COOLABAH CAPITAL INVESTMENTS™

THE INTELLECTUAL EDGE: MAKING EVERY BASIS POINT COUNT

Fund: **Smarter Money Fund - Base Fee Class**

Strategy: **Smarter Money/Short-Term Fixed-Interest**

Return (since Feb. 2012): **4.36% pa gross (3.54% pa net)**

Net return volatility (since Feb. 2012): **0.60% pa**

August 2025

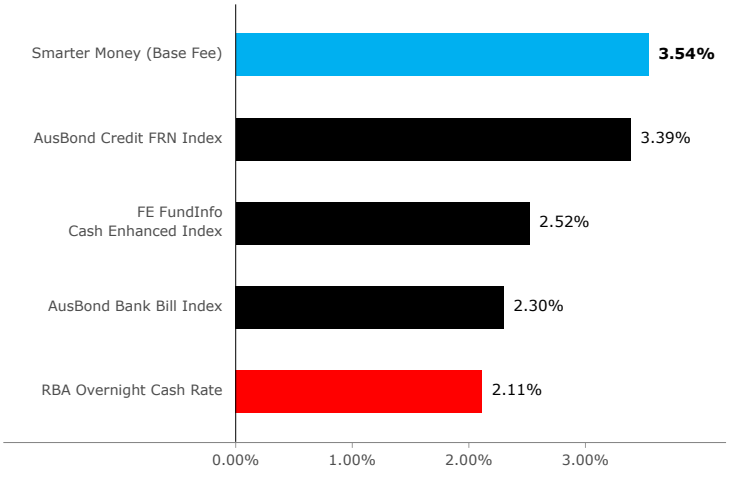
Objective: An independently-rated/recommended strategy targeting low-risk cash and fixed-income returns that exceed the RBA's cash rate by 1%-2% pa after fees, over rolling 12 month periods.

Strategy: We actively invest in a diversified portfolio of Australian deposits and investment grade floating-rate notes with a weighted-average "A" credit rating. We do not invest in fixed-rate bonds (unless interest rate risk is hedged), sub-investment grade bonds, direct loans, equities, capital notes, preference shares (eg, hybrids), use leverage, or take currency risk. We add value via active asset-selection using a range of valuation models with the aim of (1) delivering lower portfolio volatility than traditional bond funds and (2) providing superior risk-adjusted returns, or alpha, without explicitly seeking interest rate risk, credit risk or liquidity risk. The strategy is managed by Coolabah Capital Investments, which is a specialist active credit manager.

Period Ending 2025-08-31	Gross Return (Base)	Net Return (Base)†	RBA Cash Rate	Gross Excess Return‡	Net Excess Return (Assist.)†‡
1 month	0.45%	0.39%	0.29%	0.16%	0.10%
3 months	1.57%	1.37%	0.93%	0.64%	0.44%
6 months	2.61%	2.20%	1.94%	0.67%	0.26%
1 year	**6.10%**	**5.23%**	**4.12%**	**1.99%**	**1.11%**
3 years pa	6.30%	5.47%	3.90%	2.40%	1.57%
5 years pa	4.12%	3.31%	2.41%	1.72%	0.90%
10 years pa	3.82%	3.01%	1.88%	1.94%	1.13%
Inception pa Feb. 2012	**4.36%**	**3.54%**	**2.11%**	**2.25%**	**1.43%**

Smarter Money Fund Returns (Net) vs Comparisons

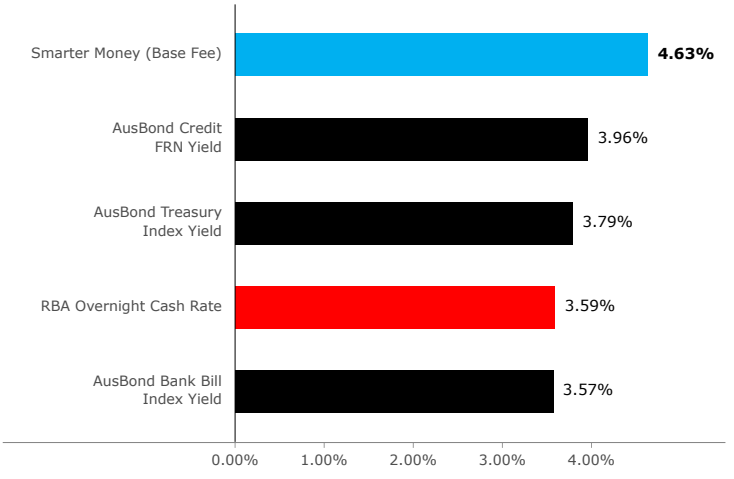
Annualized Total Returns Since Inception in February 2012 to August 2025



Data Source: RBA, Bloomberg, Apex Fund Services, Coolabah Capital Investments

Annual Running Yield

31 August 2025



Data Source: RBA, Bloomberg, Coolabah Capital Investments

† Net returns are calculated from the historic gross returns using the current fee structure as displayed in the Product Disclosure Statement. ‡ The Excess Return columns represent the gross and net return above the RBA cash rate.

Net Monthly Returns > RBA Overnight Cash Rate	76%	Av. Interest Rate (Gross Running Yield)	4.63%
Portfolio Weight to Cash Accounts	11.1%	Modified Interest Rate Duration	< 0.1 years
Portfolio Weight to Bonds	88.9%	Gearing Permitted?	No
Av. Portfolio Credit Rating	A+	1 Year Av. Portfolio Weight to Cash	10.8%
Portfolio MSCI ESG Rating	AA	Cash Accounts + RBA Repo-Eligible Debt	66.6%
No. Cash Accounts	10	Net Annual Volatility (since incep.)	0.60%
No. Notes and Bonds	152	Net Sharpe Ratio (since incep.)	2.39x

Ratings: Recommended (Zenith); Superior - Relatively Simple (Foresight Analytics)

Signatory of: PRI Principles for Responsible Investment

Zenith RECOMMENDED

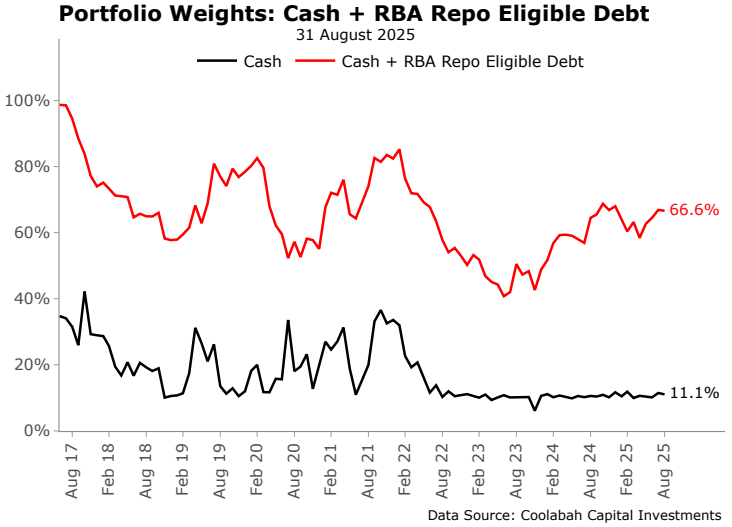
SUPERIOR RELATIVELY SIMPLE Foresight Analytics

MSCI ESG RATINGS AA

CCC B BB BBB A AA AAA

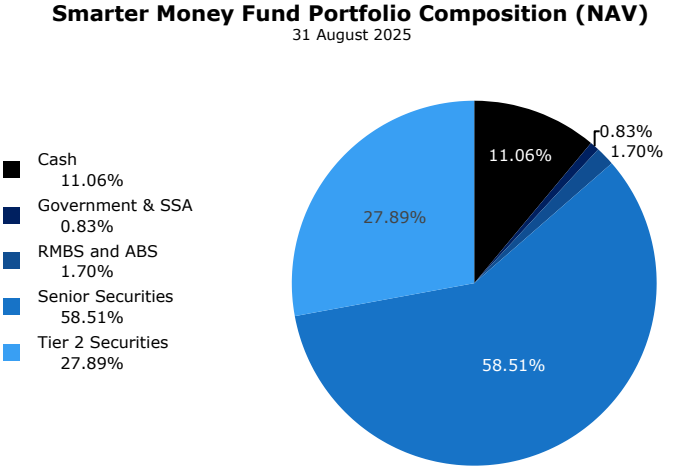
Asset weighted average rating

Portfolio Weights: Cash + RBA Repo Eligible Debt



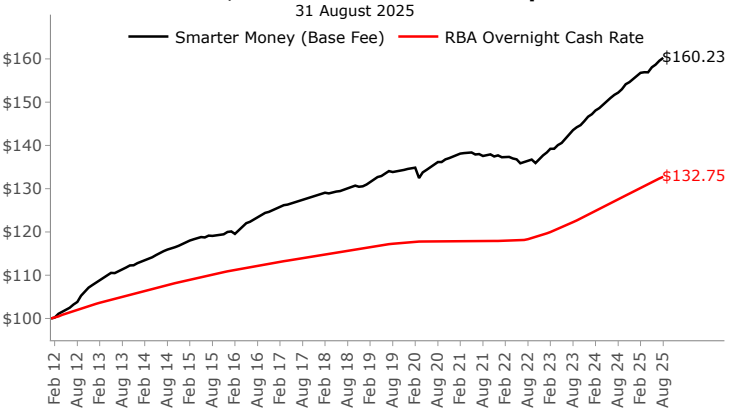
Data Source: Coolabah Capital Investments

Smarter Money Fund Portfolio Composition (NAV)



