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Systemic impacts of ‘big super’

An investigation of the systemic effects of a large superannuation system containing large funds

WRITTEN BY

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About The Conexus Institute

The Conexus Institute is a not-for-profit think-tank established in 2020 to be a catalyst for improved retirement outcomes for Australians. It applies a "research-for-impact" model to improve policy, regulation and industry practices relating to superannuation and retirement. The Institute aims to be a constructive critic willing to challenge the status quo. It is philanthropically funded by, but independent of, Conexus Financial.

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Foreword

Jeremy Cooper

Advisory Board Chair, The Conexus Institute

I would say this, of course, but this is a substantial research paper on a fascinating topic. Namely, what happens when you have a very large defined-contribution pension system in a medium-sized economy? While we often celebrate the benefits, what are the risks? Even though each country's pension system is unique—unlike, say, global banking—many of our findings will have relevance beyond Australia. This paper was a significant undertaking. First, there was little serious academic work on the topic. Second, the breadth of issues meant that inevitably, some fell outside the authors' day-to-day expertise. Fortunately, in addition to an advisory board at The Conexus Institute, we have access to a wide range of external experts. Their insights contributed greatly to our initial draft, resulting in a richer final paper. We extend our thanks to everyone who contributed—both those we acknowledged and those who preferred not to be named. We hope this research not only improves Australia's super system but also serves as a catalyst for other researchers to explore their own pension systems on similar issues.

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David strives to link industry, academia and policy. David's industry career experiences include working at Mine Super (as Chief Investment Officer), St Davids Rd Advisory (consulting and governance), and CFS GAM (now First Sentier, primarily fund-of-hedge funds). Academically, David completed his PhD at UNSW and taught for 12 years at Macquarie University.

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Contents

Part 1: Introduction

1.1. Report objectives and structure

This report investigates the implications of 'big super' for the Australian economy, financial markets and population from a wide range of perspectives. The Australian superannuation (super) sector continues to grow in size and consolidate, resulting in super becoming a 'big' industry containing some very 'big' funds. Super is attracting increasing attention from policymakers, regulators and the media (as outlined in Section 2.2). Increasing focus is being directed at whether the activities of super funds may have 'systemic' effects, in particular potential for adverse impacts. We contribute through a comprehensive report that aims to identify and discuss all related issues. We provide a balanced account by highlighting aspects of big super that are beneficial, detrimental and debatable, spanning both current impacts and potential future developments. While more airtime may be given to potential areas of concern, this should not be taken as a sign that we view super as a major source of systemic risk. To the contrary, our overarching conclusion is that the benefits of big super far outweigh any adverse impacts. We also argue that the sector's systemic importance does not extend much beyond its own perimeter.

We build on a Conexus Institute report titled '*Do Superannuation Fund Members Benefit from Large Fund Size?*' (Lawrence and Warren, 2023). This earlier report explored the impacts of large fund size from the *super fund member perspective*. Its main message was that large size is neither clearly beneficial nor detrimental for members, and what really matters was how effectively management implements given the fund size. (In short: it is not size that matters, but how it is used.)

Our definition of systemic

The word 'systemic' alludes to an overall system and is usually taken to imply a focus on interconnections between system components. We apply a different and somewhat wider lens.

> ***Definition of 'systemic' in this report:***
>
> *Aspects of the super system that have widespread and significant implications for either the Australian economy, Australian financial markets or a significant number of Australians.*

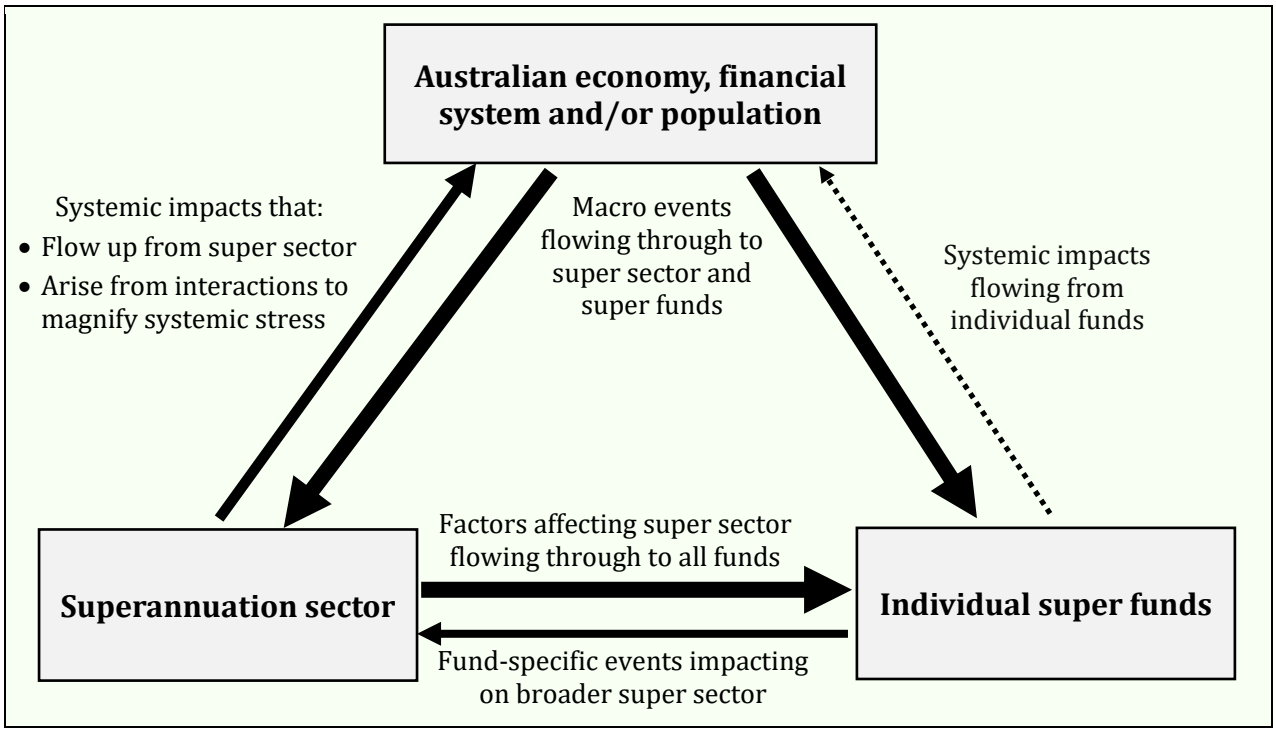
Report structure

Figure 1 frames up the interactions considered in this report, which in turn guide the broad report structure. We distinguish between three areas, with each often discussed in the collective:

- **Australian economy, financial system and/or population** – Aspects that are considered systemic need to have a significant impact in one or all of these three 'macro' components. We also consider the potential for developments in the macro environment to flow through to the super sector, and the possibility that the effects then feed-back in the form of broader systemic impacts.
- **Superannuation sector** – The super sector can be thought of as the collective of all super funds in the system. We aim to identify and discuss any broader systemic impacts that might arise from the super sector given its footprint, i.e. the relative size and scope of the sector's operations.
- **Individual super funds** –In discussing individual super funds, we aim to identify any systemic impacts that might arise from the operation of large super funds given their particular footprint.

In Figure 1, the width of the arrows that interconnect each area represents our evaluation of the degree to which the interconnection is consequential. For instance, we consider impacts flowing from the broader macro environment to be quite consequential for the super sector and individual super funds. Meanwhile, the systemic impacts flowing up from the super sector are seen as moderately consequential and those flowing up from individual funds to be of limited consequence. We reproduce a version of Figure 1 at the beginning of Parts 3, 4, 5 and 6 to highlight the relevant areas and interactions covered in these parts of the report.

Figure 1: Framing the interactions examined in this report



The report roadmap is as follows:

- *Part 2* presents background including outlining the increasing attention on super, a brief summary of available research on systemic risk in pension systems, and analysis of both the relative size of the super sector and individual super funds.
- *Part 3* outlines the benefits of a large super sector.
- *Part 4* identifies and discusses common exposures of concern that cut across the super sector at large and addresses whether they might be systemically important.
- *Part 5* discusses the interlinkages between the super sector and the Australian economy and financial system, including the extent to which super might contribute to systemic risk.
- *Part 6* considers whether any systemic impacts might arise from large super funds.
- *Part 7* presents recommendations for policymakers and regulators, super funds and the media.
- *Part 8* offers some concluding remarks, highlighting the major themes to emerge.
- *Appendix 1* lists sources of systemic risk in pension systems, while *Appendix 2* compares super funds with banks through the lens of systemic importance.

We invite readers to peruse the prior table of contents for an alternative vista of the report structure and a more detailed listing of topics that are addressed.

1.2. Executive summary

Our overarching conclusion is that Australia is much better off with a large super industry than without it. In short, the growth of super has been a major boon for Australia on balance. However, no system is perfect, and big super gives rise to issues and risks to be considered or addressed. A key theme of this report is that problems within the super sector or a large super fund are likely to remain localised, causing harm to the fund members involved but probably not having adverse systemic impacts to any significant degree. This is due to a lack of clear channels through which problems in super can lead to stress across the Australian economy, financial markets or population. We contend that the systemic importance of super directly stems from the size of the sector and its perimeter of operations, rather than as a consequence of interlinkages with other sectors.

Below we highlight the key findings of this report arranged into themes.

Super is a big and increasingly important industry

Super is a big and increasingly important industry that performs two main functions. First, super provides a savings vehicle to support the retirement of members. It has become the second largest form of household wealth behind housing. Second, super funds act as providers of funding, most notably to the business sector. Relative to the banking sector, super is a larger saving vehicle but a smaller provider of funding within the Australian economy.

Beneficial impacts of a big super industry

It can be easy to overlook the benefits that super brings to Australia amidst a focus on potential problems and risks. Australia is much better off with a large super industry for four main reasons. First, super has established a significant pool of retirement savings that may not have otherwise existed. Second, super funds operate as a vehicle for professional management of those savings by fiduciaries, to the benefit of many Australians. Third, super funds are well-positioned to act as effective stewards of capital. Fourth, the super sector rounds out the sources of finance within the Australian economy in ways that are not so well-accommodated by other providers such as banks and direct investment by private investors.

Super as an unlikely source but possible magnifier of systemic stress

Whether super could be a contributor to systemic stress is currently under focus as various commentators raise questions over systemic risks and the Australian Prudential Regulation Authority (APRA) plans to generate financial system-wide stress tests in 2025. We conclude that there is a very low risk of super being the *source* of major disruption in the Australian economy or financial markets, reflecting an absence of financial leverage and mechanisms for spreading problems across the system. Whether super funds could *magnify* system stresses arising from other sources – such as broad-based economic or financial market weakness – is a more open question. We conclude that super could act as either a stabiliser or amplifier of systemic stress depending on the situation, but any flow-on impacts are unlikely to be of major consequence in any event.

Limited scope for systemic impacts to arise from individually large super funds

The largest funds seem unlikely to have significant broader impacts notwithstanding their increasing size. Industry concentration is modest compared to other industries (such as banks) and the biggest funds are not overly large relative to the Australian economy. The biggest fund, AustralianSuper, has assets equalling around 12% of GDP and members amounting to 13% of the Australian population. While its footprint is large enough for problems to cause harm to a substantial number of Australians, it is probably not large enough to have significant systemic impacts. And the footprint of other funds is only smaller. If a large fund gets into trouble, potentially resulting in a run, the impacts are highly likely to remain localised and borne by the members of that fund.

Areas for concern

A large super industry gives rise to a range of areas for concern that we identify and discuss. We view **two areas as most worthy of attention** after considering both the likelihood and the potential magnitude of any problems:

- ***Exposure to economic and market risk*** – Super funds expose their members to economic and market risk in order to seek higher expected returns. While this is entirely appropriate, it creates vulnerability to any major economic weakness leading to extended declines in asset markets. While extended weakness in markets is unlikely, if it were to occur the impacts would be dire for the wealth, retirement income and possibly confidence of super fund members. Never say never!
- ***Underdeveloped operational infrastructure*** – The sector's operational infrastructure seems underdeveloped, most notably in member administration. The issue with member servicing being highlighted by regulators and the media might be taken as an indication of deeper problems. Until significant resources are put into uplifting the sector's operational infrastructure including systems and processes, ongoing issues with member servicing are likely to continue occurring.

The **other areas of concern** that are identified and discussed offer more limited potential to cause systemic harm or affect members across a broad front:

- ***Sector-wide liquidity squeeze*** – A significant liquidity event seems unlikely, at least in the absence of a major and unexpected change in policy around access to super. In any event, the consequences are manageable and include 'out-of-shape' portfolios as super funds sell their more liquid assets and potentially wealth transfers from fund members to other investors if assets are sold cheaply.
- ***Foreign exchange (FX) exposure*** – FX amounts to a significant exposure for super funds and their counterparties. It is difficult to see how either direct FX exposure or FX hedges of super funds could be a major source of system stress, especially as any liquidity impacts should be manageable.
- ***Concentration of service suppliers*** – The super industry relies on a limited number of suppliers in custody, insurance, consulting and cloud computing (as well as member administration). It is hard to see how these relationships could result in significant harm or disruption to the system.
- ***Vulnerabilities to scams*** – While scams are a major concern in themself, the impacts tend to be felt by any individuals affected rather than the system as a whole.
- ***Common approaches to investing*** – Super funds tend to invest in a similar fashion, giving rise to the possibility of herding and potential reduction in market depth and resilience. While some systemic impacts may be expected, they should be limited by the presence of other investor types.
- ***Unreliable source of funding*** – We hold some concern over the potential for 'feast or famine' cycles in the funding that super provides as asset class sectors fall in and out of favour. While there is potential for harm within any sectors involved, any systemic impacts will depend on the size of the sector and the extent to which there is access to other funding sources.
- ***Loss of confidence and trust*** – Any loss of confidence and trust in super funds could play through via outflows and diminished ability of super funds to effectively service their members. While such developments would be disruptive, major systemic impacts are unlikely.

Areas with less definitive impacts

For some areas investigated we conclude that the potential systemic impacts are mixed or unclear:

- ***Governance, management and culture*** are evolving as super funds transition to major financial organisations. The impacts are unclear and likely mixed, and probably systemically marginal.
- Large super funds can have significant ***influence*** over their investments and possibly policymakers. Whether this influence is used for good or ill is uncertain. Either or both is possible.

- Growth of super may have contributed to ***Australia becoming a net capital exporter***, leading to a shift in interest rate differentials and in the link between the Australian dollar (A$) and commodities.

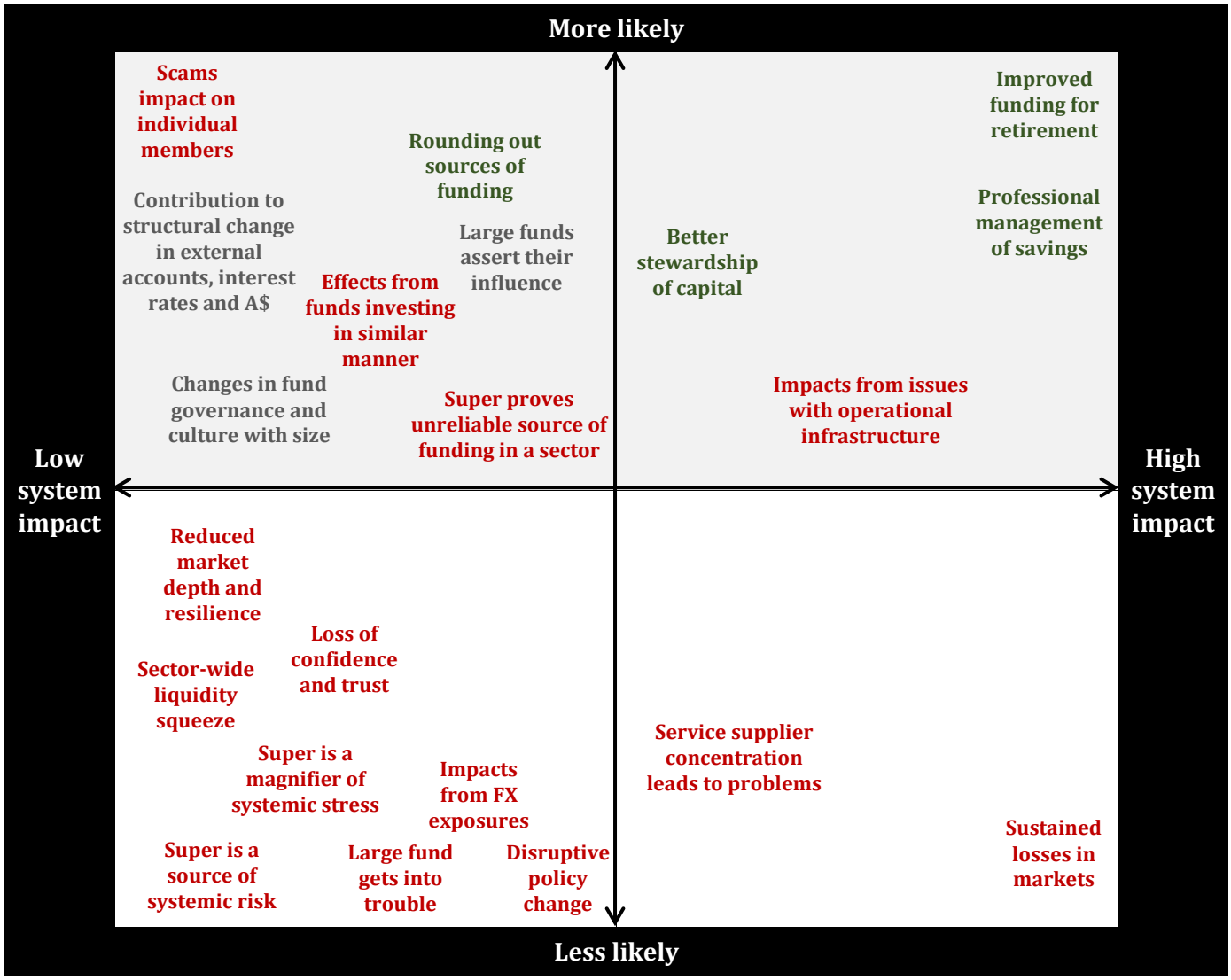
Recommendations

We provide a range of recommendations for policymakers and regulators, super funds and the media that flow from the discussion in this report. Refer Section 7 for the list.

Mapping the issues considered in this report

Figure 2 maps out the potential systemic impacts that could arise from the issues identified and discussed within this report. We have notionally positioned each issue in terms of the likelihood of experiencing a meaningful systemic impact along the vertical axis, and strength of the potential impact along the horizontal axis. The positioning is quite subjective but indicates the tenor of our findings with respect to each issue. A key takeaway from Figure 2 is that issues with potentially beneficial systemic impacts as appearing in **green** are skewed towards the upper right reflecting an assessment that they are relatively likely and relatively strong. Meanwhile issues with potentially adverse impacts as appearing in **red** are greater in number but tend to sit either to the left or lower in the diagram as they are considered either of lesser likelihood and/or lower magnitude. The overall mapping conveys a message that the rise of big super is beneficial on balance.

Figure 2: Likelihood and strength of potential systemic impacts from 'big super'



Legend**: Beneficial effects in **green**, potentially adverse effect in **red**, mixed effects in **grey

Part 2. Background

We provide background to this report from four perspectives:

- Outlining how the super sector and super funds have been attracting increasing attention as the industry grows in size (*Section 2.1*);
- Summarising the research into systemic risk in pension systems, which is relatively limited in scope (*Section 2.2*);
- Detailing the size of the super industry and the functions that it plays within the Australian economy and financial system (*Section 2.3*); and,
- Exploring the size of individual super funds relative to the economy, as well as concentration within the super industry (*Section 2.4*).

Discussion in this report is largely directed at 'institutional' super funds. Based on APRA data for September 2024, the institutional sector managed $3.06 trillion comprising $2.83 trillion in APRA-regulated funds with the balance in public sector funds that are not APRA-regulated and life office statutory funds. The self-managed super fund (SMSF) sector, which contained assets of $1.02 trillion at September 2024, is discussed in this report as deemed appropriate. We include SMSFs in the data when examining the super industry in totality, and highlight implications related to the SMSF sector on a selective basis. Breakout box #1 discusses the SMSF sector from a system perspective.

Breakout box #1: Self-Managed Super Funds (SMSFs)

Based on APRA data for September 2024, the SMSF sector contained 631,942 funds with total assets of $1,024 billion. The Australian Taxation Office (ATO) reports that there were 1,173,867 SMSF members as at September 2024. The SMSF sector is thus of meaningful size in terms of aggregate assets, comprising 25% of the $4.08 trillion of total assets in super. While the average balance per member is relatively high at around $870,000, the number of SMSF members is only about 4.3% of the Australian population and 6%-7% of total super fund members, which the ATO estimates at around 18 million.

SMSFs operate quite differently from the institutional super fund sector, which largely comprises APRA-regulated defined contribution (DC) funds that pool the assets of many members. SMSF operations entail personal management of assets often at a household level, with SMSFs restricted to a maximum of six members who usually also act as trustees. SMSFs are typically advised by financial advisers and invest through 'platforms' such as AMP North, BT Panorama, Colonial First State, Insignia, HUB24, Macquarie, Netwealth, etc. These platforms provide the administration services to SMSFs and their advisers, including: access to investments, both directly and through managed funds; trading and settlement; account management; and, reporting. SMSFs may incur a range of costs, including fees paid to investment managers, platforms, financial advisers and accountants. To the extent that some of these fees are fixed, percentage costs for larger SMSFs may be significantly lower than smaller SMSFs.

Regulation of SMSFs also differs. The ATO provides oversight of trustee compliance with duties and legal responsibilities. SMSFs do not need to meet many of the requirements placed on APRA-regulated funds such as APRA regulatory standards and the Retirement Income Covenant.

A number of elements limit the scope for systemic impacts to arise from the SMSF sector. The economic footprint of each SMSF is small. There is ample scope for SMSFs to differ in the manner in which they invest, thus limiting potential for common exposures and correlated behaviour relative to APRA-regulated funds. The bulk of the sector is professionally advised by financial advisers and invests through platforms that typically have up-to-date systems technology. Concerns include scope for individual SMSFs to invest unwisely notwithstanding the availability of professional advice and exposure to scams (discussed in Section 4.6). Nevertheless, any harm will tend to be felt by individual SMSFs and their members, and likely to occur as isolated incidents with quite limited systemic impacts.

2.1. Super industry is attracting increasing attention

Super has understandably attracted more attention as it grows in size, with interest increasingly turning towards the systemic impacts of big super. Some notable areas of focus are listed below along with selected hyperlinks that capture the tenor of the discussion:

- Evidence of poor member services has been receiving increasing focus from policymakers, regulators and media, including slow responses to member complaints, greenwashing and limited progress in developing retirement income strategies.
- Concerns have been expressed over whether super funds are exercising too much influence over corporate Australia.
- There has been increasingly visible and impactful involvement in markets by super. Standout developments include super funds acquiring some trophy assets (e.g. Sydney airport in 2022) and AustralianSuper effectively blocking the acquisition of the assets of Origin Energy with very limited disclosure or transparency around its motivations.
- Expectations seem to have increased that super funds might (or should) be funding socially beneficial investments, such as housing and energy transition.
- Occasional queries are starting to emerge over whether some funds have become 'too big to fail'.
- Regulators such as the APRA, the Australian Securities and Investments Commission (ASIC) and the Reserve Bank of Australia (RBA) as well as the International Monetary Fund (IMF) have ramped up their focus on the potential systemic effects flowing from the super sector. Systemic issues have also been receiving considerable coverage in the media, notably the Australian Financial Review (AFR).
- APRA is undertaking financial system-wide 'stress tests' specifically involving super, which it plans to release during 2025.

Much of what is being said about problems arising from the super sector flows from the monitoring of developments by regulators or various commentators, including accounts of reported incidents. Research into the nature of the issues and their underlying causes seems limited. We hope that this will be addressed as part of the heightened attention currently being paid to super.

2.2. Research on systemic risk in pension systems

Our review of the literature uncovered only a few scraps of insight into the potential for systemic impacts from big super. Most of the literature is concerned with systemic risk.

Pension systems as a source of systemic risk

Overseas research on pension systems as a source of systemic risk sems to have been spurred on by the Global Financial Crisis (GFC) of 2008-9, which brought systemic risk arising from financial markets to the front-of-mind. Most of the discussion is directed at defined benefit (DB) funds, thus limiting the relevance for super in Australia as a largely DC system.

The main feature of DB systems is the need to fund long-term liabilities (see IOPS, 2012), which typically take the form of wage-linked promises to either pay a pension for life or provide a payment at retirement in the case of 'cash balance' plans. A key concern is inability of DB funds to meet their liabilities due to funding deficits arising from asset-liability mismatches[1], especially where combined with unreliable sponsor support. While funding deficits largely operate at the individual fund level, some authors note that correlated behaviours with broader impacts can occur if funds undertake similar actions to address their funding ratios. For instance, concerns have been expressed over common pressures to sell assets stemming from mark-to-market requirements and risk-based capital requirements (e.g. see Besar et al., 2011; Beetsma et al., 2016). The stress arising in the UK during 2022 from the use of derivatives and leveraged liability-driven investing by DB funds is an example of system-wide impacts emerging from the pension sector (for an account, see Palacios and Patel, 2023). Relatedly, Jansen et al. (2024) explore the exposure of Dutch pension funds to margin calls arising from interest rate swaps designed to hedge the interest rate risk from their liabilities, and how this can impact on bond markets. In both cases, there is little relevance for DC-based pension systems.

In DC systems, funds are not required to satisfy well-defined liabilities but rather invest directly into assets with members bearing the risk (Schembri, 2014; Donald et al, 2016)[2]. Security of funding is recognised as a bigger issue for DC funds, to the extent that members may withdraw their funds. Within the Australian super industry, members can exercise choice of fund and investment choice; and have complete access to their capital in the retirement phase. Insecurity of funding heightens potential exposure to illiquidity risk (see RBA, 2021). The IMF raises this issue in its Global Financial Stability Report (see IMF 2024, pp. 40-41), but provides limited analysis. We address potential implications of insecurity of funding and related scope for liquidity pressures for the overall super sector in Section 5.1 and Section 5.3 and for individual super funds in Section 6.2.

Some of the issues raised by the overseas research apply to both DB and DC funds. For example, Beetsma et al. (2016) suggest that systemic risk might arise from correlated positions across funds that may stem from peer effects and impacts from derivative positions (most notably FX hedges; see RBA, 2021). Potential for counterparty risk may also exist (see Bengtsson, 2016). TAI (2023, 2024) addresses the nature of systemic risk faced by asset owners and how it might be managed from a fund perspective. They emphasise the adoption of system-level thinking that is forward-looking and approaches systemic risk as arising from complex, adaptive systems.

