



Australian
National
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ANU Student Managed Fund

AA Recommendation Report

Matthew Young-Thompson (Head of Asset Allocation)

Shreyanka Sarmah (Senior Analyst – Asset Allocation)

Tishan Kundu (Senior Analyst – Asset Allocation)

Arith Roy (Junior Analyst – Asset Allocation)

Aiyi (Catriona) Fu (Junior Analyst – Asset Allocation)

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Glossary

AA – Asset Allocation
AAE – Active Australian Equities
AC – Australian Cash
AE – Australian Equities
AFI – Australian Fixed Income
AI – Artificial Intelligence
ASEAN – The Association of Southeast Asian Nations
AUD – Australian Dollar
BIS – Bank for International Settlements
DCF – Discounted Cash Flow
DM – Developed Markets
DM,H – Developed Markets, Hedged
DM,U – Developed Markets, Unhedged
EM – Emerging Markets
ESG – Environmental, Social, and Governance
ETF – Exchange Traded Fund
GDP – Gross Domestic Product
IAC – Investment Advisory Committee
IEM – BlackRock iShares MSCI Emerging Markets ETF
IMF – International Monetary Fund
IOZ – BlackRock iShares Core S&P/ASX 200 ETF
IP – Investment Process
IT – Information Technology
KRW – Korean Won
MSCI – Morgan Stanley Capital International
LNG – Liquid Natural Gas
PC – Portfolio Construction
P/E – Price to Earnings
PPP – Purchasing Power Parity
ROE – Return on Equity
SMF – Student Managed Fund
TSMC – The Taiwan Semiconductor Manufacturing Company
UN – United Nations
US – the United States
USD – US Dollar
VGAD – Vanguard MSCI Index International Shares (Hedged) ETF
VGS – Vanguard MSCI Index International Shares ETF

1. Asset allocation recommendation

The Asset Allocation (AA) team of the ANU Student Managed Fund (SMF) recommends reducing the target weighting of Emerging Markets (EM) to 5%, with the proceeds to be invested in Australian Equities (AE). A comprehensive review of the asset class has shown material changes in the composition and underlying drivers of EM risk and return. The proposed adjustment therefore reflects these changes and is recommended to better preserve the real value of the Fund's capital while supporting its long-term distribution objectives.

1.1 Proposed target weights

The following changes are proposed to the SMF's target asset allocation weights for endorsement by the Investment Advisory Committee (IAC):

- i. Decrease the EM target weighting from 10% to 5% by selling the equivalent units of iShares MSCI Emerging Markets ETF (IEM).
- ii. Increase the AE target weighting from 55% to 60% of the total portfolio by purchasing the equivalent units of iShares Core S&P/ASX 200 ETF (IOZ).

To implement this, we propose increasing the target weight for AE within the AA portfolio from 5% to 10%. Combined with the 50% target weighting within the Active Australian Equities portfolio, this raises the Fund's total AE target from 55% to 60%, in line with the reference portfolio. The IOZ position will be funded by selling EM down to its new 5% target, with any remaining shortfall met by drawing down the overweight cash position. The trades required to rebalance the AA portfolio to its new target weights are set out in the table below:

Figure 1: Current and Proposed Portfolio Weights

Asset Classes	Reference Portfolio	Current Target Weights	Current Portfolio weightings (as of 12th Oct 2026)	Proposed Trades	Proposed Target Weights
Australian Equity	60%	55%	48.2%	+7.7%	60%
AAE portfolio	-	50%	45.9%	-	50%
AA portfolio	-	5%	2.3%	+7.7%	10%
International Equity	20%	25%	29.7%	-7.3%	20%
Developed markets, hedged	10%	5%	6.6%	-	5%
Developed markets, unhedged	10%	10%	10.8%	-	10%
Emerging markets	0%	10%	12.3%	-7.3%	5%
Fixed Income					
Government Bonds	15%	15%	14.1%	-	15%
Australian Cash (including accruals)	5%	5%	8.0%	-0.4%	5%

2 Rationale for recommendation

2.1 Original Thesis Review

The AA team introduced a 10% allocation to EM in 2021, implemented in two stages: an initial 5% in S2 2021, followed by a further 5% in S1 2022, subject to the original investment thesis remaining intact. The allocation was underpinned by attractive valuations and strong underlying corporate profitability. At the time, EM had a forward P/E of 13.90x, compared with 17.70x for AE and 19.85x for Developed Markets (DM), providing a relatively attractive entry point. EM's historically high return on equity (ROE), driven by profitability rather than greater leverage, further supported the view that this discount presented an opportunity for higher long-term returns. Continued institutional development and rising GDP per capita were also expected to strengthen corporate profitability over time.

The Fund's long investment horizon supported the allocation, allowing it to tolerate short-term volatility and illiquidity in exchange for higher long-term returns. Currency valuations offered an additional potential source of upside. In 2021, the AUD was approximately 7% above its PPP estimate, while the Renminbi was 35% below PPP and the New Taiwan Dollar and Korean Won were around 50% below theirs. This supported the view that currency movements could contribute to EM returns in AUD terms over the long term.

Despite these potential benefits, the allocation was capped at 10% due to several structural risks. EM offered relatively limited diversification benefits given the common exposures between Australia and Asia, as well as geographical concentration within the index. Geopolitical risks, including trade restrictions, tensions between China and Taiwan and instability on the Korean peninsula, further constrained the investment case. ESG characteristics were also a concern, with MSCI assigning EM a BBB rating compared with A for DM. The team was also unable to identify a suitable SRI-focused EM ETF at the time.

Since the initial investment, several aspects of the thesis have evolved. The valuation discount remains, with MSCI EM trading at a 12-month forward P/E of 9.72x, compared with 17.92x for MSCI World, as of 30 September 2026. However, growing concentration in semiconductor companies has increased EM's dependence on AI-related earnings, raising questions about the sustainability of current earnings expectations. While EM markets have become more accessible and some ESG concerns have eased, the original currency argument has weakened with the AUD moving below its PPP reference, reducing the potential currency upside identified in 2021. Geopolitical risks also remain significant, particularly given EM's substantial exposure to Taiwan and South Korea. Together, these developments raise questions about whether EM's persistent valuation discount continues to adequately compensate the Fund for the risks involved. Section 2.2 examines these considerations in greater detail, assessing their implications for EM's expected returns and its suitability for the Fund's objectives.

2.2 Core Factors Shaping EM Forward Outlook

As discussed above, EM's index composition has shifted meaningfully since the Fund's purchase, altering its alignment with the original investment thesis for a 10% target weight. Looking ahead, AI and technology have emerged as a new driver of risk and return, while domestic growth, global investment and supply-chain dynamics continue to evolve in an ever-changing geopolitical landscape. This section outlines the team's view on the key drivers behind EM's forward outlook and their implications for the SMF portfolio.

