

ETF quarterly report

September quarter 2022



In this edition



The Australian ETF market attracted \$3.5 billion in new investments during Q3



Vanguard attracted the highest cash flow among issuers in Q3 with \$2.07 billion.



Assets under management of ETFs in Australia remained steady at around \$121.5 billion.



Vanguard maintained its position as the largest Australian ETF issuer by assets under management with \$37.6 billion (31.1%).

Quarter in review

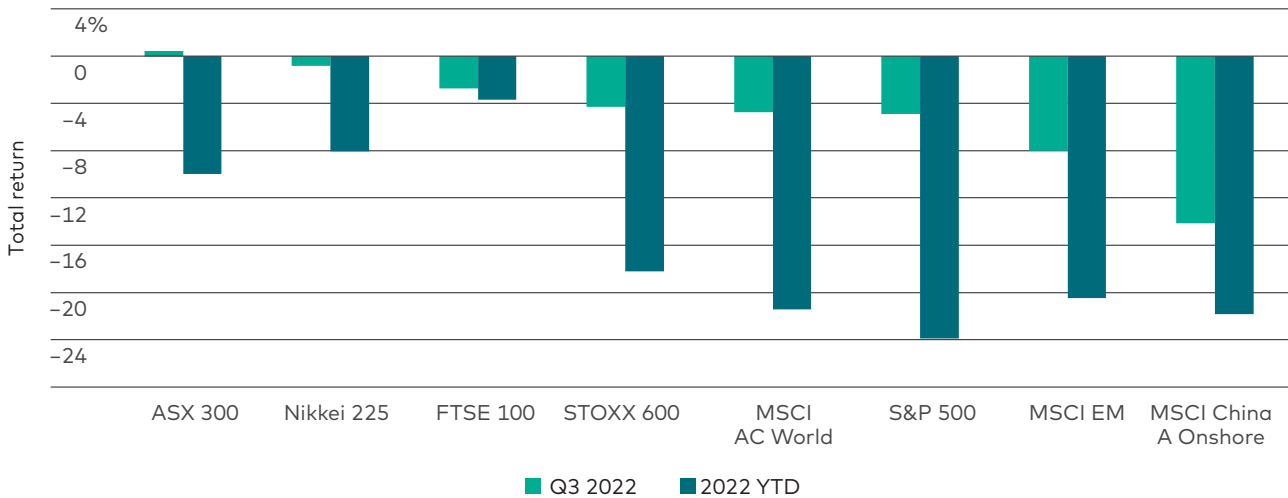
Inflation and central bank policy remained the focus for markets over the third quarter. Equities and bonds rallied through July over hopes of a soft landing and a slowing of rate hikes by central banks. However, markets reversed course and closed the quarter lower as central banks rapidly raised interest rates and reaffirmed their commitment to cool inflation.

Equity markets remained volatile as rising interest rates weighed on global growth and corporate earnings. Optimism in July spurred global equity gains of over 7% for the month in local currency terms, before retreating to end 4.7% lower quarter-on-quarter. The Australian equity market meanwhile managed a modest

gain of 0.5%. Energy stocks globally continued to benefit from elevated commodity prices, with few other sectors producing a positive return over the period.

Bond markets followed a similar trajectory as yields fell (prices rose) through July before returning to their highs for the year. The quarter ended on a volatile note as a poorly received U.K. budget sent yields higher and prompted the Bank of England to intervene in the market by buying U.K. government bonds. Global bonds fell 3.8% and Australian bonds fell 0.6% as 10-year government bond yields finished 82 basis points higher in the United States and 32 basis points higher in Australia.

Figure 1. Global equities broadly retreated



Notes: Returns are cumulative total returns in local currency. Past performance information is given for illustrative purposes only and should not be relied upon as, and is not, an indication of future performance.

Source: FactSet, as of 30 September 2022.

Australian ETF update

ETF FACT

\$2.07b

Vanguard attracted the highest cash flow in Q3 2022.

Cash flow

Q3 saw \$3.5 billion flow into ETFs, up from \$3.1 billion in Q2. Across all issuers, Vanguard had the strongest cash flow in Q3 with \$2.07 billion, bringing in \$6.33 billion since the beginning of 2022.

For the quarter, investors favoured global equities (23.2% of total cash flow) over Australian equities (22.9%), reversing the trends in Q2. Strong flows into fixed interest revealed investors' preference for domestic (26.2%) over international bonds (1.4%).

The Vanguard Australian Shares Index ETF (VAS) attracted \$643 million in Q3. Although it was down from \$972 million in Q2, it remained the most popular ETF in the market. Strong inflows were also observed across other Vanguard funds, with \$240 million flowing into the Vanguard MSCI International Shares Index ETF (VGS), \$173 million into the Vanguard Australian Shares High Yield ETF (VHY), and \$140 million into the Vanguard Australian Government Bond Index ETF (VGB).

Assets under management (AUM)

As of 30 September, there were 259 ETF products available in the Australian market, totalling \$121.5 billion. Vanguard retained its position as the top ETF issuer in Australia, managing 31.1% of funds, totalling over \$37.6 billion in AUM.