Data Source: Coolabah Capital Investments

Value of $100 Invested Since Inception



Data Source: Bloomberg, Coolabah Capital Investments

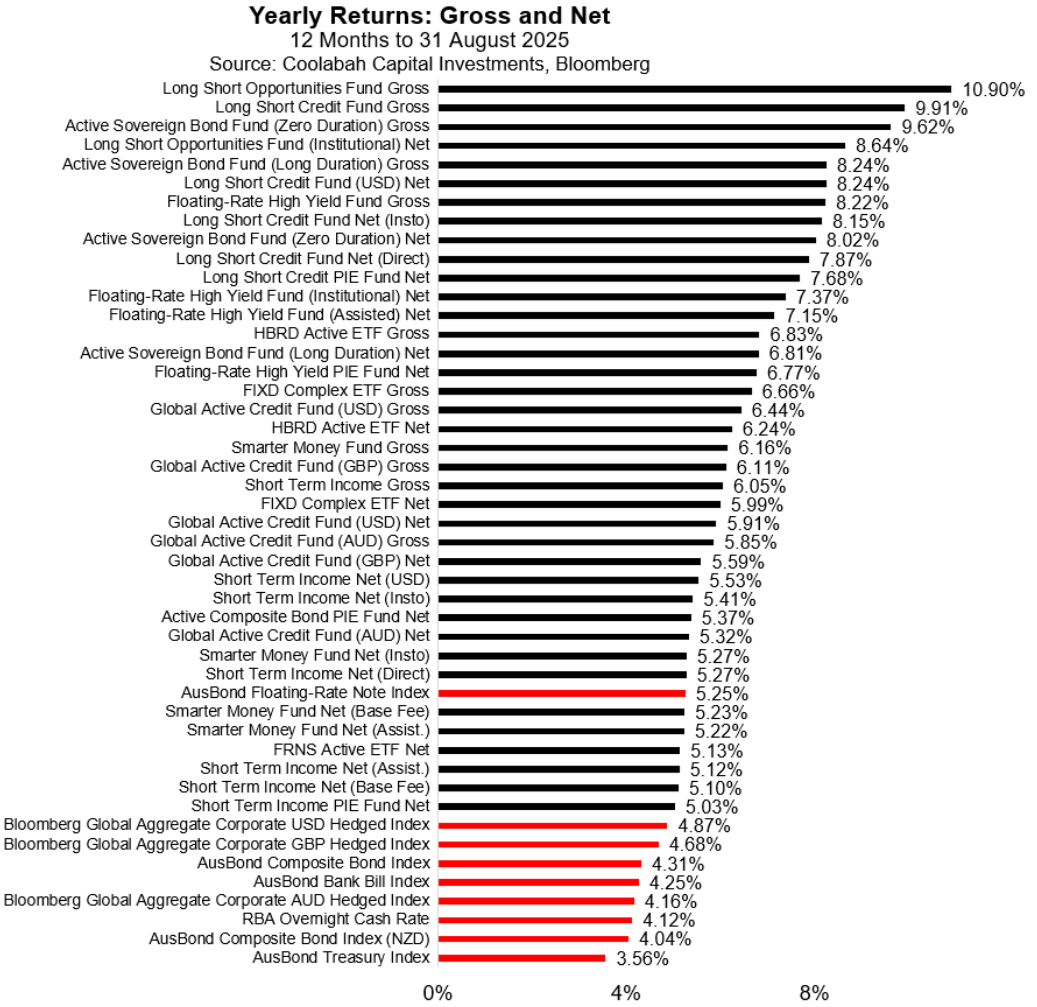
The since inception gross (net) return of 4.36% pa gross (3.54% pa net) is the total annual return earned by the fund since Feb. 2012, including interest income and movements in the price of the bond portfolio after all fund fees (assuming net returns are calculated from the historic gross returns using the current fee structure as displayed in the Product Disclosure Statement). The net return quoted applies to the Smarter Money Fund - Base Fee Class, with quarterly distributions reinvested. Investment return will vary depending upon investment date and any additional investments and withdrawals made. **The annualised volatility estimate of 0.60% pa** is based on the standard deviation of net daily returns since inception, which are then annualised, attributable to the Smarter Money Fund - Base Fee Class.

Portfolio Managers	Christopher Joye, Ashley Kabel, Roger Douglas, Fionn O'Leary (Coolabah Capital Investments)		
APIR Code	ETL6313AU	Fund Inception	17-Feb-12
mFund Code	-	Distributions	Quarterly
Asset-Class	Smarter Money/Short-Term Fixed-Interest	Unit Pricing	Daily (earnings accrue daily)
Target Return	Net 1-2% pa over RBA cash rate	Min. Investment	$1,000
Investment Manager	Coolabah Capital Investments (Retail)	Withdrawals	Daily Requests (funds normally in 3 days)
Responsible Entity	Equity Trustees	Buy/Sell Spread	0.00%/0.025%
Custodian	Citigroup	Mgt. & Admin Fee	0.79% pa

Portfolio commentary: In August, the zero-duration daily liquidity Smarter Money Fund (SMF) returned 0.45% gross (0.39% net), outperforming the RBA Overnight Cash Rate (0.29%), the BetaShares High Interest Cash (AAA) ETF (0.30%), the AusBond Bank Bill Index (0.32%), and the FE Cash Enhanced Index (0.36%). Over the previous 12 months, SMF returned 6.10% gross (5.23% net), outperforming the RBA Overnight Cash Rate (4.12%), the AusBond Bank Bill Index (4.25%), the BetaShares High Interest Cash (AAA) ETF (4.31%), and the FE Cash Enhanced Index (4.61%). SMF ended August with a running yield of 4.63% pa, a weighted-average credit rating of A+, and a portfolio weighted average MSCI ESG rating of AA.

Since the inception of SMF 13.5 years ago in February 2012, it has returned 4.36% pa gross (3.54% pa net), outperforming the RBA Overnight Cash Rate (2.11% pa), the AusBond Bank Bill Index (2.30% pa), the BetaShares High Interest Cash (AAA) ETF (2.33% pa), and the FE Cash Enhanced Index (2.52% pa). Since inception, SMF's Sharpe Ratio, which measures risk-adjusted returns, has been 3.75x gross (2.39x net). While SMF's return volatility since inception has been low at around 0.60% pa (measured using daily returns), as a daily liquidity product with assets that are marked-to-market using executable prices, volatility does exist. This contrasts with illiquid credit (eg, loans and high yield bonds) wherein assets that have very high risk can appear to have remarkably low volatility, which is, in fact, just a mirage explained by the inability to properly value these assets using executable prices.

Strategy commentary: Returns were solid in the month of August across Coolabah's strategies with the av. AAA rated, daily liquidity Active Sovereign Bond Fund again leading the charge, delivering 1.16% net of fees in the zero duration unit class, which lifted its 12 month return to 8.02% after fees. Over the last year, the sovereign strategy has only been bested by the av. A+ rated, daily liquid Long Short Opportunities Fund which delivered 8.64% net and the av. A+ rated, daily liquid Long Short Credit Fund (7.87% to 8.15% net).



Strategy commentary cont'd: In the segregated institutional mandate domain, Coolabah's best performing strategy over the last year produced 12.48% after fees (this is not available as a public fund). The chart above highlights trailing 1-year fund returns to end August. Note that past performance is no guide to future returns and investors should read the product PDS to better understand risks and consult an independent adviser.

From a macro perspective, August was an interesting month with lots of cross-currents in the data. In the US, 10-year government bond yields declined by a solid 14bps from 4.37% to 4.23% (and have fallen further since) on the back of weaker employment and domestic demand data and expectations that the Fed will cut rates in September.

By way of contrast, long-term government bond yields in Europe generally climbed due to fears about fiscal weakness and elevated volumes of ensuing government debt issuance (the French 10-year government bond yield was up 16bps, the UK 10-year was up 15bps, Italian 10-year up 8bps, and German 10-year up 3bps).

In the Antipodes, Aussie 10-year government bond yields were broadly unchanged (moving from 4.26% to 4.27%) as forecasts remained that the RBA will only cut rates modestly towards its neutral estimate around 3.0-3.5% as domestic productivity is extraordinarily weak. Across the ditch, the NZ 10-year government bond yield dropped sharply from 4.41% to 4.25% as a result of dovishness from the RNBZ (two members voted for a larger 50bps cut in August).

Cross-currents were also evidenced in moves in synthetic spreads with credit default swap indices tighter in the US (CDX IG and CDX HY 0.4bps and 1.4bps lower) while they moved wider in Europe (Main and Fin SNR 1.9bps and 3bps higher). Cash IG credit spreads generally drifted in the US (3bps wider) and Europe (6bps wider), although Aussie credit bucked the trend as they contracted 4bps (within this, 5-year major bank senior and 5-year subordinated spreads were 4bps tighter and 2bps tighter, respectively, while 5-year major AT1 hybrid spreads were unchanged).

While Bitcoin fell 7.5% over the month, gold rallied 4.8% and equity markets did okay (S&P500 up 1.9%, Nasdaq up 0.9%, NZX50 up 0.8%, Eurostoxx 50 up 0.6%, and FTSE 100 up 0.6%) with Aussie stocks outperforming (ASX200 up 3.1%).

In bond markets, fixed-rate indices like the Bloomberg Global Aggregate Corporate benchmark did well (up 0.75%) while floating-rate alternatives, such as the zero duration version of this benchmark, lagged (0.27%). In Australia, these dynamics were reversed with the AusBond Floating-Rate Note Index (0.46%) mildly outperforming the fixed-rate AusBond Composite Bond Index (0.33%).

The RBA's third interest rate cut this year in August has helped galvanise a recovery in the value of homes across Sydney and Melbourne, which had been declining until Martin Place kicked off its monetary policy easing process.

Since the first rate cut in February, dwelling values across Australia's two largest cities have been appreciating at a 6% annual rate, according to data house Cotality.

Although the election campaign understandably put a temporary dampener on buyer activity, the bounce-back has continued with gusto since the RBA's second rate cut in May.

"The rolling quarterly increase in home values shows a clear upswing," says Tim Lawless, Cotality's research director. "The 1.8% rise in the national index over the three months ending July was the strongest outcome since June last year."

As rates fall, there is less pressure on borrowers to meet their mortgage repayments, which is removing distressed sellers from the market. As a consequence, the supply of new homes for sale has been drying up.

"The positive trend in housing values is supported by persistently low inventory levels, with national listings tracking 19% below the previous five-year average for this time of the year," Lawless says.

Strategy commentary cont'd: "The imbalance between available supply and demonstrated demand has supported auction clearance rates, which have been tracking slightly above the decade average since mid-May."

While Sydney house prices are achieving record highs, the relatively moribund (and tax-burdened) Melbourne market remains 3% to 4% below its previous peak touched in March 2022.

Recall that as the RBA started to aggressively lift the target cash rate off its 0.1% lower-bound in May 2022, Aussie house prices suddenly fell by a chunky 10%, which was their second-largest correction on record.

Many quickly forgot about this drama as prices started to soar on the back of booming population growth in 2023 and 2024. The fact that Victorian dwellings are still below their 2022 peaks underscores the point that consistent capital gains in real estate are no sure thing – markets can underperform for many years.

The good news is that financial markets expect more interest rate relief to come. Traders predict the RBA will lower its cash rate from its 3.6% level to about 3.2% by the end of this year.

They have fully priced in more than 50 basis points of cuts by March, which would position the cash rate close to 3%. This should drive national home values at least 10% higher over the next 12 months.

Supply-constrained suburbs near key amenities, like beaches, schools, shopping centres, the CBD and major transport hubs, will outperform.

And land-rich houses will continue to generate much higher capital gains than apartments. As interest rates fall, investors are starting to once again hunt for more attractive income and yields.

This is especially important as term deposit rates slump into the 3% zone. Product manufacturers are licking their lips at the prospect of gobbling up the $40 billion of latent demand that will be liberated when the ASX-listed hybrid market matures in the coming years.

This has prompted a spate of ASX listings of high-yielding debt portfolios and illiquid loans wrapped up as debt securities described as "notes".

The idea seems to be that note-wrapping the illiquid assets gives them the appearance of more security and safety. And there is the additional allure of the issuer of the note having some sort of obligation to repay it, although it is not clear what that commitment is really worth.

