 81, no. 2, p. 489.
- Vanguard nd, *Vanguard Australia - Investment principles*, <https://www.vanguardinvestments.com.au/adviser/adv/about-us/investment-principles.jsp##minimise-cost> (accessed 20 July 2016).
- Wallis, S. 1997, *Financial Systems Inquiry*, Final Report.
- Weiss, L., W. 1979, 'The Structure-Conduct-Performance Paradigm and Antitrust', *University of Pennsylvania Law Review*, vol. 127, no. 4.
- World Bank nd, *Banking competition*, <http://www.worldbank.org/en/publication/gfdr/background/banking-competition> (accessed 11 July 2016).
- Worthington, A.C. 2008, 'Knowledge and perceptions of superannuation in Australia', *Journal of Consumer Policy*, vol. 31, no. 3, pp. 349–368.
- 2013, *Financial Literacy and Financial Literacy Programs in Australia*, 2013-05, Griffith Business School, Brisbane.
- Wu, S., Asher, A., Meyricke, R. and Thorp, S. 2015, *Age Pensioner Profiles: A Longitudinal Study of Income, Assets and Decumulation*, Working Paper, 2015/17, ARC Centre of Excellence in Population Ageing Research, Sydney.
- Zurich Australia 2014, *Australians and Life Insurance: Misinformed, Misinsured?*, Sydney.