

Super and the Australian economy

- Total investments of the APRA-regulated super system stand at \$2.7 trillion – more than doubling over the past decade.
- The super system – and the compulsory system in particular – continues to play a key role in supporting Australia’s long-term economic growth.
- Since its inception, the compulsory system has caused the household sector to save a higher proportion of its income than otherwise would be the case – around \$500 billion – which will support future retirement outcomes.
- This has boosted Australia’s national saving, facilitated higher levels of real investment in the Australian economy, supported higher levels of GDP.
- Over the next few decades, the super system will be a key source of funding for Australia’s energy transition. This will require a significant uplift in capital investment in the Australian economy – which underscores the ongoing importance of super in supporting national saving.
- The long-term nature of super investments means that the super system is a source of stability in domestic financial markets, including during periods when asset prices fall.
- The super system improves the sustainability of the Age Pension and takes pressure off future federal budgets.

This paper explores the key role that Australia’s APRA-regulated superannuation system plays in supporting Australia’s economic growth, facilitating investment in infrastructure and Australia’s energy transition, and supporting financial sector stability.

Total super investments continue to rise

For the APRA-regulated superannuation system, the total value of investments currently stands at \$2.7 trillion (end of September 2024). The value of super investments has more than doubled over

the past decade (from \$1.2 trillion in September 2014), with an average annual growth rate over that period of 8.2% (Chart 1).¹

At the system level, new financial capital in the order of \$40 billion needs to be deployed to new investments each quarter, on average.² Actual quarter-to-quarter investment requirements can vary markedly. This reflects the volatility of key components of system-wide inflows and outflows – particularly voluntary contributions and investment income for re-investment (Chart 2).

Looking ahead, superannuation assets are expected to keep growing for decades to come – though projections are subject to uncertainty. The future level of system assets will depend on a number of factors, including; future investment returns, rates of employment and wages growth, the amount of voluntary contributions and the tax treatment of contributions and investment earnings.

For example, Deloitte projects that Australia’s total superannuation assets will reach \$11.2 trillion by 2043 (future dollars), or around \$7 trillion in present-value terms.³

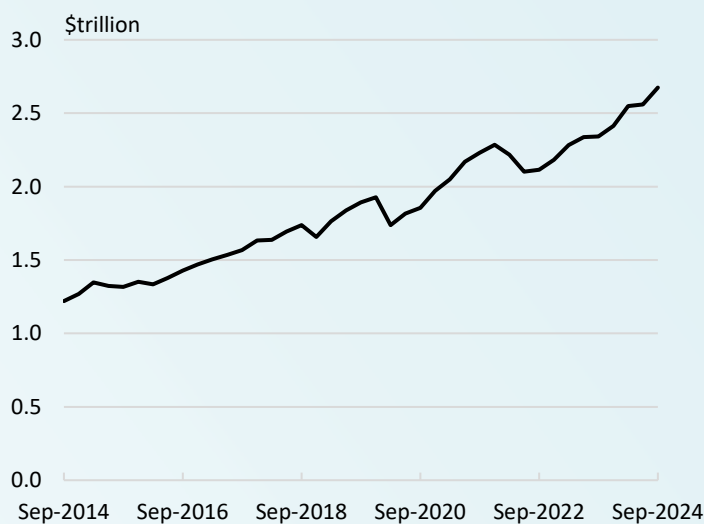
Compulsory super leads to higher national saving

From a macroeconomic perspective, the superannuation system – and in particular, the compulsory component of the system – has led to higher levels of national saving than otherwise would be the case. This supports higher levels of fixed capital investment in the real economy (than otherwise), and reduces Australia’s *net* reliance on foreign capital.

The key channel by which compulsory super raises national saving is by boosting the total saving of Australia’s household sector.

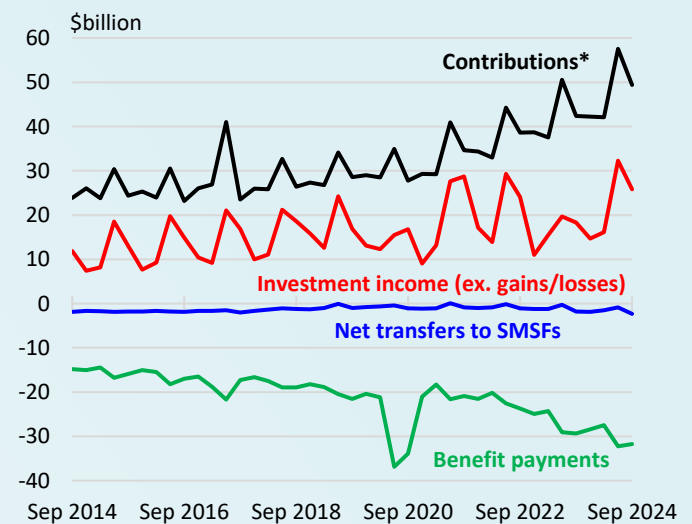
- Saving is a flow concept: the difference between income and consumption within a given time period.
- Savings is a stock concept: the accumulation of period-by-period savings over time.