When considering alternatives to the big banks' hybrid securities, it is instructive to reflect on what you are actually replacing them with. A major bank hybrid sits between its equity and bonds in risk terms as defined by its return volatility and the probability of losing money.

These securities are rated BBB by Standard & Poor's, which means they are "investment-grade" in quality.

A five-year major bank hybrid pays investors an annual running yield grossed up for franking credits of approximately 5.6%. (The cash yield before adding in the benefit of the franking credits is only 3.9%.)

Obvious solutions for hybrid investors are to move one step up or down the capital structure. If you buy ANZ shares, they pay a dividend yield of 6.6% grossed-up for franking (CBA shares offer only 4.2%).

But this comes with an enormous 20% to 30% annual return volatility. Remember when global equities plunged circa 25% in the first few months of this year as a result of concerns about the trade war?

Alternatively, you could take less risk by moving up the capital structure. ANZ's subordinated bonds are rated A minus, which is two notches above their hybrids.

Strategy commentary cont'd: They are safer and more liquid. ANZ issued new 10- and 20-year subordinated bonds last week, which yield 5.6% and 6%, respectively.

Now these yields are not franked: they are pure cash. You can, therefore, pick up similar or even superior yields to hybrids in the banks' subordinated bonds, albeit with longer-dated maturities.

One key insight here is that you are taking a piece of the same underlying risk: betting on the viability of too-big-to-fail Aussie banks with government-guaranteed deposits, implicitly government-guaranteed bonds, and central bank liquidity support.

Even when Credit Suisse collapsed in March 2023, its deposits, senior bonds and subordinated bonds were fully protected. Only the $26 billion of Credit Suisse hybrids were wiped out.

Whenever you move beyond the issuers of bank hybrids, you are stepping into a very different risk realm. That could be via high-yielding equities that have much greater volatility and probabilities of loss.

Or it could be into more illiquid bonds, notes or loans that are hard to accurately value and/or have non-trivial default hazards. To be clear, all these investments can theoretically play a role in a portfolio.

Allocators should nonetheless think carefully about the costs and compromises. Bank hybrids have proven to be extraordinarily resilient and liquid during the worst crises.

In the single toughest month for hybrids in history, March 2020, there was an incredible $1.22 billion that traded on the ASX.

Hybrids were always easy to value during this turbulent time because of their intrinsic listed liquidity, which is why the ETFs that held them consistently traded at their net asset value.

Most credit ETFs and listed funds that held loans and bonds suffered during the March 2020 shock, trading at material discounts to their official NAVs.

Once again, when Credit Suisse collapsed in March 2023, and $26 billion of its hybrids vanished, the ASX hybrid liquidity remained exceptionally robust, with more than $890 million of trading in the month.

The most sensible port of call for hybrid holders today is to simply move up or down the same capital structure. In this way, they are sticking with the same corporate risk profile, which most hybrid investors understand well.

We prefer assets that have inherently strong liquidity profiles that are easy to move in and out of with minimal transaction costs at a moment's notice. The value of real liquidity is often underestimated.

Nothing's cheap, but one asset class offers interesting opportunities

We live in a world of increasingly expensive assets. One oft-cited equity market measure, the cyclically adjusted price-earnings multiple, is now sitting at 39 times, notably above its prior 2021 peak.

In fact, it is 45% higher than the median multiple since January 1, 2008 (you get similar numbers if you start the analysis in January 2000). It looks much worse if you go back further in time: the median multiple since 1870 is just 16.

Another way of considering equity valuations is through the prism of the additional rate of return they imply above and beyond a risk-free investment.

Applying the US Federal Reserve's model of this gap, we find that the current equity return premium above risk-free government bonds is 27% below its normal level since the mid-1980s.

As with the cyclically adjusted price-earnings multiples highlighted above, the only period we can find when equities were richer was at the peak of the tech boom in 2000.

Strategy commentary cont'd: We iterate this model for Aussie bank stocks by comparing the one-year forward earnings yield on the big banks' shares to the yields paid on the same banks' bonds.

Historically, bank stocks have offered a 6.2% return premium over their bonds. At the time of writing, that excess return had fallen to 3.3%, among its lowest levels ever.

Relative to their own bonds, major bank stocks appear overvalued by 47%. Of course, the nascent artificial intelligence revolution might rationalise some of these valuations if it drives unprecedented investment, productivity, and growth, which is a possibility.

But everywhere you look, it is hard to find anything cheap. House prices have soared to record levels. Gold is trading at more than US$3554, which has never been seen before. And bitcoin is only US$12,000 off its recent $123,000-plus peak.

Within the markets we trade, hybrid spreads are close to all-time tights: typically, a five-year major bank hybrid pays about 3% to 4% above the Reserve Bank of Australia's cash rate. Today, that spread has shrunk to about 2%, which is bobbing around its weakest level since before the global financial crisis.

There is one asset class that offers some interesting opportunities: fixed-rate debt, otherwise referred to in the industry as "interest rate duration". For the first time since before the global financial crisis, long-dated fixed-rate bonds are providing a decent premium over floating-rate cash.

The Australian 10-year government bond's fixed yield is 4.34%, well north of the Reserve Bank of Australia's 3.60% cash rate. Indeed, AAA-rated Commonwealth government bonds are paying a better return than the 4.16% dividend yield on the Aussie equity market, even after grossing up the latter for franking credits. (The cash yield on Aussie shares is much lower again at 3.19%.)

The 4.34% yield on Aussie government bonds is also 27% higher than their average yield since 2008 and superior to the average 4.14% yield since 2000. Locking in these yields can furnish significant profits – and portfolio insurance – in the event there is a recession or crisis that warrants deep interest rate cuts.

This is particularly true if you are doing so via an investment that has no credit risk, such as a risk-free government bond with the highest possible AAA credit rating. (Naturally, there are many government bonds that are much more lowly rated and which do embed non-trivial credit risks.)

The flip side of this coin is that a fixed-rate bond will suffer large losses if these long-term interest rates climb a lot further. And the truth is that there are many good reasons as to why debt investors are demanding elevated fixed rates right now.

You can think of the difference between floating-rate cash, which moves up and down with the RBA's policy rate, and the fixed-rate 10-year Commonwealth government bond yield as reflecting a payment for assuming a range of different risks.

What happens if politicians continue to spend crazy amounts of money and rack up enormous budget deficits that have to be funded by unforeseen government bond issuance? Interest rates will have to rise to convince debt investors to buy the bonds.

If all this public spending creates excess demand and the economy grows at a pace beyond its inherent potential, it will precipitate inflation. And this will force the RBA to lift its cash rate higher than it might otherwise have been, driving up the yields on government bonds, given they reflect the market's best guess of the average RBA cash rate over time.

And if public sector handouts and excessive regulation of industry reduce the incentive to innovate and work hard, the amount we produce for a given level of effort will inevitably decline.

This reduction in productivity means it is more expensive to produce goods and services, which fuels inflation. As before, that will necessitate higher interest rates and government bond yields.

Strategy commentary cont'd: Along these lines, a crisis of confidence in the UK government's ability to manage its finances has pushed the interest rates it pays on its debt to extreme levels.

The yield on 10-year UK government bonds has jumped from 3.76% in 2024 to 4.72% today, miles above the 2.41% average since 2008. At some point, this becomes unsustainable: ever-higher yields on government bonds force up the annual interest bill until it becomes untenable.

And this affects all borrowing costs, including those paid by businesses and households. In the long run, this normally results in remediating policy measures to cut spending, raise taxes, and balance the books.

Looking through the business cycle, one can use a simple mental model to ruminate on when these fixed-rate bond yields begin to appeal.

If you take the average expected cash rate that is likely to assert itself over time and combine it with the expected term premium that compensates investors for uncertainty around fiscal policy, interest rates and inflation, you arrive at a hurdle rate above which yields are worth considering.

In Australia, the RBA judges that the neutral rate is circa 3%. The average term premium has tended around another 0.75 percentage points.

Combining the two variables, you get to a hurdle rate for 10-year fixed-rate bonds of 4%. While this approach has many shortcomings, it helps provide some first-pass insights that you can debate. You might, for example, have a significantly lower or higher neutral rate. Or you might want more compensation for inflation risk.

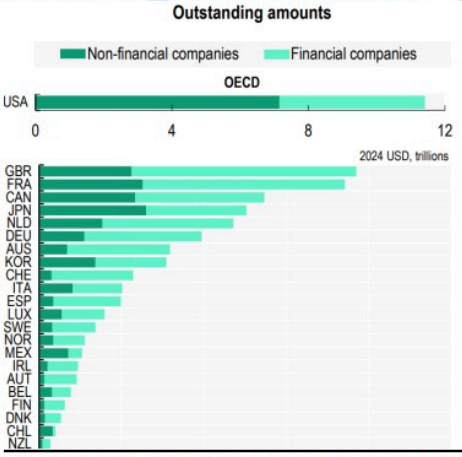
But applying these building blocks assists in thinking about minimum required rates of return, which is essential for making assessments about relative value.

Aussie banks issue more bonds with local funds now the main domestic buyer

Australia's corporate bond market has long been dominated by banks, where the bank bond market punches above its weight, with the bonds issued by all Australian financial companies now similar in size to Japan's market and not far behind Germany according to the OECD.

Moreover, the market has grown in importance over recent years, with banks issuing more bonds both relative to history and other countries.

Figure 1: Australian bonds issued by financial companies – mostly banks – punch above their weight, similar in size to Japan's market and not far behind Germany



Source: Organisation for Economic Co-operation and Development, Coolabah Capital Investments

Strategy commentary cont'd:

Figure 2: Australian banks have issued more bonds over recent years, both relative to history & other countries

Source: Coolabah Capital Investments

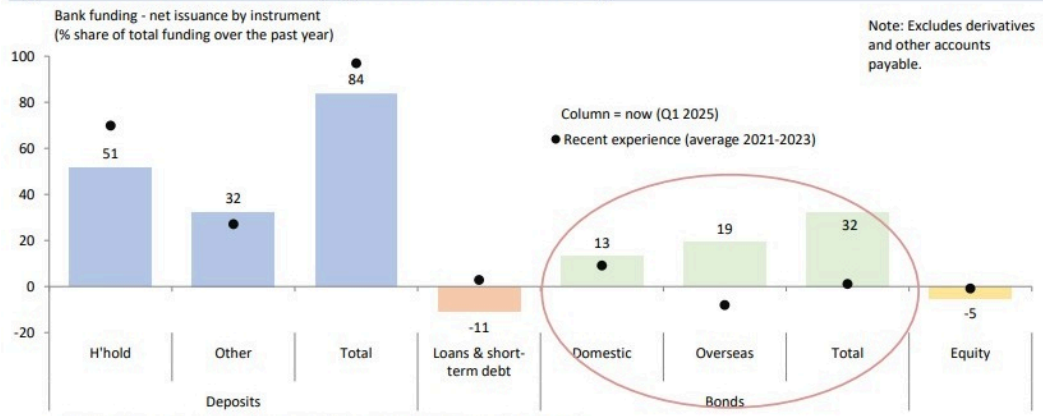
Bank funding is still dominated by deposits, but increased issuance means local banks have relied more on bank bonds lately at the expense of short-term debt/loans and equity.