2.2.1 Structural Shift Toward AI Semiconductors

IEM has become substantially more concentrated in semiconductors, increasing the Fund's exposure to the earnings cycle of a small number of AI-related companies. As seen in the index, IT has increased from around 21% of the index in September 2021 to 43.59% as of the 9th of October, with TSMC, Samsung and SK Hynix alone now accounting for approximately 29% of IEM. The durability of these earnings differs across the three companies. TSMC's near 70% foundry share gives it a strong position in advanced chip manufacturing. Its lead at the 2nm process is particularly

important for high-performance AI chips, while its 67.7% gross margin demonstrates strong current profitability. This stronger position also makes TSMC's earnings more resilient, with profits expected to remain broadly flat if AI capital spending plateaus while memory earnings are more exposed to the cycle.

Samsung and SK Hynix introduce a more cyclical exposure because memory profits are highly sensitive to pricing and available capacity. SK Hynix's operating margin moved from -67% in Q1 2023, driven by weak demand and falling prices, to +76% in Q2 2026 as demand for memory chips used in AI data centres increased and memory prices rose illustrating the short-term volatility of the memory cycle. Both companies have also committed around KRW400 trillion as Korea plans to roughly double memory capacity over the next five years. Strong AI demand can keep memory prices elevated, but if supply catches up with demand, weaker pricing power would reduce margins and the return on new invested capital. This directly affects sustainable EPS growth because retained earnings only create additional profit when reinvested capital continues to earn sufficiently high returns.

Historically, EM's strong profitability and earnings retention have not consistently translated into comparable EPS growth. A current 15.8% return on book and roughly 69% earnings retention would mechanically imply EPS growth near 11% if those economics were sustained yet realised EPS growth was only 0.5% p.a. from 2011 to 2025 as dilution and low-return reinvestment weakened the conversion of profits into per-share growth. EM's ROE is projected to reach 23.8% and EPS growth 19.2% in 2027. With semiconductors making up a larger share of the index, sustaining this growth will depend partly on the returns earned on new memory capacity as supply expands later in the decade. This makes the 2027 EPS forecast difficult to justify as a sustainable growth rate across the Fund's ten-year horizon. Further, despite EM's equities returning 34% in 2025, outperforming DM's 21%, MSCI reported that EM's forward P/E discount to MSCI World widened throughout the year, ending December 2025 near its widest level since 2003 (MSCI, 2026). The current forward P/E for MSCI EM trades at a 46% discount to MSCI World, compared with a long-term average of approximately 25% (RBC Wealth Management, 2026). This indicates investors remain cautious about EM's relative earnings quality, growth sustainability and risk profile.

The Fund retains exposure across different parts of the AI supply chain through both its EM and DM holdings. TSMC provides foundry exposure, Samsung and SK Hynix memory exposure, NVIDIA accelerator exposure, and Microsoft, Amazon and Alphabet cloud and AI-services exposure. Together, these businesses share a common reliance on continued AI investment. The Bank for International Settlements estimates that the five largest technology companies will spend more than US\$1 trillion on AI-related capital expenditure over 2025-26, showing how much semiconductor demand depends on continued investment from a small group of buyers. If this investment slows, several EM and DM holdings could be affected at the same time, increasing the risk of losses across multiple parts of the portfolio. Reducing IEM from 10% to 5% would halve the Fund's direct exposure to TSMC, Samsung and SK Hynix from 2.9% to 1.45% at current index weights. A 5% allocation therefore reduces the Fund's exposure to a slowdown in AI investment while retaining participation in these companies and the sector's long-term growth.

2.2.2 How the EM Structural Drivers Have Changed

Prior to the shift to AI semiconductors, the fundamental drivers for EM were underpinned by strong demographics, capital accumulation and strong productivity supporting expectations of higher long-term returns. While these remain relevant in aspects of the market, their contribution to sustainable growth has diminished. Notably, China was historically a major contributor to EM growth, with its rapid industrialisation and investment underpinning these structural drivers. As China's growth trajectory moderates, this prior engine of EM growth is providing less support, although opportunities remain across other EM.

Demographics

A growing working-age population historically supported EM growth by expanding both the supply of labour and the domestic consumer base, but this tailwind has weakened. Between 2024 and 2050, the working-age population (aged 15 to 64) is projected to fall in China from 984 million to 745 million. As the working-age population contracts, both production capacity and domestic demand narrow, lowering the returns that domestically focused companies can earn on reinvested capital. Companies can no longer grow volumes with the population, so earnings growth

must come from taking market share or raising prices. Each dollar reinvested therefore earns less than the last, lowering returns on reinvestment and sustainable growth. India provides an important counterweight, with its working-age population projected to rise by around 14.5% by 2050 while ASEAN economies such as Indonesia and the Philippines also retain young populations (UN, 2024). However, India and these ASEAN markets together represent only approximately 12.6% of IEM as of the 9th of October. Therefore, their favourable demographics cannot fully offset the deterioration in the larger index constituents. Over the Fund's ten-year horizon, demographics therefore provide a persistent but narrower growth tailwind, weakening the expected contribution of labour-driven growth to the Fund's ability to preserve real capital and support sustainable returns.

Capital Accumulation

High investment has historically supported EM growth by expanding production capacity, infrastructure and the capital available to each worker. This remains an important driver of growth, particularly in China, which accounts for around 21% of IEM. Chinese capital formation fell from an estimated 43% of GDP in 2021 to 38.8% in 2025, while consumption remained comparatively weak at around 56% of GDP. The effectiveness of future investment will increasingly depend on how efficiently capital is allocated and whether demand is sufficient to absorb new capacity. China's efforts to address overcapacity and improve investment efficiency may increase the returns generated from new investment over time. Over the Fund's ten-year horizon, investment is still expected to support growth, but its contribution is likely to be smaller than in the past. This reduces the potential for investment-led growth to translate into sustainable earnings and supports a lower 5% weight.

Productivity

Productivity gains have historically allowed EM economies to close part of the gap with DM by shifting labour into higher-productivity urban activity and adopting technologies already established in DM. This catch-up remains available in economies such as India, where only around 36% of the population is urbanised, but has become less significant across the largest index constituents. China is already around 68% urbanised, while Taiwan and Korea have been classified as advanced economies by the IMF since 1997. At the aggregate level, potential growth across emerging and developing economies has fallen from 6.0% in 2000-2010 to 5.0% in 2011-2021, with the World Bank projecting 4.0% for 2022-2030, indicating that the productivity catch-up is becoming harder to sustain. This is primarily structural over the Fund's ten-year horizon, as the higher marginal gains from urbanisation and technology adoption are captured, further growth requires more difficult improvements in efficiency, institutions and capital allocation. This reduces the broad productivity premium previously supporting EM's return case and therefore supports a lower allocation, while retaining 5% preserves exposure to economies where meaningful productivity catch-up remains.