Chart 1: Total super investments (APRA-regulated)



Source: APRA.

Chart 2: System-level flows, quarterly



Source: APRA. *Includes tax on contributions.

For the household sector, higher saving via compulsory super does result in lower saving via other means – however, the *net* impact on household saving is overwhelmingly positive. Broadly speaking, studies find that for each dollar of saving via compulsory superannuation, net saving by the household sector is around 60 cents.⁴ Overall, compulsory super causes the household sector to save a higher proportion of its income than otherwise would be the case.

Using data for compulsory super contributions, and assumed parameters for the net saving effect, ASFA estimates that Australian households have \$500 billion in additional savings that they otherwise would not have saved (via superannuation or otherwise) due to the compulsory super.⁵

Higher household saving results in higher national saving – which is the combined saving of Australia’s household, corporate and government sectors. With respect to the impact of compulsory super on national saving, widely cited work undertaken by the Australian Treasury estimates the boost to national saving at around 3 per cent of GDP as the Super Guarantee (SG) rate rises to 12 per cent.⁶

The trend for Australia’s national saving rate – that is, saving as a share of GDP – supports this conclusion (Chart 3). While Australia’s national saving rate has fluctuated from year to year, it has increased in trend terms since the early 1990s – a period during which the average saving rate for all OECD countries combined declined (in trend terms). There are of course many factors that influence the saving rate from year to year.

Higher national saving facilitates higher domestic investment

Higher national saving, via superannuation, accommodates a combination of higher domestic (fixed capital) investment and a narrower current account deficit than otherwise would be the case.

Domestic fixed-capital investment within an economy is the production (or import) of assets that are used repeatedly or continuously in processes of production. This largely comprises physical assets (e.g. machinery and infrastructure) but also intellectual-property assets such as computer software, and expenditure on research and development.

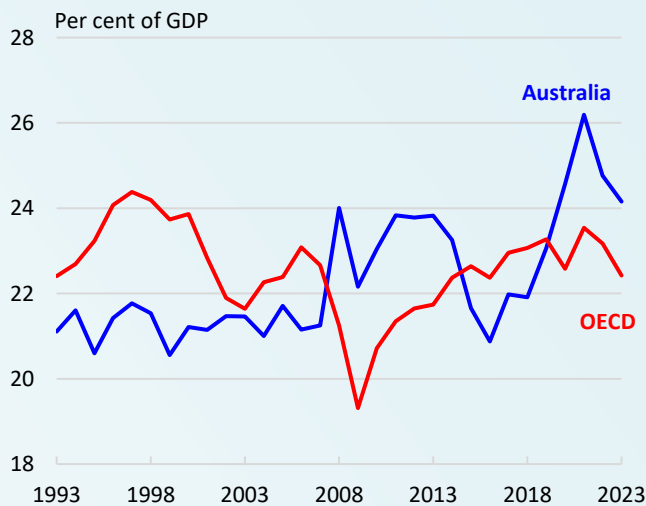
Historically, Australia generally has had more abundant domestic investment opportunities than could be funded from (historic) levels of national saving. As such, Australia has typically been reliant on foreign sources of saving to fund the shortfall.

This is reflected in Australia’s tendency to run current account deficits rather than current account surpluses – where the current account balance during any period is equivalent to national saving *less* domestic investment (Chart 4).

Under standard ‘textbook’ assumptions that apply to a small, open economy (such as Australia), an increase in the level of national saving would lead to a narrower current deficit than otherwise would be the case, rather than higher domestic (fixed capital) investment. For instance, if it is assumed that the country is a pure price-taker in international capital markets, then the quantity of domestic investment would depend on the internationally-determined price of capital, not the level of national saving.⁷

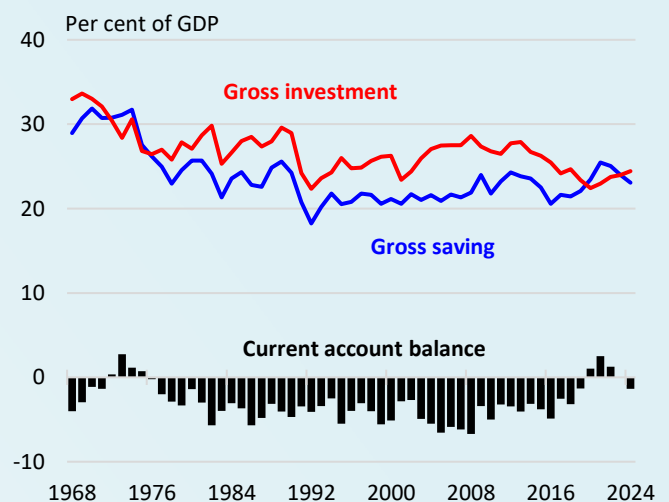
The alternative, more realistic case is where Australia is not a pure price taker. For instance, a higher level of national saving would be expected to lead to increased domestic demand for a range of domestically-issued financial instruments. This would allow capital-raising entities (e.g. firms) to raise a given level of capital for a lower cost – which would reduce the required rate of return on investment projects. Over the medium term, a lower required rate of return would be expected to lead to higher fixed capital investment by firms.