For example, over the past year, bank deposits accounted for almost 85% of bank funding. Net issuance of bonds accounted for almost one-third of funding as short-term debt/loans went backwards by about 10% and equities dropped 5%.

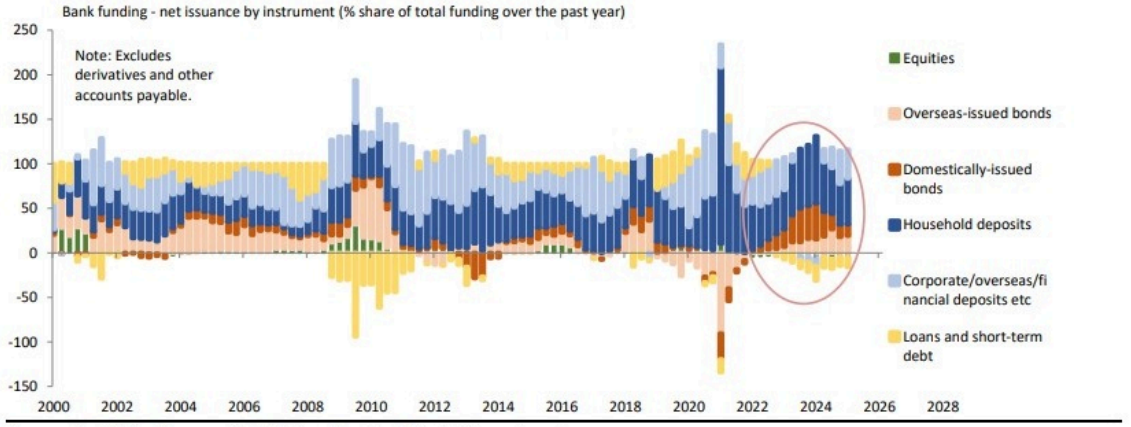
The recent reliance on bank bonds is the greatest in years, with banks at first skewing issuance to domestic bonds and more recently to overseas bonds.

The declining importance of short-term debt/loans initially reflected the end of the RBA's COVID-era Term Funding Facility loans made to banks, but lately it is because banks have reduced their reliance on one short-term debt.

Figure 3: Australian banks are relying more on bonds for funding



Strategy commentary cont'd:

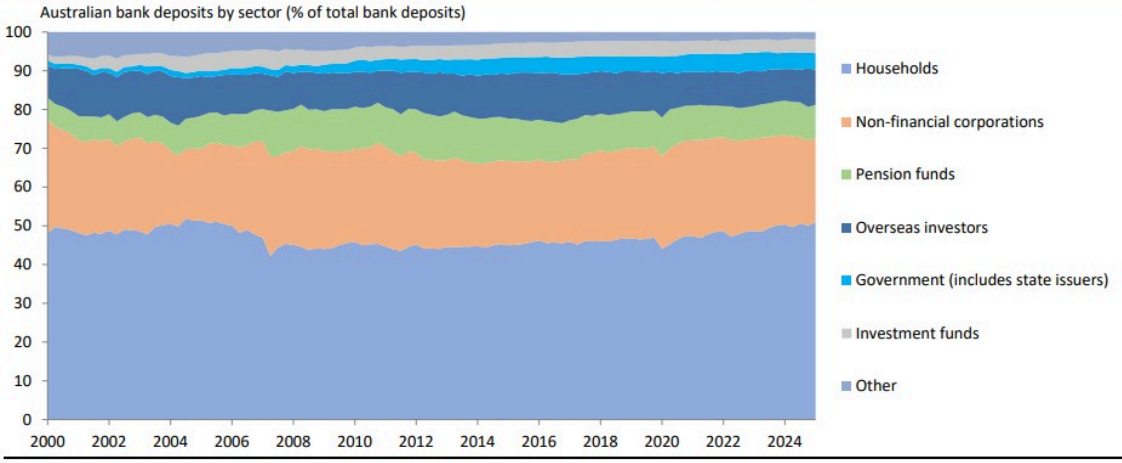


Source: Australian Bureau of Statistics, Coolabah Capital Investments

As an aside on deposits, it should be remembered that most deposits are (electronically) created when a bank writes a loan to either a household or company and the bank just credits the amount of the loan to the borrower's bank account (and by the same token, deposits are extinguished when a loan is repaid).

Households and corporates naturally dominate, accounting for about 50% and 20% of total deposits, respectively, but pension funds and overseas investors each account for close to 10%, and government and investment funds each hold almost 5%.

Figure 4: Bank deposits are much more than just household and corporate deposits



Source: Australian Bureau of Statistics, Coolabah Capital Investments

As for who is buying bank bonds, overseas investors continue to dominate the market, with a roughly 70%/30% overseas/domestic split of investor holdings of bonds outstanding.

Interestingly, overseas investors have switched out of overseas-issued bonds in favour of locally issued ones, while domestic holdings have fallen modestly and are back at pre-COVID levels.

Within the domestic investor base there has been significant change over recent years.

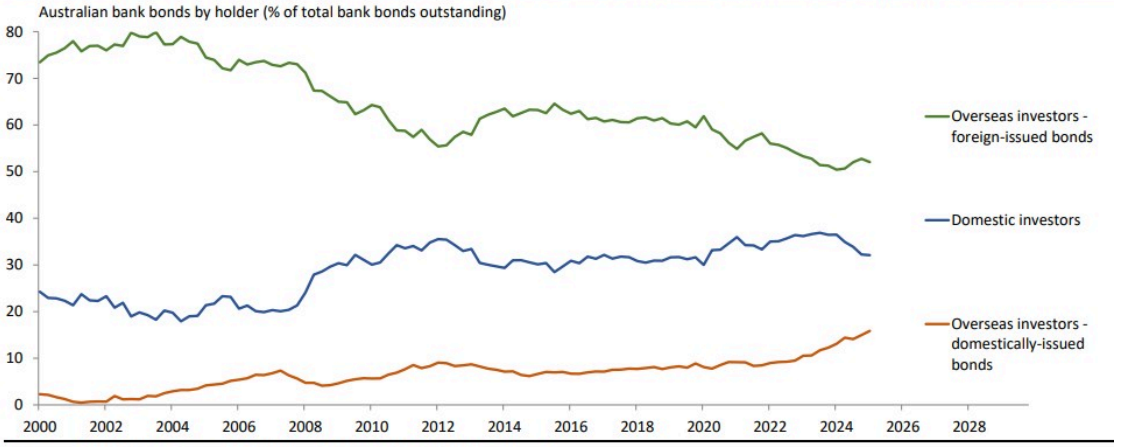
Investment funds have grown in importance and they are now narrowly the main domestic holder of locally-issued bank bonds, accounting for about 8% of the entire bank bond market, eclipsed only by overseas investors who own domestically-issued bonds equal to about 16% of total outstandings.

The same is true for pension funds, which have also grown in importance and now hold around 5% of the total market, approaching the increased 6% share of other domestic investors (mainly insurers and corporations).

Strategy commentary cont'd: Meanwhile, bank holdings of bank bonds have fallen sharply since the height of COVID and are currently about 8% of the market. RBA holdings – where bonds can be counted as collateral for repurchase agreements – have shrunk to 1%.

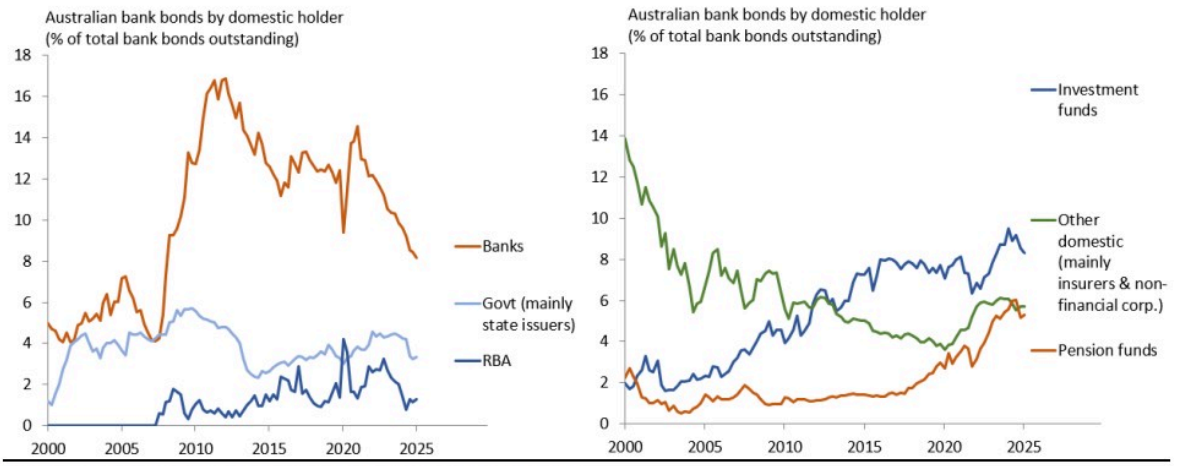
Finally, government – which is mainly state issuers – hold 3% of all outstanding bank bonds.

Figure 5: Overseas investors still dominate the market for Australian bank bonds, recently favouring domestically-issued bank bonds, while domestic investor holdings have fallen modestly to pre-COVID levels



Source: Australian Bureau of Statistics, Coolabah Capital Investments

Figure 6: The rise of domestic investment and pension funds as buyers of Australian bank bonds



Source: Australian Bureau of Statistics, Coolabah Capital Investments

The need to raise living standards through productivity

Labour productivity – which is the output each person produces in the economy – matters hugely for every Australian.

As Nobel Prize-winner Paul Krugman famously said, "Productivity isn't everything, but, in the long run, it is almost everything. A country's ability to improve its standard of living over time depends almost entirely on its ability to raise its output per worker."

The government can mask poor productivity by boosting economic growth by adding to the population, but if an individual wants to earn more, they are best to be more productive.

Put simply, productivity and living standards go hand in hand; when productivity booms, living standards boom, and when productivity disappoints, living standards disappoint.

Strategy commentary cont'd: Unfortunately, Australia's productivity performance has been dismal, with both the worst performance in decades and poor performance compared with other struggling western nations.

What is meant by dismal productivity? Well, on average, each Australian is producing much the same as they did almost a decade ago, back in 2016.

The last time Australia's productivity was this weak over such a long span was when World War 2 ended and the workforce absorbed the troops returning home. Otherwise, the comparison stretches back to a century ago to the 1920s.

Australia is not alone in facing this challenge as almost every country has been in the same boat over recent years, with the US the outlier as labour productivity there has continued to boom.

However, Australia is struggling more than most of its peers. To place Australia in perspective, continental Europe is widely thought of as a low-growth, low-dynamism economy, held back by too many regulations.