Figure 2. Industry cash flow by asset class

ASSET CLASS	Q1		YTD	
	\$M		\$M	
Australian Equity	805	22.9	3,586	31.7
Global Equity	814	23.2	2,930	25.9
Infrastructure	102	2.9	193	1.7
Australian Fixed Income	920	26.2	2,051	18.1
Global Fixed Income	50	1.4	292	2.6
Cash	387	11.0	-481	-4.3
Australian Property	126	3.6	298	2.6
Global Property	88	2.5	1,479	13.1
Commodity	-17	-0.5	215	1.9
Currency	11	0.3	8	0.1
Multi Asset	228	6.5	735	6.5
Total	3,514		11,306	

Sources: ASX monthly report and Vanguard as of 30 September 2022.

Performance

Australian shares outperformed International equities, and domestic fixed income outperformed global fixed income in Q3. The Vanguard MSCI Australian Small Companies Index ETF (VSO) was the best performing ETF over the quarter, returning 4.02%, followed by the Vanguard U.S. Total Market Shares Index ETF (VTS) with 2.2%, and the Vanguard MSCI International Small Companies Index ETF (VISM) with 1.2%.

Figure 3. Industry cash flow by issuer

ISSUER	Q3 CASH FLOW		AUM
	\$M		\$M
Beta Shares	1,557.9	44.3	21,225.9
Daintree / Perennial	0.1	0.0	17.6
ETFS	109.9	3.1	4,656.5
Fat Prophets	0.6	0.0	3.7
Fidante	-7.2	-0.2	858.8
Fidelity	7.1	0.2	271.8
Franklin Templeton / Betashares	50.3	1.4	415.0
Hyperion / Pinnacle	71.9	2.0	1,815.8
InvestSMART	26.4	0.8	252.9
iShares	-470.8	-13.4	22,113.1
Janus Henderson	0.6	0.0	1.6
K2	-0.6	0.0	22.3
Loftus Peak/EQT	-3.5	-0.1	161.8
Loomis /IML	3.6	0.1	30.7
Magellan	-876.8	-25.0	10,027.9
Monash	-1.3	0.0	22.5
Montaka/Perpetual	5.5	0.2	81.5
Morningstar	0.0	0.0	121.0
Munro / GSFM	11.9	0.3	201.8
Nanuk	44.4	1.3	601.2
Perennial	4.7	0.1	64.5
Perpetual	2.6	0.1	6.9
Antipodes/Pinnacle	13.6	0.4	301.8
Resolution/Pinnacle	141.8	4.0	1,146.8
Russell	9.6	0.3	842.3
Schroders	0.1	0.0	62.4
State Street	340.2	9.7	7,379.5
Associated Global Partners	10.9	0.3	334.6
Switzer	0.0	0.0	0.0
The Perth Mint	-16.5	-0.5	646.2
Platinum	1.5	0.0	392.4
VanEck	390.7	11.1	9,762.6
Vanguard	2,069.0	58.9	37,613.4
Vaughan IML	0.0	0.0	10.1
XTB	15.0	0.4	73.8
	3,514	100.0	121,541

Sources: ASX monthly report and Vanguard, as of 30 September 2022.