2.3 Rationale for Australian Equities

Having determined that the Fund's EM exposure no longer offers sufficient return for the risk it carries, the AA team recommends reallocating this capital to AE. Lifting the allocation from 55% to 60% improves the Fund's ability to meet its objectives by reducing the risk of a permanent loss of real value and by increasing the share of return received as income, supporting a return of at least the distribution rate plus inflation. The move also closes the gap to the reference portfolio, reducing active risk against the benchmark. While a similar reduction could be achieved by reallocating to DM, we believe Australian equities offer the following three advantages that DM cannot provide:

2.3.1 Franked Dividends

The Fund's annual distribution makes predictable income especially valuable, since it avoids forced sales timed by the payment date rather than by the market. AE offers some of the highest dividend yields globally, averaging 3.9% at the end of each year since 2006 (FactSet) and currently yielding 3.43% against 2.01% for EM (MSCI). The SMF's tax-free status widens this advantage, since IOZ's yield rises from 3.34% to approximately 3.7% once refundable franking credits are included. Since franking attaches only to profits already taxed in Australia, this benefit cannot be replicated offshore. Funding more of each distribution from yield rather than redemptions therefore allows the Fund to meet its objective without the risk of needing to sell after a drawdown, crystallising losses and shrinking the capital base.

2.3.2 Domestic Earnings Drivers

Unlike developed markets such as the US, whose recent returns have been led by the AI technology cycle, AE is driven largely by financials and materials. Reallocating the freed capital to Australia therefore reduces the portfolio's reliance on AI rather than simply moving the same exposure from one market to another. IOZ holds 32.43% in financials and 26.25% in materials, but only 2.10% in information technology as of the 9th of October. Bank profits depend on domestic credit growth, interest rates and household balance sheets, while resource earnings rely on Asian construction and the global trend of electrification, and neither is driven primarily by technology capital expenditure. AE is therefore likely to fall less in the potential event of a global repricing of technology stocks, lowering the risk of a permanent loss of real value and improving the Fund's return relative to risk over its investment horizon. This protection is partial, however, since Australia retains indirect exposure to the AI cycle through resource demand, and the weight of the banks concentrates exposure in housing. Thus, while the move increases the Fund's concentration in Australia, it does so by moving toward the reference portfolio, reducing active risk against the benchmark at a time when the direction of the AI cycle is difficult to forecast.

2.3.3 Exposure to energy transition

AE is well positioned to benefit from global growth through the resources sector. The June 2026 Resources and Energy Quarterly expects the energy transition and supply chain security to drive demand for Australian resources over the next five years. Australia was the world's largest lithium producer in 2025, with lithium export earnings forecast to rise from \$9.9 billion to \$13 billion in 2026/27, and copper reached a record US\$14,858 a tonne in September 2026. These tailwinds accrue directly to Australia's heavily weighted materials sector, translating commodity strength into earnings growth. The same report also identifies AI investment as a demand driver, so after the switch the Fund retains some exposure should AI-related stocks continue to outperform, though indirectly through copper and energy demand from data centres, and to a lesser extent than holding IT companies directly. Importantly, much of this demand comes from emerging Asia beyond China, with EM excluding China taking 21% of Australian exports in 2025. Australia was also the second-largest LNG supplier to Asia in the first half of 2026, with South Korea and Taiwan among its largest buyers, while India was its sixth-largest export market, buying more than \$6.7 billion in materials. The Fund therefore retains partial exposure to emerging market growth, but through Australian-listed companies that report in Australian dollars, pay franked dividends and follow developed market governance standards.

3 Foundations of the investment thesis

3.1 Scenario Modelling

To ensure the reallocation rests on more than qualitative reasoning, the AA team conducted a structured review of the Fund's strategic asset allocation, grounded in its investment process and updated to reflect current market conditions. This consists of outlining 3-year and 10-year scenario projections along with their associated probabilities, covering both economic drivers and asset class inputs. The AA team spent significant time revising the 10-year projections, which had not been changed for three semesters, to better reflect the current outlook.

Each asset class is assigned a base value for ROE and P/E, anchored to long-run observed averages and then adjusted to reflect the AA team's view. AE is anchored to the ASX 200's twenty-year pre-COVID average P/E, which is 15.7 on a forward basis and approximately 17 on the trailing basis used in the model. EM are anchored to MSCI EM's five-year average of 13.6, below its eighteen-year average of 16, reflecting the persistence of the dilution and profitability pressures that have weighed on the asset class since 2009. DM sits above its 15-16 long-run average, on the basis that the index's composition has shifted structurally toward technology, which now exceeds a quarter of the index against roughly a tenth twenty years ago, so the historical average describes a materially different index to the one held today. Terminal ROE was set against each market's observed level, with AE at 13.4%, DM at 17.9% as reported, and EM at roughly 11.7% implied from price-to-book ratios, then faded toward a common long-run level on the standard finding that profitability mean-reverts. EM consequently moved from the highest terminal ROE of the three to the lowest, correcting an ordering that had run against the observed data. Fixed adjustments are applied to each base for the growth and inflation state of the scenario, calibrated to historically observed fluctuations across the economic cycle. These adjustments are asset-specific and reflect structural differences between the markets rather

than a common sensitivity. AE, being roughly half banks and miners, carries the largest earnings sensitivity to the output gap. DM, weighted toward longer-duration growth cash flows, carry the largest multiple sensitivity to inflation. EM is the most growth-sensitive in both earnings and valuation, reflecting its commodity exposure and dependence on the Chinese industrial cycle.

These projections are subsequently incorporated into DCF-based asset models to determine wealth and return trajectories for each scenario. The probability distribution of the 11 scenarios remains unchanged from previous the semester's forecast, as shown in Figure 2.

Figure 2: Forecasted Forward looking Scenario Probabilities

Economic Activity: GDP/Potential		High	Medium	Low	Stagflation	Crisis
Inflation: CPI		1.015	0.995	0.980	0.950	0.935
High 4.5%		8%	11%	2%		
Medium 2.5%		15%	29%	6%		
Low 1%		3%	17%	4%		
Stagflation 7%					2%	
Crisis 0%						3%

3.2 Qualitative Adjustments

This section elaborates on how the qualitative adjustments are incorporated into the AA recommendations by the team.