It is true that European productivity has been weak, but it has actually done a bit better than Australia, with the level of productivity slowly picking up to reach its best level since COVID hit in early 2020.

Why has Australia disappointed? It is a mix of factors: an ageing population demanding more government services, companies not investing enough in their workers, and companies not investing enough in technology.

How pervasive is the influence of government on productivity? Well, first up, the public sector has grown in importance.

Over the past 10 years, an extra 2.9 million people found work, where just over half – or 1.5 million of them – were hired in the broad public sector.

All this growth in the public sector means that almost 1 in 3 people now work in either the public administration, health and social welfare, or education industries.

Moreover, if you look across Australia, the health and social welfare industry is in the top three employers in most suburbs and towns and it is often the largest employer.

These trends are in no way unique to Australia, holding true for the ageing populations of other advanced economies, where Australia's broad public sector share of employment only places it in the middle of the global pack.

Not surprisingly, the same outsized strength in the public sector shows up in economic activity. For example, over the past ten years, Australia's economy has grown by about 2.25% per annum, with government spending accounting for 1.25pp of that growth.

As a result, government spending has averaged almost 30% of GDP for nearly all of the past year. This matches the brief stimulus-driven peak at the height of COVID and is only exceeded by the spending undertaken during the Second World War.

But to bring it back to productivity, the public sector's productivity has stagnated for just over twenty years, with the level of labour productivity about the same as it was in 2004.

Why is this the case? Government spending on infrastructure provides a great benefit to productivity, but its benefit is mainly felt by the private sector, while boosting the productivity of labour-intensive jobs in, say, health, aged and disability care is difficult.

What about sluggish productivity in the private sector? Two obvious culprits are investment and technology, where a worker can be made more productive by investing more in them and using technology to be more efficient.

Unfortunately, Australia is lagging on both counts.

Strategy commentary cont'd: If you look at Australia's capital stock per worker, it is about the same as what it was almost a decade ago, showing that many companies find it easier to hire more people rather than invest in their existing staff.

In this respect, Australia has been left behind by American companies, where business investment is booming, and even Europe.

Australia is even more behind on technology. If technology is measured using what economists call multifactor productivity, it is broadly the same as what it was almost a quarter of a century ago, back in 2001.

This sort of sustained weakness hasn't been seen since the early 1960s and, again, Australia has been left in the dust by the US and, to a lesser extent, Europe.

The natural question to ask, though, is whether AI changing things and if Australian firms are investing in artificial intelligence and big data to keep up with the global competition.

Looking at business investment in technology, Australian firms have started to lift their spending, but it is still low at about 2.5% of GDP. European competitors are spending about 4.5% of GDP on tech, while US firms are spending 8% of output.

Keep in mind, though, that weak productivity is not confined to the public sector and productivity has been poor in several important private-sector industries.

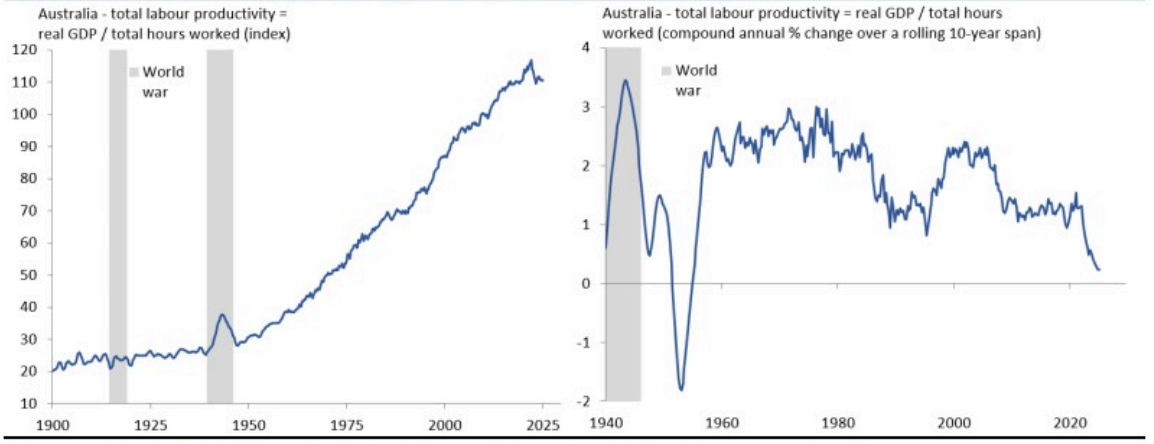
Productivity has stagnated for years in industries like mining, which has been a notable drag on national productivity, the financial sector, which is dominated by the banks, construction, and manufacturing. In contrast, productivity has done OK in sectors providing services to businesses, farming, and wholesale/retail.

All this leads to the question of what happens if Australia doesn't invest more and spend more on technology to fix productivity.

The most obvious thing is that living standards will be stuck in a rut. Australian companies will be less competitive than their US, European, and Asian peers and Australia's economic growth will be weak unless the government props it up by boosting the population.

The economy would also risk becoming more lopsided, relying on competitive advantages in mining, education, and tourism, with the government continuing to play a large role as Australians become older.

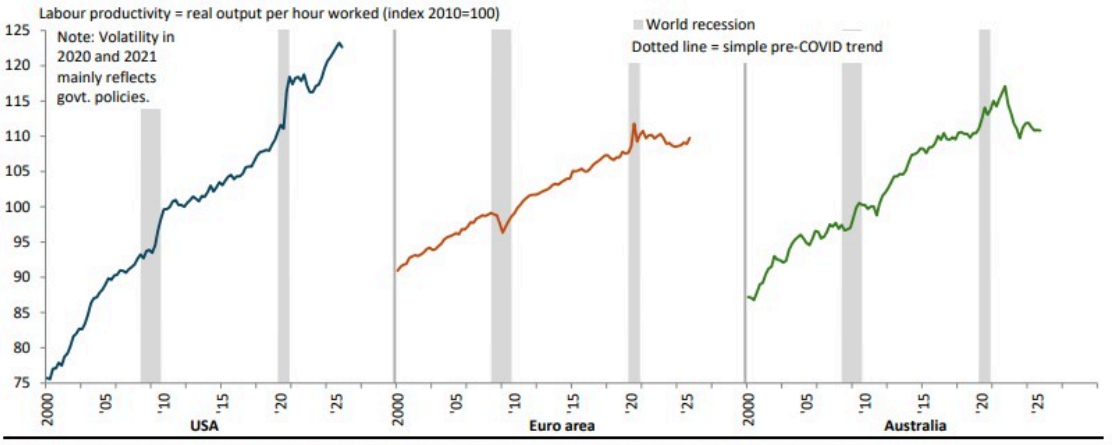
Figure 1: Australia's labour productivity has been dismal over recent years



Note: Spliced with productivity on a heads basis prior to the mid 1960s. Interpolated annual estimates in history.
Source: Australian Bureau of Statistics, Reserve Bank of Australia, Coolabah Capital Investments

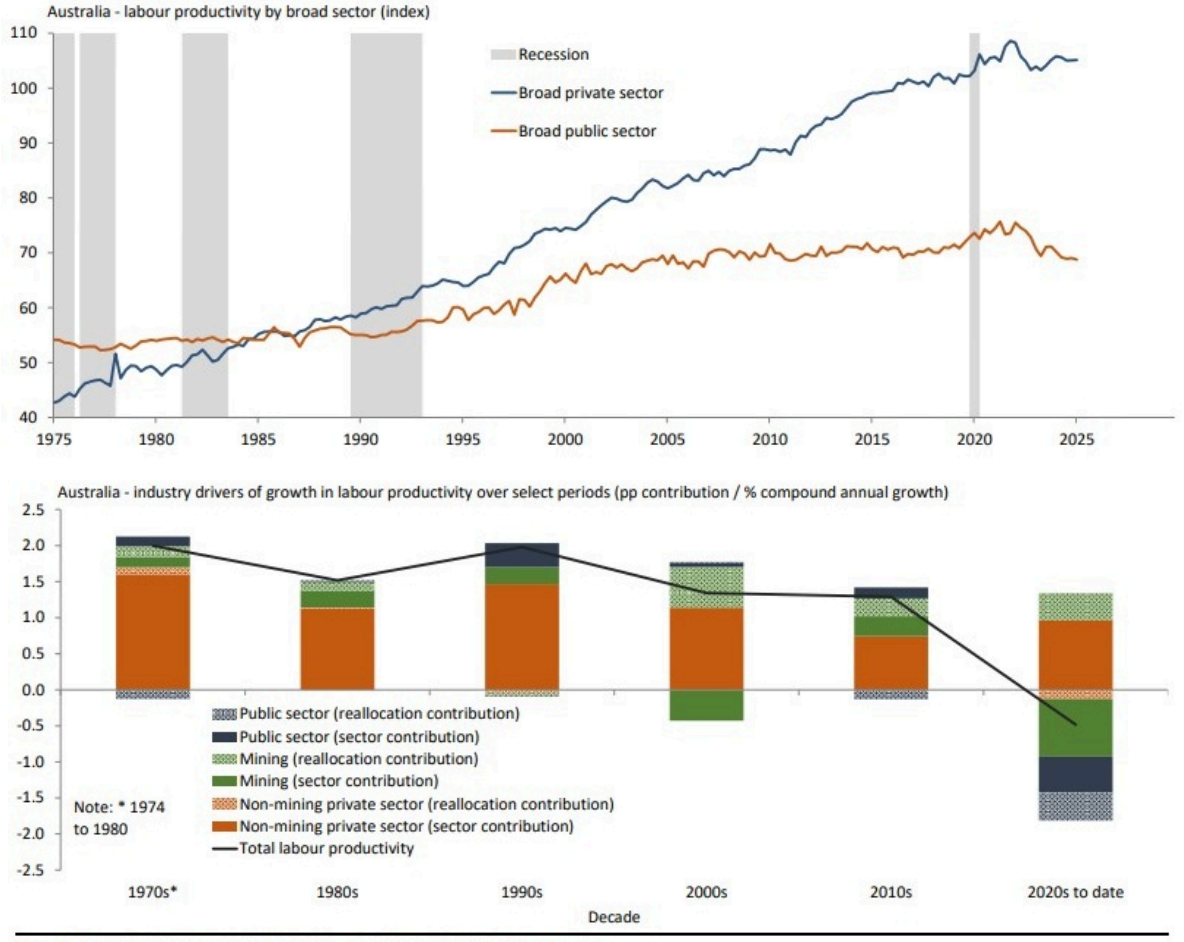
Strategy commentary cont'd:

Figure 2: Labour productivity has boomed in the US, euro area productivity is gradually picking up, and Australian productivity remains weak



Source: Australian Bureau of Statistics, Bureau of Economic Analysis, Eurostat, Coolabah Capital Investments