Chart 3: National saving



Source: ABS.

Chart 4: Current account balance



Source: ABS.

Given the less-than-proportionate impact on domestic investment, higher national saving also reduces Australia’s *net* external financing requirements – reflected in a narrower current account deficit. It should be kept in mind that the level of GDP would be higher as well – generated by a higher level of productive capital stock from higher levels of domestic investment.

Higher levels of national saving and investment boosts GDP

The combination of higher saving and investment – due to compulsory super – supports higher levels of Australian GDP.

Super funds are part of the broader real-economy/financial-sector mechanism whereby new savings are mobilised to fund new fixed capital investment for productive purposes. Ongoing fixed capital investment over time (less depreciation of capital), builds the economy’s capital stock. Technological advancements can be thought of as being ‘embedded’ in higher quality capital.

Higher levels of increasingly advanced capital underpin higher levels of GDP and labour productivity (roughly speaking, output per worker). Ultimately, this leads to higher wages for Australian workers and higher living standards for the broader Australian population.

Modelling undertaken by the CSIRO-Monash Superannuation Research Cluster supports the positive effect of compulsory superannuation on GDP. The modelling concludes that a 1 per cent increase in the SG rate (and the associated increase in national saving) increases the level of real GDP by around 0.2 percentage points in the medium term.⁸ The main mechanism underpinning the rise in GDP is higher levels of fixed capital investment by firms.

Looking ahead, ongoing investment in the Australian economy will be crucial to support Australian’s living standards as the population ages. Over the next few decades, the proportion of the population

involved in producing Australia’s economic output will shrink, while the proportion of the dependent population (that is, retirees plus children) will increase (Chart 5). This suggests that average output per worker (that is, measured labour productivity) will have to increase, by some degree, just to sustain average living standards. In this regard, the super system will play an important role in building Australia’s productive capacity.

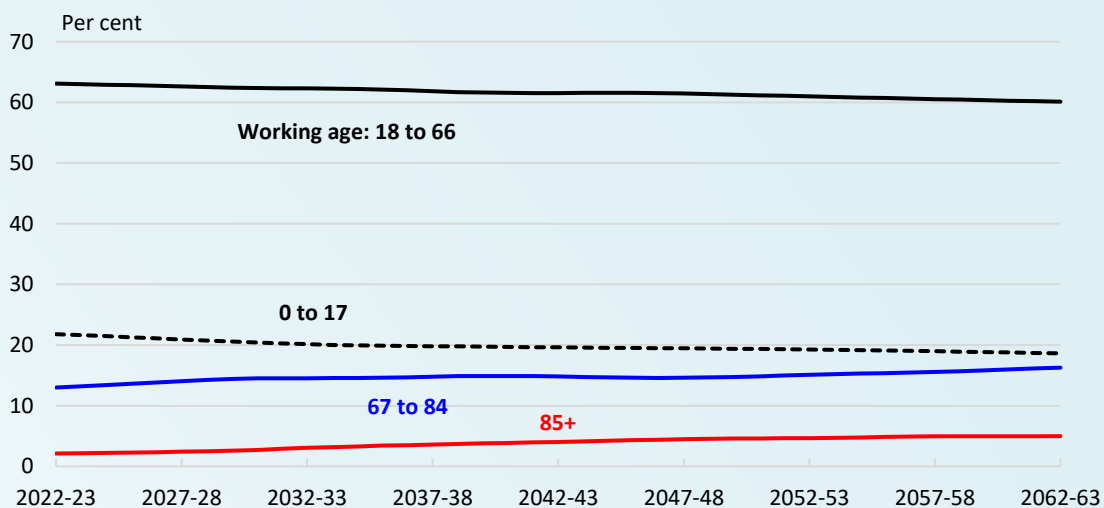
Supporting Australia’s energy transition

Australia’s productive capital stock has evolved over time – reflecting, among other factors, a growing population that has shifted geographically, continual changes to the structure of Australian industry, and technological advancement. Over the next few decades, the key driver of changes to Australia’s capital stock – and the required new fixed capital investment – will be our energy transition.

Australia’s journey to achieving net zero emissions will require a fundamental transformation of Australia’s capital stock – such that the emissions generated from the production of all goods and services in the economy (in a given period) nets to zero, and all within a timeframe of little more than a single generation.