3.2.1 PC Model Optimised AA Weightings

Model scenario probabilities and optimal weightings are subject to a qualitative overlay representing macroeconomic fundamentals and structural economic shifts, with the adjusted probabilities shown in Figure 8. Unconstrained, the model allocates 53.97% to AE and 46.03% to AFI, with no allocation to any other growth asset. Constraining the optimiser to align with the Fund's 80% growth target gives 80% AE and 20% fixed income. Both outcomes follow directly from the ten-year expected returns in Figure 10, where the three equity blocks sit within a narrow band and AE lead on the strength of franking credits, which are refunded in cash to a tax-exempt fund and are therefore a structural entitlement rather than a return forecast. EM's probability-weighted ten-year real return is marginally higher than AE's (2.64% against 2.57% p.a.), but AE outperforms it in all five scenarios in which EM's real return is negative, including stagflation (-11.06% against -13.37% p.a.), and because the utility function penalises these losses more than it rewards EM's stronger upside, the optimiser prefers AE.

Figure 3: Utility optimisation Results

Asset Classes	Reference Portfolio	Current Target Weights	Current Portfolio weightings (as of 12th Oct 2026)	Proposed Target Weights	Unconstrained Optimised Portfolio Weights	Constrained Optimised Portfolio Weights
Australian Equity	60%	55%	48.2%	60%	53.97%	80%
AAE portfolio	-	50%	45.9%	50%	-	-
AA portfolio	-	5%	2.3%	10%	-	-

International Equity						
Developed markets, hedged	20%	25%	29.7%	20%	0%	0%
	10%	5%	6.6%	5%	0%	0%
Developed markets, unhedged	10%	10%	10.8%	10%	0%	0%
	0%	10%	12.3%	5%	0%	0%
Emerging markets						
Fixed Income						
Government Bonds	15%	15%	14.1%	15%	46.03%	20%
Australian Cash (including accruals)	5%	5%	8.0%	5%	0%	0%
Utility	-0.5048	-0.5054	-0.5106	-0.5041	-0.4759	-0.4893

3.2.2 Adjusted Weightings

The optimiser only captures the trade-off between risk and return, identifying the asset weights that maximise expected return for a given level of risk without accounting for other considerations relevant to asset allocation, such as liquidity, implementation costs and the Fund's investment mandate. Its output is also highly sensitive to parameter uncertainty, as small changes in expected returns or covariances can produce large shifts in the optimal weights, and to model uncertainty, as every asset is modelled from the same inflation and output paths and the framework therefore understates both asset-specific volatility and the diversification benefit of holding multiple growth assets. For these reasons, the optimiser is treated as an input to the allocation decision rather than its final answer, with constraints imposed on the weights and the final allocation determined qualitatively. Cash is held at 5%, in line with the reference portfolio and sufficient to meet the Fund's liquidity requirements and scholarship distributions. AE retains the largest growth weight, reflecting the argument outlined in Section 2.3, and is consistent with the 60% domestic allocation in the reference portfolio. DM equities are held at 15%, split between hedged (5%) and unhedged (10%). While DM shares exposure to many of the same global factors as EM, including the trade cycle, commodity demand and US real rates, the index is considerably more diversified across sectors, with no single company dominating returns to the degree seen in EM. Its constituents are also of higher quality, with stronger balance sheets and a demonstrated capacity to recover from cyclical drawdowns, which is reflected in the lower earnings sensitivity to the output gap applied to DM in the scenario framework. Stronger institutions, governance standards and shareholder protections further support holding this exposure in DM rather than EM, and the hedged and unhedged split manages currency risk given that the Fund's distributions are paid in Australian dollars. EM is recommended at a reduced weight of 5% on the reasoning set out in Section 2. This allocation produces a utility of -0.5041, marginally higher than the current target portfolio at -0.5054 and the reference portfolio at -0.5048. As the proposed and reference portfolios differ only in holding 5% in EM rather than in hedged DM, this supports a reduced rather than eliminated EM weight. The margins are small, however, as all three portfolios carry an 82% probability of shortfall over ten years and an expected real value between 0.814 and 0.818 (Figure 12). The constrained optimisation process is set out in Appendix A.

3.3 Conclusion

At its introduction in 2021, the allocation to EM was supported by a compelling investment case. EM traded at a forward P/E of 13.90x, against 19.85x for DM, and its elevated ROE appeared to reflect genuine profitability rather than leverage. Since then, the structural foundations of that case have weakened materially. EM has converted little of its profitability into EPS growth, which averaged only 0.5% p.a. from 2011 to 2025. Meanwhile, the demographic and investment tailwinds in China are diminishing, and the currency advantage identified in 2021 has largely dissipated. Simultaneously, the index's changed composition has introduced new sources of risk. TSMC, Samsung and SK Hynix now account for approximately 29% of IEM. This leaves the Fund's EM returns increasingly dependent on the same AI investment cycle that drives its developed market holdings, and more exposed to geopolitical risk surrounding Taiwan and the Korean peninsula. Against this backdrop, AE offers a more appropriate allocation for the capital released. Their franked dividend yield of approximately 3.7% directly supports the Fund's distribution objective. Their limited exposure to information technology, at 2.1% of IOZ, reduces the portfolio's reliance on the

AI cycle, and the increase restores the Fund to its 60% reference weight. A retained 5% allocation provides material but reduced exposure to the growth potential of India and ASEAN, as well as to EM's valuation discount, while halving the Fund's direct exposure to the three semiconductor companies from 2.9% to 1.45%.

Therefore, the AA team recommends reducing the EM target weight from 10% to 5% and increasing the Australian equities target weight from 55% to 60%. This adjustment reduces concentration risk within the portfolio and better positions the Fund to preserve its real capital and sustain its annual distributions.

Appendices

Appendix A: The Introduction of the PC Model

The asset allocation investment process (AA-IP) is based on the belief that long-term returns are intimately tied to two factors: cash flow fundamentals and pricing. Thus, the AA-IP is based on forming distributions of cash flow projections and terminal asset prices over a long horizon (10 years), which enables the estimation of expected portfolio outcomes as well as shortfall risk relative to the target. The primary model for the asset allocation investment process is the PC model. A brief introduction to the model is provided below.

The model comprises four components: (i) Scenario Analysis, (ii) Forming Asset Model Inputs, (iii) Asset Models, and (iv) Portfolio Construction.

a. Scenario Analysis

Figure 4: Scenarios

Inflation: CPI	Economic Activity: GDP/Potential				
	High	Medium	Low		
High	1	2	3		
Medium	4	5	6		
Low	7	8	9		
				10. Stagflation	11. Crisis

The scenario analysis establishes the economic states, which helps create possible distributions of accumulated wealth and hence return paths for each asset class.