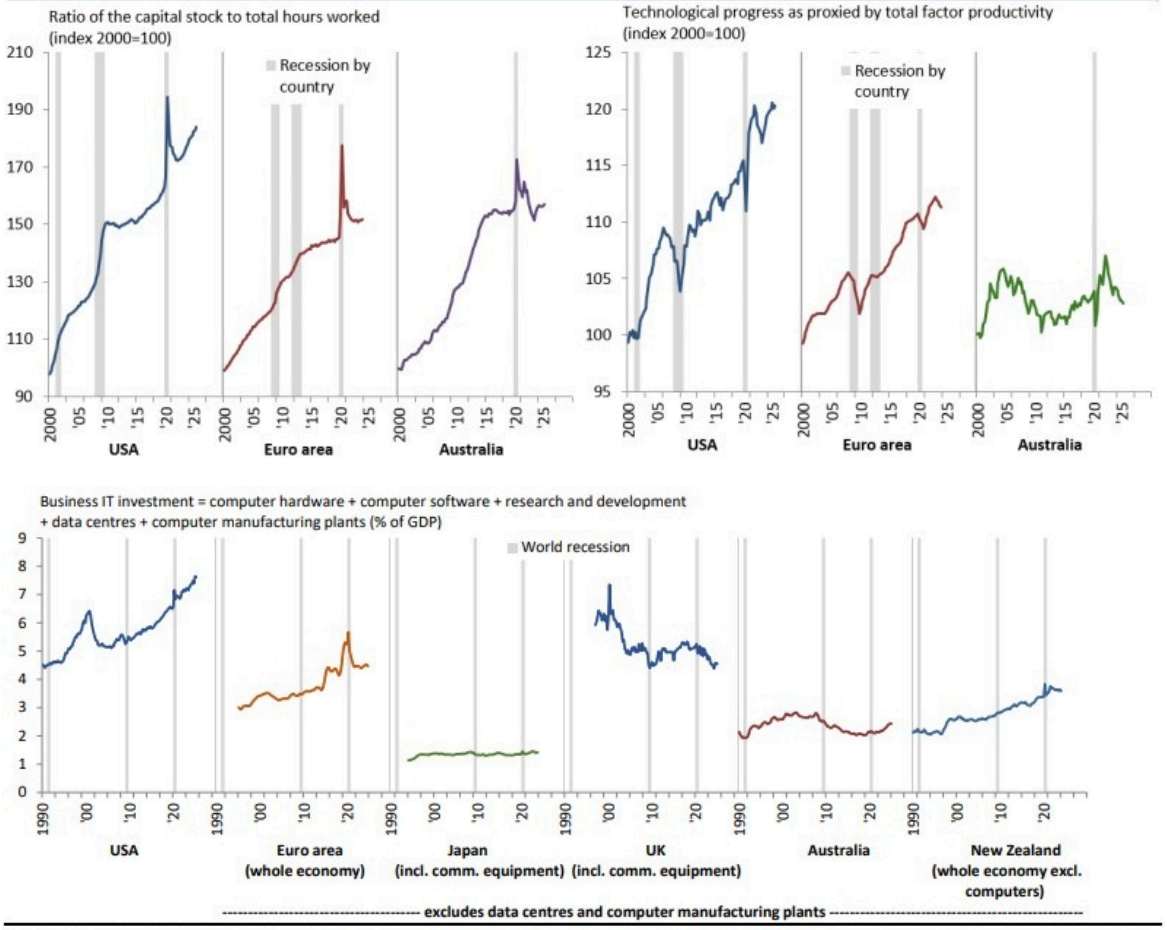
Figure 3: Labour productivity in Australia's broad public sector has been weak for a long time, weighing on national productivity over recent years, while broad private-sector productivity has been poor lately



Source: Australian Bureau of Statistics, Coolabah Capital Investments

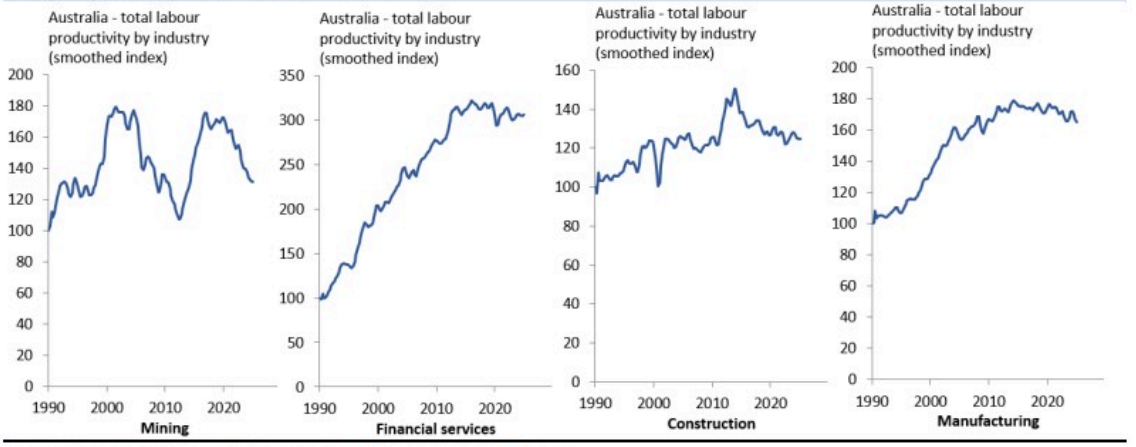
Strategy commentary cont'd:

Figure 4: Australia has underinvested in both its workers and technology relative to both history and most other countries



Source: Australian Bureau of Statistics, Bureau of Economic Analysis, e-Stat, Eurostat, Federal Reserve Bank of San Francisco, Office for National Statistics, Statistics New Zealand, Coolabah Capital Investments

Figure 5: Weak productivity is not confined to the public sector and productivity has been consistently poor in many important private-sector industries



Source: Australian Bureau of Statistics, Coolabah Capital Investments

The RBA trims the neutral policy rate and lowers potential output, productivity growth, & the NAIRU

The RBA's forecasts suggest that the RBA is assuming a short-term neutral policy rate of just over 3% and a lower NAIRU of 4.25%. The RBA has marked down potential growth from 2.25% to 2% as it revised down trend growth in labour productivity from 1% to 0.7%. The clear risk is that productivity continues to undershoot, which would place downward pressure on the estimated neutral rate – albeit countered by other influences – and suggest that the NAIRU may not have fallen by as much as thought by the RBA.

Strategy commentary cont'd: A striking feature of the RBA's staff forecasts under the new Monetary Policy Board is how many of the latest estimates are practically straight lines.

Underlying inflation is forecast to hold at 2.6% for a couple of years before edging down to 2.5% in late 2027. The unemployment rate is expected to tick up to 4.3% and hold at that level for the entire forecast horizon, while the forecast profile for annual growth in GDP implies quarterly increases of 0.5% for almost every quarter through to the end of 2027.

The RBA has freely acknowledged that predicting the future is inherently difficult, as the Pagan-Wilcox review of forecasting at the bank made clear almost a decade ago, noting that, "forecasting is difficult and forecasts are almost always wrong, it's just a question of how wrong they'll be".

However, it is still unusual to see such steady forecasts. Normally straight-line estimates are the product of DSGE models, which are ill-suited to forecasting and are more commonly used by central banks to help address questions about policy.

More plausibly, the stability could reflect a decision by RBA management to impose judgment by smoothing what they might regard as spurious volatility in model forecasts. Forecasters – especially market forecasters – often impose judgment based on their experience and this is a reasonable explanation for the RBA's smooth forecasts.

Tied to the possibility of smoothing the forecasts is that the largely straight-line estimates are what the RBA regards as a "steady state" for economy, where inflation ends the forecast horizon at 2.5%, the midpoint of the inflation target, and annual GDP growth matches the RBA's newly-revised estimate of potential growth of 2%.

In turn, these estimates suggest that the RBA staff are effectively working on the assumption that the NAIRU is now 4.25%, even though their most recent model estimates suggested it was steady at about 4.75% and where the RBA board reportedly assumed that the NAIRU was 4.5% earlier this year.

That is, if inflation expectations remain anchored at 2.5%, then the RBA's forecast that inflation settles at the midpoint of its target implies that there is no output gap by the end of the forecast horizon. If there is no output gap, then Okun's law – which specifies that the gap between output and potential output is linearly related to the gap between the unemployment rate and the NAIRU – suggests that the forecast unemployment rate of 4.3% is also the assumed NAIRU.

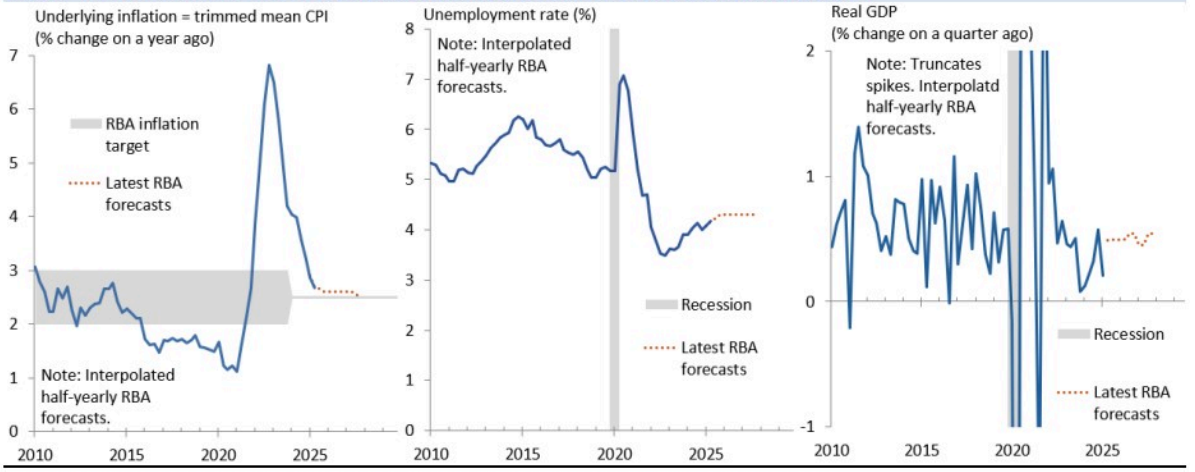
The idea that the RBA's current forecasts are largely "steady state" estimates is something that Deputy Governor Hauser recently encouraged when he was asked about the neutral policy rate:

"My answer, … which I wouldn't frame as a neutral rate, is go and look at our forecast. We've tried to take account of all of the available information and say, what is the outlook for inflation, unemployment, growth and so forth, conditioned on a particular [market-based] path for interest rates [and] our forecast in May … was that with interest rates following a gradual and gentle path down to about 3.2% at the end of our forecast period, inflation would come back to target. Now, it takes a little bit of intellectual agility to work out what that means but I would say not very much. I would gently and humbly encourage people to pay a bit more attention to that forecast than perhaps some people do."

On this basis, the Monetary Policy Board would likely currently regard the forecast end-point for the cash rate – which nowadays is based on market pricing the week before the staff forecasts are published – as a short-term neutral policy rate, which the latest figures put at 3.1% (by way of comparison, RBA staff recently put the average of a range of estimates of the neutral rate at about 2.75%).