For Australia, as is the case globally, this structural shift will require higher, sustained levels of new fixed capital investment in the real economy than otherwise would be the case. There is a significant degree of uncertainty regarding the required uplift in new fixed capital investment – for example, while investment in low-emissions real assets will need to rise markedly, much of this will supplant investment in high-emissions real assets that otherwise would occur. A reasonable estimate is that, on average, levels of new fixed capital investment will need to be in the order of 5% higher than ‘business-as-usual’ over the next three decades or so (and front-loaded).⁹

Chart 5: Population cohorts (% of total population)



Source: Australian Government (2023 IGR).

Australia’s higher trajectory for fixed capital investment will necessarily involve a combination of higher national saving and higher net foreign borrowing. However, given that fixed capital investment will need to rise across the globe to a degree that is (at least) equivalent to Australia’s requirements means that Australia will not be able to rely fully on foreign capital to close the investment-saving gap. This latter point underscores the ongoing importance of the super system in supporting Australia’s national saving.

For Australia, as is the case globally, future fixed capital investment will be concentrated among a set of key sectors – most notably the energy sector. New investment for Australia’s energy transition will involve scaling up low-emissions real energy assets to meet both the demands of a larger population, and to replace existing high-emissions capacity with low/zero-emissions capacity that will need to accommodate more extensive electrification across the economy.

Australia’s electricity generation capacity will need to expand significantly. Recent estimates published by the Australian Industry Energy Transitions Initiative suggest that by 2050, Australia’s total electricity generation capacity (for domestic use) will need to almost treble from current levels, with the proportion of renewable-based capacity rising from around 40 per cent today to near 100% by 2035 – that is, renewable-based capacity will need to increase approximately four-fold from current levels by 2035, and approximately six-fold by 2050.¹⁰

Complementary investments will be needed to upgrade and expand associated infrastructure, including electricity transmission and distribution networks (to connect generators to end-users), as well as energy storage and firming facilities to accommodate the larger role of renewables in generation. Electrification infrastructure will need to be expanded across Australian industry and transportation

networks. Gas-based generation will be required to support the orderly phase-out of coal, and then, while itself largely phased out, will be required as weather-independent back-up for renewables.

The quantum of new fixed capital investment required for energy sector decarbonisation is in the order of hundreds of billions of dollars.

The superannuation system will be a key source of funding for Australia’s energy transition. Of course, any new potential investment opportunity must stack-up – whether this is a direct, discrete investment in an energy infrastructure asset, or an indirect stake via an unlisted investment platform (that holds direct stakes). In this regard, accommodative policy settings will be crucial in facilitating super fund investments (for details, see the ASFA discussion paper: *Towards an Energy Transition Accord*).¹¹

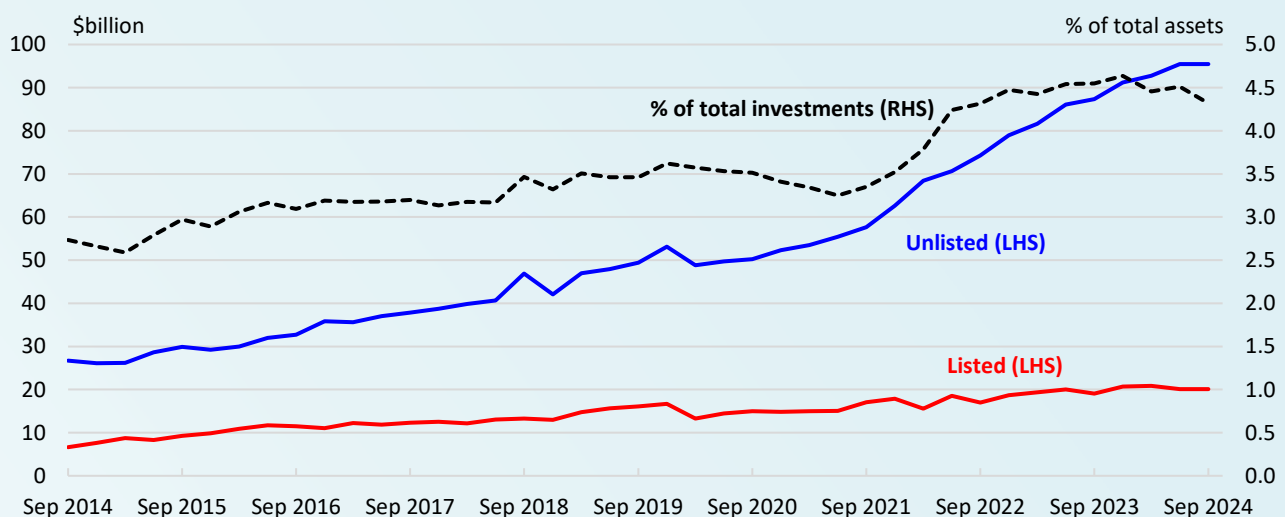
Building Australia’s infrastructure

More broadly, the superannuation system is an increasingly important source of capital for new investment that underpins Australia’s long-term productivity performance – in particular, large scale infrastructure projects.