The potential for systemic impacts arising from the Australian super industry is directly addressed in a small number of papers. Donald and Nicholls (2015) and Donald et al. (2016) highlight the high reliance of Australian super funds on outsourcing to service providers in areas such as administration, custodianship, asset consulting, auditing and insurance. We expand further on this

[1] The management of DB funds is complicated by the liability effectively amounting to long-term cash-based obligations (e.g. pay pension income) that is valued on an ongoing basis using market-based discount rates.
[2] For DC funds, it might be argued that the asset always equals the liability given that the promise made is to give the member (or their beneficiaries) the assets back through either income or lump sum redemptions.

matter in Section 4.4. Clarke (2018) argues that members are exposed to systemic gaps in legislation, regulation and governance in some parts of the industry, calling out the for-profit sector and choice options. In its 2021 Financial Stability Review (RBA, 2021), the RBA examined how the super sector handled the 'emergency' early release of super, member switching and liquidity demands related to foreign exchange hedging during the COVID period of 2020. Subsequently in its 2024 Financial Stability Review (RBA, 2024), the RBA suggested that super could either be a source of stability or an amplifier under systemic shocks and raised the need to improve liquidity management practices. While these papers all raise relevant points, the issues examined are narrow in scope and the connections through to widespread systemic risk are often left unclear and may be arguable.

The International Organisation of Pension Supervisors provides a list of the risks in pension systems, directed at regulators. We summarise and interpret this list in Appendix 1, which provides some useful background for the discussion in this report.

Pension funds as a stabilising influence

Some authors argue pension funds can operate as a stabilising influence in markets as longer-term investors that tend to trade against major market movements (Besar et al., 2011; Schembri, 2014; Beetsma et al., 2016). This argument would initially seem to apply to DB systems to a greater extent, given their relative security of funding. Nevertheless, short-term behaviours may still emerge for DB funds due to peer effects and pressure to meet funding ratios.

DC systems also exhibit features that could lead them to have either a stabilising or magnifying influence, as noted by RBA (2024). Stabilising forces relate to any propensity to buy assets that have been sold down due either to portfolio rebalancing or a desire to target 'cheap' assets. On the other hand, DC systems have some features that encourage shorter-term behaviour. This includes concerns over the possibility of member outflows in response to poor absolute performance or significant underperformance relative to peers or benchmarks (exacerbated in Australia by the severe consequences of failing the Your-Future-Your-Super (YFYS) performance test); and the scrutiny placed on shorter-term super fund returns by fund boards, the media and regulators as well as some fund members. Incentive structures and career considerations by investment staff can also play a role. Pressures to deliver short-term performance can emerge for these additional reasons even though member switching may tend to be low. We discuss a range of aspects that could result in the super sector being either a stabilising or magnifying force in Part 5.

Summing up

The broad consensus in the research is that systemic risk is generally limited with respect to the pension industry, and lower in DC than DB systems (e.g. Beetsma et al., 2016). This is especially the case relative to banks (Besar et al, 2011; Australian Treasury, 2019). Appendix 2 discusses the nature of systemic risk with respect to banks, explaining why the risks are significantly greater for banks than for super funds.

2.3. Size and functions of the super sector

The super sector is a BIG player within the Australian financial system. Exactly how big, however, depends on the function of interest. We frame the discussion on the size of the super sector around two main functions that super performs[3]:

(a) Super is a *saving vehicle* through which Australians invest assets that are then deployed during retirement, in particular for generating income to consume during retirement.

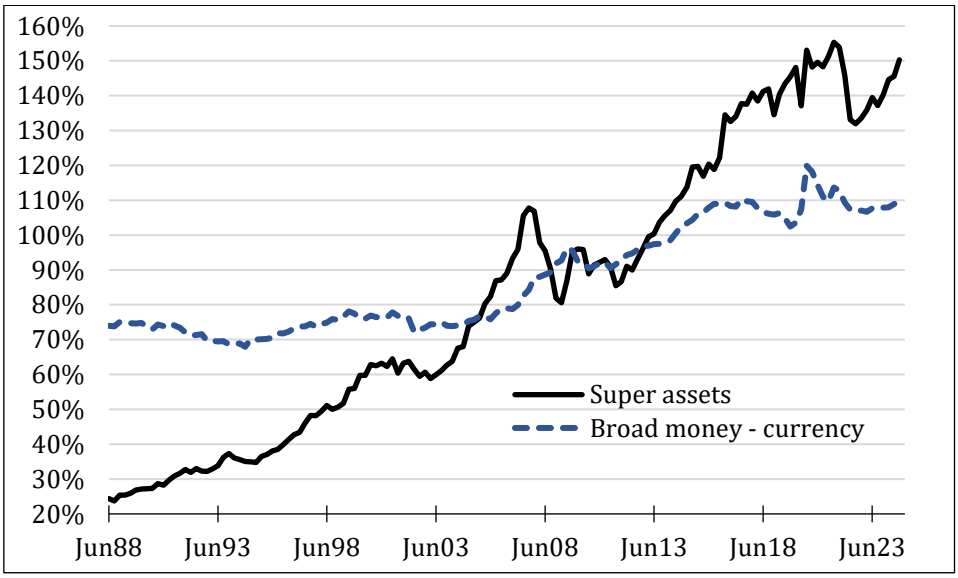
(b) Super is a *provider of funding*[4] within the Australian economy[5].

As we detail below, the super industry plays a more important role in the savings function than as a provider of funding, but is nevertheless quite significant in performing both.

Super as a savings vehicle

Figure 3 and Figure 4 focus on the savings function. Figure 3 reveals that the savings of Australians in the form of assets invested in super have grown over time, equalling 150% of gross domestic product (GDP) as at September 2024. By comparison, savings via deposits with financial institutions like banks, as measured by broad money less currency, amounted to 110% of GDP, i.e. 40% less than super. Basically, super is a more important conduit for household savings than the banking system.

Figure 3: Total super assets vs. deposits as % of GDP



Data sources: Australian Bureau of Statistics (ABS); RBA

Figure 4 takes a broader view by showing the composition of household wealth in Australia. It reveals that housing is a far more important asset, with super a distant second. The ABS reports total net household wealth of $16.5 trillion (6.2-times GDP for FY2023-24), of which $11.2 trillion or 68% is attributable to land and dwellings. Assets in super equate to 24% of total wealth, and 52% of total financial assets (excluding debt). Currency and deposits comprise 23% and shares and other equity 19% of total wealth. This confirms that super is the key source of financial wealth for Australians.

[3] Super funds perform a range of activities that are related to these two main functions, including institutional super funds assisting their members with financial choice and decisions.
[4] The term 'funding' as used here with respect to super funds refers to ownership of any asset, whether that asset is already in existence or newly created.
[5] While super also provides funding to overseas economies, this is of limited significance.

Figure 4: Composition of Australian household wealth

As at June 2024	$ billion	% total net wealth	% financial assets
Non-financial assets			
Land and dwellings	11,216	68.1%	
Other non-financial assets	846	5.1%	
Total	*12,062*	*73.2%*	
Financial assets			
Superannuation reserves	3,936	23.9%	52.0%
Shares and other equity	1,483	9.0%	19.6%
Currency and deposits	1,718	10.4%	22.7%
Other financial assets	434	2.6%	5.7%
Total	*7,571*	*46.0%*	*100.0%*
Liabilities			
Loans	-2,974	-18.0%	
Other liabilities	-182	-1.1%	
Total liabilities	*-3,156*	*-19.2%*	
Wealth (Net worth)	**16,477**	**100%**	
Consumer durables	572	3.5%	

Source: ABS

The super sector is likely to grow in relative size as a conduit for savings over the short-to-medium term. For instance, Deloitte (2024) projects total super assets to rise to around 190% of GDP over 20 years relative to a baseline of 143% as at December 2023. Drivers include investment returns, an increase in the superannuation guarantee (SG) to 12% from 1 July 2025 and maturing of the system as more Australians build toward a full working lifetime of contributing at higher SG rates.

Super as provider of funding

The role of super as a provider of *funding* within the Australian economy is trickier to identify and depends in part on whether the concern is the *stock of funding* in place or the *flow of new funding*.

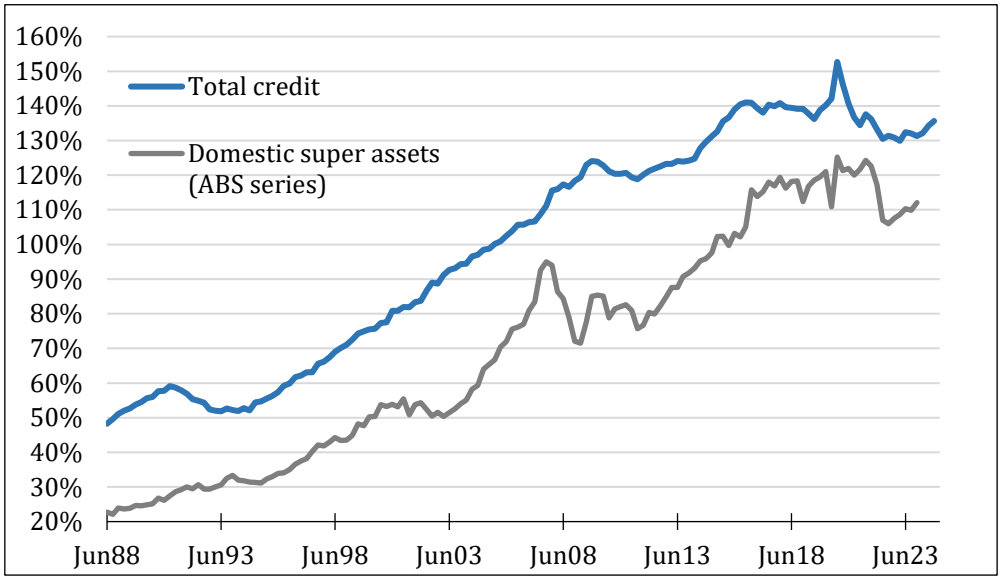
Stock of funding

Figure 5 presents an historical perspective on the stock of funding within Australia as defined by the loans provided by banks and other financial intermediaries and total value of domestic assets of super funds as reported in the ABS's *5655 Managed Funds, Australia* publication. The ABS data suggest that the domestic assets of super funds amounted to 112% of GDP as at December 2023, which is 20% below the 132% of total credit provided by financial intermediaries. However, the ABS series is problematic for two reasons. First, it was discontinued in December 2023. Second, it is highly likely to significantly overstate domestic investment by super funds[6].

We estimate the actual percentage of domestic assets in super at around 65% as the complement of weighting to overseas assets of 35%, allowing for 43% weight in overseas assets by APRA-regulated funds (see Figure 13), 14% for SMSFs, after adjusting the ATO data for other sources (e.g. see this article in Firstlinks) and notionally assuming 35% for non-APRA-regulated funds (excluding SMSFs). This would imply that domestic assets in super amount to about $2.6 trillion or 92% of GDP. Teasing out the relative size of super versus banks in providing funding in Australia is also complicated by the fact that super 'funds' the banks in part through equity and wholesale debt funding.

[6] The ABS estimate of about 79%-80% of domestic assets does not reconcile with data on overseas asset weights. APRA-regulated funds are reported to have had 42.9% in identifiable overseas assets as at September 2023 (see Figure 13) when APRA last made the data available. This alone equates to 26% of total assets in super as at September 2023. The ATO reports that about 2% of SMSF assets are invested overseas, although this is an underestimate due to failing to account for overseas investments through locally domiciled funds.

Figure 5: Total super assets vs. deposits as % of GDP



Data sources: ABS; RBA

Flow of new funding

The flow of new funding provided by super to the economy is much harder to nail down. Figure 6 analyses the sources of change in total assets for APRA-regulated super funds over the last 5 years. We are most interested in cash flow components as they represent new cash that super funds have available to invest. We define *cash flows to invest* as comprising: net contributions received less benefits paid out; investment income[7] excluding capital gains[8]; various operating items including expenses, income and insurance-related payments; and income tax paid. Adding these components reveals that total cash available to invest by APRA-regulated funds has been running at $100-$110 billion per annum over the 3-4 years following the COVID period (noting 2020 was impacted by the Early Release Scheme). The average is similar when income tax is excluded to arrive at 'regular' cash flows, noting that tax paid can be volatile. Total cash flow to invest over this period amounted to 4.2%-4.4% of average assets.

Figure 6: Analysis of change in net assets for APRA-regulated super funds

Year to September, $ billion	2020	2021	2022	2023	2024
Opening net assets	*2061.1*	*2044.6*	*2402.6*	*2321.8*	*2553.4*
Contributions net of contribution tax	107.7	120.6	135.0	151.6	171.6
Benefits paid and net benefit transfers	-110.0	-80.1	-86.4	-110.9	-125.3
Net contributions less benefits	***-2.3***	***40.5***	***48.6***	***40.7***	***46.3***
Investment income excluding capital gains	57.6	78.5	84.4	64.5	88.9
Expenses, operating income, insurance flows	-13.8	-15.2	-16.6	-16.3	-17.9
'Regular' cash flows	**41.5**	**103.9**	**116.5**	**89.0**	**117.3**
Income tax	6.4	-19.4	20.6	-6.8	-16.4
Total cash flows to invest	**47.9**	**84.5**	**137.1**	**82.1**	**100.9**
Capital gains	-73.5	264.4	-235.1	140.3	253.1
Other	9.0	9.2	17.2	9.2	11.6
Closing net assets	*2,044.6*	*2,402.6*	*2,321.8*	*2,553.4*	*2,918.9*
Regular cash flows / average assets	***2.0%***	***4.7%***	***4.9%***	***3.6%***	***4.3%***
Total cash flows to invest / average assets	***2.3%***	***3.8%***	***5.8%***	***3.4%***	***3.7%***

Data source: APRA

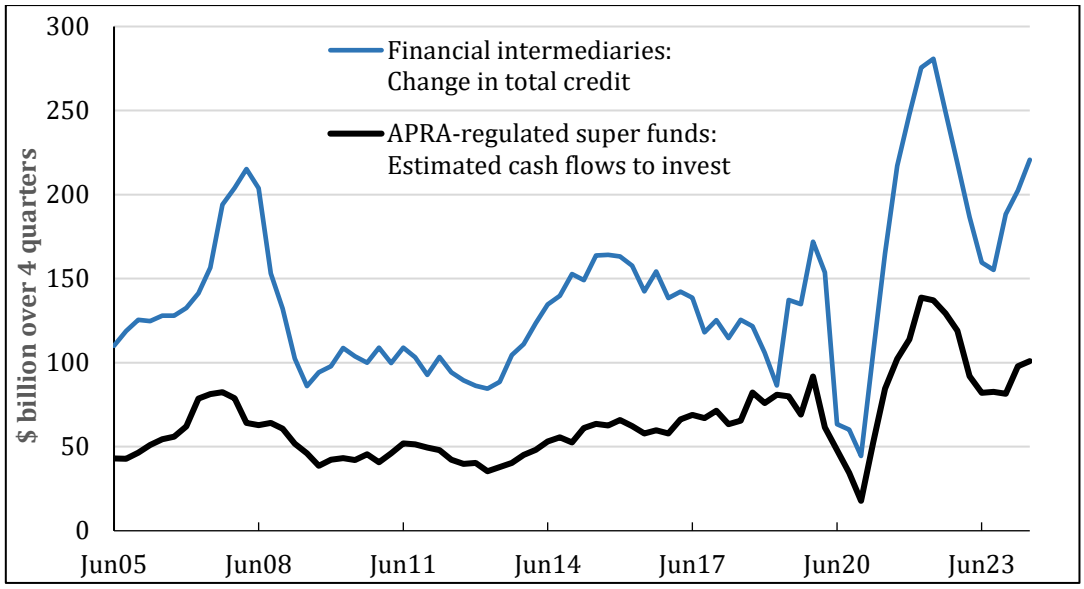
[7] Investment income is often reinvested back into the same asset class by super funds.
[8] We are unable to separate realised and unrealised capital gains.

The issue at hand is the magnitude of cash flows to invest that are directed towards Australian assets. We estimate a *baseline* amount of around $65-$70 billion for the overall super sector prior to considering asset allocation effects (which are discussed below) as follows:

- Between $57-$63 billion for APRA-regulated funds, based on $100-$110 billion of cash flows to invest as per Figure 6 and 57% of assets being held in Australia as per Figure 13 (see Section 4.1).
- A further $7-$8 billion for the SMSFs sector. SMSF flow of funds statistics[9] provided by the ATO point to net annual outflows of between $17 billion and $24 billion over the 5-years to FY2022-23, which averages 2.7% of assets over the period. We allow for 85% weighting to Australian assets and an investment yield of 3.7%, noting the preference of SMSFs for higher yielding investments and the majority of funds being in the pension phase, which acts to limit tax paid by the sector.
- Notionally assuming zero net cash flow for the ($210 billion) non-APRA-regulated institutional sector.

Figure 7 provides historical context on the size of the flow of new funding by APRA-regulated super funds relative to banks and other financial intermediaries. The chart compares the back series of the 'total cash flows to invest' as estimated using the method of Figure 6 against the change in total credit, with the latter operating as a proxy for new credit being created by financial intermediaries. New cash to invest by APRA-regulated funds averages 47% of new credit created over the entire history of the series and 49% over the last 3-4 years. Applying a notional two-thirds discount for new cash flows being directed overseas suggests that the baseline level of new funding provided by super funds within Australia might be around 30% of new credit created by financial intermediaries.

Figure 7: Super cash flows to invest vs. new credit by financial intermediaries



Data sources: APRA, RBA

While the statistics we present are somewhat rubbery, they nevertheless highlight that super has played much less of a role as a source of new funding within the Australian economy than traditional financial intermediaries such as banks. Looking forward, how the situation will evolve is unclear. Over the short-to-medium term, new cash available to invest by the super sector should remain relatively consistent as it stems from comparatively stable and slow-moving elements. However, these elements could change meaningfully over longer periods as the super system matures and investment income (probably) increases with rising assets under management. According to estimates supplied to us by Deloitte, the super system is projected to move into net cash outflow around 2037, i.e. 10-15 years into the future.

[9] The ATO flow of funds data includes contributions, benefits, net transfers and total expenses.

Asset allocation activities

Asset allocation activities are also relevant for the new funding made available by super funds within Australia. Cash flow allocated to Australian assets may reflect changes in strategic asset allocation (SAA) and rebalancing activities in response to relative asset performance. For instance, less cash might be allocated to Australian assets if super funds continue to increase overseas asset exposure, or Australian assets have outperformed overseas assets (perhaps because the A$ has risen in value). Increased allocation to overseas assets could be driven by larger super funds developing their offshore programs[10], perhaps supported by some SMSFs seeking to address their underweighting in overseas assets. The $65-$70 billion baseline level of cash flows to invest in Australian assets that we estimate above should hence be seen as a rough guide under stable conditions, and would prove an over-estimate if significant funds are being directed overseas. We note that a 1% reallocation[11] to overseas assets amounts to around $40 billion in a $4 trillion industry.

Meanwhile, new credit created by financial intermediaries can fluctuate substantially over time with the demand for credit and the willingness of financial intermediaries to provide it. Activity in the housing market is relevant, given the largest component is housing loans (see Figure 8). However, the ability of financial intermediaries to grow the funding they supply is less constrained as the consequence of the credit creation mechanism, through which credit is extended via new loans and returned to the banking system as a deposit as those loans are spent. The banking system thus notionally generates its own funding, albeit subject to central bank activities to add or mop up liquidity and the ability of the sector to secure equity capital[12].

Super as shadow banking

Many of the implications of the rise of super relate to the sector's role in financial disintermediation as an alternative provider of intermediation between savers and users of those savings. Financial disintermediation entails replacement of traditional financial intermediaries such as banks with savers providing funding directly to users, including via fund managers or asset owners. This is also known as 'shadow banking'[13]. There has been a longstanding trend towards disintermediation as asset markets have developed. The rise of private credit is a recent example where investors are providing credit directly to businesses as banks reduce their participation in riskier lending.

How super funds and financial intermediaries such as banks provide funding differs significantly both in terms of the sectors they target and the manner in which they go about their business. Figure 8 presents a breakdown of Australian loans provided by authorised deposit-taking intermediaries (ADIs) as at October 2024. It reveals that around 65% of total loans by ADIs are supplied to households, the vast majority of which are housing loans. Credit provided to businesses is about 30% of the total or $1.1 trillion. We also note that many major Australian corporations tap global debt markets rather than Australian banks to secure loans.

Figure 8: Loans and finance leases on Australian books of selected ADIs

As at October 2024

Sector	Housing	Other personal	Non-financial business	Financial institutions	General government	Total loans
$ billion	2,250.1	99.5	1,080.9	179.7	6.2	3,616.4
% total	62.2%	2.7%	29.9%	5.0%	0.2%	100.0%

Data source: APRA

[10] For instance, AustralianSuper, ART and Aware Super have set up overseas offices.
[11] This is similar to the rate of increase in overseas weightings observed in ABS data over the last 5 years.
[12] The link between credit creation and savings held and bank deposits also has implications for the role that financial intermediaries play in the savings function.
[13] Schembri (2014), Bengtsson (2016) and Bonizzi and Churchill (2017) discuss the systemic risks associated with shadow banking and financialisation, with Bengtsson focusing on investment funds and the other authors on pension funds. We draw on their insights, re-interpreting them for Australian super funds.

Meanwhile, the majority of the super sector assets in Australia of around $2.6 trillion 'funds' business activities through providing 'risk capital', i.e. taking equity-like positions. As well as their holdings of existing assets, super funds may deploy their cash flows to invest in the form of either participating in primary offerings and hence create new assets, or to purchase existing assets on the secondary markets. In the latter case, the transaction releases cash to the seller to deploy, but does not directly generate any new capital formation.

In any event, it seems safe to conclude that super sector is a more important supplier of funding to the Australian business sector than traditional financial intermediaries, given the tendency of super to invest in assets residing within the business sector while the banking sector largely services the household sector (see Figure 8)[14]. A situation where business is increasingly reliant on super funds as a funding source has a range of implications that we will discuss in the sections below.

A further key point of distinction is that super funds are 'asset owners'[15] and allocators that are held to account for their investment performance. Meanwhile, traditional financial intermediaries respond to requests to provide funding typically through loans with a primary concern that those loans will be paid off. The role of super funds as asset owners that allocate capital sits at the foundation of the type of funding they supply and how they go about providing it. This in turn influences the type of impacts that they might have on the Australian economy and financial markets. In particular, super funds will tend to allocate to investments that offer attractive risk/return characteristics. However, they do so while considering aspects such as how an investment fits within their prevailing portfolio construction framework, implications for performance assessment (including the YFYS performance test and peer-relative outcomes), need to access to liquidity, the cost of investing, and the fund's capacity to access and then manage the investment.

Super as provider of retirement income

One consequence of the role of super funds as a saving vehicle for retirement is that the super sector can also act as a provider of retirement income streams and related services to Australians. According to Treasury's Intergenerational Report 2023, drawdowns from superannuation are projected to rise from 2.4% to 5.6% of GDP between FY2022-23 and FY2062-63, with the proportion of Australians with retirement accounts from which they draw a superannuation pension increasing from 8% to 19%. Spending on Australian Government Age and Service Pensions is projected to fall from around 2.3% to 2.0% of GDP over the same period. Super is thus forecast to become to become an increasingly important provider of retirement income over time, moving from around the same magnitude up to 2.8-times the Age Pension. Super funds will be required to become increasingly central in assisting retirees with their spending needs as a consequence. This will increasingly impact on the kind of assets in which super funds invest due to greater need for liquidity.

Summing up

The super industry has grown from something of a sideshow in the late 1980s to a comparable magnitude to traditional sources of financial intermediation. However, a dichotomy exists between the role that super plays in the two main functions of a savings vehicle and a provider of funding. Super has become far more significant than traditional financial intermediaries as a savings vehicle and sits at a solid second behind housing as a form of household wealth. However, super remains far less significant as a provider of new funding within the Australian economy than traditional financial intermediaries, especially with regard to the flow of new funding. Nevertheless, both sectors perform the funding function in differing ways, with super tending to support the business sector and financial intermediaries the household sector in particular housing. While super might grow as a provider of new funding domestically, it seems unlikely to overtake the banking system's role.

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[14] The banking sector may also act as an agent that assists larger corporates to access capital markets directly.
[15] Technically super funds do not 'own' the assets, but are managing assets held in trust for the benefit of members. Nevertheless, it is common in the industry to refer to pension funds as a class of asset owner.

2.4. Size of individual funds

Figure 9 details the size of the larger super funds relative to the Australian economy as well as super industry concentration using data for FY2022-23 (the latest currently made available by APRA[16]). Figure 10 (see over) reports data on the banking industry for comparison. As the variables we consider are relatively sticky (at least barring large-scale mergers), data from FY2022-23 remains quite relevant.

Figure 9 and Figure 10 reveal that the super industry contains some sizeable funds but is relatively unconcentrated, especially compared to the banking industry. Of the total assets in super, 25% are managed by the largest four funds and 42% by the largest 10 funds. For banks, the big four account for 72%-74% and the largest 10 banks between 79% and 89% of the industry, depending on the measure. The largest super fund (AustralianSuper) has assets that account for 8.3% of the super sector while equalling 11.6% of GDP. It holds 14.7% of the member accounts within APRA-regulated funds[17]; received $19.8 billion of net inflows (comprising natural flows and inward switches) to invest amounting to 0.8% of GDP. By contrast, the assets of the largest bank (CBA) accounts for 22%-25% of the industry with assets equal to 45% of GDP. Again, clear reasons emerge to distinguish the super and banking industries on concentration and the relative size of the largest organisations.

Figure 9: Super industry breakdown by fund size and categories (FY 2023)

Rank / Number	Fund	Total assets ($bn)	% of total super assets	% GDP	Member accounts ('000)	% of total APRA fund accounts	Total net inflows ($bn)	% GDP
1	AustralianSuper	300.4	8.3%	11.6%	3,255	14.7%	19.8	0.8%
2	Australian Retirement Trust	272.1	7.5%	10.5%	2,410	10.9%	7.5	0.3%
3	Insignia Financial	180.6	5.0%	7.0%	1,863	8.4%	-2.9	-0.1%
4	Aware Super	161.4	4.5%	6.2%	1,195	5.4%	2.1	0.1%
	Top four	**914.4**	**25.3%**	**35.4%**	**8723**	**39.4%**	**26.5**	**1.0%**
5	UniSuper	124.7	3.5%	4.8%	649	2.9%	4.3	0.2%
6	AMP Super	111.0	3.1%	4.3%	942	4.3%	-2.4	-0.1%
7	Colonial First State	106.4	2.9%	4.1%	813	3.7%	-1.7	-0.1%
8	HOSTPLUS	100.1	2.8%	3.9%	1,781	8.0%	6.1	0.2%
9	Cbus Super	83.7	2.3%	3.2%	917	4.1%	2.6	0.1%
10	HESTA	75.8	2.1%	2.9%	1,027	4.6%	2.8	0.1%
	Top ten	**1516.1**	**42.0%**	**58.6%**	**14852**	**67.1%**	**38.2**	**1.5%**
11	REST	75.3	2.1%	2.9%	2,023	9.1%	3.8	0.1%
12	Mercer Super	67.4	1.9%	2.6%	848	3.8%	-0.5	0.0%
13	BT Super	67.4	1.9%	2.6%	284	1.3%	-2.1	-0.1%
14	CSC	56.0	1.5%	2.2%	690	3.1%	0.2	0.0%
15	Care Super / Spirit Super	48.9	1.4%	1.9%	571	2.6%	0.7	0.0%
	Funds > $50bn assets	**1,831**	**50.7%**	**70.8%**	**19,269**	**87.1%**	**40.5**	**1.6%**
16-65	Other APRA-regulated	346	9.6%	13.4%	2,859	12.9%	13.6	0.5%
65	**Total APRA-regulated***	**2,177**	**60.3%**	**84.2%**	**22,127**	**100.0%**	**54.1**	**2.1%**
	Other funds (residual)	495	13.7%	19.1%				
594,334	SMSFs	880	24.3%	34.0%				
	Total super industry	**3,614**	**100.0%**	**139.7%**				

* Includes APRA-regulated funds providing data, and used by Bell and Warren (2024) as their 'analysis sample'.