Strategy commentary cont'd:

Figure 1: The RBA staff's latest key economic forecasts are basically straight lines



Source: Australian Bureau of Statistics, Reserve Bank of Australia, Coolabah Capital Investments

Another important feature of the RBA's forecasts was the decision to lower its estimate of annual potential growth from 2.25%, which is also the latest median market estimate, to 2%.

The revision reflected the staff marking down assumed trend non-farm labour productivity growth from 1% to 0.7% per annum, which is based on average growth over the past twenty years. There is no obvious reason to focus on the average growth of the past twenty years, although Treasury's dated budget assumption of 1.2% productivity growth is based on the same random approach.

Normally, lower potential growth would be expected to be broadly reflected in a similar reduction in the RBA's estimate of the neutral rate. The NAIRU could also be higher based on Okun's law. For example, if output was above potential such that the unemployment rate was below the NAIRU, then if estimated potential was lowered, then output would be even higher than potential and the gap between the unemployment rate and the NAIRU would be correspondingly larger.

The RBA has instead argued that both the neutral policy rate and the NAIRU are unaffected, stating that:

"The productivity downgrade has no implications for our assessment of the NAIRU and full employment, so our assessment of labour market tightness remains unchanged. Our forecasts for activity and potential output growth have been revised down together so our assessment of the evolution of the output gap is unaffected, while our current assessment of the output gap already accounts for past low productivity growth. While in theory lower productivity growth would imply a lower neutral interest rate, in practice our model estimates … derive from the observed data, which already reflect the historical slowdown in productivity, and so are unaffected by the change in our forecast assumption."

These are strong claims, but to be fair a 0.25pp revision to assumed productivity growth is relatively small, overshadowed by the already-large confidence intervals around trend productivity, the neutral policy rate, and the NAIRU. Also, in the case of the NAIRU, it is worth remembering that Okun's law is an observed relationship and not an identity.

The bigger issue is whether the productivity assumption remains too optimistic, posing a more material risk to the RBA's views on the neutral policy rate and the NAIRU.

Assessing trend labour productivity is extraordinarily difficult as productivity has languished for about a decade, apart from a COVID-era spike, echoing the persistently dismal productivity of other advanced economies, bar the US.

Not surprisingly, this has seen both the RBA and the market consistently overstate productivity, continually factoring in an elusive recovery.

Using the RBA's current forecasts, together with some very strong assumptions, the RBA's forecast profile for productivity can be mechanically split into its two drivers, namely the ratio of the capital stock to labour and multifactor productivity.

Strategy commentary cont'd: Higher labour productivity could be driven by companies and government investing more to make it easier for their employees to complete work and/or technological progress making production more efficient, as proxied by multifactor productivity.

On CCI's calculation, the RBA staff's assumption of 0.7% annual growth in labour productivity reflects forecast recoveries in both the capital-labour ratio and multifactor productivity, where the capital-labour ratio contributes about 0.5pp to labour productivity growth and multifactor productivity adds around 0.2pp.

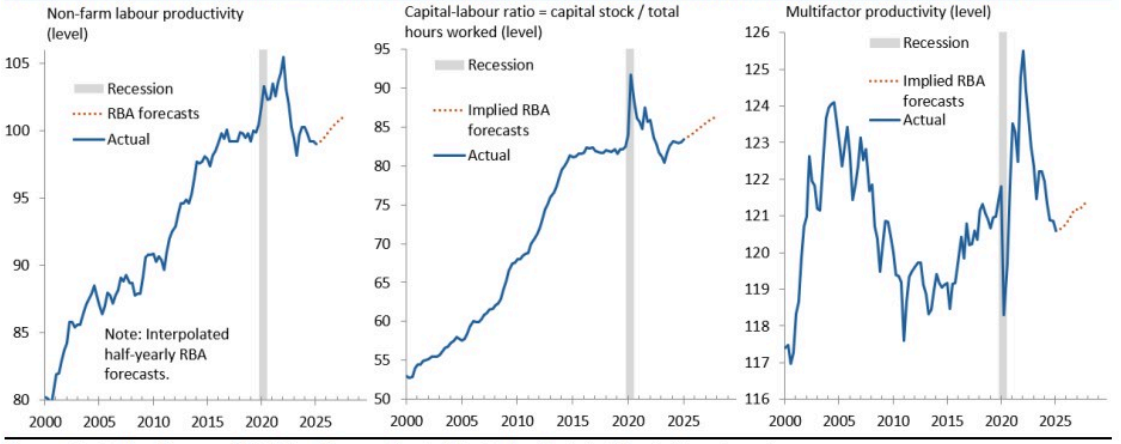
The RBA's forecasts imply only weak growth in the capital stock, but enough to outpace an expected slowdown in total hours worked, while a recent decline in multifactor productivity is assumed to immediately reverse.

Judging how realistic this outlook is hard, but productivity could continue materially to undershoot the RBA's forecasts, eking out small gains if companies continue to expand output by hiring more staff rather than ramping up investment.

Similarly, using business investment in technology as a window into technological progress, Australian companies have recently increased their spending, but not by much and where Australia lags tech investment in most advanced economies.

If labour productivity remains weak, then this would provide a stronger argument for a lower neutral rate, albeit countered by upward global pressure on the neutral rate and the influence of largeish budget deficit, and suggest that the NAIRU may not have declined by as much as thought by the RBA.

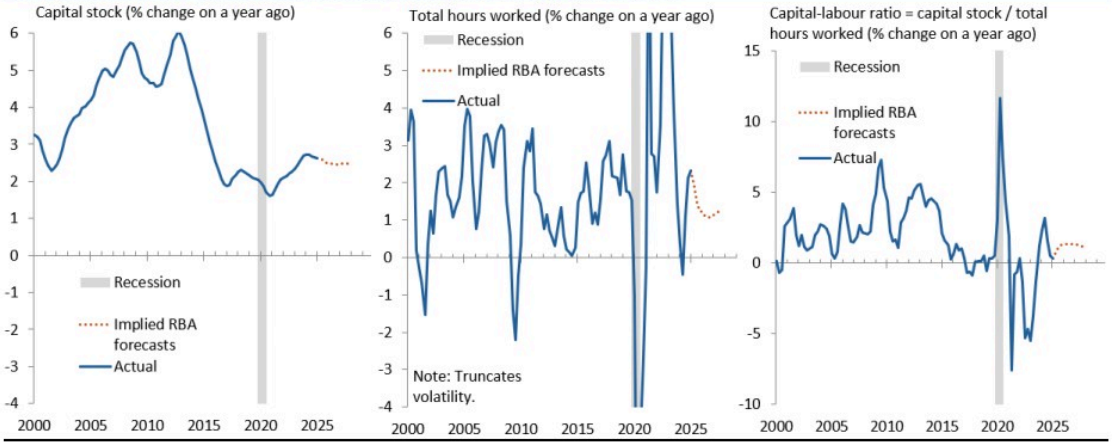
Figure 2: The RBA's assumed recovery in productivity depends on companies and government investing more in their workers and, to a lesser extent, a recovery in technological progress (aka multifactor productivity)



Source: Australian Bureau of Statistics, Reserve Bank of Australia, Coolabah Capital Investments

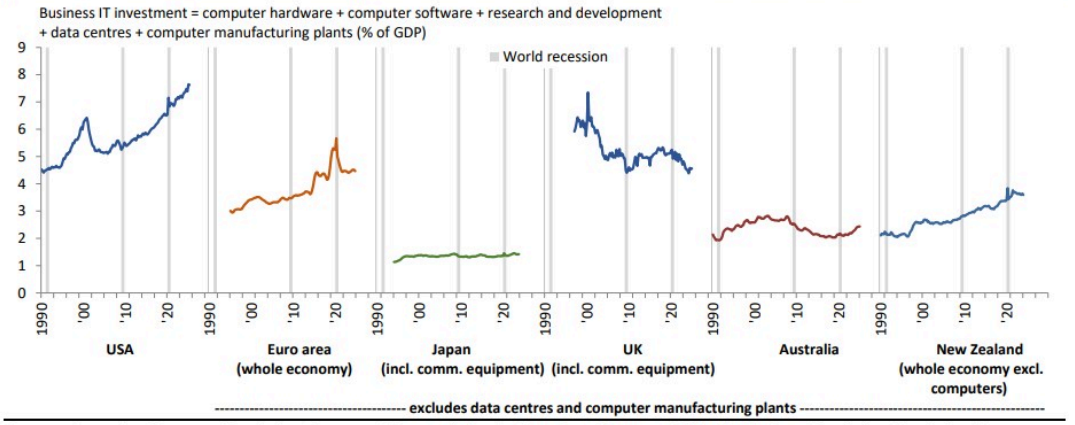
Strategy commentary cont'd:

Figure 3: The RBA forecasts a modest recovery in the capital-labour ratio as slow growth in the capital stock is enough to outpace a mild slowdown in growth in total hours worked



Source: Australian Bureau of Statistics, Reserve Bank of Australia, Coolabah Capital Investments

Figure 4: Using tech investment as a proxy for multifactor productivity, Australian companies have been gradually investing more in technology, but much less so than most advanced economies



Source: Australian Bureau of Statistics, Bureau of Economic Analysis, e-Stat, Eurostat, Office for National Statistics, Statistics New Zealand, Coolabah Capital Investments

The Fed should cut interest rates

US consumer spending has stalled, with the level of monthly spending showing no change in real terms over the first half of this year, something normally only seen in either a recession or a sharp downturn. Spending has been held down by falling expenditure on durable goods and barely any growth in spending on services.

At the same time, core PCE inflation has picked up, with an increase that rounded up to 0.3% in June, in line with market expectations after factoring in small revisions to history. This was the largest monthly rise since larger seasonally-distorted gains at the start of the year, with annual inflation steady at 2.8%. Other measures of core inflation, such as the core market prices and trimmed mean PCE series, showed the same pick-up in June.

The increase was driven by a 0.4% tariff-driven gain in core goods prices, matching increases at the start of 2025. Annual core goods inflation has picked up from zero in January to 0.6%. In contrast, core services prices were better behaved, up another 0.2% in June, with annual inflation steady at 3.4%.