This process ultimately generates 11 future economic states, based on high/medium/low intersections of the two macro drivers, GDP/Potential (output gap) and inflation, plus 'Crisis' and 'Stagflation' states to capture tail risk (Figure 4). The expected wealth path of each asset class is determined as the probability weighted outcome of all the economic scenarios.

b. Forming asset model inputs

The AA team forecasts the key parameter inputs required for forecasting expected return for each asset class over 10-year horizon across the 11 economic states along with qualitative adjustments. The medium-term forecast over a horizon of 3 year enables the team to add granular details into the forecasts.

c. Asset Models

Real wealth paths of each asset class are generated using asset models widely used in the industry, which serve as the main inputs for the portfolio construction process in part 4.

d. Portfolio constructions

The portfolio construction phase aims to set asset weights by balancing return and risk in line with the objectives of the SMF. The PC model adopts a reference-dependent utility function that is parameterised to reflect the risk appetite of the SMF and generates a candidate portfolio by maximising the expected utility. A few constraints are set to arrive at the optimal weights consistent with the investment policy of SMF. AA team makes subjective adjustment to the model output before determining the portfolio target weights

Appendix B: Model key inputs

Figure 5: Historical Scenario Probabilities (1992 - Present)

Scenario	GDP/Potential			
Inflation		High 1.015	Medium 0.995	Low 0.98
	High 4.5%	9.5%	11.9%	0.8%
	Medium 2.5%	19.8%	28.5%	3.2%
	Low 1%	3.2%	19.0%	4.0%

Figure 6: Australian Inflation Targets for 3- and 10-year landing points

Scenario	Year 3 Inflation	Year 10 Inflation
High	4.00%	4.50%
Medium	2.75%	2.50%
Low	2.00%	1.00%
Stagflation	5.00%	7.00%
Crisis	1.50%	0.00%

Figure 7: Australian GDP/Potential Targets for 3 and 10-year landing points

Scenario	Year 3 GDP/Potential	Year 10 GDP/Potential
High	0.992	1.015
Medium	0.983	0.995
Low	0.963	0.980
Stagflation	0.975	0.950
Crisis	0.958	0.935

Appendix C: Key Metrics

Figure 8 illustrates the assumptions of the eleven economic scenario states for 3- and 10-year forecast horizons, derived from inflation and output gap and their associated probabilities. Further details of the scenario states are provided in section 3.1.

Figure 8: Scenario states and probability summary

Scenarios			
No.	Inflation	Output gap	Probability
1	High	High	8%
2	High	Medium	11%
3	High	Low	2%
4	Medium	High	15%
5	Medium	Medium	29%
6	Medium	Low	6%
7	Low	High	3%
8	Low	Medium	17%
9	Low	Low	4%
10	Stagflation	Stagflation	2%
11	Crisis	Crisis	3%
Probability-Weighted			100%

Figures 9 and 10 show the 3-year and 10-year real returns across all 11 economic scenarios, incorporating distributions. Figures 11 and 12 illustrate the fluctuations in expected portfolio value across the economic scenarios, comparing the current portfolio to the reference portfolio, including metrics such as expected shortfall and expected utility.

Figure 9: Asset class 3-year expected real returns under 11 scenarios

Scenarios		3-year expected real return (% p.a.)					
No	Inflation / output gap	AE	DM,H	DM,U	EM	AFI	AC
1	H,H	-2.93%	-6.07%	-6.04%	-3.24%	1.42%	0.99%
2	H,M	-7.25%	-7.97%	-7.94%	-7.84%	1.81%	0.77%
3	H,L	-11.52%	-13.24%	-13.21%	-10.56%	2.36%	0.55%
4	M,H	-0.21%	0.11%	0.14%	4.52%	2.95%	1.05%
5	M,M	-3.35%	-4.56%	-4.53%	1.25%	3.29%	1.17%
6	M,L	-8.63%	-8.58%	-8.55%	-2.89%	3.62%	0.99%
7	L,H	0.53%	2.63%	2.66%	7.37%	3.76%	1.08%
8	L,M	-3.86%	-1.19%	-1.16%	0.09%	4.59%	1.11%
9	L,L	-9.11%	-8.94%	-8.91%	-8.88%	4.93%	0.93%
10	Stagflation	-20.46%	-20.37%	-20.35%	-23.54%	-0.30%	1.31%
11	Crisis	-29.92%	-24.90%	-24.88%	-25.67%	6.90%	-0.29%
Probability-Weighted		-5.10%	-5.08%	-5.05%	-1.83%	3.26%	1.01%

Figure 10: Asset class 10-year expected real returns under 11 scenarios

Scenarios		10-year expected real return (% p.a.)					
No	Inflation / output gap	AE	DM,H	DM,U	EM	AFI	AC
1	H,H	3.98%	2.36%	2.39%	4.67%	0.99%	0.80%
2	H,M	1.37%	0.34%	0.37%	-0.90%	0.73%	0.45%
3	H,L	-2.84%	-2.35%	-2.32%	-5.20%	0.15%	0.09%
4	M,H	5.66%	4.91%	4.94%	7.75%	2.13%	1.21%
5	M,M	3.16%	3.00%	3.03%	2.83%	1.73%	1.17%
6	M,L	-1.11%	0.25%	0.28%	-1.28%	1.44%	1.00%
7	L,H	6.24%	6.28%	6.31%	9.31%	2.95%	1.57%
8	L,M	3.64%	3.96%	4.00%	4.26%	2.50%	1.30%
9	L,L	-0.78%	1.40%	1.43%	0.32%	2.24%	0.97%
10	Stagflation	-11.06%	-11.61%	-11.58%	-13.37%	-0.29%	0.47%
11	Crisis	-3.27%	-5.82%	-5.79%	-6.24%	2.68%	0.09%
Probability-Weighted		2.57%	2.31%	2.34%	2.64%	1.75%	1.01%

Figure 11: Expected real portfolio value after 3 years (allowing for distributions)

Scenarios		Expected change in real portfolio value (% p.a.)		
No.	Inflation / output gap	Reference portfolio	Current target portfolio	Proposed target portfolio
1	H,H	-7.08%	-6.96%	-6.95%
2	H,M	-9.88%	-9.90%	-9.87%
3	H,L	-13.26%	-13.09%	-13.13%
4	M,H	-4.13%	-3.69%	-3.91%
5	M,M	-6.76%	-6.26%	-6.48%
6	M,L	-10.51%	-9.97%	-10.24%
7	L,H	-3.10%	-2.55%	-2.87%
8	L,M	-6.23%	-5.98%	-6.16%
9	L,L	-10.67%	-10.66%	-10.67%
10	Stagflation	-20.09%	-20.39%	-20.24%
11	Crisis	-25.41%	-25.24%	-25.44%
Probability-weighted		-7.87%	-7.56%	-7.72%

Year 3 Real Portfolio Metrics			
Expected portfolio value	0.787	0.795	0.791
Probability of shortfall	100%	100%	100%
Expected shortfall	-21.33%	-20.51%	-20.92%
Expected utility	-0.5328	-0.5065	-0.5196

Note: Shortfall is measured relative to a target of maintaining the real value of the portfolio after distributions.