Data sources: ABS, APRA, ATO

[16] APRA is intending to provide the data for FY2023-24 in early 2025.

[17] AustralianSuper had 3.4 million members at June 2024 according to its Annual Report, which equals 12.7% of the Australian population.

Figure 10: Banking industry breakdown by bank size and categories (FY 2023, Residential)

Bank	Assets ($bn)	% total	% GDP	Loans and finance leases ($bn)	% total	% GDP	Deposits ($bn)	% total	% GDP
Commonwealth	1,154	21.6%	45%	791	23.3%	31%	720	25.3%	28%
Westpac	1,032	19.3%	40%	654	19.3%	25%	547	19.2%	21%
National Australia Bank	945	17.7%	37%	573	16.9%	22%	483	17.0%	19%
ANZ	709	13.3%	27%	449	13.3%	17%	364	12.8%	14%
Top four	**3,841**	**71.8%**	**148%**	**2,467**	**72.8%**	**95%**	**2,115**	**74.2%**	**82%**
Macquarie Bank	254	4.7%	10%	131	3.9%	5%	136	4.8%	5%
Bank of Queensland	120	2.2%	5%	23	0.7%	1%	70	2.5%	3%
Bendigo and Adelaide	112	2.1%	4%	16	0.5%	1%	70	2.4%	3%
ING Australia	100	1.9%	4%	19	0.6%	1%	51	1.8%	2%
Suncorp-Metway	93	1.7%	4%	14	0.4%	1%	51	1.8%	2%
HSBC Australia	60	1.1%	2%	11	0.3%	0%	32	1.1%	1%
Top ten	**4,579**	**85.6%**	**177%**	**2,681**	**79.1%**	**104%**	**2,524**	**88.6%**	**98%**
Remainder (55 banks)	772	14.4%	30%	707	20.9%	27%	325	11.4%	13%
Total	**5,351**	**100%**	**207%**	**3,388**	**100.0%**	**131%**	**2,849**	**100%**	**110%**

Data sources: APRA, ABS

No single super fund seems large enough in its own right to be considered a systemically important financial institution whose failure might trigger a financial crisis, especially after allowing for the absence of clear mechanisms for propagating risk across the system as will be discussed in Section 5.1. However, AustralianSuper has a sizeable footprint and any problems it may encounter would impact on a meaningful cross-section of Australians. We discuss the implications of a major fund getting into trouble in Section 6.2.

The Australian super system may be distinguished from countries where a dominant fund exists that provides pensions and is very large relative to the economy, which includes Korea, Norway and Singapore (see Beetsma et al., 2016).

Summing up

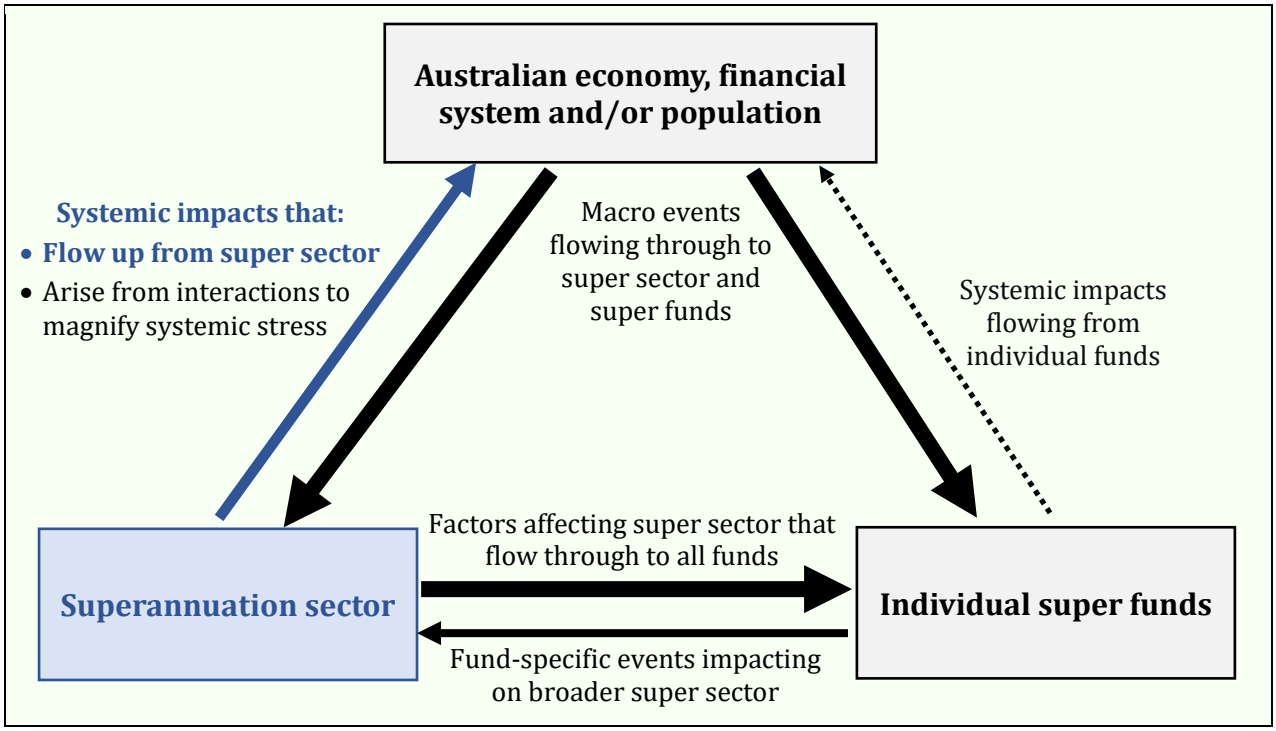
Individual super funds are not sufficiently large relative to the economy to be systemically important, although the largest (AustralianSuper) has a meaningful footprint. Further, the industry is some way from being oligopolistic. It would require a strong, ongoing trend towards concentrated growth and/or consolidation and a hollowing out of smaller funds to change the situation in a way that has significant impacts on aspects such as the variety of offerings available to members, competition[18] and the range of super funds operating in certain market segments.

[18] Azar, Schmalz and Tecu (2018) point to evidence as well as a substantial body of theory that more concentrated ownership of companies translates into less competition and higher prices in product markets.

Part 3. Benefits of a large super industry

When considering systemic impacts there is a natural attraction towards focusing on potential risks and problems. This part acknowledges the considerable systemic benefits that arise from big super. Figure 11 frames up the interactions considered, which are highlighted in **blue**.

Figure 11: Framing the interactions examined in Part 3 (as appearing in blue)



We identify and discuss four main benefits that, in our view, outweigh any concerns and risks that will be discussed in Parts 4, 5 and 6. The benefits include:

- Creating a substantial pool of funding for retirement (*Section 3.1*);
- Providing for professional management of those savings (*Section 3.2*);
- Enhancing the stewardship of capital (*Section 3.3*); and,
- Rounding out the sources of funding available within the Australian economy (*Section 3.4*).

To help readers appreciate the benefits, we close this part by considering the counterfactual through speculating over what might have happened if the super industry did not exist in its current form (*Section 3.5*).

The core benefits are the first two as listed above, which together amount to super operating as a vehicle for managing a large pot of retirement savings in a more professional manner. The act of playing these two roles gives rise to a variety of flow-on benefits, including super funds positioning to assist members with their retirement needs, enhanced stewardship of investments and the rounding out of the sources of finance that are made available.

In summary, big super improves how savings are supplied and invested within capital markets. The overarching theme is that the Australian economy and financial system function is much better off with a large super sector than would have occurred in its absence.

3.1 Substantial pool of funding for retirement

The super system facilitates the accumulation of assets to fund a better retirement for many Australians who may not have otherwise adequately saved for their retirement needs. While the efficacy of compulsion and a universal contribution rate of 12% may be debated[19], and there is some possibility that super could effectively substitute for other forms of savings, the overall outcome is most probably beneficial. Super supports many people in smoothing their standard of living over their lifetime, as well as providing an element of peace of mind through having a pot of money set aside for retirement.

The sizeable investment in super also reduces the reliance on the Age Pension and other forms of social security (as noted in Section 2.3), bearing in mind that pay-as-you-go public pension schemes can be a source of intergenerational inequity[20]. On the other hand, this comes at a heavy cost in terms of the notional tax expenditures on super's various tax concessions. There is also a perception among international commentators[21] that the significant pool of retirement savings established through the Australian super system has been beneficial relative to the situation in other countries.

3.2 Professional management of retirement savings

The super system provides an avenue for many Australians to access professional management of their savings at a reasonable cost through institutional super funds, which many people would have difficulty achieving for themselves. This benefit applies in particular to members with more modest balances who lack the capacity or inclination to manage their own savings or pay for financial advice.

Members of super funds benefit from the skill of professional management either through internal investment teams or outsourcing to investment managers, combined with oversight by fiduciaries (i.e. trustees) with legal obligations to act in members' best interests. Super funds undertake investment activities on behalf of members that most would have difficulty effectively accessing for themselves. This includes manager selection, investing in well-diversified private asset portfolios and asset selection when investing internally; all of which are supported by informed research.

While there are complaints that super fund fees are 'too high'[22], it is likely that members would pay more as private investors for equivalent investment products. Super funds can access size discounts, are better placed to negotiate fees and may reduce costs through internalisation on behalf of their members. The presence of economies of scale in administration and scope to further reduce investment fees through internal management (see Lawrence and Warren, 2023) also holds some prospect of super fund fees trending down as the industry grows.

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[19] For instance, the Retirement Income Review of 2020 raises question marks over the need for a universal 12% contribution rate as do other commentators. The key drawback raised is that such a high contribution rate penalises lower income earners who would be better off consuming more of their working incomes (as opposed to being forced to contribute it to super) and then relying on the Age Pension in retirement.

[20] OECD projections place public expenditure on pensions as the lowest of countries modelled by 2035, partly due to super, but also because of Australia's comparatively high wages. On the other hand, the fiscal cost of Australia's retirement system is projected to remain relatively stable as a percentage of GDP after tax concessions are taken into account (see Australian Government, 2023).

[21] See '*Why the whole world is suddenly paying attention to Aussie super*', Investment Magazine, 4 April 2024.

[22] The claim that super charges aggregate fees of $30 billion and these are 'too high' is often cited, e.g. by the press and policymakers. We avoid entering this debate other than pointing out that the same level of scrutiny is not afforded to the cost of the bank system as an alternative provider of financial intermediation. For instance, according to APRA's *Quarterly authorised deposit-taking institution statistics*, the banking sector earned total profits of $42 billion and incurred operating expenses of $62 billion in the year to June 2023. (We acknowledge that care needs to be taken in directly comparing banks with super.)

Super funds should ultimately provide infrastructure to assist their members in converting assets into income during retirement. However, with development of retirement income strategies is still in an early stage[23], the provision of effective retirement guidance services by super funds is a future prospect rather than a current reality. On the other hand, members pay for super fund infrastructure and related services through administration fees whether they use those services or not, meaning that an element of deadweight cost or cross-subsidisation may occur.

Overall, we contend that the existence of a large institutional super fund sector provides considerable benefit to many members. We note that members of institutional super funds who feel they are not getting a good deal always have the ability to opt-out and invest through an SMSF.

3.3 Better stewardship of capital

Institutional super funds (and the institutional investment managers they employ) are well-positioned to act as effective stewards of capital as a consequence of their investing activities. Super funds are concerned with efficient allocation of capital, focusing on both risk and return[24]. They can act as informed monitors of their investments, as well as various agents in the system such as investment managers and company management. In providing this stewardship, super funds are able to perform some roles more effectively than other financial intermediaries such as banks that focus more on the risk of loans not being repaid, as well as private investors who are less able to act as effective monitors and stewards.

One area where stewardship activities by super funds offer potential for beneficial systemic effects is socially responsible investing (SRI) including investing with a view to environmental, social and governance (ESG) impacts. Australian super funds have become more active in engaging with companies over ESG and sustainability matters. Two examples include pressing companies over workplace behaviours and the involvement of some large super funds in agitating for Rio Tinto to redress the Juukan Caves incident, which led to significant changes at the Board and senior management levels. While the efficacy of some activities may be debated, in general the net impact on the economy and society seems more likely to be beneficial than not. In particular, super funds can play a significant role through improving corporate governance, noting that they have a motivation to enhance the management of the companies in which they invest to buffer returns.

3.4 Rounding out the sources of funding

Super helps to round out the sources of funding in the Australian economy. Super funds can mobilise capital at scale and make decisions relatively quickly (at least where they are delegated to internal investment teams). Large super funds are also able to readily provide equity-like or at-risk funding for big-ticket unlisted assets such as infrastructure[25]. Super can help fill funding gaps left by traditional financial intermediaries, with the emergence of private credit being a good example. The presence of super funds might also assist in addressing the underdevelopment of the Australian corporate debt market moving forward. Relatedly, the existence of professionally managed super funds could improve the availability of funding for socially desirable investments, which may have some broader systemic benefits. In doing so, super funds are subject to a best financial interests duty

[23] The APRA/ASIC *Pulse check on retirement income covenant implementation* of July 2024 details the underdeveloped state of retirement income strategies within the industry.
[24] We note that this function may be constrained by aspects such as the YFYS performance test and concerns with peer risk, which is discussed in Section 4.3.
[25] Investment managers can also provide funding for these big-ticket assets through aggregation of smaller investors, although this can involve frictions such as the need to raise the capital, the need for investors to sacrifice liquidity and potentially higher costs as a consequence of the management fees.

and scrutiny on their returns, which helps ensure that socially desirable investment are pursued only where they are also financially attractive.

Super funds (along with other forms of shadow banking) might be viewed as largely complementary rather than competing[26] with financial intermediaries such as banks as suppliers of funding.

3.5 Considering the counterfactual

The benefits of a universal super system containing substantial assets and at-scale, professionally managed funds might be better appreciated by considering the counterfactual. We speculate that the following might have occurred in the absence of the super industry having developed into its current form, thus leaving many people to their own devices in saving for retirement[27]:

- **Under-saving** – Many people might have under-saved, in part due to the influence of various behavioural effects that generate inertia and myopia such as procrastination, status quo bias and present-day bias.
- **Poorer investment decisions** – Some people would have attempted to make investment decisions for themselves for which many are poorly equipped, resulting in costly mistakes. The tendency toward return-chasing is a notable trait that is likely muted when investing via a super fund. Many people might have invested their savings in bank deposits, resulting in much lower returns and hence poorer retirement outcomes.
- **Heightened agency risk** – Some people would have chosen to out-source the investment of their savings. However, many would end up being served by commercial interests that are driven by profit motives, some of which might be based overseas or pay less attention to regulatory requirements. This would heighten exposure to agency risk, especially relative to investing with a super fund that is subject to fiduciary obligations, best interest duties and a range of regulatory requirements aimed at protecting members[28]. These people could be exposed to paying higher fees or a greater risk of being provided with inappropriate investments[29].
- **Exposure to scams and fraud** – People managing their own assets may be more exposed to scams and fraud, relative to a situation where those assets are being managed by a super fund.

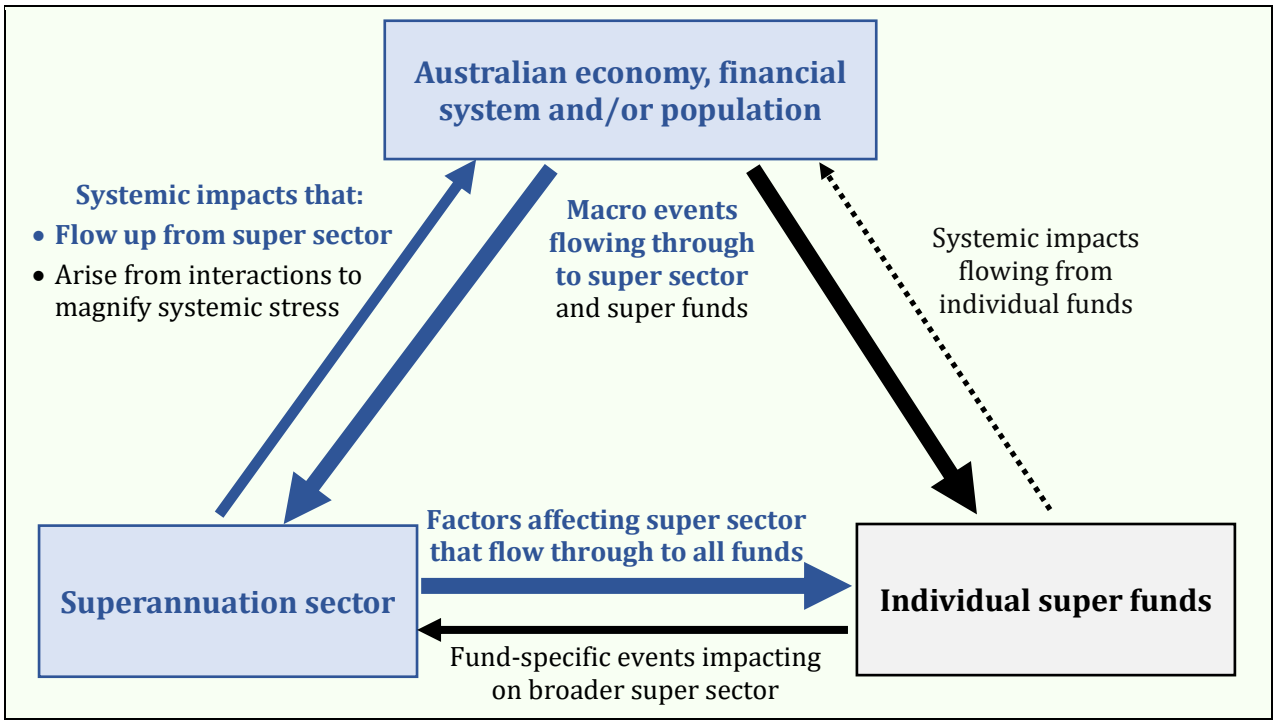
We suspect that many Australians would have been worse off under the scenario painted above. In summary, the emergence of a substantial super industry has most probably added value relative to the alternative where people would have been left to their own devices or relying on agents that are less aligned with their interests.

[26] Super funds compete with banks in the provision of credit in some segments, but can play a complementary role at other times, e.g. private debt where funding is provided to borrowers no longer being serviced by banks.
[27] The need of individuals to save for themselves would only have been exacerbated by the progressive attrition of defined benefit superannuation plans being offered by employers.
[28] The argument is not that there is an absence of agency risk in the super sector, but rather that there are reasons to expect it to be structurally lower than under other commercial arrangements.
[29] Financial advisers might have taken up some of the slack in the absence of super funds providing investment services. However, financial advisers are more likely to be engaged by only wealthier people.

Part 4. Common exposures of concern

In Part 4 we turn to potential systemic impacts that could arise from the super industry itself under the heading of 'common exposures of concern'. We focus on aspects that *cut across the industry at large* and could lead to widespread loss of wealth or other adverse impacts arising from problems being experienced by many super funds or fund members across a broad front. Figure 12 frames up the interactions considered here in Part 4, which are highlighted in **blue**. Part 5 goes on to discuss potential impacts that may stem from interlinkages between super and the broader economy or other parts of the financial system. Part 6 considers the scope for broader systemic impacts arising from individual large super funds.

Figure 12: Framing the interactions examined in Part 5 (as appearing in blue)



We discuss eight concerns related to common exposures across most super funds that we have identified through either research, observation or feedback:

- Exposure to economic and market risk, which arises from super funds seeking to capture market risk premiums in order to deliver better long-term member outcomes (*Section 4.1*);
- FX exposure, which is relatively large and has possible return and liquidity management implications (*Section 4.2*);
- Propensity to invest in similar ways while often adopting a shorter-term perspective (*Section 4.3*), which may lead to correlated behaviours coupled with short-termism;
- Service supplier concentration (*Section 4.4*);
- Underdeveloped operational infrastructure (*Section 4.5*);
- Increasing threat of scams (*Section 4.6*);
- Possibility of disruptive policy change (*Section 4.7)*; and,
- Reliance on confidence and trust, and potential implications if undermined (*Section 4.8*).

We view exposure to economic and market risk (see Section 4.1) and underdeveloped operational infrastructure (see Section 4.5) as most consequential, respectively due to higher magnitude of potential impact and higher likelihood of occurrence. Other exposures that may be impactful but of less concern from a systemic perspective include FX and member exposure to scams, with the latter more likely to affect individual members than the system at large. The other concerns either have more debatable consequences or significant systemic impacts are more difficult to envisage.

4.1 Exposure to economic and market risk

Exposure to economic and related market risk is *the* major source of potential for broad-based wealth loss through super. Part 3 highlighted the accumulation of retirement savings and the professional management of those savings as two major benefits from the growth of super. One consequence of professional management is that (institutional) super funds seek higher returns on behalf of their members by aiming to capture market risk premiums arising as compensation for risk. This positioning is entirely justifiable, especially in the accumulation phase. Investing in riskier 'growth' assets offering higher expected returns is more likely than not to support stronger wealth accumulation over long investment horizons and boost retirement income for members, making them better off. Nevertheless, seeking higher expected returns inevitably comes with some danger. The OECD has drawn similar conclusions (see OECD, 2024).

Growth exposure

Figure 13 reports the asset holdings of APRA-regulated super funds as at September 2023. (The series has been discontinued and is currently being updated, but nevertheless adequately conveys the situation.) This data suggests about 69% is invested in economically exposed assets; although the actual percentage is probably higher due to additional exposures within fixed income via credit and the 'other assets' category. The performance of risky assets (especially equities) dominates outcomes in multi-asset portfolios, with diversification tending to have modest effects at the margin. In a series of papers, Leibowitz and Bova show that over 90% of the volatility of a typical balanced fund is explained by equities (or instance, see Leibowitz and Bova, 2005).

Figure 13: Assets of APRA-regulated super funds

As at September 2023	Assets		Currency hedging	
	$ bn	%	$ bn	%
EXPOSED TO THE ECONOMY				
Equities				
Australian listed equities	512.1	21.9%		
International listed equities	617.2	26.4%	168.3	27.3%
Unlisted equity	118.1	5.0%		
Total equities	***1,247.5***	***53.3%***		
Other exposed				
Australian listed property	55.8	2.4%		
Australian unlisted property	112.8	4.8%		
Listed infrastructure	33.2	1.4%		
Australian unlisted infrastructure	87.4	3.7%		
International unlisted infrastructure	74.2	3.2%	57.7	77.7%
Commodities	2.4	0.1%		
Total other exposed	***365.7***	***15.6%***		
TOTAL EXPOSED	**1,613.1**	**68.9%**		
FIXED INCOME				
Cash	200.5	8.6%		
Australian fixed income	272.9	11.7%		
International fixed income	202.0	8.6%	156.8	77.6%
TOTAL FIXED INCOME	**675.5**	**28.9%**		
Other assets	52.0	2.2%		
TOTAL	**2,340.7**	**100.0%**	**382.82**	**16.4%**
International (equity, infrastructure, fixed income)	*893.4*	*38.2%*		*42.9%*
Unlisted assets (including other)	*444.5*	*19.0%*		

Data source: APRA quarterly superannuation statistics, 27 November 2024. Asset data from September 2023 is reported as the series has been discontinued and is currently being updated.

Significant and sustained market declines cannot be ruled out

The main danger associated with high weights to growth assets would be economic events that result in a significant and sustained market decline. While an unlikely outcome, it cannot be totally ruled out and has precedent in history looking across markets and time. A widely recognised example is the persistently poor performance of Japanese equities in the decades following bursting of an asset bubble in 1990. Other examples of sustained wealth loss include: the 13 years that the S&P500 took to recover in real terms following the tech bust of 2000; substantial losses of wealth following defeats in a war (e.g. Japanese and German equities lost 95% and 99% respectively in real US$ terms associated with World War 2); and losses during periods of high or hyper-inflation (e.g. 1970s). Anarkulova, Cederburg and O'Doherty (2022) document some of these developments. They use simulations of cross-country data to estimate a 12% probability of a real wealth loss over a 30-year horizon, with 5% probability of real wealth loss of 53% or greater. OECD (2024) provides estimates based on simulation analysis that the probability of achieving a lower income replacement rate is 9%-13% when investing in equities versus fixed income.

The main concern over long horizons is developments that lead to sustained economic damage and result in the long-term cash flows (i.e. earnings) of exposed assets being impaired. This can lead to permanent loss of wealth as asset prices adjust downwards in recognition of lower expected cash flows. Examples of developments that might have a major and sustained negative impact include:

- Event that kills a large portion of the global population
- Hot war involving nuclear deployment
- Severe impacts from climate change leading to loss and requiring very costly mitigation action
- Social change that inspires mobilisation against the corporate sector and reduces profitability
- Global depression due to a major policy error
- Debt default (or monetisation) by a major nation or nations
- Ructions in private markets stemming from over-exuberance, leverage and lack of transparency

While these are all low probability events, they cannot be totally ruled out. Another source of concern are corrections from a state of over-extended valuation, which contributed to the extended underperformance of Japanese and US equities referred to above. In this regard, it is noteworthy that the multiples attached to Australian equities and especially US equities (about two-thirds of the MSCI ACWI index) are currently above historical averages.

Members are not just exposed via super

Concern over potential wealth loss through super is exacerbated by the fact that most super fund members are personally exposed to the economy through other channels such their jobs or investments outside super (including housing). A major problem in the broader economy could thus adversely impact super fund members through a variety of channels. The implication is that the super industry is effectively doubling down on behalf of members on the continuation of prosperity, especially within the Australian economy.

Summing up

While investing in economically exposed assets like equities has historically paid off, a repeat is by no means guaranteed. Poor performance by such assets could reduce wealth and lower retirement income for all super fund members. This is something of an 'elephant in the room' risk in terms of the potential for high impact, albeit one of low likelihood.