New infrastructure investment is a key source of productivity growth in modern economies. With respect to direct effects on firms, new infrastructure investment can lower production costs and facilitate greater market access. New infrastructure investment can have further (indirect) impacts on productivity growth from network externalities and competition-enhancing effects.

Particularly in the context of the recent rapid increase in Australia’s population, Australia has a significant infrastructure needs. The available international comparisons suggest that, notwithstanding recent increases in government spending on infrastructure and increased private participation in projects, the overall quality of

Chart 6: Super investments in infrastructure



Source: APRA and ASFA calculations.

Australia’s infrastructure lags behind comparable nations.¹²

With respect to domestic infrastructure only, investments of APRA-regulated superannuation funds total \$118 billion – which comprises \$97 billion in unlisted domestic infrastructure and \$21 billion in listed infrastructure (Chart 6). In addition, funds also hold infrastructure debt through their fixed interest portfolios.¹³

From the perspective of super funds, the growth in infrastructure as an asset class has occurred in response to a number of factors, including strong financial performance of infrastructure assets, greater recognition by funds of the role of infrastructure as an investment class within portfolios, and a desire among funds to better match future pension liabilities to assets.

Source of financial sector stability

The APRA-regulated superannuation system is a source of stability in domestic financial markets, including during periods when volatility can spike, and asset prices can fall sharply.

During these periods, super funds tend to deploy new financial capital in a counter-cyclical manner. The steady stream of contributions – particularly into the compulsory super system – provides a fairly predictable source of new demand for domestic securities. Net of stable outflows for the payment of retirement incomes, these annual flows amount to around \$50 billion. In addition, super funds – as investors with relatively long time horizons – can afford to absorb short-term asset-price fluctuations and are reluctant to realise losses.

Historically, during periods of financial market turmoil, the super system has provided liquidity at critical times – such as during the Global Financial Crisis (GFC).

For the Australian corporate sector, the severe and sudden

tightening of the corporate bond market during the GFC (when credit spreads widened alarmingly), meant that firms seeking to raise capital had to do so via equity raisings (rather than debt). At a time when many companies sought to issue new shares, the super sector was a vital buyer – which drove a (then) record level of equity fund raising in 2008-09.¹⁴

The APRA-regulated superannuation system also has structural features that help limit the build-up of systemic risks. Firstly, the vast majority of super assets (94%) are within defined contribution funds, which do not offer guaranteed returns to members. Secondly, super funds are restricted in their ability to borrow. This is in contrast to pension systems in some other jurisdictions.

- During the GFC, the absence of leverage within APRA-regulated funds enabled the super system to have a stabilising influence on the financial system and the economy during the crisis.
- More recently, in the UK, leverage within defined benefit funds was a source of stress in the UK Government bond market (in September 2022).¹⁵

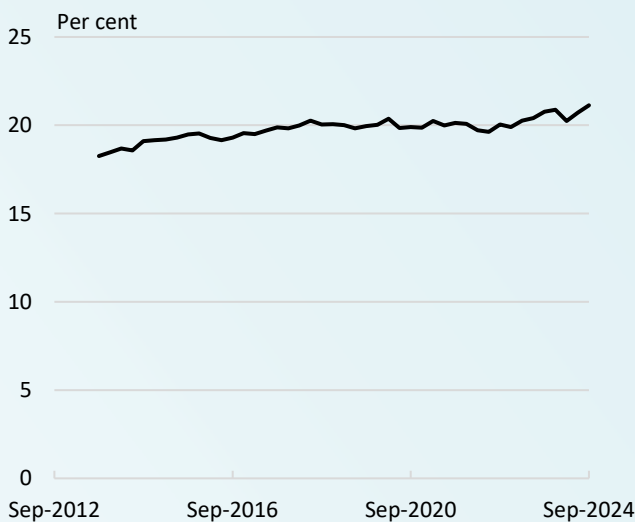
Source of financial sector capital

As the APRA-regulated superannuation system has grown in size, so has its potential role as a source of capital for the financial system.

As noted above, the total value of super investments has more than doubled over the past decade. This represents a faster growth rate than for the Australian economy and the broader financial system. Despite this, total super fund holdings of domestic financial assets have grown more in line with the size of domestic financial markets.