Figure 12: Expected real portfolio value after 10 years (allowing for distributions)

Scenarios		Expected change in real portfolio value (% p.a.)		
No.	Inflation / output gap	Reference portfolio	Current target portfolio	Proposed target portfolio
1	H,H	-1.57%	-1.42%	-1.46%
2	H,M	-3.49%	-3.66%	-3.55%
3	H,L	-6.50%	-6.75%	-6.64%
4	M,H	0.06%	0.29%	0.19%
5	M,M	-1.78%	-1.81%	-1.79%
6	M,L	-4.80%	-4.88%	-4.87%
7	L,H	0.79%	1.08%	0.93%
8	L,M	-1.21%	-1.16%	-1.19%
9	L,L	-4.26%	-4.26%	-4.32%
10	Stagflation	-13.03%	-13.22%	-13.11%
11	Crisis	-6.69%	-6.86%	-6.71%
Probability-weighted		-2.25%	-2.23%	-2.23%
Year 10 Real Portfolio Metrics				
Expected portfolio value		0.814	0.818	0.816
Probability of shortfall		82%	82%	82%
Expected shortfall		-18.91%	-19.02%	-18.94%
Expected utility		-0.5048	-0.5054	-0.5041

Note: Shortfall is measured relative to a target of maintaining the real value of the portfolio after distributions.