4.2 Foreign exchange (FX) exposure

Impacts from FX exposure will be experienced by all super funds to the extent they hold overseas assets. FX is a very significant exposure within super fund portfolios. Figure 13 (see Section 4.1) reports that APRA-regulated funds had identifiable weightings in overseas assets of 42.9% as at September 2023. The weighting is potentially higher allowing for overseas assets within the unlisted equities, listed infrastructure and other asset categories. The size and weight in overseas assets and hence FX exposure is likely to increase as the super sector and funds grow and invest more overseas.

A super fund with overseas assets faces the choice of accepting the exposure to foreign currency or hedging that exposure using derivatives such as forward FX contracts. In this section, we discuss the implications of both unhedged FX exposures and FX hedging, with particular focus on the liquidity impacts that could arise from cash calls on FX hedges following a significant A$ movement. Part 5 discusses the role of FX exposure in interactions with the Australian economy and financial system.

Unhedged FX exposure

Figure 13 reports that 38.2% of the identifiable international (i.e. overseas) assets of APRA-regulated funds were hedged as at September 2023, implying that the unhedged exposure to overseas assets amounted to (at least) 21.8% of total assets. Unhedged overseas assets give rise to exposure to FX fluctuations, specifically any movements in the A$ versus the underlying basket of foreign currencies that is not then counterbalanced by asset returns. There are many elements and angles to how unhedged FX exposure could behave that we will not delve into in any depth[30]. Suffice to say that, while unhedged FX exposure may have significant impacts on the returns that are delivered to members, it is highly debatable whether it should be considered of systemic importance.

Hedged FX exposure

Figure 13 suggests that APRA-regulated funds were carrying currency hedges of $383 billion at September 2023, equating to 16.4% of total assets and a 38.2% hedge ratio on overseas assets. FX hedges thus amount to a significant exposure in their own right. FX hedges are somewhat unique within the asset mix as the exposure arises in the form of derivatives added into portfolios that otherwise comprise of assets that are largely directly-held. FX hedging replaces exposure to foreign currency fluctuations with exposure to potential liquidity effects and counterparty risk.

The potential for liquidity effects stems from the fact that an A$ decline results in the super fund 'losing' on its FX hedges that need to be settled in cash, while incurring offsetting gains in the value of its overseas assets through currency translation effects. The net result is no meaningful loss of value for the fund overall. Nevertheless, liquidity problems can emerge if a significant currency decline gives rise to large cash calls, and there are problems in satisfying those cash calls because assets are difficult (or costly) to sell due (say) to being unlisted or relatively illiquid. Additional liquidity pressures may arise if an A$ decline coincides with a market crisis that makes it difficult to readily liquidate assets at reasonable prices across the board.

The example of MTAA Super is instructive. The fund ran into liquidity problems and incurred significant losses during the GFC when the A$ fell sharply with around half its portfolio in unlisted assets along with currency hedges in place. Although no major losses resulted and the fund survived, the situation was tenuous. Super funds have subsequently become more reluctant to allow their unlisted asset exposure to become too high in part due to the lessons learned from this episode.

[30] Considerations include whether real currency-adjusted asset returns equalise across countries over the long run, extent to which foreign currency is a diversifying asset (and whether this may have changed, as discussed in Section 5.6), the propensity for currencies to trend and hence impact returns over extended periods of time, and the heavy weighting within most overseas asset classes to investments domiciled in the US.

Despite the hypothetical potential for FX hedging to give rise to significant liquidity problems, the risks seem limited and quite manageable. We discuss in Section 5.3 why the risks are low of a liquidity squeeze in the super sector. We are similarly unconcerned by the liquidity impacts of FX hedging. It is worth recounting the key reasons here:

- Unlisted asset holdings of most super funds are not significant enough to place funds at risk of a major liquidity crisis, noting that cash calls may be satisfied by selling liquid assets. Data provided to the Conexus Institute by Chant West (refer chart in this article) reveals that the majority of funds have less than 30% exposure to unlisted assets, with three funds in the 30%-35 range.
- A more likely implication is that FX hedges could contribute to fund portfolios getting 'out of shape' to the extent that liquid assets are sold and funds are inhibited from rebalancing their unlisted asset exposures back to target[31].
- Laddering of FX contract expiry affords some protection against concentrated cash calls.
- APRA requires funds to undertake liquidity stress testing, which helps ensure that super funds do not leave themselves over-exposed.

RBA (2021) provides an analysis of the liquidity impacts stemming from FX hedges during the COVID period[32]. It did not uncover any major stresses, although this was in part due to the decline in the A$ being relatively short-lived. Our analysis in Section 5.3 collaborates the RBA findings.

Counterparty implications

A substantial rise in the A$ would result in super funds gaining on their hedges and counterparties needing to settle their losses in cash. This raises the possibility of counterparty risk. Hopefully any counterparty would have deep pockets such as a major bank[33] or has adequately hedged its book. If not, there may be potential for flow-on problems from an exposed counterparty. Gauging this risk is made more problematic as there is little clarity around the identity of counterparties or how FX hedges are being implemented. For example, the FX hedges could be placed by the super fund themselves, outsourced to currency overlay managers or put in place by external fund managers within their portfolios under an investment mandate. This area needs to be better understood.

A side note on other derivatives

There is even less scope for issues to emerge from other derivative positions as they tend to be less significant relative to the overall portfolio. With FX hedging, derivatives are used as a vehicle *to establish the position itself*. In other markets there is a propensity for super funds to directly hold the underlying assets, while using derivatives such as equities or bond futures to quickly shift asset allocation or rebalance portfolios. These positions tend to be transitory rather than permanent. Where derivatives are being used to manage asset weights, any exposure should be limited as super funds tend to undertake only modest variations in their target SAAs while rebalancing trades are reactive to market movements. We see no clear cause for concern related to these areas.

Summing up

FX gives rise to exposures that are shared across most super funds and hold potential for some meaningful impacts on fund portfolios related to the returns delivered and the need for liquidity management. Nevertheless, these impacts seem unlikely to be systemically significant, especially as risk of a liquidity squeeze as a consequence of A$ fluctuations can be discounted (see Section 5.3).

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[31] The Conexus Institute provides analysis and tools examining the impact of unlisted assets on portfolios.
[32] RBA estimates that funds needed to meet $17 billion in margin calls in response to a 15% decline in the A$ during the first half of March 2020 before it recovered. RBA comments that about half these margin calls were paid to the major Australian banks, and the remainder to international banks.
[33] Super funds are likely to have additional exposures to the banks via their equity and fixed income portfolios.

4.3 Similar approaches to investing

A propensity exists for super funds to invest in similar ways, while tending to focus on shorter-term performance (e.g. over 1-3 years) notwithstanding that they are managing assets towards the long-term purpose of providing income in retirement. The implications may include potential for exposure to common risks that could result in shared losses, correlated positions and herding behaviours. In this section we describe the potential drivers and the implications of shared exposures for members more broadly. Section 5.5 will discuss the implications for financial markets by addressing the extent to which similar positions could affect market resilience or volatility.

Institutional settings encourage a similar approach to investing

Potential for correlated investing behaviour that is undertaken with a shorter-term focus arises from the institutional settings under which super funds operate. Key aspects include:

- ***Peer-relative focus*** – Concern with peer-relative performance stems from various influences including: remuneration incentives; performance reporting practices, e.g. league tables; career considerations; member behaviour, e.g. better performing funds may receive more inflows; and, human instinct. A peer-relative focus can encourage herding behaviour and shorten horizons.

- ***YFYS performance test*** – The combination of mandated benchmark indices and the existential consequences of test failure encourages close management of tracking error relative to the YFYS benchmarks (e.g. see Bell, 2022). Effectively the regulatory framework directs super funds in how they invest to a meaningful degree, albeit allowing some latitude to vary from the benchmarks at the margin. The result is that super fund portfolios will gravitate towards investments that demonstrate exposures similar to the benchmarks. The YFYS test also shortens horizons to the extent that funds attempt to avoid runs of poor shorter-term performance which could lead to a YFYS test failure, especially for funds with little 'buffer' (see Bell, 2022)[34].

- ***SAA approach to investment*** – The vast bulk of the super industry is anchored to SAAs, most of which contain broadly similar exposures to key asset classes with some variation at the margin. Use of a SAA approach is encouraged as it forms the foundation of the YFYS test, and multi-asset investment options are described using SAAs in product disclosures. Although some funds refer to applying a total portfolio approach, management of the SAA nevertheless seems an overriding consideration. There is less pressure to implement a standard SAA approach within the platform operations of for-profit super funds and SMSFs where members tend to operate under the direction of financial advisers. However, even here common practice is based around SAA frameworks. The outcome is that the industry tends to target multi-asset portfolios containing similar asset classes to a large degree.

- ***Funding constraints on providing patient capital*** – Institutional super funds (especially the APRA-regulated sector) face funding constraints that further limit their capacity to supply 'patient capital'. While assets within the overall super system are 'locked in' to a significant degree[35], institutional super funds lack complete security of funding due to member choice of both fund and investment options. Concern that the assets could 'walk out the door' is exacerbated by the YFYS performance test and peer-relative considerations, as discussed above. Many funds are also keen to deliver good performance to help attract new members. These considerations further influence behaviour towards a focus on shorter-term performance, notwithstanding that choice may be

[34] Potential for correlated behaviour is further exacerbated by the interaction between the YFYS performance test and growth in passive investment more broadly, which may combine to further concentrate investment in assets included in the benchmark indices.

[35] Preservation ensures that this is the case during accumulation. Members can in theory take out all their assets from super in the retirement phase. However, many retirees who withdraw their assets out of super at retirement will invest it elsewhere, although some will use withdrawals for spending or debt repayment.

exercised by only a minority of members. The implication is that institutional super funds can find it difficult to act as genuinely long-term investors and to accept too much illiquidity, compounding their wariness over drifting too far from the YFYS benchmarks and peers.

On the other hand, some differences exist across funds that help to limit the commonality in investment approaches. For instance, commonality is greatest within the profit-for-member sector. Meanwhile, for-profit (i.e. retail) funds may operate a significant part of their business as platforms offering a large range of investment options from which members can choose often under financial advice, which in turn supports some variation in investments. SMSFs invest quite differently to institutional super funds, including holding more in cash, domestic assets and property. Further divergence arises from differences in how various super funds operate[36], including the extent to which internal management or outsourcing to external managers is employed and investment processes that are adopted via these channels.

Nevertheless, on balance most super funds appear substantially 'look-alike', investing in similar assets in a similar manner with any variation occurring at the margins.

Implications of common exposures for members

The propensity for super funds to invest in a similar way creates scope for common performance impacts to arise. If something goes wrong related to how super fund portfolios are constructed, there is a reasonable chance that the impacts would be felt by fund members across a broad front. Potential effects might include the following:

- ***Potential for widespread losses*** – If funds invest in a similar manner, then any losses from a class of investment could be widely experienced across the super system. A large number of members could suffer common reductions in wealth from those investments as a result.
- ***Some funds may pursue inappropriate investments*** – Propensity to invest in a similar manner may induce some funds to take actions that are unsuitable for their circumstances, particularly under a peer-relative focus. For example, some funds may be enticed to over-invest in illiquid assets or follow peers into sectors such as highly leveraged and opaque private equity or private credit to an inappropriate degree in order to match their peers.
- ***Home bias*** – Figure 13 suggested that APRA-regulated funds invest around 57% in Australian assets; while we suggest in Section 2.3 that about 65% of total super fund assets are invested locally. This 'home bias' represents a further dimension of portfolio concentration. It heightens exposure of members to situations where the Australian economy and asset markets perform poorly. A related consideration is that the Australian equity market is highly concentrated. At December 2024, the S&P/ASX200 Index had weights of 34% in financials (the bulk attributable to the banking sector), 19% in materials (mainly resources) and 49% in the largest 10 stocks.

Summing up

The institutional super industry delivers up a set of substantially look-alike portfolios containing broadly comparable exposures, with differences around the margins. This creates scope for any performance problems to manifest across the bulk of the industry, leading to two concerns. First, as discussed in this section, is that poor investments are likely to impact on fund members across a wide front. A second concern, to be discussed in Part 5, is that any interlinkages between super funds and the wider financial system will tend to be broad-based across the super sector.

[36] Q-Super adopted a different approach based around managing portfolios tailored for member cohorts, but has moved to an SAA approach following the merger with Sunsuper to form ART. We also understand that the Hostplus approach focuses on allocation of cash inflows, although with an eye on SAA.

4.4 Service supplier concentration

Another concern is the reliance on common service suppliers across significant parts of the super sector. Donald et al. (2016) provide evidence of high concentration in some of the service suppliers used by the industry. The authors estimate the market share of the top five providers at 96% in asset consulting[37], 92% in auditing, 84% in custody[38], 74% in insurance, 71% in actuarial services and 45% in member benefit administration. Of these suppliers, those that either 'handle the money' or engage with members and hold key member information offer greater potential for financial loss, perhaps through cybercrime or service failures. This includes custody, member administration and insurance. Cloud services might also be added to the list as their use grows, especially given that there are three major providers (AWS, Microsoft and Google) that could be used by multiple funds.

As Donald et al. (2016) compiled their data over a decade ago, we attempt to check if industry structures may have changed. More recent market shares are reported for the top six providers in the Australian custodian industry in Figure 14 and life insurance in Figure 15. While not directly comparable with the estimates that Donald et al. compiled for super funds, they nevertheless suggest that market shares of the major providers in these industries have not changed significantly, albeit with some further concentration in insurance. It is harder to get updated data for member administration. We note that Link (now MUFG) reports servicing 41% of super accounts in its 2023 annual report. Bhat (2023) reports that Link managed member funds of $825 billion and Mercer funds of $354 billon, which are 33% and 14% respectively of super assets excluding SMSFs as at June 2022. Overall, it seems these three service industries remain relatively concentrated.

Figure 14: Custodian market shares

Custody and administration, as at December 2023

Rank	Provider	%	Cumulative
1	J.P. Morgan	24%	24%
2	Northern Trust	17%	41%
3	Citigroup	15%	56%
4	State Street	15%	71%
5	BNP Paribas	9%	80%
6	NAB Asset Services*	8%	88%

Source: Australian Custodial Services Association

** NAS is exiting the industry*

Figure 15: Life insurance market shares

Reported in early 2024

Rank	Provider	%	Cumulative
1	TAL Life	34%	34%
2	AIA Australia	17%	51%
3	Zurich	15%	66%
4	MLC	10%	76%
5	Resolution Group	7%	83%
6	MetLife	5%	88%

Source: Plan For Life, taken from LifeInsuranceDirect

Implications

The reliance of significant parts of the super industry on the same service providers establishes linkages and potential points of shared vulnerability where any problems could simultaneously impact many super funds and their members. While these points of vulnerability are easy to spot, the degree of risk and possible implications are much harder to gauge. To this effect, we suggest that super fund members might face the following risks:

- ***Custody***[39] – The greatest damage would arise if vulnerabilities in systems or processes led to outright theft of assets. Other areas where members might incur losses could include trade errors, failing to keep proper records leading to mis-valuation of assets, and issues around FX hedging (see Section 4.2) where the custodian is managing the positions. We understand that custodians

[37] Asset consulting services are now more diversified as funds governance models have evolved and many have internalised. With DB funds disappearing, pure actuarial consulting is also becoming less important.

[38] Donald and Nichols (2015) take a closer look at custodians.

[39] Custodians are considered globally significant important financial institutions (G-SIFIs).

generally establish bare trusts for their clients while many funds have error rectification clauses in their custody agreements, both of which provide meaningful protection.

- ***Member administration*** – We have broader concerns over underdeveloped operational infrastructure in the super industry, which is specifically discussed in Section 4.5. Cyber risk and member exposure to scams (discussed in Section 4.6) also relate to member administration. Outsourcing plays a significant role in member administration. According to one article, member administration as at June 2020 was outsourced by 44% and insourced by 47% of super funds, with the remainder operating under a hybrid model. Software is another service where there is meaningful reliance on external suppliers: we understand that Bravura Solutions and IRESS are key to some industry participants. There is significant reliance on these service providers to have their systems and processes in order, and to interface effectively with the operations of super funds[40]. Problems in a major provider of member administration services, including software provision, could affect a significant part of the industry and adversely impact many members.

- ***Life insurance*** – The key concern would be an insurer failing to meet its claim obligations either on life insurance policies or (looking forward) lifetime income stream products. Bankruptcy of a major insurer could result in difficulty in the insurance company honouring its obligations. However, the risk is somewhat limited by the capital requirements and APRA regulatory oversight that is imposed on insurance companies. Individual members could also be harmed by unreasonable denial or delay in meeting claims or mispricing of premiums.

- ***Cloud services*** – Increasing reliance on cloud services creates a common point of vulnerability to an unregulated activity, especially given the dominance of three providers. For instance, a major provider being the subject of a cyberattack could impact fund operations members across a broad front. The importance of cloud services was highlighted in April/May 2024 when the online services of UniSuper were disrupted for about two weeks after Google Cloud accidentally ceased service provision and deleted their client records.

While it is apparent that the super industry is relying on the quality of the systems and processes of some key service providers (and the diligence of regulators, most notably in insurance), it is hard to exactly gauge the likelihood of significant issues arising when looking from the outside. Member administration is of most concern as an important function for super funds where there are only a few external suppliers that are unregulated and providers of what amount to complex and internationally unique services. It is also costly and complex for funds to transition administration providers or internalise the services. For instance, it reportedly takes 12-months to transition to a new member administration supplier; while we understand that consolidating multiple administration processes (as occurs following a merger) is a 3-year project.

A related issue is the existence of any mechanisms to protect or compensate members for losses, such as from the suppliers themselves, insurance or government support[41]. The introduction of APRA Prudential Standard *CPS230 Operational Risk Management* from 1 July 2025 may help improve the identification and management of outsourcing risks by requiring super funds to enhance their third party risk management practices.

Summing up

It is hard to see how reliance by super funds on shared service suppliers could give rise to significant systemic impacts. Member administration concerns us most and is discussed further in Section 4.5. Nevertheless, the level of embedded risk from common service suppliers is difficult to gauge. There is a need for greater understanding of the points of vulnerability and potential consequences.

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[40] AustralianSuper has moved to insource its life insurance claims handling and complaint management in late-2023 following problems with these processes under outsourcing to Link.

[41] For example, the Government provided funding following the Trio collapse recouped by an industry levy. We understand it was a complicated and time consuming process, and did not fully compensate all members.

4.5 Underdeveloped operational infrastructure

We hold significant concerns that the operational infrastructure across much of the super industry may be sub-standard, including the core information technology (IT) systems, processes and staffing particularly in relation to member administration and support. The concerns primarily relate to administration rather than investments, given that highly sophisticated systems are readily available from external providers to support the investment functions[42].

Our concerns initially arose after considering the historical trajectory of the industry and pieces of evidence (some of which is anecdotal) hinting that operational problems could be sitting under the hood. Comments were received from multiple sources during feedback on the report draft that operational infrastructure was a key area of concern particularly in member administration, although the main sources of vulnerability were not apparent. It was as if everyone who commented thought there were problems but could not put their finger on exactly what they were.

Historical trajectory

Super has grown from what might be described as a 'cottage industry' into a major financial sector comprising some large organisations managing large amounts of assets for large numbers of individuals. The super sector has also been going through a process of consolidation. In addition, funds have had to respond to ongoing regulatory change and increased reporting requirements, which have only increased the burden on operational systems, processes and staff. Such a situation gives rise to the risk that many super funds are struggling with legacy systems and processes which are unsuitable for large, highly complex organisations, or are operating with systems that have been cobbled together following mergers. For these reasons, we suspect that system risks extend beyond the relationships with external service providers (see Section 4.4), especially with regard to member administration, to include the internal operational infrastructure of the funds themselves[43].

We strongly suspect that the super industry needs to undertake significant investments to upgrade systems to a state that can support the operations of a major financial organisations providing tailored services to individual members. In particular, super funds need to support the development of their retirement income strategies, which requires an increased capacity for personalisation. Investment in systems and the ability to service members with differing needs will incur considerable cost and absorb significant organisational resources including management time. We sense that the super sector is embarking on a long journey to upgrade its operational infrastructure in the area of member support, with many super funds lagging.

Evidence of wide-based issues

Various incidents raise question marks over the state of member administration and the presence of system vulnerabilities. Listed below is a selection. While each incident in itself does not indicate a systemic issue, together they sum to a body of circumstantial evidence that many super funds are struggling with their operational infrastructure.

- Administration and member servicing matters have been the source of the vast majority of complaints reported to the Australian Financial Complaints Authority, with the handling of insurance claims a standout. ASIC's report on Insights from internal dispute resolution data reporting of December 2024 (pp29-33) also highlights member servicing issues as a flash point.

[42] There are reasons for concern over unit pricing, especially with regard to unlisted assets as per a recent APRA review. However, this amounts to an issue for member equity rather than having systemic implications.
[43] Potential for systems-related problems may be less for SMSFs, which tend to use administration platforms where there has been considerable investment. Major platform providers include Insignia, Macquarie and BT Panorama, with inroads being made by tech-enabled players such as HUB24, Netwealth and Praemium.

- ASIC sued AustralianSuper in September 2023 for failing to consolidate multiple member accounts, while commenting that it expected that the problems extend to other funds. We understand that their member records made it difficult for AustralianSuper (which self-reported the incident) to address the issue in an effective manner.
- NGS Super suffered a cyber-attack in December 2023. APRA responding by placing licensing conditions on the fund and commenting that cyber risk management needs a broader uplift across the super industry.
- The disruption of UniSuper's online services in April/May 2024 referred to above highlighted a source of potential vulnerability.
- A systems outage at ART resulted in service disruptions and failure to pay pensions on time.
- Cbus referred to administrative failures as the source of its issues with claims management, which was described by the fund as indicative of a systemic issue.
- Commentary from various observers has been referring to the poor state of customer service in the super industry, including ASIC, consumer groups and the media.
- We have been told by one fund that system integration following a merger was hindering the advancement of their retirement income strategy.

Potential impacts

Poor operational infrastructure could result in harm to members through various channels:

- mis-estimation of member benefits
- failure to process member transactions correctly or efficiently
- misleading members through poor messaging or advice due to mis-understanding their situation
- cybercrime, including theft of personal data[44]
- failure to identify and prevent fraud or scams (discussed below in Section 4.6)
- risk that any problems could go un-noticed due to lack of member knowledge or engagement
- remediation of problems will incur costs, which will ultimately be borne by members

Another consideration is the potential for adverse impacts on confidence and trust in super funds and perhaps the super system as a whole. This is discussed in Section 4.8.

Summing up

None of the observed events involving system failures or poor member servicing have yet led to widespread losses across many members, although some individuals have undoubtedly been badly affected. Any adverse impacts need not remain so localised going forward. However, the exact potential for significant problems across a broad front is hard to gauge when looking from the outside. It may be that any underlying issues continue to manifest as a drip-feed of problems that impose ongoing costs on members and serve to undermine confidence and trust in super. In any event, there are ample orange and red flags that make the state of super fund operational infrastructure an area that deserves close attention and one of our prime concerns.

[44] While funds are required to have measures in place to safeguard information security under Prudential Standard *CPS 234 Information Security*, whether effective measures are in place across the industry is unclear.

4.6 Member exposure to scams

There are *a priori* reasons to be particularly concerned about scams in super. The existence of members with significant assets who are lacking in financial literacy creates an opportunity for scammers. Retirement is of greatest concern given that the balances tend to be larger, the assets can be immediately withdrawn, and the vulnerability of many retirees is heightened by cognitive decline. The Australian Competition and Consumer Commission (ACCC) observes that older Australians are the group most vulnerable to scams. Another related concern in the retirement phase is elder abuse. SMSFs seem like a particular weak point in the system, noting that the members are also typically the trustees and assets can be sizeable. While assets are preserved in accumulation, it may still be possible to bleed a member's account through identity theft or convincing them to switch into a vehicle that directs the funds offshore or into inappropriate products.

Evidence so far

Publicly available evidence of scamming activity is limited, but the signs are there. Aware Super warned members in March 2024 that super was being targeted by cybercriminals, and that it had prevented $36 million in scams over the last 12 months. ASIC warned in May 2024 that it was detecting high-pressure cold calling tactics and social media click-bait leading to switching of super into high cost or high-risk products. Scammers were also active in exploiting the early release of super scheme during the COVID period. We fear these incidents are the tip of an iceberg.

Capacity to detect and mitigate scams

The extent to which the super sector has effective capacity to detect and mitigate scams is unclear. Controls against scams may exist to the extent that the member's fund is able to identify scamming activity or take steps to ensure that the recipient bank account or investment vehicle is *bona fide* when a transfer is requested. We suspect that some funds have not yet enabled security measures such as multi-factor authorisation, which APRA now requires where it is necessary to protect important information. Further, our concerns over the state of super fund operational infrastructure raises question marks over the capacity of funds to detect and mitigate scamming activity.

There are signs that the threat of scams is receiving very close attention. In particular, the Australian Government has been focusing on increasing scam protections, led by Treasury and Minister Stephen Jones MP. In July 2024, the Financial Services Council issued a standard on *Fraud and Scam Mitigation Measures for Superannuation Funds*. Putting in place measures will take time, and scam protection is ultimately a never-ending arm-wrestle with scammers.

Summing up

The risk of scammers causing member harm is a major concern for individual members, but not necessarily a systemic issue. While scams (and fraud) may cause significant harm to individual fund members who are affected, it is not clear that the impact would be widespread member losses or disruption to the economy or financial markets. Scams (as well as fraud) could have broader impacts on confidence and trust, which we discuss in Section 4.8. On balance we view scams as being of high probability of occurrence, but the impacts likely to be of low magnitude from a systemic perspective.

4.7 Possibility of disruptive policy change

This section reminds that policy change is always a possibility and can have broader impacts.

Examples of policy changes that might occur

While not wanting to speculate too far, below we highlight four possible policy changes that might occur and could have significant impacts on how super funds operate, what they deliver to members, and how they interact with the Australian economy and markets. We make no comment on the merits or likelihood of these policy measures.

- **Change in the taxation arrangements around super** – Changing the tax arrangements around contributions or the retirement phase could impact on the wealth created through super and the amount of cash the sector has to invest. Much depends on how any tax changes are implemented, including whether they form part of a broader package.
- **Preservation** – A Coalition government might loosen the preservation rules motivated by a philosophy that the assets belong to members who should thus have a greater say in how their savings are deployed. The Opposition is considering a policy of allowing greater access to super to help support home purchase, which while a modest proposal in itself, could be a forerunner to other changes. The implication would be reduced funding certainty for super funds, and perhaps outflows from the system resulting in less cash to invest.
- **Early release** – It is not impossible that an Early Release Scheme similar to that during COVID could be revisited in response to a major economic crisis. While considered by many as a 'last resort' measure, it might be viewed by the government of the day as an expedient way to relieve pressure on Australian households that could be politically popular. Whether there would be any significant impacts is a moot point, noting that RBA (2021) found the industry handled the early release of super in response to COVID relatively well.
- **Investment direction** – Another possibility is that super funds are given strong direction on how they should invest, which could have unintended consequences. For instance, it could raise sector exposure to particular types of risk including home bias (see Section 4.3). Although there are currently no plans to do so, we note that the current Labor Government has expressed a desire to see super funds invest more in 'national building projects' such as the energy transition and social and affordable housing[45].