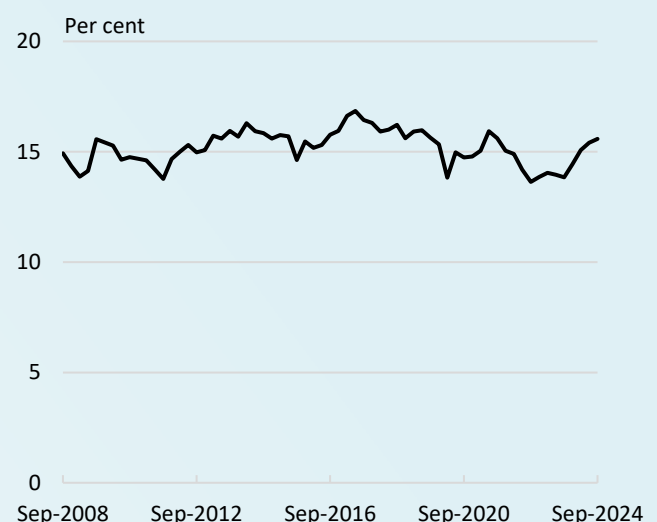
For example, since 2013 (the start of APRA’s data set) the APRA regulated system’s share of holdings of ASX- listed equities has risen only slightly (Chart 7).¹⁶ Note, that holdings of self-managed super

Chart 7: Super system’s share of ASX*



Source: APRA and ASX. *APRA-regulated funds only – excludes SMSFs.

Chart 8: Super system’s share of bank funding*



Source: ABS. *APRA-regulated funds only – excludes SMSFs.

funds (SMSFs), which are not within the APRA-regulated system, have a steeper trajectory.¹⁷

The likely continuation of this trend is suggested by the fact that, at present, 60 to 70 cents of every new dollar of superannuation capital is deployed offshore, as funds seek to counter concentration risk vis-à-vis the Australian economy:¹⁸ the system-wide allocation to domestic assets is around 50%, while Australia accounts for just 2% of global GDP and 3% of advanced-economy GDP.¹⁹

The APRA-regulated superannuation system’s role as a source of funding for Australia’s banking system has a similar trajectory.

While it is certainly the case that the composition of super-system funding for the banking sector has changed markedly over the last two decades, the system’s share of total bank funding has changed little. Funding from the APRA-regulated super system accounts for about 15% of total bank funding (Chart 8). This chart includes direct funding plus ASFA estimates of indirect funding via intermediaries (e.g. non-money market investment funds).²⁰ Again, holdings of SMSFs (not within the APRA-regulated system), have a steeper trajectory – largely reflecting equity holdings.²¹

With respect to the underlying composition of funding, super-fund holdings of short-term bank-funding has switched from bills of exchange (BoE) to one-name paper (ONP), in part reflecting the contraction of the latter market. In 1999, super funds accounted for around 15% of both BoE and ONP funding for banks. Currently, super funds account for 25% of ONP funding. The super system’s share of equity funding for banks (currently 16%) is lower than in 1999, while shares of long-term debt (currently 25%) is higher (Charts 9 and 10).²²

Box: Super funds’ offshore investments

A common misconception is that purchases of *existing* foreign assets by super funds leads to an increase in Australia’s reliance on foreign saving (or Australia’s *net* offshore funding requirement).

Australia’s net offshore funding requirement is determined, fundamentally, by the difference between domestic fixed capital investment and national saving. Where an Australian super fund purchases an *existing* foreign asset, the net effect of the underlying transactions is no change to Australia’s net funding requirement. The following example bears this out.

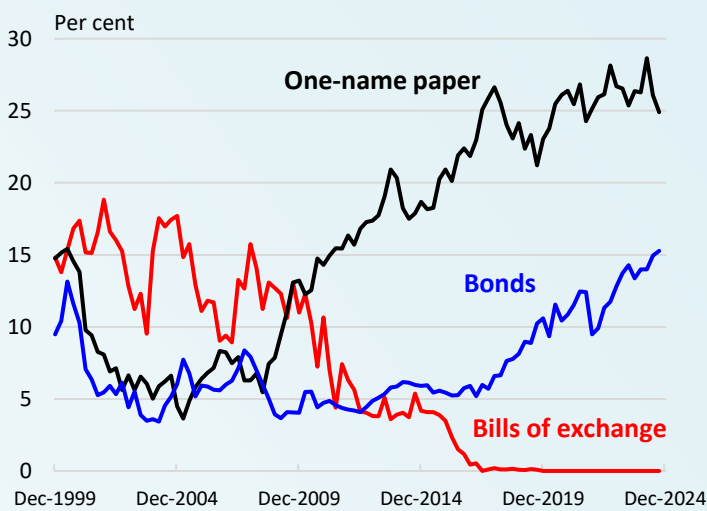
An Australian super fund purchases a US equity asset from a US-based entity. One side of the cross-border transaction is the transfer of ownership of the US equity to the super fund. The other side of the transaction is the payment made by the super fund to the US-based entity. Payment will be made in USD.

If the super fund makes the payment out of its existing holdings of USD, the cross-border transaction amounts to an exchange of one US asset (equity) for another (USD). There is no net effect.