Appendix D: Asset class Wealth Paths

Figure 13: Australian Equities Wealth Paths

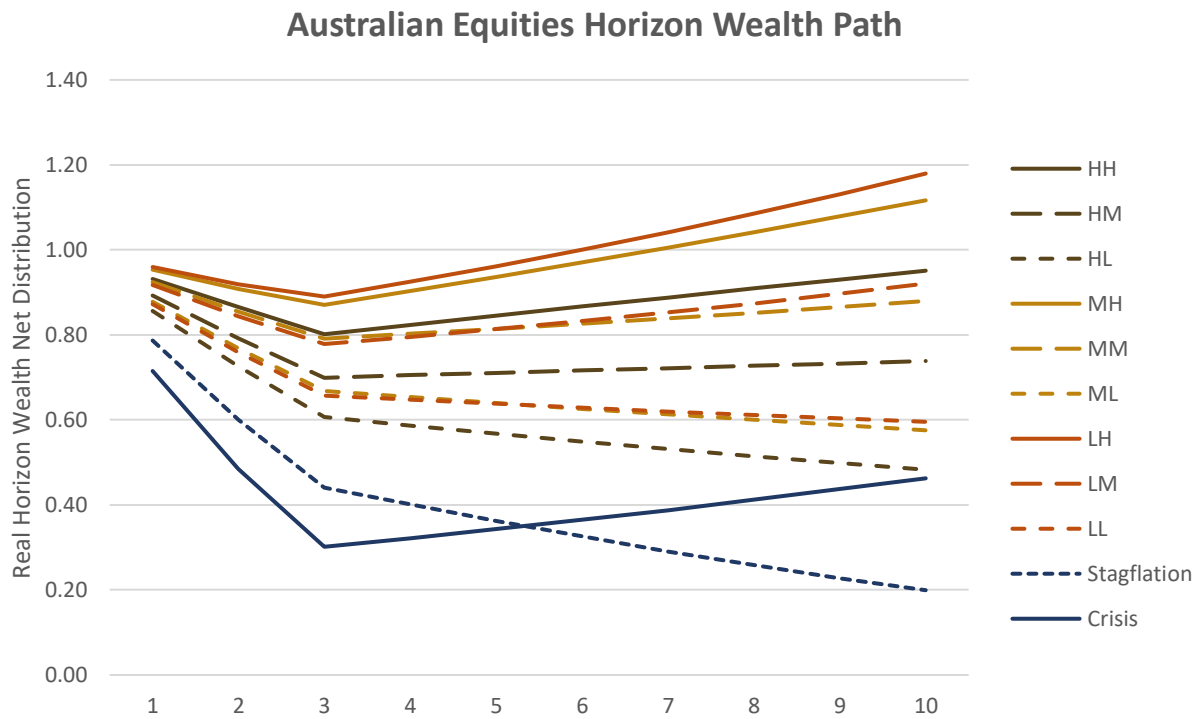


Figure 14: Developed Markets (Unhedged) Wealth Paths

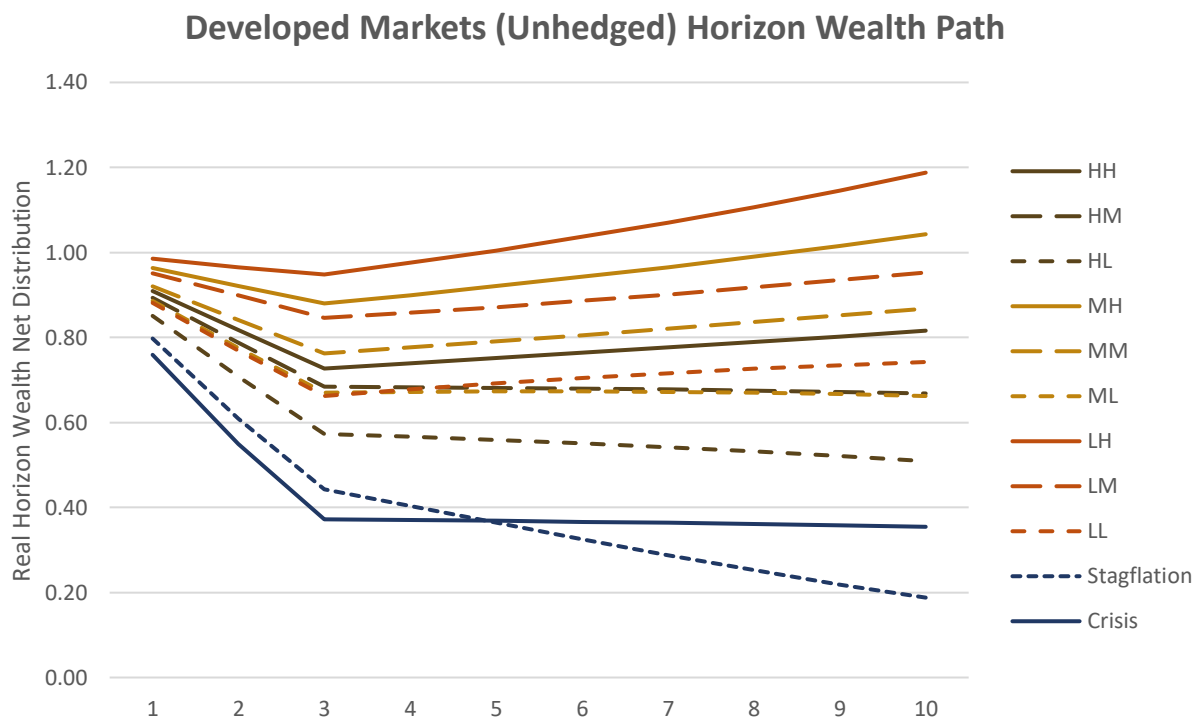


Figure 15: Developed Markets (Hedged) Wealth Paths

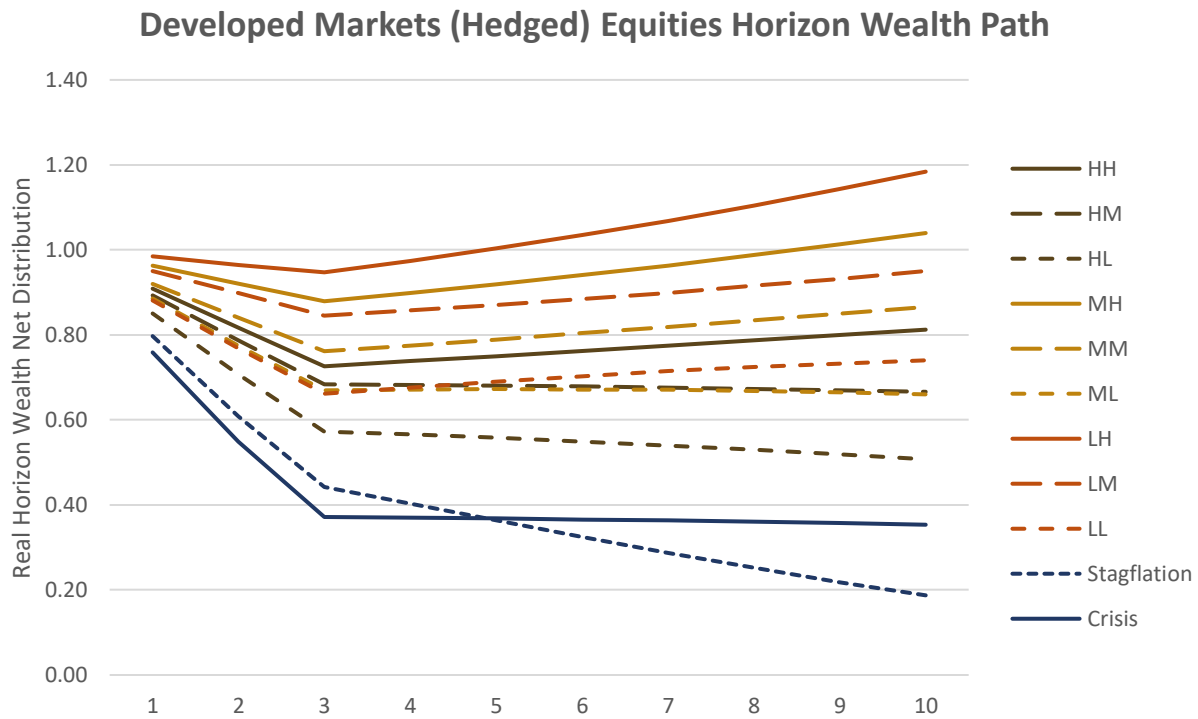


Figure 16: Emerging Markets Wealth Paths

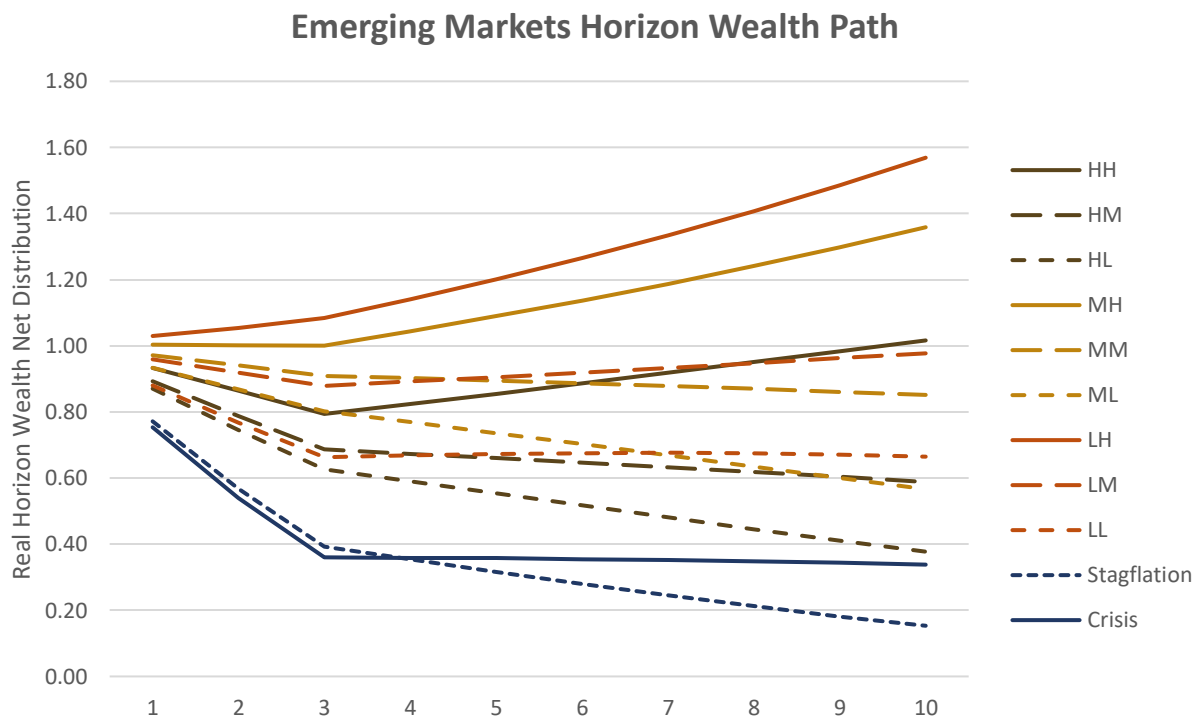


Figure 17: Australian Cash Wealth Paths

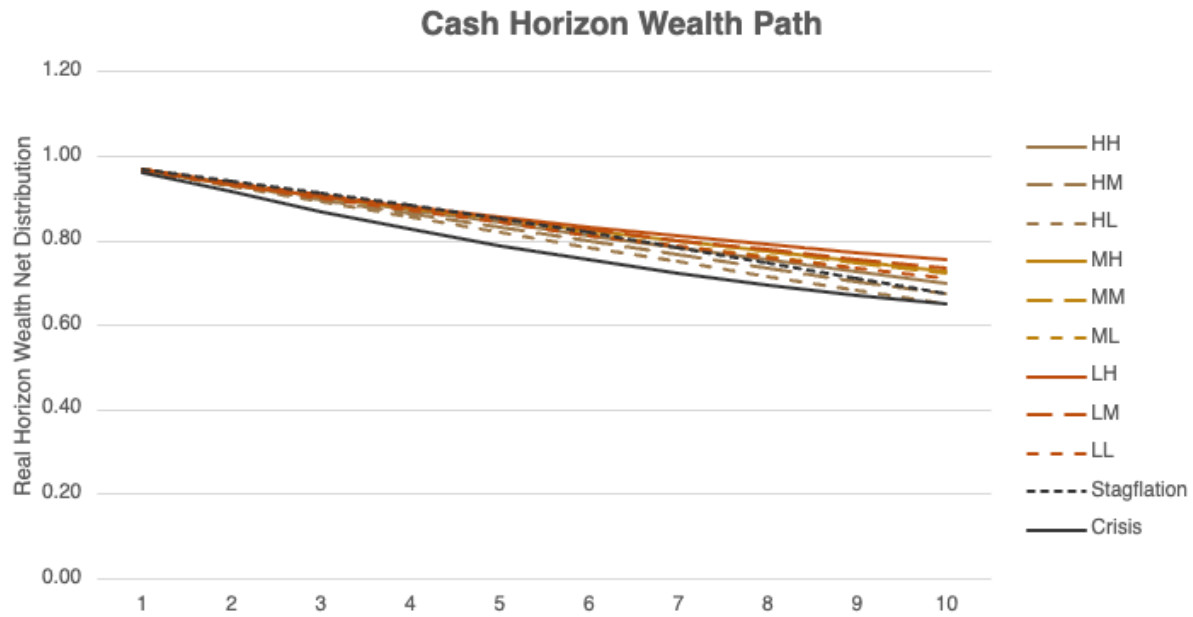
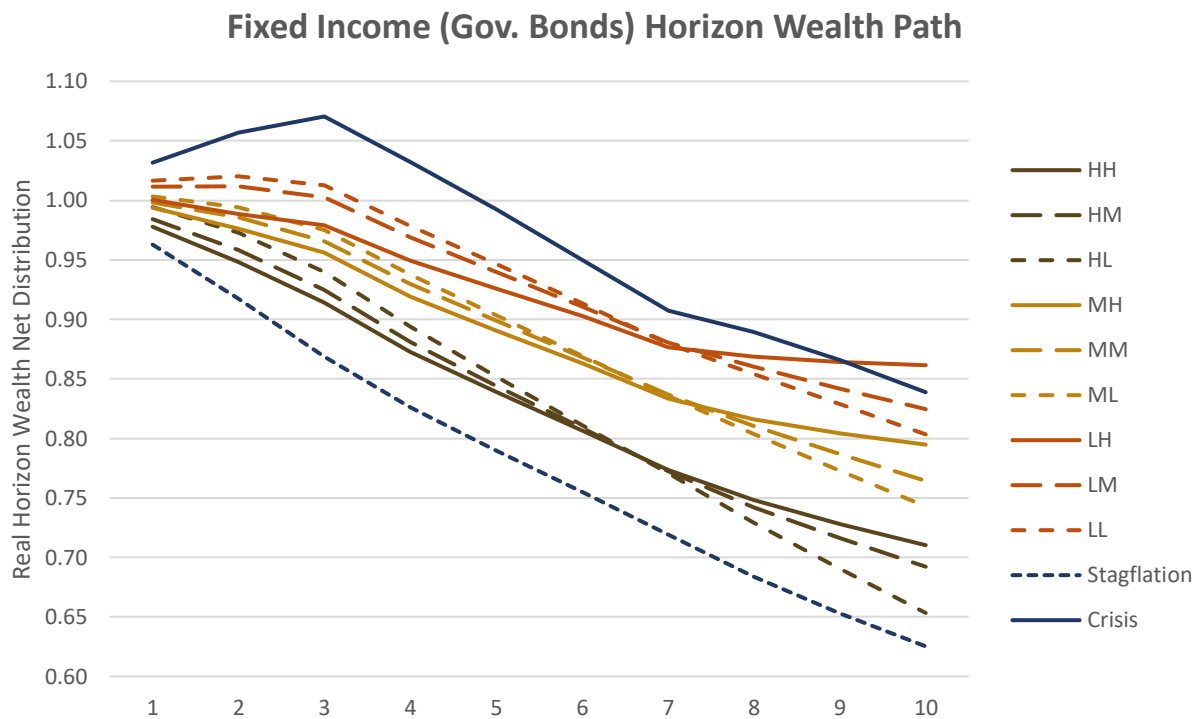


Figure 18: Australian Fixed Income (GOV) Wealth Paths



Appendix E: Forward Risk & Return Drivers

Figure 19: 2025 Inbound FDI Breakdown for Top 10 Countries in IEM

Source: UN Trade and Development

*Index weight as of Sep 2026

**This figure is not a summation of the percentages above. Instead, it represents the change in the total dollar value of FDI across Top 10 EM markets from 2024 to 2025.

Contact details

SMF email: smf.rsfas@anu.edu.au

SMF website: <https://rsfas.anu.edu.au/study/student-managed-fund>

SMF Facebook page: <https://www.facebook.com/smfANU/>

SMF LinkedIn page: <https://www.linkedin.com/company/anu-smf>

Research School of Finance, Actuarial Studies and Statistics

College of Business and Economics

+61 2 6125 4626

The Australian National University

Canberra ACT 2600 Australia

www.anu.edu.au

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