Summing up

We would like to think that policymakers would avoid making disruptive policy changes with significantly negative systemic impacts, especially where changes are made either at short notice or retrospectively and hence afford super funds little or no time to prepare[46]. Nevertheless, policy changes that have adverse effects can never be totally ruled out, given that politics can sometimes dominate over economic rationality and not all policy impacts are foreseeable.

[45] Interestingly, at a Conexus event in Canada during May 2024 there was discussion of how the very successful Canadian pension model may be under siege along similar grounds.
[46] Both the introduction of the YFYS performance test and the Early Release Scheme following COVID were of this nature.

4.8 Reliance on confidence and trust

The super industry relies on confidence and trust to operate effectively to a least some degree. Confidence and trust support the ability of funds to assist their members, who become more willing to accept any products and guidance being offered when they consider the source to be trustworthy. Any undermining of confidence and trust could lead members to take actions aimed at protecting themselves that ultimately prove costly or act to reduce the efficiency of the system. The super system will work better under a situation where members are willing to rely on the super industry … *and* the industry acts in ways that this faith is justified.

What could undermine confidence and trust

Some developments that could lead to a loss of confidence or trust by members include:

- *Large, sustained reductions in super balances stemming from exposure to economic and market risk (see Section 4.1)* – Members could lose faith in super upon suffering large losses. Poor performance by a large fund might also have broader impacts and will be discussed in Section 6.2.
- *Significant operational problems related to poor infrastructure (see Section 4.5) or service suppliers (see Section 4.4)* – Examples of developments include failure to protect members from a cyberattack or administration errors that lead members to doubt whether their super is secure.
- *Scams (see Section 4.6) or fraud* – Losses from scams or fraud committed from within a super fund could be impactful on members and undermine confidence and trust if blame for the loss is attributed to failure by the fund or the industry at large.
- *Actions that lead to super funds being perceived as untrustworthy* – Examples of action that could undermine trust include malfeasance, highly visible legal action by regulators over matters of deep concern, overcharging members, or ESG breaches that are deemed highly unpalatable.
- *Overstating of problems by traditional or social media* – The media might give impetus to loss of confidence or trust in how incidents are reported. While calling out specific problems with the super industry or funds is constructive, drifting into inflammatory language that creates fear or encourages the perception that the industry at large is failing (when this is not the case) could act to undermine confidence and trust.
- *Government or regulators over-playing their hand* – While it is important that the industry is held to account, public criticism by the authorities is a two-edged sword. On one hand, it can enhance confidence by sending the message that super funds are being closely monitored and required to operate in members best interests. On the other hand, heavy-handed criticism might undermine trust in super funds and thus confidence in the super system. Poorly conceived or constant policy change (see Section 4.7) could also undermine confidence in the super system.

Implications of a loss of confidence or trust

While any loss of confidence or trust would be disruptive, it is not clear how significant systemic impacts would result. The main potential for meaningful impacts would be if many members responded to loss of confidence and trust in super by attempting to take control and either make decisions for themselves and/or manage their assets directly, despite being poorly equipped to do so. Some members may also turn to poorly informed sources for guidance, such as family, friends and social media.

An example of poor decision making would be widespread switching towards investing too defensively in reaction to large losses, which could reduce wealth accumulated over time and perhaps alter the nature of funding that super funds provide to businesses. On the other hand, wholesale switching of this type seems unlikely given that history suggests the vast majority of

members have remained relatively inactive during times of market stress[47]. Wholesale outflows from the system also seem unlikely for reasons outlined in Section 5.1.

In short, the main implication of a loss of confidence and trust in super would be to reduce the effective operation of the system. This could incur additional costs at the margin but is unlikely to qualify as a systemically important event.

Summing up

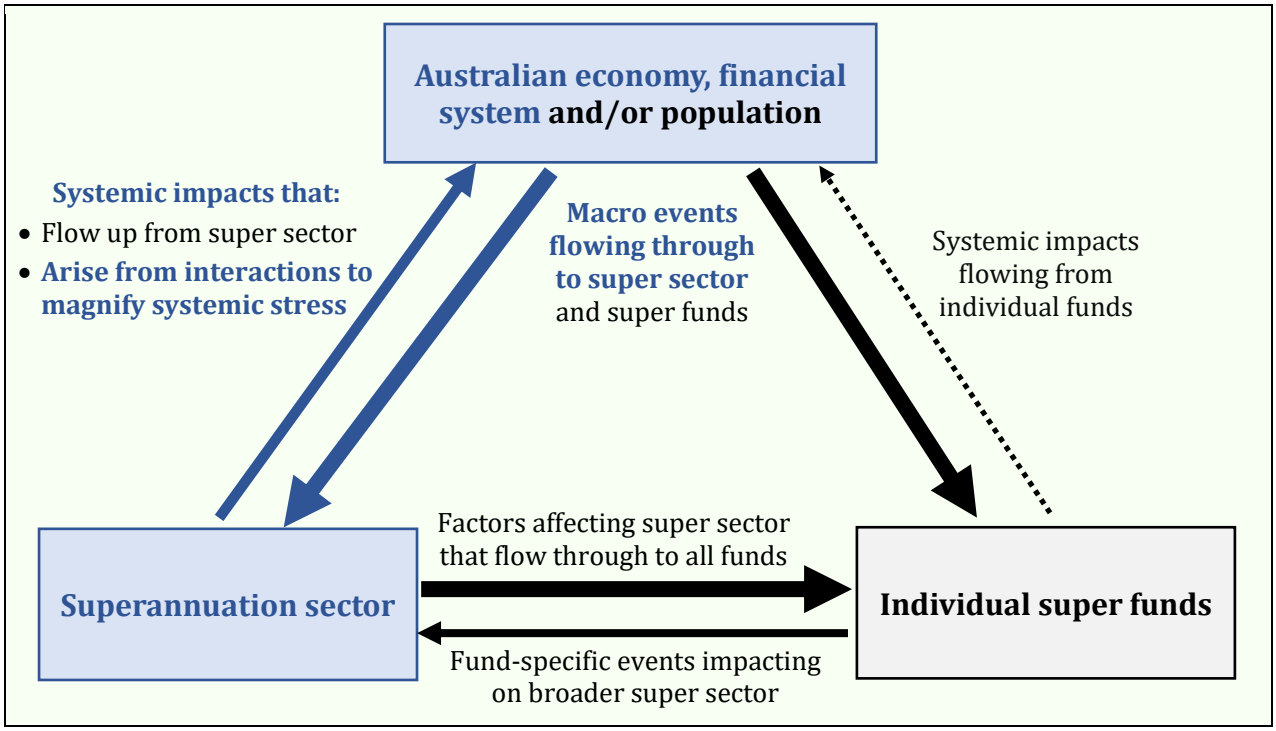
While a loss of confidence and trust could have some detrimental effects on the operation of the super system, it is difficult to see how significant systemic impacts would result.

[47] Switching behaviour remained very low in response to both the GFC and COVID. For example, Gerrans (2012) finds that less than 7% of members from five super funds switched investment options during two-half years covering the GFC. Butt et al. (2024) estimate that 3.4% of members of a large super fund switched options during a 3-month period when COVID was declared a pandemic with 81% making defensive switches.

Part 5. Interlinkages with the broader economy and financial system

In Part 5 we consider impacts that could arise from interlinkages between the super sector and the broader economy or other parts of the financial system. Figure 15 frames up the interactions considered as highlighted in **blue**.

Figure 15: Framing the interactions examined in Part 6 (as appearing in blue)



Six topics are discussed:

- Why we consider the super sector as an unlikely *source* of systemic risk (*Section 5.1*);
- Extent to which super might *magnify* system stresses arising from other sources (*Section 5.2*);
- Possibility of a liquidity squeeze within the super sector, and the potential implications for the Australian economy and financial markets (*Section 5.3*);
- Reliability of super as a source of funding, focusing on impacts that could flow from super withdrawing from funding an asset class (*Section 5.4*);
- Potential impacts on depth and resilience of financial markets stemming from super funds tending to invest in a similar fashion (*Section 5.5*); and,
- Whether the growth in super may have contributed to a structural shift in Australia's balance of payments, interest rate structure and the behaviour of the A$ (*Section 5.6)*.

The tenor of the discussions is that impacts flowing from the above matters are often debatable and unlikely to be systemically important. For instance, we consider super as an unlikely source of systemic risk in its own right, and suggest that whether super could be a magnifier or dampener of systemic stress arising from other sources will depend on the situation. A scenario where super encounters a system-wide liquidity squeeze that results in significant systemic stress seems quite unlikely but cannot be ruled out entirely. We see some potential for the super sector to act as a volatile funding source, being the source of some deterioration in market depth and resilience, and contributing to structural change in Australia's external interlinkages. In each case the effects are likely to be modest. On balance, we see no clear reason to expect major systemic impacts to flow from any of the matters addressed in Part 5.

5.1 Super an unlikely source of systemic risk

This section discusses whether the super sector could act as a *source* of systemic risk due to linkages with the Australian economy or financial markets, noting that Part 4 discussed impacts directly arising from the super sector itself. We conclude that super is an unlikely source of significant stress that then spreads to the broader system. The prime reason is that it is hard to identify mechanisms through which problems within super sector can compound into significant economy-wide disruption such as a major recession or a system-wide financial crisis. While problems arising from the super sector may impact many fund members (as discussed in Part 4), any effects should remain largely localised within the super sector rather than spur contagion.

'Super ain't banks'

As a source of systemic risk, 'super ain't banks'. Appendix 2 explains how the bank sector can potentially act as a major *source* and *propagator* of systemic risk. This stems from a combination of high leverage, potential for bank runs, interconnections that act as conduits for contagion, and the possibility of credit creation turning into credit destruction and debt-deflation. Appendix 2 also outlines how the features that establish banks as propagators of systemic risk are largely absent in Australia's mainly DC[48] system. Specifically, super funds invest in assets on behalf of their members, with the members bearing the risk. Further, they are not permitted to leverage directly[49] and hence cannot incur complete loss of capital. Super funds may perform poorly, thus leading to members incurring partial loss of their capital (in particular, see Section 4.1 on exposure to economic and market risk). However, super funds are highly unlikely to fail and drag the system down with them.

Asset sales in response to broad-based outflows or switching

One mechanism through which systemic stresses might be sourced from super is where the sector becomes a major seller of assets as a consequence of broad-based outflows or member switching. In this section we discuss whether such selling could have flow-on systemic effects. Relatedly, Section 5.3 investigates the potential for broad-based redemption or switching to generate a liquidity squeeze. Part 6 subsequently addresses the possibility of a run on a major fund. We note for now that we view both widespread redemptions from the super sector or a run on a fund as unlikely events, and if they do occur, any adverse systemic impacts should be quite manageable.

It is difficult to identify channels through which selling by super funds due to wholesale redemptions or switching into defensive assets can cause significant system stress. Three possible effects include:

- **Transfer of assets and potentially wealth** – Any assets sold by super funds would be transferred to other investors. This would entail transaction costs and potentially a transfer of wealth from fund members to the purchasers if super funds are forced to sell assets 'cheaply' to raise liquidity. The transaction costs should not be systemically important, while any asset and wealth transfers seem unlikely to have any meaningful systemic effects. One caveat is that there could be a wealth transfer from Australia to overseas if assets are sold too cheaply to overseas investors.

- **Wealth effects from declines in asset prices** – While asset price declines fuelled by super fund sales might give rise to negative wealth effects, the economic impacts are likely to be modest. The RBA estimates that a 1% change in stock market wealth results in a 0.12% change in the *level* of

[48] In 2023, DB funds stood at 12% of total super assets according to WTW Thinking Ahead Institute's *Global Pension Assets Study 2024*, and 13.7% of assets for APRA-regulated funds according to the APRA Annual fund-level superannuation statistics for June 2023 The bulk of DB funds are in the public sector. For example, only 2.9% (or $73 billion) of assets in APRA-regulated funds were DB funds with a non-government sponsor.

[49] Leverage is permitted if secured against assets on a non-recourse basis, and super funds invest in vehicles and company structures that are leveraged, e.g. hedge funds, private equity, and property. The effect in both cases is to limit potential losses to the amount of 'equity' capital invested.

consumption over the longer run (see May et al., 2019). Broader economic impacts from reduced consumption would be diluted by factors such as consumption being about 52%[50] of domestic demand, offsets from reduced imports and any policy easing, and any asset price impacts being concentrated in investments that super funds happen to sell rather than across the board. Allowing for these factors, a decline in growth assets of 10% as a consequence of selling by super funds might reduce the level of domestic demand by around 0.4%. There are also limits on the extent to which transitory selling pressure can lead to sustained price declines in the absence of deterioration in fundamentals, which should help limit the magnitude of any longer-term impacts.

- **Availability of new funding** – The availability of new funding from super funds could dry up within asset classes being liquidated, at least until the effect of fund outflows has played through. The impact will depend on when the businesses in relevant sectors will be seeking additional funding, and availability of alternative funding sources. In many cases, the impacts will be both modest and distributed over time as business operations continue on regardless and other funding sources are sought (including using retained earnings). An area of vulnerability may be short-term debt roll-overs, which we discuss next.

Withdrawal of short-term debt funding

Short-term debt roll-overs may become a point of systemic vulnerability if the super sector starts drawing on its cash reserves at large scale, perhaps to satisfy redemptions (discussed above) or meet cash calls on FX hedging (see Section 4.2 and Section 5.3). According to the RBA (2024), super funds directly hold nearly one-third of bank short-term debt securities[51]. Super funds may also hold short-term debt of other entities such as corporates. Failure to roll-over this debt may result in funding pressures within the banking system and elsewhere, especially if entities involved cannot secure alternative funding. Banks may be able to seek funding via either deposits, offshore sources or the RBA, although some corporates may struggle. One consequence could be increased funding costs. Nevertheless, it seems unlikely that contagion would be the result given the existence of alternative funding sources (particularly for banks) and scope for the authorities to react (discussed next).

The authorities are unlikely to stand idly by

If the financial system was at risk of a major systemic event as a consequence of the super sector becoming a forced seller of significant assets or withdrawing from short-term debt markets, the authorities are likely to act. The RBA has the power to ensure that the banking sector remains funded. It might even extend asset repos or the discount window to super funds if the situation was sufficiently dire. APRA can provide relief from the portability requirements (i.e. freeze redemptions) under SIS regulations 6.36 and 6.37. This facility was used during the GFC and could be deployed again to provide a break on super fund outflows[52].

Summing up

While one should 'never say never', it is difficult to imagine a chain of events where issues originating in the super sector can spread to other sectors and result in significant systemic stress. Barriers include: fact that super fund members directly wear any wealth loss; absence of leverage in super; the notion that outflows from super would result in assets being transferred; and potential for the authorities to take action if the worst threatens. Adverse impacts may emerge from any negative wealth effects and possibly pressures on entities relying on super funds for new funding, notably short-term debt. Nevertheless, it is difficult to see how the outcome would be major stress being placed on the Australian economy or financial markets.

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[50] At current prices in year to September 2024 based on ABS National Accounts data.
[51] RBA (2024) also notes that super funds hold over one-quarter of equity issued by domestic banks. Any transfer of these holdings to other investors seems inconsequential from a systemic perspective.
[52] This might buy some time but could heighten desire of members to get their assets out as soon as they can.

5.2 Super a possible magnifier of systemic stress

Section 5.1 discounted the possibility of super as a *source* of systemic risk in its own right. We are more open-minded to the possibility that the super sector could act as a *magnifier* of systemic stress that emerges from other sources. There are also contrary arguments that the super sector could act as a stabiliser. We see both possibilities as feasible depending on the situation.

Systemic stress scenario

Systemic stress episodes are more likely to arise from a confluence of events. For instance, systemic risk episodes are prone to occur in conjunction with a global economic and/or market crisis with multiple causes and broad-based implications, such as the GFC of 2008-9. Figure 16 frames up such a scenario and highlights some actions that super funds might take that could see the sector acting as a either a stress magnifier or a stabilising force. The key take-away is that actions taken by super funds could pull in either direction. Much depends on the dominant factors at play at the time.

Figure 16: How super funds might behave under a systemic stress scenario

Scenario	Super as a stress magnifier	Super as a stabilising force
• Recession in global and Australian economies • Significant asset price declines - Negative wealth effects - Reduced funding availability • Substantial A$ weakness[53] • Reduced liquidity in asset markets • Widespread switching from growth to defensive assets • New outflows from super due to: - Government broadens access to super under financial hardship - Effects flowing from rising unemployment and retirement • Banking sector under pressure - Need to recapitalise as housing corrects and bad debts rise - Short-term debt funding issues	• Outflows and member switching and related assets sales heighten: - Asset price declines and hence negative wealth effects - Limited funding availability, especially for illiquid growth assets - Outflows lessen scope to fund bank short-term debt • A$ weakness leads to large cash calls on FX hedges, resulting in: - Heightened need to sell assets - Lessened scope to fund bank short-term debt	• Moves to exploit opportunities in asset markets most under stress through SAA adjustments • Rebalancing leads to purchase of: - Assets most under price pressure - Australian assets, reflecting rebalancing following A$ decline • Funding provided to business by participating in deeply discounted capital raisings (as during the GFC) - Includes bank recapitalisations • Defensive switching improves scope to fund bank short-term debt

Discussion of why it could go either way

A key take-away from the above scenario is that actions taken by super funds during a systemic stress episode could pull in either direction. Much will depend on the dominant factors at play at the time. We offer two examples to help explain why super could act as either a magnifying or stabilising force.

[53] This assumes that the A$ remains traded as commodity-based 'risk-on' currency. The possibility that this may have changed is discussed in Section 5.6.

Example 1: Asset allocation vs member activities

The first example relates to the balance that is struck between asset allocation activities and any outflows and member switching. Rebalancing is an important mechanism through which super funds can act as stabilisers as it requires buying assets that have fallen too far while selling assets that have held up. Consider a 70/30 fund that encounters a -20% return for the growth component and a +5% return for the defensive component, resulting in a net return of -13%. Rebalancing back to a 70/30 mix requires 5.7% of the portfolio to be switched from defensive to growth assets, in the absence of any cash flows. If rebalancing activity is undertaken across the $2 trillion of assets (about two-thirds of institutional super funds), around $114 billion of growth asset purchases and defensive asset sales would be required. In addition, super funds might choose to adjust SAA to favour asset classes that have fallen too far and appear cheap. This could further buffer their role as a stabiliser.

However, the need to purchase growth assets for rebalancing can be reduced or even neutralised if there are either significant outflows[54], defensive switching by members, or some combination of the two[55]. For instance, outflows may be taken out of the defensive component to facilitate rebalancing. Under the above example, outflows equal to 8% of assets would offset any need to purchase growth assets. The extent to which reduced inflows or even outflows and/or member switching is encountered during the episode will determine the extent to which super funds can behave as a stabilising force through either rebalancing and/or adjusting SAA at the margin, versus acting as a magnifying force through asset sales and cutting funding (as discussed in Section 5.1).

Example 2: Funding of bank short-term debt

Our second example of offsetting forces relates to the capacity of the super sector to fund bank short-term debt under a systemic stress episode. Outflows and/or the need to meet cash calls on FX hedges could reduce the scope for super funds to fund bank short-term debt. On the other hand, member switching into defensive options could increase the sector's scope to fund bank debt. Other factors may also be at play that help determine whether super funds withdraw from funding the banks, including: capacity of super funds to sell overseas assets to satisfy the cash calls on FX hedges; impact of operating in what might be less liquid markets on ability to liquidate assets; the extent to which concerns over bank defaults causes wariness over holding bank debt; the interest rate spreads that banks offer to attract wholesale funding; and, the extent to which the authorities are willing to offer support (either explicit or implicit) to super funds in participating in funding bank short-term debt. In sum, whether super funds remain ongoing funders of bank short-term debt will depend on the factors at play at the time.

Summing up

While the super sector is an unlikely source of systemic risk, whether it could dampen or magnify any existing system stresses is unclear and largely depends on the circumstances. Basically, it could go either way. In any event, the potential actions that could be taken by the super sector seem likely to have a marginal rather than significant effect on how the stresses play through the economy and financial system.

Our discussion in this section outlines potential interactions and channels between the super sector and the broader financial system but provides only limited analysis. APRA has announced it will be undertaking financial system-wide stress tests in 2025, which should involve in-depth modelling. It will be interesting to see if their findings confirm our conclusions or otherwise.

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[54] The outflows may be taken out of the defensive component to facilitate rebalancing. Under the example, outflows equal to 8% of assets would offset any need to purchase growth assets.
[55] See Section 5.3 for further discussion and analysis of the potential for outflows and switching.

5.3 Possibility of a sector-wide liquidity squeeze

A liquidity squeeze involving super funds is being cited as a potential systemic risk. For instance, both IMF (2024) and RBA (2024) refer to potential for liquidity pressures, with the RBA (p35) citing the possibility that "*capital calls on private asset exposures, abrupt policy shifts (like the introduction of the Early Release Scheme) or margin calls on foreign exchange hedges – could lead to synchronised asset sales in some domestic markets as funds attempt to raise cash quickly*". We first outline why a meaningful liquidity squeeze is an unlikely scenario, then present some analysis to illustrate the impacts if it were to occur. In short, we see a liquidity squeeze within the super sector as a minor systemic risk, given that it is an unlikely event that would only have modest adverse consequences on the broader system if it were to occur.

Potential for a sector-wide liquidity squeeze

We first discuss relevant factors in the potential for the super sector to encounter a liquidity squeeze as a consequence of widespread redemptions or switching of investment options. Switching is relevant because any liquidity strains can stem from difficulty in trading the assets required to give effect to the switch where those assets are relatively illiquid[56].

- **Underlying inflows** – Cash inflows act to limit the scope for liquidity pressures as they can be deployed to meet any liquidity needs, albeit over time as cash flows are received. The super system is currently in net inflow and expected to remain so for the foreseeable future (until around 2037 according to estimates provided to us by Deloitte). Our own estimates drawing on Figure 6 suggest that net cash to invest (including investment income received) as percentage of assets may currently be running at around 3.5% per annum, combining cash to invest by the APRA-regulated sector of 4.2%-4.4% p.a. and an allowance for net cash to invest of 1% p.a. for the SMSF sector.

- **Preservation during accumulation** – Members generally cannot access their super during accumulation. While access to super may be granted on financial hardship or compassionate grounds, outflows from this source are likely to be minor. The implication is that assets in accumulation must remain within the super system, and hence will not contribute to a sector-wide liquidity squeeze unless there is a major policy change (discussed below).

- **Access during the pension phase** – We estimate that assets in the pension phase exceed 30% of total system assets[57]. The propensity to take funds out of super in retirement should be restrained by many members preferring to have their retirement savings either professionally managed by a super fund or retained in their own SMSF[58], and any desire to retain access to the zero-tax status of a retirement account. These considerations might be more important to members with larger balances, thus buffering the propensity for pension assets to be retained within the super sector. Nevertheless, access in the retirement phase is in theory a source of potential outflows, and one which is only likely to grow over time as the system matures.

- **Switching to SMSFs** – Members could choose to take their assets out of APRA-regulated funds in favour of SMSFs. This is more likely to occur upon widespread loss of confidence or trust in the APRA-regulated sector (see Section 4.8). While this merely changes the structure through which super savings are held, there may be some flow-on effects. First, it could give rise to liquidity

[56] Illiquidity in growth portfolios may stem from unlisted assets such as property, infrastructure and PE and illiquid sectors within listed markets such as small caps and emerging markets, and in defensive portfolios from assets such as credit securities and private debt. Liquidity may also vary with market conditions.
[57] Bell and Warren (2024) estimate that 17.7% of total assets for APRA-regulated funds were held in pension accounts as at June 2023. The ATO estimates for FY2020-21 places 64% of SMSFs in pension phase. Allowing for 50% of non-APRA-regulated public sector funds (which could be an understatement) and applying sector asset weights suggests that 31% of system assets are in the pension phase.
[58] Our calculations indicate that SMSFs hold in excess of half the system assets in the pension phase.

pressures within the APRA-regulated sector. The scope for members of APRA-regulated funds to start up their own SMSFs should be constrained by many members lacking the confidence or desire to manage their own super, as well as limits on the availability of service suppliers in particular financial planners to assist with SMSF establishment.

- **Switching of investment options** – Widespread switching from growth to defensive investment options could occur in response to major fears over the outlook for the world economy or financial markets, in line with the scenario painted in Section 5.2 (see Figure 16). The likelihood of substantial switching of this type is somewhat limited by member inertia, which we discuss next.

- **Inertia by fund members** – Inertia is perhaps the most significant factor acting to mitigate the potential for broad-based redemption of funds from super or switching of investment options. There is strong evidence that the vast majority of members remain inactive even in times of market stress. Gerrans (2012) and Butt et al. (2024) find that the percentage of super fund members switching investment options remained well below 10% in both the GFC and COVID. A further evidence point is the lack of member switching in response to YFYS test failures, with one study finding that only around 3% of assets were switched out of underperforming funds over the first two test rounds. Reasons why members might fail to react to developments include disengagement and (perhaps more importantly) limited understanding of the available alternatives.

- **Policy change** – Section 4.7 identified two policy changes that could give rise to liquidity pressures being placed on the super sector: a Coalition government loosening the preservation rules, including allowing access to super to help support home purchase; and revisiting of the Early Release Scheme during an economic crisis. Liquidity stress placed on the super system from a change of policy should remain manageable in the absence dramatic policy change permitting large outflows that is unexpected and occurs over a relatively short period of time. We discuss the COVID episode below as a test case, noting that it included early release of super and that the industry handled the situation relatively well. There is a reasonable possibility that policy change would not be pursued to the extent that it risked major liquidity pressures being brought to bear.

- **Liquid assets can be sold to satisfy cash requirements** – Super funds have the option to sell their liquid assets to initially meet any cash calls, and then address unlisted component over the course of time. This is *a critical point* in understanding why the potential is limited for a liquidity squeeze to manifest into a systemic event. Selling more liquid assets addresses immediate liquidity needs. The main consequence[59] is that the remaining portfolio is left 'out-of-shape', deviating from target asset weights, particularly in the split between liquid and illiquid assets. The remaining portfolio would likely carry higher liquidity risk and greater valuation uncertainty. The super fund could also be left exposed to increased tracking error relative to the YFYS performance test benchmarks[60] and peers. The potential implications of cash calls are a function of the amount of illiquidity in the portfolio. The APRA-regulated sector had about 19% in unlisted assets according to APRA data from September 2023 (see Figure 13, Section 4.1). Effective illiquid exposure would be higher as the APRA data only accounts for certain asset categories and does not capture illiquid assets residing within listed asset sectors (e.g. small caps, corporate debt). For a rough guide, let's assume total sector exposure to illiquid assets of 30%. Outflows equal to 10% of the portfolio that are satisfied by sales of liquid assets would result in portfolio weights in illiquid assets moving up from 30% to 33.3%. While positions that deviate from target to this degree may be uncomfortable, they hardly seem a major cause for concern. We further explore these issues below in the context of a market scenario that represents something of a 'worst case'.