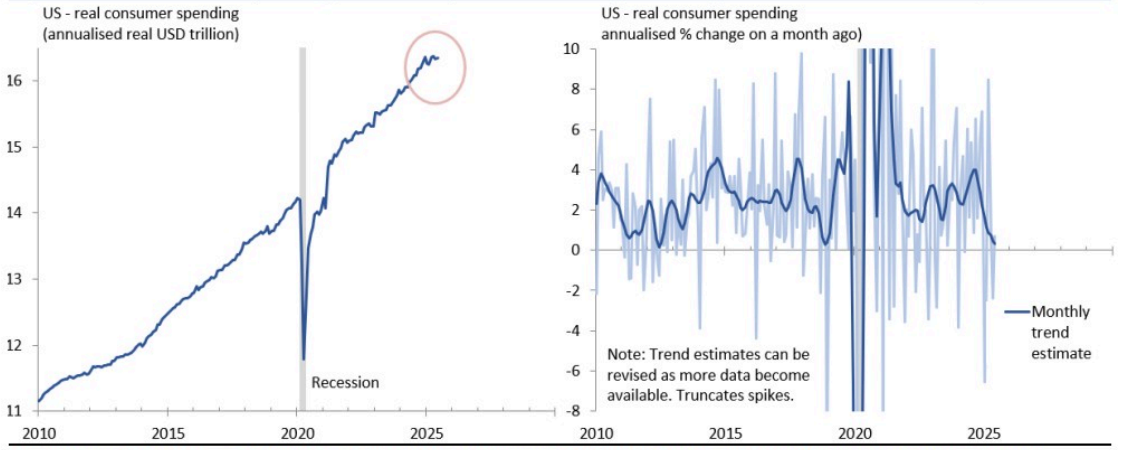
At this stage, core inflation is tracking slightly below a simple linear interpolation of the FOMC's median forecast that core PCE inflation will reach 3.1% in Q4 this year. This, combined with the pronounced weakness in consumer spending, suggests that the Fed should resume cutting interest rates in September, particularly when most measures of inflation expectations remain contained.

Strategy commentary cont'd: As for wages, the private-sector excluding commissions etc measure of the employment cost index continued to grow at a quarterly rate of about 0.8-0.9% in Q2 on CCI's seasonal adjustment, a little above the average growth prevailing prior to COVID.

As for the supply of labour, the latest data show that the government has more than doubled the monthly rate of internal detention of immigrants and refugees, with a smaller pick-up in deportations.

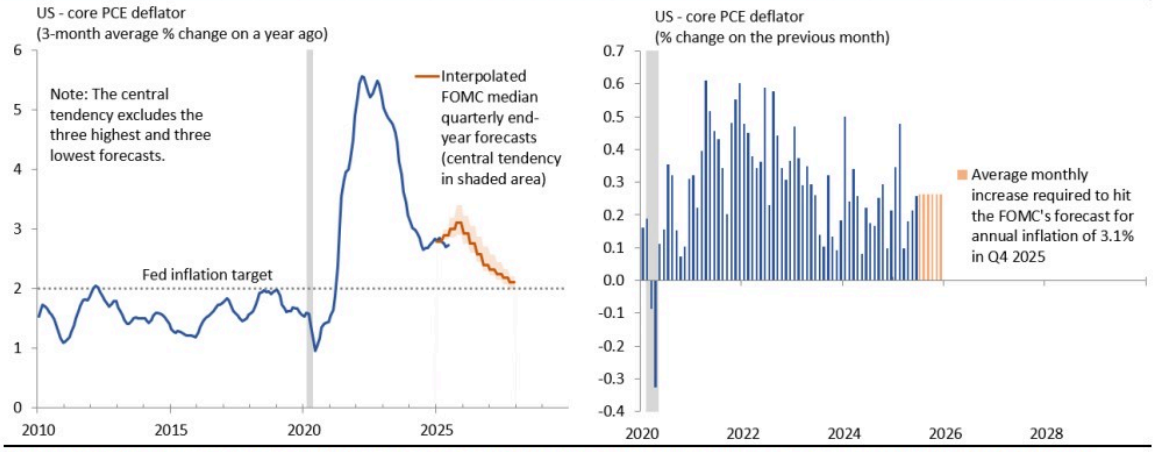
The US population is currently growing at an annualised rate of about 0.5%, which is the slowest growth in the history of the republic, excluding the COVID-era distortions. Deportations should slow growth further, placing downward pressure on economic growth and upward pressure on inflation.

Figure 1: US consumer spending has broadly stalled, showing no change over the first half of this year



Source: Board of Governors of the Federal Reserve System, Bureau of Economic Analysis, Federal Reserve Bank of Dallas, Federal Reserve Bank of St Louis, Coolabah Capital Investments

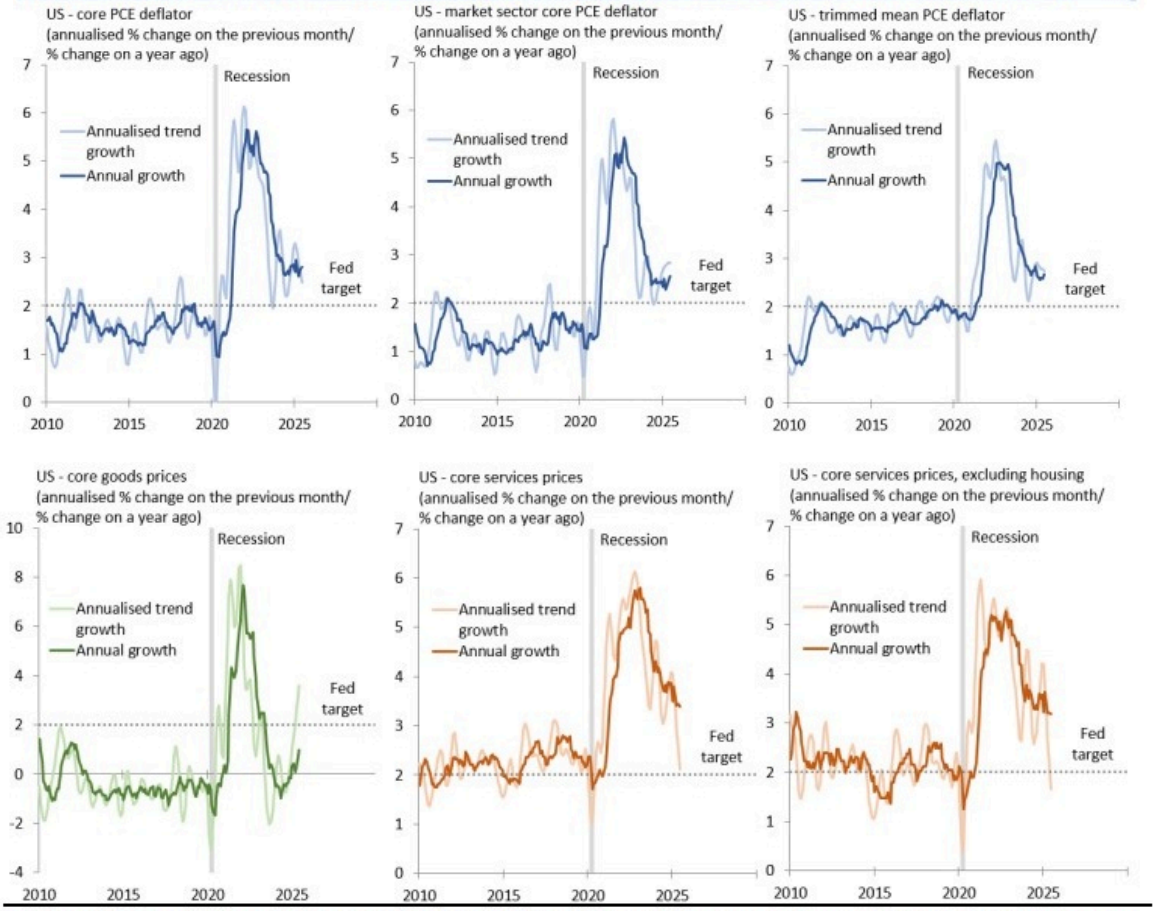
Figure 2: US core inflation is tracking slightly below the simple interpolation of the Fed's end-year forecast



Source: Board of Governors of the Federal Reserve System, Bureau of Economic Analysis, Federal Reserve Bank of Dallas, Federal Reserve Bank of St Louis, Coolabah Capital Investments

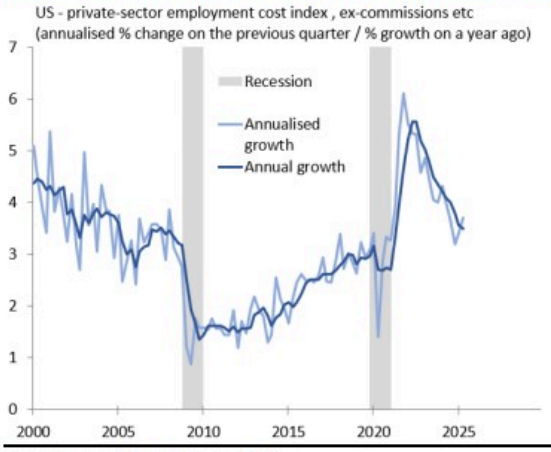
Strategy commentary cont'd:

Figure 3: The US government's new tariffs are boosting core goods prices, adding to overall core inflation



Source: Bureau of Economic Analysis, Federal Reserve Bank of Dallas, Federal Reserve Bank of St Louis, Coolabah Capital Investments

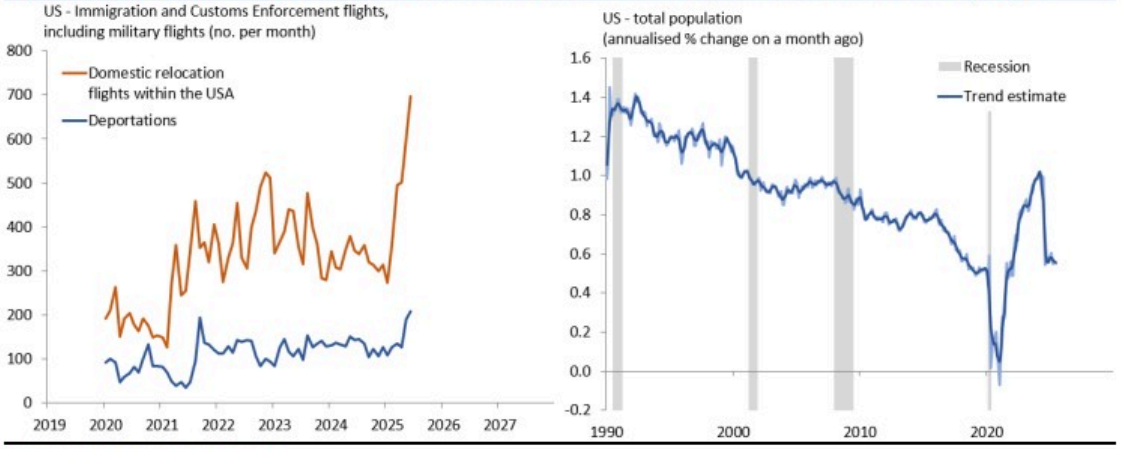
Figure 4: US wages growth is slightly above pre-pandemic experience



Note: Seasonally adjusted by CCI.
Source: Federal Reserve Bank of St Louis, Coolabah Capital Investments

Strategy commentary cont'd:

Figure 5: Record low US population growth should slow further as the government detains more people



Note: Seasonally adjusted by CCI.
Source: Bureau of Economic Analysis, Witness at the Border, Coolabah Capital Investments

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