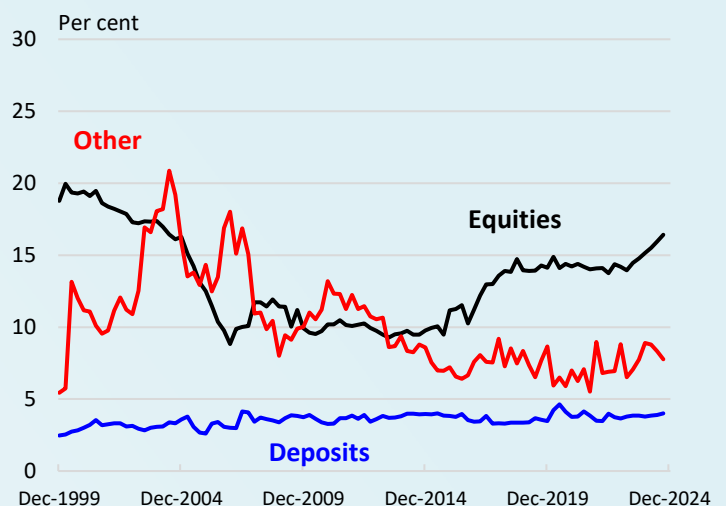
If the super fund needs to purchase USD in the FX market, it will exchange typically for AUD. If the super fund buys USD from another Australian entity, then (as above), the cross-border transaction involves the exchange of one US asset (equity) for another (USD).

If the super fund purchases USD from a US-based entity, that entity will have a surplus of AUD – with which it will purchase an Australian asset. The net effect of the cross-border transaction is that super fund will have more US assets (equities), while the US-based entity will have more AUD assets.

Charts 9 & 10: Composition of direct funding for Australian banks, from APRA-regulated super funds



Source: ABS.



Source: ABS.

Super reduces pressure on Federal Budget

Compulsory superannuation improves the sustainability of the Age Pension and takes pressure off future federal government budgets.

Over coming decades, the proportion of Australians who are of working age will decline, while the proportion of people of retirement age and older will increase (see Chart 5). By 2060, ongoing population ageing means that there will be just over three working age people for each person of retirement age and older, compared with over four today and around seven just two generations ago.

Generally speaking, the fiscal pressures associated with an ageing population include a lower base for income tax revenue (in proportionate terms at least), higher recurrent outlays for health care and government funded pensions (as a share of GDP), and higher capital expenditures with respect to aged-care and health care facilities (as a share of GDP).

Future governments will have to constrain specific age-related spending, or alternatively act to cut other forms of spending, increase taxes or accept permanently higher budget deficits (or a combination of these). However, for each of these alternative approaches (or combinations of them), there are significant implications for economic growth and intergenerational equity.

Notwithstanding the fact that the proportion of Australians of Age Pension age will increase over coming decades, the superannuation system will help contain future Age Pension expenditure.

Today, people who are entering retirement have not had the advantage of a full working life of compulsory superannuation contributions. However, as time goes on, people who reach retirement will have received SG contributions at higher rates, for longer periods of time, and receive higher investment income on

higher balances (than otherwise would be the case). This will lead to higher balances for workers at retirement.

Looking ahead, Commonwealth expenditure on the Age Pension is expected to remain relatively stable, at low levels, over coming decades. The government projects that Age Pension spending will fall from 2.3% of GDP in 2022-23 to 2.0% of GDP over the period to 2062-63, assuming the SG rate is increased to 12%.²³

When the cost of superannuation tax concessions is added to Age Pension costs, the total cost to government is still relatively low and sustainable.

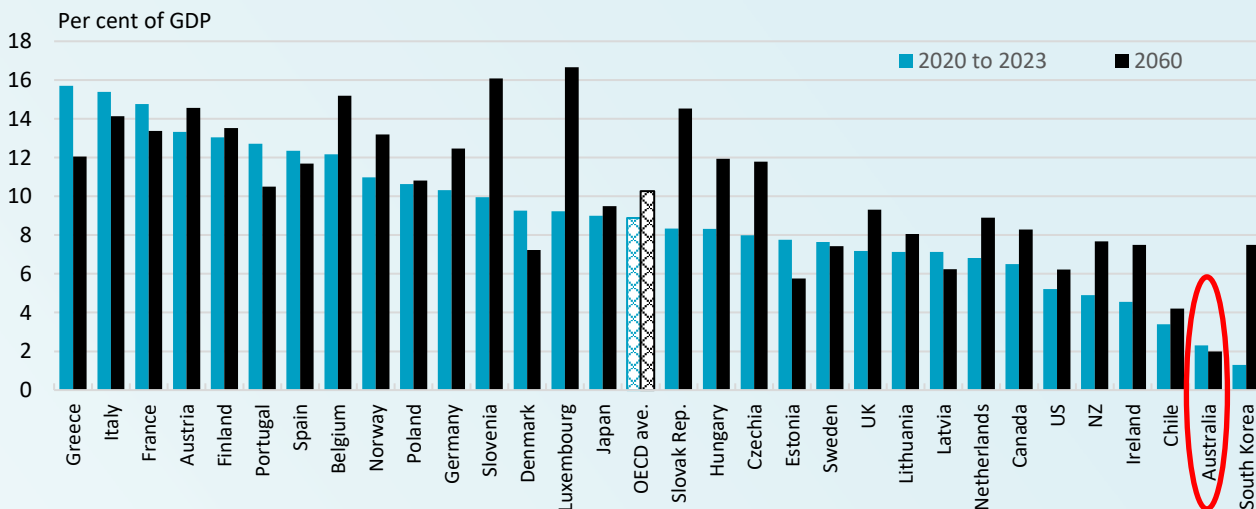
The cost of tax concessions for contributions is projected to remain stable at around 0.9% of per cent of GDP, while the cost of tax concessions for investment earnings is projected to rise from 1.0% of GDP to 1.5% of GDP by 2062-63. With regard to the latter, as the super system matures, assets will shift from the accumulation phase to the retirement phase – where investment income is tax free.²⁴