[59] Another consequence as discussed in Sections 5.1 and 5.2 is that price pressure from super funds could result in the liquid assets being sold trading at a discount to fundamental value, resulting in a wealth transfer from super fund members to the buyers.

[60] Super funds can adjust their SAA on a quarterly basis for performance testing purposes, which may help limit any tracking error to the YFYS test. Deviations from the YFYS benchmark indices may still remain.

- **Super funds can borrow short term to meet redemptions** – Section 97 of the SIS Act permits super funds to borrow up to 10% of assets for 90 days for the purpose of enabling the trustee to make a payment to a beneficiary where they are required to do so by law, i.e. meet redemptions. While most funds might use this facility reluctantly, it is available if required.
- **Funds have some latitude to extend redemptions** – Under Regulation 6.34A of the SIS Regulations, super funds may extend redemptions up to a period to 30 days in the case of illiquid investments (or longer with the consent of the member).

On balance, the likelihood of major outflows or member switching seems modest, at least in the absence of a change in policy that significantly increases access to super. Any in any event, significant outflows are unlikely to give rise to a major liquidity squeeze but rather result in an out-of-shape portfolio. The next sub-section presents and discusses some 'worst case' estimates, with the subsequent sub-section providing some scenario modelling.

'Worst case' estimates of liquidity pressures from outflows and switching

Figure 17 presents 'worst-case' estimates to gauge the potential magnitude of liquidity pressures within the super sector under a scenario similar to that presented in Figure 16. Our estimates do not consider the possibility of significant policy change such as early release of super or liquidity needs arising from FX hedging. (FX hedging is incorporated in the scenario below.)

Two situations are modelled that capture the impact of member actions in terms of either withdrawing or switching their super. We then notionally adjust for available cash flows to invest over the course of a year assuming they are 75% of the baseline rate estimates from Section 2.3. The first situation involves outflows from pension accounts coupled with switching by members of institutional funds to SMSFs. The second situation captures wholesale switching from growth assets to defensive assets, which might occur under deep concerns over the economic or market outlook. We allow for significant member activity with respect to pension and choice accounts, and limited activity for MySuper default funds. While the assumptions amount to something of a 'finger in air' and need to be approached with caution, they nevertheless help establish that even more extreme liquidity scenarios should remain manageable for the super sector.

Figure 17: 'Worst case' outflows from super system and switching to defensive assets

Based on APRA data as at September 2024	Assumed baseline	(A) 'Worst case' system outflows, incorporating transfers to SMSFs		(B) "Worst case' switching of growth into defensive assets		
	$ billion	% of sector	Flows ($ billion)	% of sector switching	% assets switched	Growth asset sales ($ billion)
Member-driven asset flows	*Assets*					
MySuper	1075	-2.0%	-22	-5.0%	-3.5%	-38
Pension accounts*	624	-20.0%	-125	-20.0%	-14.0%	-87
Other, including choice	1360	-10.0%	-136	-15.0%	-10.5%	-143
Institutional funds	***3059***	***-9.2%***	***-282***	***-12.5%***	***-8.8%***	***-268***
SMSFs	1024	15.4%	157	-20.0%	-14.0%	-143
TOTAL	**4083**	**-3.1%**	**-125**	**-14.4%**	**-10.1%**	**-411**
Adjusted for cash flow to invest	*Cash flow*					
Institutional funds @ 3.2%**	98	-6.0%	-184		-5.6%	-170
SMSFs @ 0.75%**	8	16.1%	165		-13.3%	-136
Total inc. cash flow to invest	**106**	**-0.5%**	**-19**		**-7.5%**	**-306**

** Baseline assumes 18% of APRA-regulated fund and 50% of non-APRA-regulated assets in the pension phase*

*** Baseline cash flows to invest reduced 25% relative to estimates appearing in Section 2.3 for balance of unemployment, increased retirements, lower investment income and capital loss tax benefits*

Situation A: Worst case system outflows and transfers to SMSFs from APRA-regulated funds

This situation entails institutional funds encountering a 20% withdrawal of pension assets along with about $157 billion or 6.5% of the accumulation assets of institutional super funds being transferred into SMSFs, which increases SMSF assets by 15.4%. The result is modest system outflows of -3.1%. This converts to a small outflow of -0.5% after adjusting for cash available to invest from net inflows, investment income, expenses and tax. The outflows from institutional funds, however, are somewhat significant at -9.2% of assets and -6.0% adjusted for cash available to invest. While such outflows would require close management, two factors should limit the liquidity pressure placed on institutional funds:

- Any transfers to SMSFs would be paced by the extended time it would take for members establish SMSFs. This would give institutional super funds breathing space to accommodate the outflows.
- Any outflows from institutional funds may be satisfied through the sale of liquid assets (as discussed above). Assuming a total weighting in illiquid assets of 30%, the weight of institutional funds in illiquid assets would rise from 30% to only 33% under this particular situation.

This situation is of limited concern from a systemic perspective, with potential impacts being insignificant for the super sector overall and quite manageable for the institutional sector.

Situation B: Worst case switching of growth into defensive assets

Under this situation we allow for aggressive switching from growth to defensive assets well in excess of any historical experience. Our modelling assumes a notional portion of the assets within each industry sub-sector being switched from 70/30 options to 100% defensive options, e.g. cash. The amount of assets switched under the assumption equals 10.1% of super system assets and 7.5% adjusted for cash to invest. The institutional super fund sector fares better that SMSFs due to the presence of MySuper options and access to greater cash flows to invest, with switches within the institutional sector totalling to 8.8% of assets and only 5.6% adjusted for cash to invest. Although growth-defensive switches could potentially occur over a shorter time frame than the sector outflows analysed under situation A, the magnitudes involved suggest that a major liquidity squeeze is unlikely to eventuate.

Scenario modelling and our prior research

We investigate a liquidity stress scenario using models and definitions that were framed up by the Conexus Institute in a research project undertaken in collaboration with the CFA Society Australia. The scenario combines various impacts to represent something of an extreme case.

The Conexus Institute research project defined two orders of liquidity risk. The first order issue is the ability to meet liquidity demands as and when they fall due (i.e. fund solvency). Second order liquidity issues comprise the following:

- Changes in portfolio quality during and post the liquidity event, i.e. 'out-of-shape' portfolios
- Time required to restore portfolio quality
- Costs associated with restoring portfolio quality
- Member inequities arising from 'stale' pricing of illiquid assets.

As discussed above, the first order issue is unlikely to be a major concern given that there are sufficient liquid assets in super fund portfolios that can be sold at relatively short notice to meet any immediate liquidity demands. We view the second order issues as more relevant. While these issues have arguably been given insufficient attention in the past, APRA is requiring greater focus under SPS 530. Nevertheless, we argue that they are unlikely to qualify as systemic risk issues, although they remain quite relevant from an individual fund perspective.

Scenario framing

To confirm that a systemically important liquidity squeeze is unlikely, we design a liquidity stress scenario that broadly represents the institutional super sector and is calibrated to a market environment similar to that during the GFC. Key scenario assumptions are listed in Breakout box #2 (see over). The assumed market movement are quite large and extended (unfolding over 18 months) and coincide with 2% in net outflows and 7% in member switching to defensive options. We have also allowed for FX hedging of 33% of total assets or about twice that reported on Figure 13.

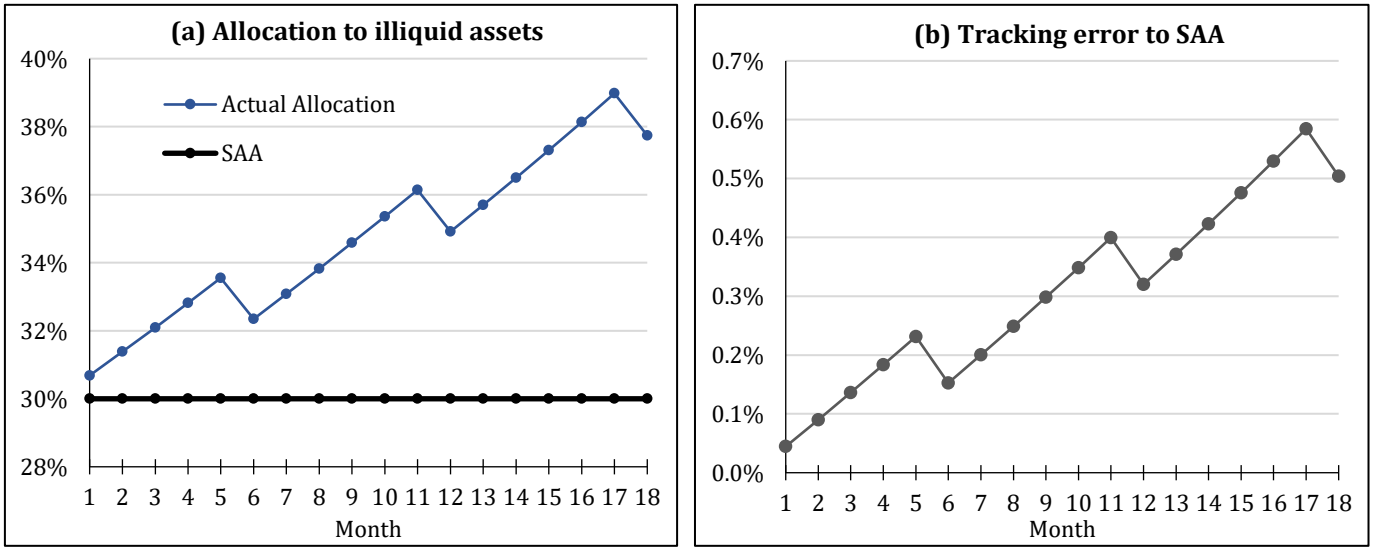
Breakout box #2: Liquidity stress scenario – Key assumptions

- **Time frame of event** – 18 months
- **Market movements** – Deterministic changes as follows:
  Liquid defensive assets: +1.0% monthly, +19% cumulative (i.e. compounded)
  Liquid growth assets: -2.8% monthly, -40% cumulative
  Illiquid assets: -1.4% monthly, -22% cumulative; with periodic revaluation
  Australian dollar: -1.9% monthly, -29% cumulative
- **Illiquid assets** – 30% of the portfolio prior to event; 5% cost to transact (1.4% cumulative impact)
- **FX hedging** – around 33% of total assets (with variation across sectors)
- **Member switching to defensive assets** – 0.4% per month, amounting to 7% cumulative
- **Flows** – Net outflows of -0.11% per month (-2% cumulative impact), comprising 0.33% per month 'normal' flows with -0.45% impairment due to reduced employment and some early release
- **Fund activities** – Operate off reported values for unlisted assets; cashflow requirements (switching, redemptions and FX) met by selling liquid assets; re-balancing among liquid assets to maintain a growth-defensive target.

Scenario results

Figure 18 presents two of the key results. Figure 18(a) on the left shows that the allocation to illiquid assets rises to around 38% or 8% above target SAA. This is an indicator of how far the portfolio gets out-of-shape relative to target. Figure 18(b) on the right indicates that tracking error to SAA reaches about 0.5%-0.6%. This may be taken as an indication of the risk of failing the YFYS test if deviations from SAA turn out to be on the wrong side of the market.

Figure 18: Modelled portfolio parameters under the liquidity event scenario



Neither result indicates any cause for concern over major illiquidity-related strains on super funds. Exposure to liquid assets does not fall below 60%, meaning that the representative fund never comes close to facing any solvency issues (i.e. the first order issue). Regarding second order issues, the deviation from SAA reaches uncomfortable levels but remains manageable in terms of both portfolio quality and risk of YFYS failure. In unreported results, we estimate that the degree of portfolio mispricing is limited to 2.5%-3%, which amounts to moderate potential for member inequity.

While liquidity stress is broadly manageable under the above scenario, two developments might challenge this finding through a more sizeable impact on liquidity demands or the supply of liquidity in the marketplace. Government policy enabling more broad-based access to their super savings than the modest amount we have allowed is an obvious candidate for a liquidity demand factor. Another possibility is where supply of liquidity in the marketplace is extremely impacted by a prolonged period of stock exchange downtime[61] or a breakdown in the workings of the government bond markets, thus restricting super funds from selling even their liquid assets. It is difficult to imagine this kind of market breakdown persisting for a prolonged period of time, with either development seeming fringe and unlikely. They would also be likely to result in action by the authorities to stabilise the situation, as discussed in Section 5.1.

COVID and the Early Release Scheme as a liquidity event

We provide an account of the COVID and early release of super incident as a recent liquidity event. COVID hit over the March quarter of 2020, with a sharp equity market and A$ sell-off occurring over approximately 4 weeks before bottoming towards the end of March followed by a sharp rally. Over the quarter, super funds increased cash holdings by $51 billion (approximately 2.5%), around half of which was due to member-directed switching activity. The A$/US$ declined by 12.5% during the quarter, which we estimate required $50 billion of liquidity to meet margin calls. We estimate that a total of around $100 billion or around 5% of super fund assets were sold.

The Government announced the Early Release Scheme on 8 April 2020, with no indication that super funds were given any notice of this policy. Applications were open from 20 April 2020 through to 31 December 2020. Members could make up to two separate applications to redeem up to $10,000. A total of $36.4 billion was paid out over the course of the year, including close to $20 billion during the June quarter. The scale of early release was not as large as feared by some super funds, partly due to the impact of Government initiatives such as JobKeeper. Some funds, particularly those with a high proportion of members under casual employment arrangements, experienced reduced superannuation guarantee contributions.

Market movements during the June quarter were generally favourable for raising liquidity. Equities performed strongly, with the ASX All Ordinaries Index rising by 17% and the A$/US$ by 12.4%. This greatly assisted funds in managing any liquidity pressures. However, there were some signs of stress between banks and super funds related to bank bills. With very little secondary market activity, banks were forced to buy back or redeem bank bills from super funds who were looking to raise cash as members switched back into growth market exposure. The expansion of liquidity and capital provided by the RBA to domestic banks ensured that the issue could be managed.

Ultimately the early release of super resulted in a relatively moderate outflow of less than 2% of assets. Nonetheless there was a sizeable degree of concern at the time, largely because the policy surprised the super sector and there was high uncertainty over potential redemptions. The stressed connection between banks and super funds was also of some concern, but the episode illustrates how the central bank is able to help manage any issues in this regard.

The COVID episode was successfully navigated by Australian super funds, with few signs of systemic impacts. RBA (2021) draws similar conclusions. The episode was a new experience that will help inform super funds, banks and regulators about what is required to manage liquidity events if they

[61] The ASX recently suffered an outage related to its aging CHESS settlement infrastructure.

occur in the future. Nevertheless, a full stress event was not realised due to the market sell-off only lasting short time that was followed by a vigorous market rebound. It yet remains to be seen how the super sector would handle a major, sustained market move coupled with high member activity.

Summing up

We conclude that the super sector is an unlikely source of liquidity stress within Australian financial system. Our scenario modelling suggests that it would require an improbable confluence of extreme developments for any liquidity pressures to become unmanageable and turn into a systemic event.

5.4 Super as a (un)reliable source of funding

One benefit of 'big super' as identified in Part 3 was rounding out the funding sources in the Australian economy. The notion is that super funds deepen the funding available to parts of the business sector that are not fully served by financial intermediaries such as banks or private investors, e.g. private debt and providing risk capital for big-ticket assets such as infrastructure and property. In this section we consider the reliability of super as a funding source. We raise the possibility of 'feast or famine' situations where funding availability in some sectors ebbs and flows, with potential broader implications for the economy.

Influences on the willingness of super funds to provide funding

Availability of funding to certain sectors can depend on what assets are being favoured by super funds at the time. The extent to which super funds provide or withdraw funding to an asset class will reflect a range of influences, including:

- **Perceived attractiveness of the investment opportunity** – Super funds will weigh up expected return relative to investment risk, where risk may span multiple dimensions including asset volatility, drawdown potential, YFYS tracking error and peer risk. Funding to various assets can fluctuate as super funds attempt to supply capital to attractive investments and withdraw capital from investment deemed unattractive.
- **Room to allocate to the opportunity** – The room to invest in an asset class can depend on deviations from target SAA and rebalancing needs[62], capacity to adjust SAA to accommodate opportunities and cash available to invest (see Section 2.3 and Section 5.3).
- **Capability** – A base level of capability is required to invest in an asset class or asset. Super funds (including SMSFs) need to understand the investment (ideally through research) and have the ability to access and implement the investment either directly or via investment products or managers. Some sectors may be overlooked due to a lack of capability to invest.
- **Behavioural and other influences** – Investment management within super funds may be influenced in allocating assets by considerations such as potential implications for reputation, career risk, pressure to keep up with peers and investment fads.

Variation in the above influences can lead to super funds being keen providers of funding to a sector at certain times, while withdrawing funds at other times. This has potential to create cycles of hype followed by funding droughts as assets fall in and out of favour or deviate from target weights.

What if funding is withdrawn

Of concern from a systemic perspective is where a sector is relying on super for funding that is then subsequently withdrawn, causing the sector to retrench. Property market cycles have been known to be closely connected to the ebb and flow in availability of funding from financial intermediaries. Private equity (PE) provides a recent global example of the type of dynamics that can be at play. PE capital raisings dropped sharply in 2023 as the 'capital recycling' mechanism was disrupted by a combination of PE funds finding it difficult to liquidate assets and return capital to investors, who in turn tended to be over-allocated to the asset class following strong performance and capital raising activity in the post-COVID period. As a consequence, new funding provided to PE by asset owners has been weak over recent years, with many asset owners looking to extract capital from the sector. The ebb and flow of super fund involvement could have similar effects in any sector in which funds invest.

[62] Rebalancing requires allocating to assets that are underweight and away from assets that are overweight. FX movements also impact rebalancing activities.

Of particular concern is where users of capital are relying on rolling over short-term debt and super funds are acting as major funding providers that could withdraw. Section 5.1 discussed the short-term debt funding of banks by super funds, noting that the RBA could act as a backstop if necessary. Debt funding of businesses could be of more concern particularly if the private debt market continues to expand and then contracts. Private debt is currently a 'hot' asset class that is attracting capital from across the super sector, in part as funds buy into a narrative. A future scenario is imaginable where private debt falls out of favour with super funds, removing a key funding source for some businesses.

Withdrawal of funding could impact on the level of activity in sectors drawing on super for funding. Contagion might occur to the extent that withdrawal of funding has knock-on effects in the form of rising defaults, forced asset sales and pressure on asset prices. The scope for systemic impacts will depend on the size of the sector and whether other sources of funding are available. Super funds would need to withdraw funding from an economically significant sector that has limited alternative sources of funding for meaningful systemic impacts to result.

Asset allocations trends may be direct funding away from some areas

Asset allocation trends give rise to two possible areas of concern: the general level of funding available to Australian business, and funding of small businesses. Some scope for adverse impacts arises in both cases, although they should be moderate from a systemic perspective.

Funding for Australian assets more broadly

The trend of super funds allocating more to overseas assets at the expense of Australian assets (see Section 2.3) could reduce funding available for Australian investments at the margin. Each 1% reallocation to overseas assets amounts to around $40 billion in a $4 trillion system. This is a significant amount relative to our baseline estimate of $65-$70 billion of new cash available to invest in Australian assets from Section 2.3. If the pace of reallocation to overseas assets quickens or the flow of new funding available from super funds within Australia declines, then the super sector could move from a state of providing new funding to a state of either reallocating existing Australian assets ('shuffling the deckchairs') or even withdrawing funds[63]. However, it seems more likely that impacts for the funding of Australian assets from any such trends will be slow moving and moderate, particularly while the super system remains in net cash inflow.

Funding for small business

Another concern is that the availability of funding to smaller businesses including start-ups may be impaired by the growth of the super sector and consequently the size of super funds. Lawrence and Warren (2023) discuss the implications of large size for how super funds invest from the fund perspective. A key issue is that the larger the fund, the less that a small investment 'moves the dial' in terms of impact on the portfolio. At some point, smaller assets where there are constraints on how much capital can be committed will run into barriers related to the potential benefit of investing relative to costs in terms of the management time and other resources required to manage the investment. This gives rise to the question of whether the increasing size of Australian super funds might impact on funding availability for small business to an extent that results in broader, systemic effects.

One area where detrimental systemic impacts might arise is through reducing the equity capital available to smaller businesses. Here effects would be limited to the extent other participants can take up the slack. This could include any remaining small-medium super funds, investment

[63] By contrast, financial intermediaries such as banks are in the business of responding to requests and providing loans, and can create credit without first requiring a deposit (see Appendix 2). They are more likely to always be there as a general source of funding. Nevertheless, banks can also withdraw from funding certain sectors. Indeed, this is a contributing factor to the increase in private debt.

managers offering pooled funds that address sectors vacated by larger super funds, or direct investment by private investors. Nevertheless, with super becoming an increasingly significant conduit for equity funding within the Australian economy, and overseas investors tending to favour investing in larger companies, some reduction in available funding to small companies seems likely.

Another concern is impacts on the financial infrastructure that supports smaller companies. Institutional investors and their service providers (e.g. investment banks) provide benefits through supplying research, company monitoring, liquidity and pricing discipline in the market, with attendant implications for market depth and resilience. Institutional involvement in Australian small cap equities is already low, in part because the fund management community operating in this sector is limited and has thinned out. Increased size and concentration within the super sector will only exacerbate this problem, given that super funds are now a major conduit for institutional capital in Australia.

Summing up

While big super may help round out the sources of funding, the way that super funds behave as allocators of assets can result in funding being withdrawn from sectors that fall out of favour. Some adverse systemic impacts could result. However, the magnitude will depend on whether the sectors involved are economically significant and the extent to which other funding sources can fill the gap.

5.5 Impact on depth and resilience of financial markets

Market depth and resilience could be compromised if markets become 'one-sided' due to correlated demands for liquidity from super funds attempting to trade in the same assets in the same direction at the same time. The question arises as to whether the increasing size of super coupled with a tendency for institutional super funds to invest in a similar fashion (see Section 4.3) might have adverse implications for the depth and resilience of Australian asset markets. The discussion below argues that impacts should be limited by the presence of other investor types.

What is market depth and resilience

Market depth refers to the capacity to trade in volume without moving the price. Resilience refers to the ability of prices to return to fundamental value after trades have been completed. Depth and resilience impact on liquidity and market quality, with implications for volatility and the likelihood of prices significantly deviating from fundamentals for extended periods. Market depth and resilience have implications for the efficiency of markets in allocating capital and acting as a source of information about value and cost of capital.

The nature of the market participants is a key determinant of depth and resilience. Diverse participants that invest in differing ways enhance market depth and resilience through helping avoid one-sided markets where investors tend to herd into and out of the same opportunities, leading to lower market depth, higher volatility and potentially bubbles and crashes. Diversity increases the likelihood of finding a counterparty that is willing to take the other side of trades without greatly moving the price, or may take action if prices deviate too far from fundamentals. Deep and resilient markets tend to contain investors with different investment objectives and processes, risk aversions, cash flow profiles, tax status, time horizons and liquidity needs. Also desirable is a significant group of participants that invest on a long-term, fundamental basis and have flexibility to respond (see Warren, 2016)[64]. Such participants can act as liquidity providers and help keep prices tethered to fundamentals so that prices are more efficient and provide informative signals.

Super and market depth and resilience

While super funds have emerged as a major player in Australian asset markets, their impact on market depth and resilience is unclear. Although super funds may tend to invest in a similar manner as discussed in Section 4.3, they are far from the only investors in the markets. They may also act in ways that enhance market efficiency.

Considering ***Australian equities***, Deloitte (2024) estimates that super funds currently own 36% of the ASX market cap, which they predict to move to about 47% by 2043 if the current weights are retained. While this potentially makes super a very significant player, it does not follow that the actions of super funds will necessarily dominate the Australian equity market in a way that undermines market depth and resilience. Mitigating factors include the following:

- The Australian equity market is populated by a wide variety of other investors. Figure 19 (see over) illustrates through a breakdown compiled by JP Morgan. Meaningful differences in investment processes exist across the range of market participants.

[64] Security of funding is needed to perform this role, as it often involves trading against the market which is more difficult if there is risk funding will be withdrawn upon a position initially going awry and taking a long time to pay off. This issue has been discussed in the literature under the heading of "limits to arbitrage", but is also captured in the Keynes quote that "the market can stay irrational longer than you can stay solvent".

Figure 19: Ownership of Australian equities as at June 2024

Type of owner	Pension (super)	Institutional	Offshore	Households	Passive	Total
Percentage held	29%	27%	21%	12%	11%	100%

Source: JPMorgan "Fund Manager Radar", 27 September 2024, citing ABS and Bloomberg Finance L.P. as sources

- While super funds may invest in similar asset classes and have some propensity to limit tracking error versus benchmarks as discussed in Section 4.3, they nevertheless vary in their approaches to security selection when taking active risk. Super funds hold their equities both directly through internal teams and a range of external investment managers (some captured under 'institutional' category in Figure 19), all of which may apply different investment styles. There is no one common source of decisions on active positions in stocks held by super funds.
- Super funds will probably reduce weightings in Australian equities as they 'outgrow' the Australian markets (i.e. encounter capacity constraints), placing some limit on their size relative to the market. We think it is unlikely that Deloitte's projection for super funds to own 47% of the ASX by 2043 will be realised (although the direction of travel seems correct).

Similar observations apply for ***other asset markets***. For instance, there is a broad array of participants operating in fixed income and property markets. Indeed, it is difficult to think of a market where super funds dominate, although they are significant players in infrastructure.

Overseas institutional investors are particularly relevant to the issue at hand. Overseas investors have considerable flexibility over where they invest, making them likely responders to any significant mispricing of Australian assets in a global context. They can also move relatively large amounts of capital, noting that Australia is a small component of global investment universes. Mispricing of Australian assets could be corrected through modest portfolio shifts by overseas investors.

Super funds may also act in ways that ***enhance market efficiency***. Super funds can play the role of long-term, fundamentally-driven investors to some degree, at least within the constraints imposed by peer comparisons, the YFYS performance test and the SAA approach as discussed in Section 4.3. It is possible to imagine super funds stepping up to exploit opportunities and hence provide liquidity and dampen fluctuations in some situations. For instance, institutional super funds were a major player in providing equity funding to companies during the GFC. Nevertheless, as discussed in Section 5.2 and Section 5.3, super is not guaranteed to act as a stabiliser. It is possible that the sector may move in unison to exacerbate market movements in some situations.

There are some ***particular areas of concern***. The YFYS test may interact with the growth of passive investment to concentrate investment in assets included in the benchmark indices through the combined actions of super funds and other investors who invest passively. Haddad et al. (2024) provides evidence that increasing the share of passive investment makes share prices less elastic, i.e. increases the price response to orders placed. Peer effects and a related tendency to herd may also be at play. These forces might reduce market depth and resilience in key asset classes such as Australian equities. Another concern (raised in Section 5.4) is that the increasing size of super funds could reduce market depth and resilience in the small cap sector where larger funds may be reluctant to invest due to capacity constraints.

FX market

Section 4.2 discusses how the super sector has significant involvement in the FX forward markets, with an estimated exposure of $383 billion as at September 2023 due to FX hedges. To place this exposure in context, $383 billion equalled 11.3 days of currency forward turnover and 2.6 days of

swap turnover in the Australian FX market during October 2023[65] and 62% of net financial derivatives as reported as part of Australia's international capital account by the ABS[66] for September 2023. This suggests that the FX hedging contracts of super funds are of a meaningful size relative to the overall FX market.

The main source for concern would be imbalances developing in the FX swap market as super funds increase their overseas assets. According to Atkin and Harris (2023), the FX forward markets are currently relatively balanced. The FX swap markets could get out of balance if the growth of demand for FX hedging from super funds starts to exceed the ability of the banking sector to take the other side. Impacts might include lower liquidity and a related increase in hedging costs.

Summing up

The increasing importance of super funds coupled with a propensity to invest in similar ways will likely diminish the depth and resilience of Australian capital markets at the margin. However, the extent to which this occurs is unclear. We lean towards the view that there is no major cause for concern as the super industry is insufficiently dominant in the context of the broader market sue to the presence of other investors, and operates with sufficient diversity of investment processes at the security selection level.

[65] This estimate is based on conversion of US$ values reported in the RBA *Semi-annual report on foreign exchange turnover* at an A$/US$ rate of 0.635.
[66] Based on ABS No. 5302.14 *Balance of Payments and International Investment Position, Australia*.

5.6 Impact on external macroeconomic links

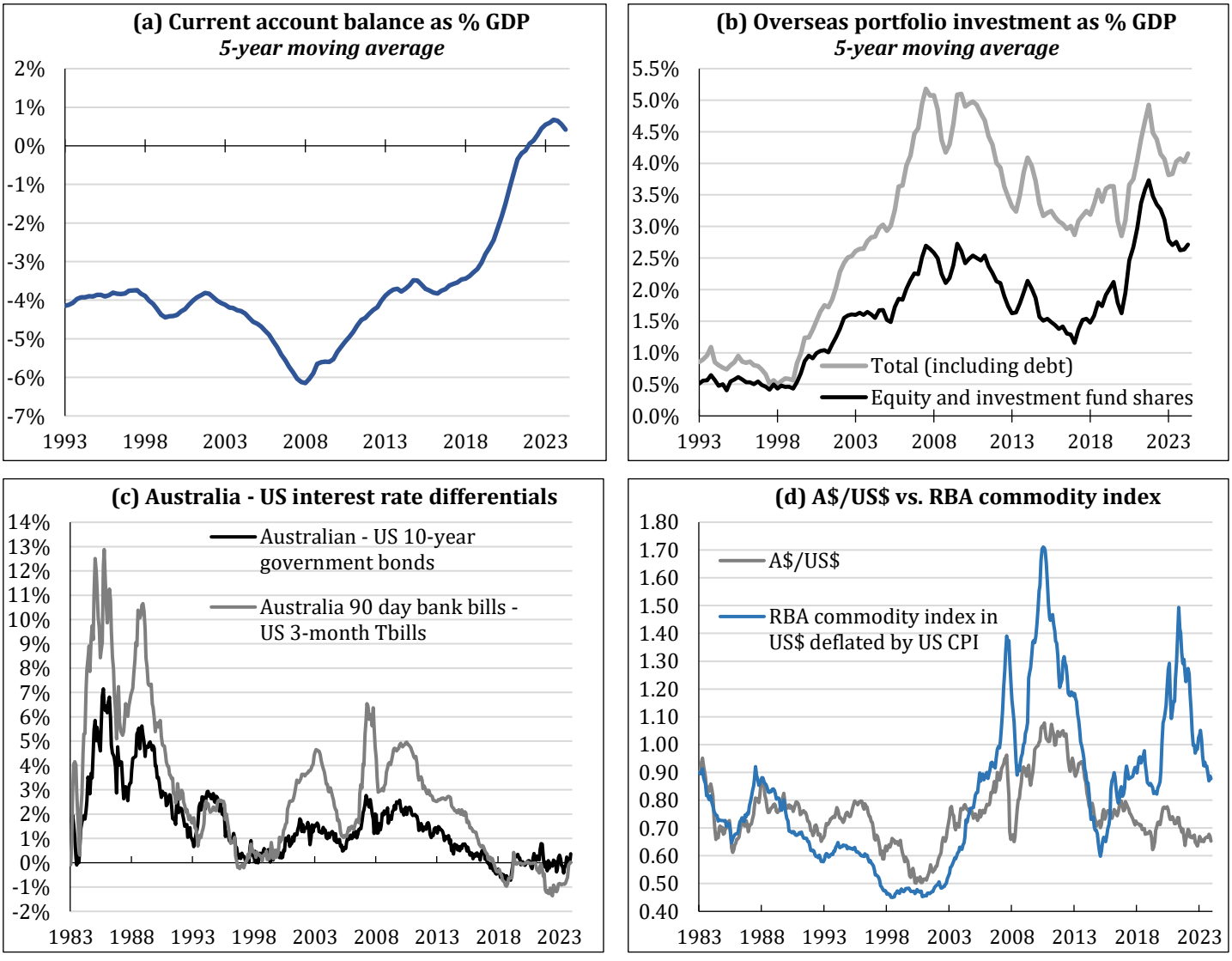
This section examines the theory that macroeconomic links with the rest of the world are being transformed by the rise of the super industry as a major exporter of capital.

Trends in the balance of payments, interest rates and the A$

Figure 20 reveals the following notable developments in the Australian economy over the last couple of decades:

- Shift from a large current account deficit to a current account surplus (Figure 20a);
- Increasing net overseas portfolio investment (Figure 20b), most notably through equities where the super industry is a relatively large player;
- Interest rate differentials versus the US narrowing substantially and recently sitting at a discount (Figure 20c), when traditionally Australian rates sat at a sizeable premium; and,
- Signs of weakening in the historically close link between the A$ and commodity prices, with the A$ currently lower than suggested by the relation with commodities alone (Figure 20d).

Figure 20: Trends in Australia's external macroeconomic linkages



Data sources: ABS, RBA, St Louis Fed

Possible explanations for these trends

While there are many possible explanations for these trends, they are consistent with what might be expected under a structural shift towards Australia becoming a capital exporter to which the super sector may be a significant contributor. A current account surplus could emerge as a counterpart to the capital account shifting towards deficit[67]. Adam and Atkin (2022) examine trends in Australia's balance of payments. They highlight both overseas equity investment by super funds and reduction in mining investment as underpinning the shift in the capital account from surplus to deficit, and increased commodity exports as important in a shift into trade surplus. They suggest that these factors are key contributors in moving the current account from deficit to surplus.

How the balance of payments trends might translate into shifts in interest rate differentials and the behaviour of the currency is less clear, but we offer some preliminary thoughts. Australia becoming an exporter of capital could reduce the need to offer higher interest rates to attract foreign capital, which in turn may have allowed the RBA to run lower rates than might otherwise have been possible. A swing in the balance of payments that is *driven* by changes in the capital account might be expected to show up as a weaker currency, given that exporting capital requires selling the A$ to buy foreign currency. A lower A$ could in turn assist the turnaround in the current account from deficit to surplus. Lastly, trade flows becoming a less important driver than capital flows in the balance of payments could help to loosen the link between the A$ and commodity prices.

While the pieces of evidence are largely circumstantial, they do seem to fit the storyline of a series of related structural changes that have been partly driven by shifts in the capital account to which super is an important contributor.

To further gauge the plausibility of the theory, it is worth considering the potential magnitude of capital that the super industry might export. Doing so requires taking into account both the investment of available cash flows and any shifts in asset allocation that are directed towards purchasing overseas assets. The super sector may have around $45 billion[68] per annum in cash flows to invest overseas prior to asset allocation effects. On top of this, an increase in weightings to overseas assets of around 1% per annum could add a further $40 billion[69] to outflows, taking them to $75-$80 billion (in the absence of rebalancing trades). Outflows of $85 billion per annum would equate to over 3% of GDP and compares with an average current account surplus at 1.2% of GDP over the last five years. The relative magnitude of potential capital outflows from super therefore seems large enough to have an influence.

Summing up

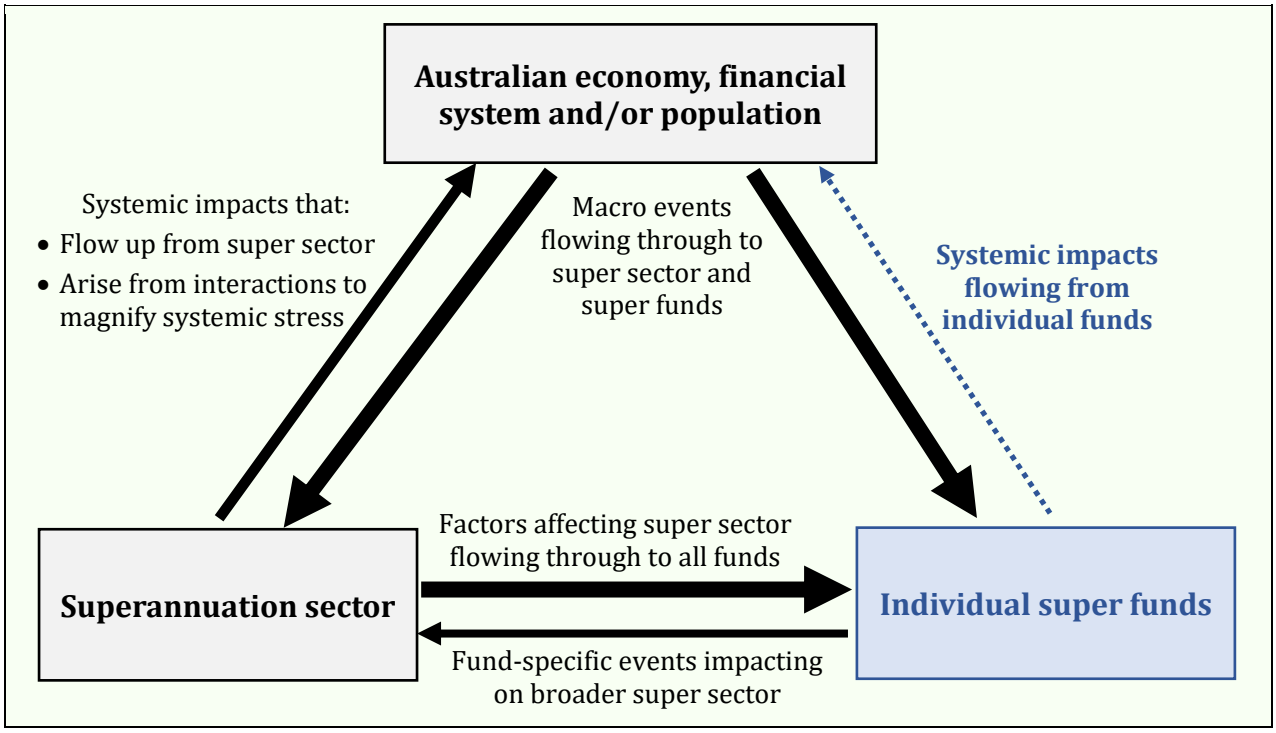
There is some evidence, albeit largely circumstantial, that the rise of super may be contributing to structural shifts in the balance of payments, interest rate differentials and the behaviour of the A$. However, the extent to which super is a major cause of the observed trends is uncertain.

[67] The capital account and current account balances must sum to zero (at least in theory).
[68] $45 billion represents the complement of the cash flows available for investing in Australian assets as per Section 2.3.
[69] $40 billion equals 1% of super industry assets of $4 trillion.

Part 6. Systemic impacts from large super funds

Many of the impacts arising from big super sector operate through the emergence of a large super sector, as discussed in Parts 3, 4 and 5. Nevertheless, the distribution of super funds by size can matter as well as overall sector size. A highly concentrated industry containing dominant players may differ in character and potential impacts from one with diffuse participants. In this part we address whether large super funds may give rise to systemic impacts. Figure 21 frames up the interactions considered, which are highlighted in **blue**.

Figure 21: Framing the interactions examined in Part 6 (as appearing in blue)



Section 2.4 discussed how the super sector is not concentrated enough for high concern over adverse effects on competition and market efficiency. It was also argued that the largest funds are not big enough to be systemically important in their own right. This part rounds out the discussion by considering whether broader impacts might flow from large super funds in two sections, each covering a range of aspects:

- Whether the behaviour of large funds could give rise to broader impacts, including those flowing from: how big funds invest; shifts in governance, management and culture with large fund size; and, how big funds may use their increasing influence (*Section 6.1*); and.
- Possible impacts that could arise from a large fund getting into trouble, including potential for harm across its footprint and consequences of a run on a large fund (*Section 6.2*).

We conclude that, while the super industry being populated by quite large funds should have some consequences, the potential effects are mixed and the scope for significant systemic impacts seems quite limited. Nevertheless, the footprint of the biggest funds is large enough for any problems to impact on a meaningful number of Australians.

6.1 Behaviour of large super funds

This section considers whether the increasing presence of large super funds might have broader systemic impacts as a consequence of how big funds behave. Even though the largest super funds may not be large relative to the broader economy (see Section 2.4), they can be important and influential players. We consider three points of distinction for large super funds: how they invest; governance, management and culture; and the use of influence.

How large funds invest

Ability to invest effectively in various asset sectors evolves as super grows in size. This issue was discussed Section 3.4 and Section 5.4 with regard to the overall size of the super sector. Our focus here is large individual funds, drawing on Lawrence and Warren (2023). As a general rule, investing in listed markets becomes more difficult with size as capacity constraints are encountered. Breakout box #3 (see over) illustrates by highlighting the constraints that AustralianSuper should be encountering in Australian equities. As discussed in Section 5.4, constraints will be most impactful when investing in smaller companies, but will also extend to mid-caps in the case of AustralianSuper. Meanwhile, size offers advantages such as enhanced scope to invest in big-ticket private assets like unlisted property or infrastructure[70] and be involved in transactions where ability to offer large licks of long-term capital assists to secure deals, e.g. participation in major capital raisings.

The dichotomy between large funds facing increasing barriers to investing in listed markets while being more able to invest in other opportunities can have both positive and negative impacts on the broader Australian economy and financial markets. As discussed in Section 3.4, large funds operate as the vehicle through which the sources of funding can be rounded out in some sectors. For sectors from which large funds withdraw, much depends on the extent to which other participants can fill any gaps. Having large super funds within the financial system seems more likely to be positive on balance, albeit concentrated in asset markets where it is beneficial to offer large licks of capital.

Governance, management and culture

Evolving to become a large financial organisation requires adjusting governance and management practices and addressing issues of culture. Size can lead to improved governance and management through bringing more resources to bear, e.g. larger 'governance budgets'. On the other hand, as discussed by Lawrence and Warren (2023), large size gives rise to challenges. Size can make it harder to sustain a constructive culture with a common sense of purpose. Coordination problems may emerge that make the organisation less flexible and less effective as silos form, complexity increases and bureaucracy builds. Profit-for-member funds could find it more difficult to sustain a capacity to closely identify with members as they grow and move to spanning multiple industries. Recent issues with member servicing might be viewed partly as the consequence of growing pains. Imbuing large financial organisations with a healthy risk culture with willingness to raise issues can be challenging. How super funds develop with regard to these issues remains to be seen.

Potential effects could be both beneficial and detrimental, and it is hard to say whether members will be better or worse off. The less-than-successful conversion of life insurance mutuals into for-profit companies provides a warning that it cannot be assumed that organisations can grow and successfully transition. The most likely outcome will be dispersion in how well super funds manage evolving into large financial organisations, with variable implications for member outcomes. It seems unlikely that the situation will accumulate into major systemic impacts, especially when individual funds are not yet large enough to be systemically important (see Section 2.4).

[70] Lawrence and Warren (2023, pp. 14-15) discuss this aspect, using the WestConnex consortium in which AustralianSuper participated as an example.

Breakout box #3: AustralianSuper as an illustration of size constraints in listed markets

We use the operation of AustralianSuper in Australian equities to illustrate how size can constrain the capacity of a super fund to operate effectively in listed markets. Figure 22 reports AustralianSuper's top 20 shareholdings within its Australian shares portfolio as at June 2023, along with the percentage of the company owned as reported on 13 October 2023. The weighted average shareholding for these 20 companies based on this data is 5.28%, with five holdings in the 10%-15% range. Figure 23 estimates the portion of each top 100 company that AustralianSuper needs to own for a 2% position in its Australian shares portfolio, which we use as a proxy for a meaningful position that 'moves the dial' for the overall portfolio. Reaching a 2% position requires holding in excess of 10% of the market capitalisation for companies ranked below number 43, and the 20% takeover threshold for companies ranked below 94.

These estimates indicate how large size limits the ability to invest effectively in some sectors. Figure 23 suggests that AustralianSuper needs to buy a significant stake even in mid-cap stocks to move the dial. This can give rise to difficulties in establishing and exiting positions without encountering liquidity and market impact problems. Further, the fund is pretty much precluded by holding limits from taking meaningful positions in small caps. Large size can also make strategies that emphasise diversification more difficult to implement, especially when there is sector concentration amongst large caps (financials and resources in the case of the Australian market).

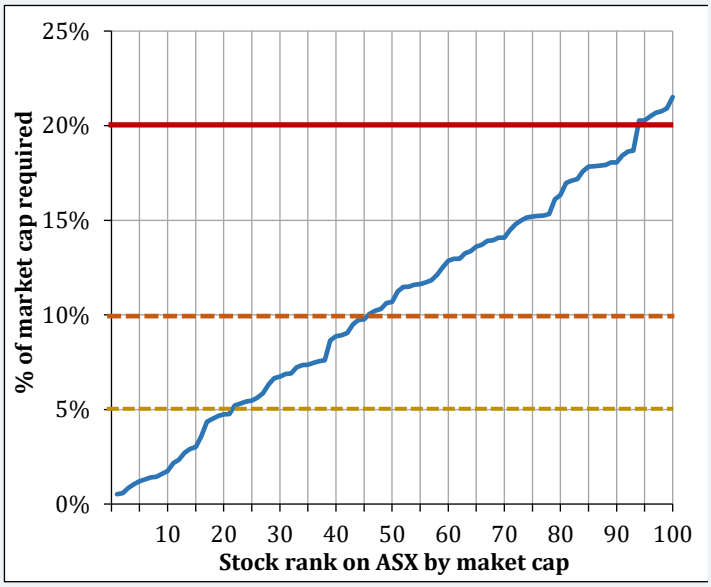
A further implication is that large funds can have considerable influence over assets in which they invest. Holdings of 5%-10% may be sufficient to have a significant degree of control over a company, especially with a diffuse register. This control was demonstrated by AustralianSuper being instrumental in blocking the proposed acquisition of the assets of Origin Energy in late-2023 (having increased its shareholding to over 17% versus 12.69% as reported in Figure 22).

Figure 22: AustralianSuper's top 20 holdings of Australian companies

Company	% portfolio, 30 June 2023	% owned
BHP	12.49%	3.44%
Commonwealth Bank	9.40%	3.49%
CSL	7.64%	3.58%
National Australia Bank	5.05%	3.94%
Woodside Energy	4.52%	4.34%
Woolworths	4.33%	5.62%
Macquarie Group	3.88%	3.64%
Wesfarmers	3.46%	3.89%
Westpac	3.27%	2.75%
Transurban	3.27%	4.75%
QBE Insurance	3.19%	8.56%
Origin Energy	2.93%	12.69%
Aristocrat Leisure	2.68%	6.65%
Computershare	2.42%	10.76%
ANZ	2.39%	2.11%
Lottery Corp	1.95%	10.73%
James Hardie	1.86%	6.67%
Endeavour Group	1.51%	8.37%
Orica	1.50%	14.20%
Ampol	1.43%	12.61%
Total/weighted average	**79.17%**	**5.28%**

Sources: AustralianSuper Annual Report for FY 2023, Investment Magazine "Inside AustralianSuper's active ownership strategy", 13 October, 2023

Figure 23: % of stock that AustralianSuper needs to own for 2% position of the Australian shares portfolio



Source: Stock data downloaded from marketindex.com on 6 May 2024. Assumes Australian share portfolio of $75 billion.

Main takeaway

Funds the size of AustralianSuper may limit or even pass over involvement in some listed market sectors due to capacity constraints, with small- and even mid-cap Australian equities the current case in point. Meanwhile, they wield considerable influence where they do invest.

Influence

Large size brings influence. Whether this is beneficial or detrimental for the Australian economy and society depends on how that influence is used. We highlight some of the potential flash points before offering reflections.

As illustrated in the box above for AustralianSuper, the largest super funds are reaching a scale where they can be highly influential investors in specific assets. It is reasonable to expect them to use this influence to enhance the value extracted or protect against downside risk. To this effect, it seems probable that large super funds will increasingly seek to influence the board membership of listed companies. The Chair of the Conexus Institute Advisory Board, Jeremy Cooper, suggests it is foreseeable that super funds will start nominating board members to listed companies, as they currently do with private market investments where they have significant stakes. Infrastructure is another sector where large super funds may build influence over time as major suppliers of long-term capital. Super funds already have significant holdings in the major airports (including via IFM Investors), which could feasibly be mimicked in other areas of infrastructure over time. Australian super funds have also become more active in engaging with companies over ESG and sustainability matters. The involvement of some large super funds in agitating for Rio Tinto to redress the Juukan Caves incident is a salutary example. AustralianSuper playing the 'kingmaker' role with respect to bids for Origin Energy and Healthscope are further examples of a large fund using its influence.

Size can also bring political and social influence. Large super funds may possess considerable influence over policymakers given they are major providers of capital. Most of the large super funds have established staff with specific responsibility for managing their public advocacy, some of which is coordinated through industry groups such as the Super Members Council of Australia. Examples are emerging of large funds such as AustralianSuper and ART making public statements on policy in superannuation, retirement and financial advice and even broader social matters.

Influence can be used for good or ill. In the arena of company oversight and ESG engagement, the activities of large super funds have been so far done with an intent of bringing about positive change[71] for investment performance if not society in general[72]. The likelihood that well-intentioned activity of this type will continue is enhanced to the extent that members and society at large expect super funds to behave constructively. Direct exercise of voting power and appointments of representatives to boards may be undertaken as an act of stewardship, and hence also viewed as constructive. On the other hand, there is the potential that large super funds could use their influence to secure benefits for the fund and its members at the expense of other parts of society. This could involve, for instance, advocating for policy changes that amount to forms of rent seeking. There is also a risk of regulatory capture to the extent that large funds can garner influence over policymakers and regulators and use it to shield themselves from accountability.

Summing up

Large super funds behave differently to smaller funds, introducing a new element into the Australian environment. Scope emerges for systemic impacts from the fact that large funds invest differently, manage in a professional yet more bureaucratic manner and have greater influence that they may attempt to wield. The broader effects flowing from these behavioural tendencies are potentially both beneficial and detrimental, and could be mixed across funds. Nevertheless, we see no reason to expect any significant systemic impacts flowing from the behaviours by large individual funds.

[71] We recognise that there will be varying views over the efficacy of some engagements. We are emphasising here the *intent*, i.e. improve the companies in which the funds invest and possibly also society in the process.
[72] Activities aimed at improving society are more controversial given the sole purpose test and the duty to act in members' best financial interest. This matter crosses over into the topic of universal ownership (Urwin, 2011), under which it is argued that actions to improve the economy and society at large will benefit members.

6.2 Potential for a big fund to get into trouble

We now consider the potential for a big fund to get into significant trouble and whether this might have systemic impacts. After first identifying some points of vulnerability, we then discuss what implications might flow from significant problems emerging for a large super fund.

Point of vulnerability

Significant problems for an individual super fund could flow from poor implementation of either the business or investment strategy in a manner that harms members and/or leads to significant loss of confidence and trust in the fund. We suggest the following points of vulnerability, many of which reflect the areas of concern discussed in Part 4:

- **Poorly implemented investment management at large scale** – Investment management directly impacts member wealth and is thus 'mission-critical' for super funds. Substantial financial losses are more likely to stem from poor outcomes from economically exposed assets, which is discussed as a super sector issue in Section 4.1. Nevertheless, investment activities can also lead to significant relative underperformance if poorly implemented. Underperformance could result from: taking aggressive positions that fail to pay off; investing in excess of capacity in public markets (notably Australian equities); failing to develop an effective private market program; over-exposure to illiquidity combined with the fund being placed in the position of a distressed seller; and, poor execution of internal investment management including an overseas investment program (see next dot point). APRA oversight and the YFYS performance test both help limit the risk of a major fund implementing their investment program in a way that could lead to extremely poor relative performance through constraining how funds invest. For instance, the YFYS test makes funds wary about deviating too far from their stated SAAs or the YFYS test benchmarks.

- **Poorly implemented overseas investment program** – As super funds become larger they face increasing incentive to look overseas to deploy assets at greater scale. Setting up overseas operations can assist in expanding and deepening involvement in overseas markets, which may bring various benefits[73]. AustralianSuper, Aware Super and recently ART have set up overseas offices. We would not be surprised if other large funds do so in due course, following the lead of the big Canadian funds[74]. Lawrence and Warren (2023) discuss how managing a global investment organisation with overseas offices is an entirely different game that will test super fund trustee boards and management as well as regulators. This is especially the case where the assets are being managed offshore. Lawrence and Warren identify a number of challenges that could result in poor performance if not successfully met, including being unable to secure suitable staff with the required skills and alignment, disruption through undermining culture and coordination across the organisation, and an increased cost structure. Overseas offices can be expensive, entailing upfront investment and grappling with multiple regulatory regimes and more complex reporting.

- **Systems and administration problems** – This area encapsulates a range of events with differing potential for adverse impacts. Most notable in the current context are underdeveloped operational infrastructure and exposure to cybercrime[75] or scams, given that these are important issues which also apply to large super funds. These exposures were discussed in Sections 4.5 and Section 4.6.

- **Co-ordination problems** – Coordination is a challenge for large organisations. Large size adds to complexity and bureaucracy, makes it more likely that silos form, and increases the difficulty of

[73] The potential benefits include widening of the investment opportunity set, better access to opportunities, diversification benefits, and boosting of organisational skills plus access to expertise through embedding investment professionals within the target markets – provided that talented individuals can be attracted.
[74] CPP Investments and CDPQ both have offices in nine countries, see https://www.cppinvestments.com/contact-us and https://www.cdpq.com/en/contact-us.
[75] While large funds may have more resources to commit to cyber security, they also present as bigger targets.

sustaining a common culture and sense of purpose. Consequences include less flexibility, lower productivity and difficulties in innovating, all of which could result in poorer member outcomes through wasted or misdirected efforts. Risk management can also become more challenging as portfolios grow in size and breadth of exposures. Poor coordination can result in mistakes.