Overall, the total cost of the Age Pension and tax concessions for superannuation are projected to rise marginally – from 4.2% of GDP to 4.4% of GDP by 2062-63. This is remarkable given the expected ageing of Australia’s population.²⁵

This means that the cost to government of Australia’s retirement income system will remain more affordable than almost every other OECD country. Australia, both currently and in prospect, has among the lowest levels of public expenditure (in terms of per cent of GDP) on income payments to the aged in the world.

Across the OECD, government expenditure on public pensions averages around 9 per cent of GDP, and is projected to increase to around 10 per cent on average by 2060 (Chart 11). Some European countries already have four times the level of Australian expenditure, with this projected to rise further.²⁶

Chart 11: Government expenditure on pensions



Source: OECD.

¹ APRA, *Quarterly Superannuation Performance*, September 2024 and APRA, *Quarterly Superannuation Industry Publication*, September 2024.

² ASFA calculations.

³ Deloitte Australia (2024), *Dynamics of the Australian Superannuation System: The Next 20 years to 2043* and ASFA calculations.

⁴ For example, see Ruthbah, U. and Pham, N. (2020), *Household Savings and the Superannuation Guarantee*, Monash Centre for Financial Studies, prepared for the Australian Treasury: Retirement Income Review.

⁵ ASFA calculations.

⁶ Gruen, D. and Soding, L. (2011), *Compulsory Superannuation and National Saving*, Australian Treasury, Economic Round-up 2011/3.

⁷ That said, in this framework an increase in the level of national saving could lead to higher domestic investment if higher national saving lowered domestic risk premia, and thus the required rate of return

⁸ Giesecke, J. A., Dixon, P. B. and Rimmer, M. T. (2015), *Superannuation within a Financial CGE Model of the Australian Economy*, Centre of Policy Studies, Victoria University, working paper no. G-253.

⁹ ASFA calculations based on projections from other sources, including: McKinsey and Company (2022), *Financing the Net-zero Transition: From Planning to Practice*; and Australian Industry Energy Transitions Initiative (2023), *Pathways to Industrial Decarbonisation*, Phase 3 Report.

¹⁰ Australian Industry Energy Transitions Initiative (2023), *Pathways to Industrial Decarbonisation*, Phase 3 Report.

¹¹ Available at: <https://www.superannuation.asn.au/wp-content/uploads/2024/11/Towards-an-Energy-Transition-Accord-November-2024-004.pdf>.

¹² According to the International Institute for Management Development's World Competitiveness Rankings, Australia ranks 18 out of 67 countries in terms of infrastructure.

¹³ APRA, *Quarterly Superannuation Industry Publication*, September 2024.

¹⁴ Allen Consulting Group 2011, *Enhancing Financial Stability and Economic Growth: The Contribution of Superannuation*.

¹⁵ RBA, *Financial Stability Review*, September 2024.

¹⁶ APRA, *Quarterly Superannuation Performance*, September 2024; APRA, *Quarterly Superannuation Industry Publication*, September 2024; and ASX market capitalisation statistics.

¹⁷ APRA, *Quarterly Superannuation Performance*, September 2024; APRA, *Quarterly Superannuation Industry Publication*, September 2024; and ASX market capitalisation statistics.

¹⁸ APRA, *Quarterly Superannuation Performance*, September 2024; APRA, *Quarterly Superannuation Industry Publication*, September 2024; and ASF calculations.

¹⁹ US dollar terms (IMF, *WEO Database*, October 2024).

²⁰ ABS, *Australian National Accounts: Finance and Wealth*, September 2024.

²¹ ABS, *Australian National Accounts: Finance and Wealth*, September 2024.

²² ABS, *Australian National Accounts: Finance and Wealth*, September 2024.

²³ Australian Government 2023, *2023 Intergenerational Report*.

²⁴ Australian Government 2023, *2023 Intergenerational Report*.

²⁵ Australian Government 2023, *2023 Intergenerational Report*.

²⁶ OECD, *Pensions at a Glance 2023*.