- **Failure to effectively execute a large merger** – Failure to effectively integrate two large funds under a merger could have ongoing and significant impacts on fund members. The impacts could potentially arise through either weak investment performance, poor member services, or both. Merging organisations often face problems in integrating systems and developing a common and supportive culture. System integration in particular can be costly and fraught with difficulties.

Potential implications

Part 4 concluded that the super sector is an unlikely source of systemic risk, although it might magnify systemic stress in some situations. This broad conclusion translates through to any problems that may be encountered by a large fund, albeit of lower import to the extent that a single or few funds are involved. A major fund running into trouble could have two implications. The first would be direct harm to members of the fund. The second is the possibility of a 'run' on the fund.

Harm to members of the troubled fund

The direct implications of a large super fund getting into trouble will depend on the size of its footprint in terms of assets and members. The high water mark is AustralianSuper, which had $342 billion in assets and 3.4 million members at June 2024 according to its Annual Report. The assets amount to 8.7% of all assets in super and around 12% of GDP, while the members represent 12.7% of the Australian population. The second largest fund, ART, had $302 billion in net assets and over 2.3 million members at June 2024 according to its Annual Report. Figure 9 in Section 2.4 reveals that seven funds have in excess of one million member accounts. The large funds hence have a meaningful footprint. However, most are not large enough for any harm to their members to be considered systemically important, although it might be argued that AustralianSuper with a footprint of 12%-13% relative to the economy and the population is in a grey area.

Investment underperformance by a super fund matters if it is sustained and hence compounds over time. Assume a fund delivers a return of 5.5% relative to 6% for its peer group. This performance difference would result in lower wealth accumulation for the members of the underperforming fund of 7% after 15 years, 13% after 30 years, 19% after 45 year and 25% after 60 years[76].

The greatest scope for broad-based member harm from problems in administration and operational support resides with cybercrime, as it can impact across a significant number of members. Scams can result in significant harm for the victims but are more likely to impact on only a portion of the member base of any single fund. Problems that result in poor interactions between a fund and its members – such as account errors, transaction failure or delay, service disruption and poor member experience – are less weighty to the extent they tend to impact on a minority of members and/or seem unlikely to lead to major losses. While it is possible that a large fund could encounter meaningful coordination problems or failure to effectively execute a large merger, the main consequence might be a weakening of investment performance or poor member service with marginal rather than substantial effects.

Run on a large super fund

A 'run' on a fund involves members *en masse* exercising their member choice by attempting to switch to either another fund or (if in the retirement phase) to outside of the super system. A run could in

[76] Sixty years spans age 25 to age 85, i.e. the period a typical member could remain with a fund. Differing time periods are quoted in recognition that amounts contributed are invested for differing periods.

theory emerge as a consequence of significant reputational damage and loss of confidence and trust. Incidents that might trigger a run could include:

- Outstandingly poor investment performance, e.g. failure of the YFYS test.[77]
- Administration or operational issues, e.g. cyberattack, fraud
- Bad behaviour by a large fund, e.g. over-charging members or otherwise treating them badly
- High public visibility of any problems, e.g. damning media coverage

A run would entail releasing the member balances and a need to sell assets. The consequences would be comparable to those discussed in Section 5.3 from the sector perspective. This could include distressed asset sales that potentially result in liquidation at bargain prices, probably entailing those assets which can be readily sold such as listed assets and/or better-quality unlisted assets. The effect would be to transfer wealth from members of the fund suffering the run to other investors, while leaving behind a portfolio of poorer quality that deviates from target weights[78]. Business sustainability may also be tested, especially if the fund suffers irrecoverable damage to its reputation leading to persistent outflows. These adverse impacts would be largely borne by the members of the troubled fund, rather than being systemic in nature.

We consider a 'run' on a major fund as a very low likelihood. As discussed in Section 5.3, propensity of members to switch in response to poor performance has been quite low, at least so far. The experience in response to YFYS test failures where only around 3% of assets were switched according to one study is instructive given that letters were sent to members and coupled with considerable media coverage. Risks may be mitigated to some extent by super funds being required to have plans in place to deal with pressures on the entity under *CPS190 Recovery and Exit Planning* and *CPS900 Resolution Planning*. Nevertheless, large super funds tend to be relatively inflexible, which may inhibit their effectiveness in implementing their recovery plans.

The question arises as to how the authorities might respond to a run on a major super fund. Trustees can apply to APRA for relief from the 'portability' requirements (i.e. a freeze on redemptions) under SIS regulations 6.36 and 6.37, which was quite common during the GFC in 2008-9. This might buy some time, but could make matters worse by heightening the desire of members to get their assets out when they can. It is possible that regulators might need to take more explicit action if a large fund gets into trouble such as brokering the transfer of assets or a fund merger, reminiscent of actions taken in response to 'too big to fail' in banking.

In summary, an uncontrolled run on a major super fund seems unlikely. If it does occur, it could have significant impacts on the fund and its members and create something of a mess for regulators to clean up. However, it seems unlikely to have significant systemic impacts. Reasons are similar to those discussed in Section 5.3 with respect to the possibility of super sector outflows, including the fact that the assets and possibly wealth may be transferred within the financial system and funds being left with an out-of-shape portfolios. If only one fund is involved, the scope and scale of the impacts should be narrower than any sector-wide event.

Summing up

Any problems encountered by an individual super fund could cause harm to the members of that fund and may be felt relatively broadly to the extent that it involves a big fund with a large footprint spanning many members. However, any adverse impacts are likely to remain localised to that fund rather than propagate across the Australian economy or financial system.

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[77] The YFYS performance test acts to heighten the risk of a run by requiring funds that fail to write to their members advising them of any failure, as well as prohibiting the acceptance of both new members and contributions upon a second failure. In effect, the test is designed to make failure a very public event and encourage members to investigate other funds.

[78] An 'out-of-shape' portfolio could be exposed to higher risk in term of portfolio volatility and tracking error relative to its YFYS test benchmark. This could leave the fund and its members in a tenuous position.

Part 7. Recommendations

7.1 Recommendations for policymakers and regulators

Our recommendations for policymakers and regulators ('the authorities') highlight matters where some action could be worthwhile or greater attention might be afforded. We offer these recommendations with the caveat that some suggested activities may already be being undertaken of which we are unaware. Recommendations are arranged in categories according to type of activity.

Implementing policy change

- ***Consider systemic impacts*** – Policy impact statements should incorporate a broad lens (which is in line with current government guidelines) that considers potential systemic benefits and risks of policy measures, including scope for unintended consequences.

- ***Provide notice, if at all possible*** – Policy change should be implemented allowing sufficient time for the super industry to prepare wherever possible. Giving notice is particularly important where policies impact on liquidity management, how super funds invest, or super fund assessments.

Areas where attention might be refocused

- ***Raise attention on system-level matters*** – Traditionally the authorities have focused more on the performance and behaviour of individual funds. System-level matters have recently been receiving greater attention, notably the implications of a large super industry for systemic risk. For instance, APRA has raised its focus on system-wide risk within its Corporate Plan for 2023-24[79] and through a recent restructuring establishing a Cross-industry Risk Division. We encourage the authorities to further expand the attention given to system-level considerations, including with respect to impacts from performance testing and the role of confidence (see next two dot points).

- ***YFYS performance test*** – The YFYS test is a good example of more emphasis having been placed on individual funds rather than system-level effects. The YFYS test is primarily designed and directed towards holding individual super funds to account (although the weeding out of underperformers might be seen as a system-level policy objective). Greater attention could be paid to the broader implications of the test's design. The YFYS test influences how super funds invest through imposing index benchmarks, and being framed under the presumption that funds apply an SAA approach when other possibilities exist such as a total portfolio approach. The implicit direction on how to invest enhances the likelihood of funds investing in similar assets in similar ways and raises the reluctance to invest in assets that increase tracking error to the YFYS benchmarks. The YFYS test also increases the probability of a run on a fund, as discussed in Section 6.2. We mention these issues in the Conexus Institute submission to the current review of the YFYS test, and hope that Treasury might give these broader matters some consideration.

- ***Confidence in the super system*** – Section 4.8 discussed the relevance of maintaining confidence and trust in the super system. The authorities should seek to strike the right balance between calling out inappropriate actions by super funds and avoiding inflammatory language and hyperbole that could undermine confidence. Poorly conceived or constant policy change (see Section 4.7) that undermines confidence in the super industry should also be avoided.

Potential points of vulnerability to investigate

- ***Operational infrastructure*** – Section 4.5 highlighted how the super sector may be struggling with operational infrastructure that is not-fit-for-purpose and in need of a significant upgrade. We have question marks over whether the industry is sufficiently prepared for cyber risk, and how the industry might fund the required investment in its systems given the pressure to keep fees down.

[79] This included plans for "enhancing stress testing across regulated industries and ensuring macroprudential policy settings remain appropriate for the operating environment".

The authorities should consider undertaking in-depth analysis into the current state of the operational infrastructure within the super industry, and any actions that may be taken if it is found there are indeed major issues that need addressing.

- ***Scams*** – Section 4.6 discussed the potential for scams to cause significant harm to super fund members. We are particularly concerned about retirees, given the combination of high balances, ready access to funds and cognitive decline in the retirement phase. A focused analysis might be undertaken into the scam risk in the super industry, which we sense is far less prepared to detect and mitigate scams than the banking industry. The interface between the banks and super in processing transactions might be examined as part of any investigation.
- ***Concentration in service providers*** – Some in-depth research might be worthwhile to better understand the concentration in key service providers such as custodians, insurance, member administration and use of cloud services, and whether this could be a source of systemic vulnerability. We see value in undertaking an overarching review, rather than relying on super funds doing their own due diligence under CPS 230[80].

Matters where prior preparation seems required

- ***Run on a super fund or funds*** – The authorities might prepare for how they might help limit the risk of a run on super funds and how they might respond if one occurs. We suggest building early warning systems and pre-planning any response – even if a run is an unlikely event[81].
- ***Overseas operations*** – Regulatory oversight of the overseas offices of large super funds may need special attention, in particular where assets are managed offshore and activities sit outside the local regulatory perimeter. The aim might be to identify the key issues, establish oversight protocols supported by specialist staff, make connections with overseas regulators in areas where Australian super funds are active, and plan out responses if major problems emerge.

Issues to monitor

- ***FX hedging*** – Section 4.2 discusses FX hedging as a potential source of liquidity pressures on super funds and possibly counterparty risk. We recommend that regulators keep a close eye on what super funds are doing in this area, including how liquidity risk related to FX hedging is being managed. An examination of the counterparties that funds are dealing with may be worthwhile. We welcome the identification by the RBA (see RBA, 2024) of FX hedging as a possible source of liquidity pressures and the heightened focus on liquidity management under APRA's SPS 530.
- ***Use of influence*** – Section 6.1 observed that large funds may have considerable influence that could be used for good or ill. A watch might be kept on the activities of large funds from this perspective, including being alert to the risk of regulatory capture.

Other topics to research

- ***External linkages*** – Section 5.6 discussed how the rise of super may have contributed to structural change in the balance of payments, interest rate differentials and the behaviour of the A$. Drivers of structural change in Australia's balance of payments have been examined by the RBA. The links to the interest rate structure and behaviour of the A$ may be a topic worthy of additional research.
- ***Reliance of sectors on funding from super funds*** – Section 5.4 raises the possibility that super may prove an important but unreliable source of funding to some sectors. It may be useful to better understand the risks through researching what sectors may be relying on super funds to fund their activities, and the vulnerability of those sectors to withdrawal of funding provided by super.

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[80] *CPS 230 Operational Risk Management* comes into effect in July 2025.

[81] While super funds are required to have plans in place under *CPS190 Recovery and Exit Planning* and *CPS900 Resolution Planning*, it is likely that involvement from the authorities could be required if a run ever occurs.

7.2 Recommendations for super funds

While this report adopts a systemic lens, some the issues discussed nevertheless suggest a few recommendations for super funds:

- **Continue to uplift practices in two areas** – The discussion in this report touches on two areas where super funds should continue to invest into uplifting their practices:
  - *Operational infrastructure* – We highlight this as an area that likely needs close attention and further investment by many super funds. The action required is likely to vary across funds.
  - *Risk management practices, notably liquidity stress testing* – While some super funds have taken steps to improve their liquidity management processes, this does not appear universal as highlighted by a recent APRA review into trustee progress in implementing enhanced valuation governance and liquidity risk management requirements with respect to unlisted assets. Any analysis of risk including liquidity issues might take into account pressures that could arise from sources outside of the fund itself, including stresses on the broader financial system or super sector. Funds might also set out to ensure that peer considerations do not dominate fund-specific characteristics in managing risk[82].
- **Industry collaboration** – Super funds might seek out to collaborate on areas where potential issues are sector-wide, e.g. operational risks. Cyber risk, scams and counterparty risk are obvious areas for collaboration.
- **Social licence to operate** – Super funds might be aware of the impact of their actions on social licence to operate to help guard against the risk of loss of confidence and trust.

7.3 Recommendations for media

We call on the media to be responsible in their reporting and avoid unnecessarily undermining confidence and trust in the super system. The media's focus on super has increased notably over the last 1-2 years, with reporting typically focusing on problems. This is understandable, and it is important that the super industry is held to account. The risk in highlighting problems is that it may have adverse consequences for confidence and trust in the super sector, which could disrupt the efficient operation of the system (see Section 4.8).

Our suggestions include:

- Reporting should remain factual.
- Avoid drifting into emotive and inflammatory language that may entice fear.
- Avoid leaving an impression the industry is universally failing when problems relate to individual funds. We would like to see balanced reporting, including highlight good as well as poor practice.
- Communicate significance of any developments rather than focusing on numbers without context, e.g. mention the size of any numbers quoted relative to the super fund or sector[83].

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[82] For instance, the upper level of illiquid asset allocations should reflect fund-specific inflows and potential for outflows rather than peer allocations. Also, super funds with more assets in the pension phase or choice rather than default options should remain wary of investing too heavily in unlisted and other illiquid assets.

[83] A good example is the reporting of APRA data on super fund expenditures realised in October 2024, where all articles we reviewed focused on dollar amounts without noting the significance of the amounts in relative terms. For example, an article by the AFR on 30 October 2024 was headlined "*Super funds fork out $423m in marketing blitz*", but did not attempt to place the size of the spending in context noting that $423 million equals under 0.02% of total assets of APRA-regulated funds at June 2023. Other media reporting was similar.

Part 8. Concluding remarks

We conclude by highlighting the most notable themes to arise from this report. A central theme is that a ***large super system is a boon for Australia***. Establishing a significant pool of retirement saving that is being professionally managed by fiduciaries, and the attendant improvement in stewardship of investments and broadening of the sources of financing, are all major benefits. Overall big super is a positive development for the Australian economy and society.

While big super gives rise to some issues and risks that need to be recognised, we nevertheless argue that the super sector has limited consequences for ***systemic risk***, which is more likely to arise from elsewhere. We view super as an unlikely *source* of systemic stress. While super might act to *magnify* pressures arising from other sources, it could equally act as a stabilising force depending on the situation. Rather, we see problems within super as unlikely to extend much beyond the perimeter of the super sector or any super fund involved, at least not in a systemically significant way. While any problems should remain largely localised to the sector or funds involved, potential for member harm is increasing as the industry's footprint widens as the super sector and funds grow in size.

We see ***two main areas of concern*** related to the super sector that could result in adverse impacts of widespread nature. The first is that ***super heightens exposure to economic and market risk***. While significant and sustained market losses may be unlikely, if they do occur there could be substantial adverse impacts on the wealth, retirement income and perhaps confidence of members. The sell-off associated with the GFC sparked considerable angst, especially among members nearing or in retirement, even though Australia escaped relatively unscathed in part due to benefiting from Chinese economic growth at the time. A similar or worse scenario than the GFC could have more dire impacts given the growing footprint of the super sector, especially if Australia proves less resilient next time. We sense that risks associated with economic and market exposure are underappreciated, probably because the lived experience is that markets have always gone up. A broader view of history suggests this is by no means guaranteed as extended market declines occur occasionally.

Our second main area of concern relates to ***underdeveloped operational infrastructure***. The likely root cause is that super started as something of a cottage industry that then expanded quickly and is now struggling with legacy systems and processes. Failures in member servicing stand as an indication that something is not quite right. We were struck by almost universal agreement that there were problems in administration during feedback on this report. We suggest the appropriate interpretation of the situation is that '*super funds are struggling with operational support infrastructure that is unsuitable for large financial organisations*', rather than the line often pushed by policymakers, regulators and the media that '*super funds are failing their members*' implying that super funds are incompetent or uncaring. Nevertheless, the exact nature and depth of any problems in the sector's operational infrastructure is not very visible. Greater focus is required on getting to the heart of the issues and identifying the required actions. Upgrading the operational infrastructure in the industry will be challenging and is likely to involve considerable cost and time. We would like to see greater recognition of this situation, and more focus on ensuring that super funds are working towards addressing any issues than assuming that the underlying problems can be easily addressed.

While this report offers a range of novel perspectives, perhaps the most notable is that we see ***limited potential for broad impacts to arise from a liquidity squeeze*** within the super sector or a run on a large super fund. The notion that super funds offer redemptions at call with up to 30%-35% invested in unlisted assets coupled with potential for cash calls on FX hedges have been highlighted as a source of liquidity risk, including by IMF (2024). Potential for adverse systemic impacts related to liquidity stress is limited by various factors, including: accumulation balances needing to remain in the system; low member propensity to switch; the fact that asset sales merely transfer assets; the likelihood that liquid assets will be sold with the main consequence being 'out-of-shape' portfolios; and ability of the authorities to take action if needed, e.g. APRA can suspend redemptions. While a sector-wide liquidity event or a run on a large super fund could cause harm to the members of the funds or fund involved, it is hard to envisage how significant systemic impacts could arise.

While this report contains much more, we see the above themes as most worthy of highlighting.

APPENDICES

Appendix 1: Potential sources of systemic risk

Figure 23 lists the risks in pension systems that supervisors might monitor as complied by the International Organisation of Pension Supervisors provides (IOPS, 2012, pp.18-20). The IOPS list is summarised in the first and second columns, to which we added social licence and reputational risk at the bottom. We expand on the IOPS list with additional commentary in the third column, and identify whether the risk relates to both DB and DC funds or DB funds only in the fourth column.

Figure 23: Risks factors faced by pension funds

Source: Initial list from IOPS (2012, pp18-20), with additional comments by authors

Risk factor	Summary of IOPS description	Additional comments	Relevance
Investment or market risk	Losses due to adverse market movements, leading to underfunding in DB plans or low balances in DC accounts. Could stem from systemic market events, overly concentrated portfolios or investment in poorly regulated products.		DB and DC
Counterparty risk / credit risk	Loss due to failure of a counterparty to meet its obligations	Liability hedging and insurance are key areas	Mainly DB, also DC
Funding and solvency risk	Insufficient assets to meet liabilities		DB only
Liquidity risk	Not being able to meet payment obligations without excessive costs, or the total inability to recover funds or only with a significant delay	Extends to ability to meet margin calls on derivatives and manage portfolios that include private assets	DB and DC
Mismatch risk	Volatility in investment returns in relation to that necessary to meet liabilities, i.e. differential effects	Might be seen as a subset of investment and market risk	DB only
Actuarial risk	Inappropriate actuarial assumptions related to valuation of liabilities and insurance underwriting risks	Could be extended to appraisal valuation risks in private assets in DC setting	Mainly DB, also DC
Agency risk	May lead to exposure to excessive fees, conflicts of interest, misappropriation and misallocation	Mainly relates to external parties, but could apply to internal management	DB and DC
Operational risk	Losses resulting from inadequate internal processes, people and systems	These two risk factors are closely related. Cyber risk and scams deserve a special mention as significant emergent threats.	DB and DC
IT risk	Inadequate systems and processing capabilities		
External and strategic risk	Sensitivity to, or failure to respond to, external factors that threaten the viability of the fund	Catch-all category. Notable items that might slot in here include policy uncertainty, disruption threats, climate change and geopolitical risk	DB and DC
Contagion and related party / integrity risk	Potential for adverse impacts resulting from a close association with other parties through direct financial exposure or reputational damage	IOPS seems to relate integrity risk to association with external parties. We add the point below to recognise that this risk can arise from fund actions.	DB and DC
Added by authors: Social licence and reputation risk	Loss of social licence, perhaps though reputational self-harm, may impair ability to operate effectively	Heightened by increased attention on funds as the sector grows in size	DB and DC

Appendix 2: Super funds and banks compared

This appendix focuses on differences in the functioning of banks and super funds that are most significant for potential for economy-wide or system-wide effects. Australian Treasury (2019, see p99) lists out the key differences between super funds versus banks and insurers as:

- Nature of the promise is different
- Conceptual blurring of prudential and conduct regulation
- Trust structure
- Much lower risk of a run / failure
- No capital requirements
- High risk of conflicts of interest

These key differences reflect the fact that banks and super funds differ in their underlying nature and the functions that they each perform, as summarised below:

Banks

Banks are highly leveraged entities that accept deposits and provide loans upon request, with a thin layer of shareholder equity acting as a buffer for risk. For example, total equity of the big four[84] Australian banks was 6.2% of total assets at the end of FY2023. This structure makes individual banks vulnerable to insolvency risk, i.e. losses on assets that wipe out their equity. Further, the interconnected nature of banking systems and the manner in which they finance activity can result in problems within individual banks spilling over into system-wide effects, i.e. contagion. The transition mechanism through which contagion may occur is discussed below.

Super funds

Super funds invest assets on behalf of their members within a structure where assets are held in trust for the member's benefit without leverage[85]. In a DC system[86], members bear all the risk and may suffer losses to the extent that poor returns lower the value of their assets. The promise of the super fund relates to best efforts to manage the assets wisely (and put members' interests first). This structure makes it nigh-impossible for a super fund to become insolvent. Further, it is difficult to identify a mechanism through which problems at one fund may be transmitted across the system.

Mechanisms for propagating systemic risk

We now unpack the mechanisms that make banks a much more significant source of systemic risk than super funds.

- **Leveraged balance sheet versus asset portfolios** – Banks manage a balance sheet comprised of assets funded by liabilities and equity, where both the assets and the liabilities take the form of interest-bearing financial claims to a large degree. This provides some element of hedge, relative to more traditional companies where the assets comprise business operations that are partly funded by financial claims and hence mismatched. This allows banks to sustain notionally high leverage on a thin layer of equity. Nevertheless, bank equity is placed at risk as the assets and liabilities can be mismatched in two ways. The most important is that bank assets are exposed to default risk, which can lead to losses on the assets if loans are not repaid. In addition, banks often

[84] ANZ Banking Group, Commonwealth Bank, National Australia Bank and Westpac Banking Corporation.
[85] We refer here to there generally being no leverage within the fund structure, i.e. super funds are not allowed to borrow directly, except in very limited circumstances – see s97 of the SIS Act. Section 67A of the SIS Act also allows borrowing secured against assets on a non-recourse basis. This facility is used by SMSFs, while institutional super funds invest in leveraged vehicles including listed companies as well as hedge funds, private equity and property. In all these circumstances, potential losses are limited to the value of the assets invested.
[86] In DB funds, the sponsor is the major party responsible for bearing the risk; although members remain exposed to the failure of the sponsor to honour the promise. In addition, where a DB fund 'cashes out' assets to the member at retirement, the member then bears the risk in the pension phase.

carry maturity mismatches through borrowing short and lending long ('maturity transformation'), and may be exposed to interest rate effects to the extent that deposits and other funding from money markets is at shorter duration than their loan book. Banks may become insolvent if these mismatches result in the value of equity being wiped out. By contrast, super funds invest directly in assets without leverage and hence cannot become insolvent.

- **Potential for 'runs'** – Potential for insolvency sits at the foundation of why banks are exposed to 'runs' whereby depositors and other funders withdraw their funding *en masse* due to fear that they might not get their money back. The implication of runs is exacerbated as banks face difficulty in liquidating their assets to satisfy the demands from depositors and other funders, which requires calling in or selling their loans. Bank runs have been observed multiple times over the course of history, which has led to central banks putting in place measures to reduce their likelihood (e.g. deposit insurance) and mitigate the potential effects (e.g. providing supplementary funding to banks suffering deposit withdrawals). We are not aware of any runs on DC pension funds, although they are theoretically possible under redemption at call (as in Australia). Withdrawing funds from a DC super fund could be motivated by fear of future investment losses or severe loss of confidence, but is quite unlikely for the reasons discussed in Section 5.3 and in any event would not have the same impetus as fear of total loss of deposits in a stressed bank.
- **Contagion** – Contagion risk is exacerbated in banking due to meaningful interconnections between banks via mechanisms such as interbank lending and banks acting as counterparties for each other in derivative markets. These channels can lead to losses in one bank flowing through to other banks, and potentially causing major disruption across the industry. Super has little in the way of substantial channels through which problems in one fund may spread to others. Distressed asset sales by one super fund may have implications of the returns of other super funds also invested in those assets. However, the effects should be transitory provided that prices subsequently re-adjust. Rather, one fund becoming a distressed seller is more likely to result in a transfer of wealth, as discussed in the next dot point.
- **Credit creation vs. largely closed system** – Credit creation is fundamental to banking and the channels through which lending translates into economic impacts. Bank lending creates a credit that is spent by the borrower, which is returned to the banking system as a deposit thus boosting the aggregate bank balance sheet and hence the money supply. The reverse occurs when bank loans are repaid as deposits are extracted from the system to repay the debt thus reducing both sides of the aggregate bank balance sheet. If such 'reverse credit creation' gets out of control it could have dire systemic effects, denoted by Irving Fisher as debt deflation. The mechanism entails a self-feeding spiral of debt repayment, money supply contraction, economic weakness, bankruptcies, asset liquidation, impaired credit availability and falling prices that ultimately leads to a deflationary recession or even depression[87]. Of course, governments and central banks are quite aware of this risk, which helps explain their actions in response to the GFC and more recently COVID. The mechanisms of credit creation and destruction do not apply to super funds, which merely invest member contributions and operate within a somewhat closed system. If a super fund suffers outflows, the result will be a 'shuffling of the deckchairs' with the assets sold[88] and transferred to other investors with the flows either going to other super funds (a requirement in accumulation) or possibly moving elsewhere within the system (may occur in retirement). Further, unlike for banks, a run should not be an existential event for a super fund as there is highly likely to be sufficient liquid assets that can be sold to satisfy the redemption (see Section 6.2).

In summary, the features that make the banking sector a significant source of systemic risk (principally leverage or fractional reserve banking) are largely absent from the super sector.

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[87] Measures to avoid pressures within the banking system developing into a debt-deflation spiral include increased government spending funded by central bank bond purchases, flooding of the banking system with liquidity, providing lender of last resort facilities, standing ready to purchase assets if required, and bail outs.
[88] Another possibility might be that asset ownership is transferred without a formal sale. While this is not generally contemplated, it may be invoked under extreme circumstances with assistance from APRA.

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