Figure 4. Vanguard product summary

ASSET CLASS	ASX TICKER	LAST PRICE \$	MER %	QUARTER RETURN	1 YEAR RETURN	3 YEAR RETURN P.A.	QUARTERLY CASH FLOW \$M	FUM \$M
Australian Equity ETFs								
Broad Market	VAS	81.72	0.10	0.53%	-7.94%	2.81%	643.2	10,768.1
Property	VAP	69.02	0.23	-6.93%	-21.30%	-4.76%	62.0	1,939.6
High Yield	VHY	61.32	0.25	0.13%	-0.07%	4.50%	173.1	2,321.5
Large Companies	VLC	66.68	0.20	0.15%	-3.84%	3.80%	13.0	158.2
Small Companies	VSO	58.53	0.30	4.02%	-12.93%	4.93%	58.4	656.4
Ethically Conscious Australian Equities	VETH	50.82	0.16	1.12%	-12.00%	N/A	24.1	386.1
International Equity ETFs								
Developed Markets	VGS	88.49	0.18	0.36%	-9.72%	6.39%	240.4	4,631.1
Developed (AUD hedged)	VGAD	71.60	0.21	-5.15%	-17.40%	4.09%	110.9	1,668.7
All world Ex US	VEU	68.53	0.08	-4.33%	-15.57%	0.42%	60.4	2,073.8
Total US Market	VTI	280.43	0.03	2.20%	-7.88%	9.31%	71.5	2,880.0
Developed Europe	VEQ	50.72	0.35	-6.26%	-18.69%	-1.14%	-7.2	258.1
Asia ex Japan	VAE	61.63	0.40	-7.62%	-18.82%	0.74%	-25.2	301.6
Emerging Markets	VGE	62.98	0.48	-5.30%	-15.95%	0.33%	29.1	595.0
Global Infrastructure	VBLD	61.81	0.47	-2.55%	6.98%	2.97%	18.5	312.5
International Small Companies	VISM	51.10	0.32	1.20%	-15.76%	4.16%	20.7	199.4
Ethically Conscious International Equities	VESG	61.82	0.18	-0.24%	-13.53%	6.30%	-3.5	586.6
Minimum Volatility – Active (AUD hedged)	VMIN	47.99	0.28	-6.42%	-10.03%	-1.47%	1.0	15.0
Global Value – Active	VVLU	53.90	0.28	-0.44%	-4.18%	6.10%	65.9	590.5
Fixed Interest ETFs								
Australian Composite	VAF	43.89	0.15	-0.67%	-11.49%	-3.59%	107.2	1,480.5
Australian Government	VGB	44.94	0.20	-0.77%	-12.06%	-3.94%	140.0	751.8
Australian Corporate	VACF	47.40	0.20	-0.06%	-9.37%	-1.93%	14.5	573.5
International Treasury (AUD hedged)	VIF	38.07	0.20	-3.93%	-12.46%	-4.15%	36.4	628.9
International Credit (AUD hedged)	VCF	36.91	0.30	-4.45%	-16.48%	-4.51%	-6.9	169.7
Global Aggregate (AUD hedged)	VBND	40.67	0.20	-4.43%	-14.61%	-4.41%	38.1	487.5
Ethically Conscious International (AUD hedged)	VEFI	41.70	0.26	-4.39%	-14.29%	-4.31%	1.7	57.3
Diversified ETFs								
Conservative	VDCO	46.50	0.27	-2.21%	-11.54%	-1.13%	0.7	225.2
Balanced	VDDBA	47.10	0.27	-2.08%	-12.40%	0.07%	22.3	596.7
Growth	VDGR	49.12	0.27	-1.61%	-11.96%	1.72%	33.5	597.6
High Growth	VDHG	51.15	0.27	-1.11%	-11.51%	3.34%	125.2	1,702.7
TOTAL							2,069.0	37,613.4

Note: Returns assume that an investor purchased shares at Net Asset Value and do not reflect transaction costs imposed on the creation and redemption of ETF units, the brokerage or the bid-ask spread that investors pay to buy and sell ETF securities on the Australian Securities Exchange. Total returns are after management costs. Past performance information is given for illustrative purposes only and should not be relied upon as, and is not, an indication of future performance.

Why strategic asset allocation wins

Asset classes perform differently over time. Spreading investments across a range of growth and defensive asset classes is essential to the construction of high-quality, diversified portfolios.



Minh Tieu
Head of ETF Capital Markets – APAC,
Vanguard Australia

Asset classes perform differently over time. Spreading investments across a range of growth and defensive asset classes is essential to the construction of high-quality, diversified portfolios.

Strategic asset allocation (SAA) determines how investments are allocated

based on an investor's risk-return preference and long-term market forecasts.

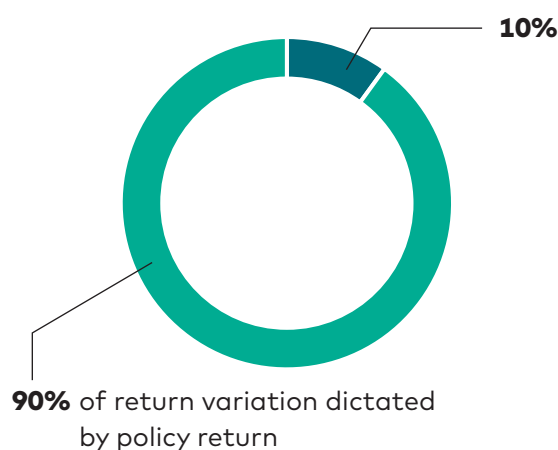
The SAA decision drives the vast majority of portfolio return movement, rather than market timing or security selection. Which is why Vanguard believes an investor's SAA should be developed and held for the long term.

Vanguard's approach to strategic asset allocation

Vanguard's own Diversified Funds are built on SAA based on long-term risk and reward assessments, ensuring they have an enduring role in an investor's portfolio.

When constructing our Diversified Funds, we follow a top-down approach that starts by defining our SAA. Vanguard's Investment Strategy Group (ISG) conducts an annual asset allocation review to ensure that the SAA is aligned with the funds' strategy and reflects Vanguard's best thinking.

Figure 5. Strategic asset allocation drives the investment experience



Notes: For each fund in our sample, a calculated adjusted R2 represents the percentage of actual-return variation explained by policy-return variation. The percentage shown in the figure represents the median observation from the distribution of percentage of return variation explained by asset allocation for balanced funds. The Australian market sample covered 682 balanced funds from January 1, 1990, through September 30, 2020. Calculations were based on monthly net returns, and policy allocations were derived from a fund's actual performance compared with a benchmark using returns-based style analysis (as developed by William F. Sharpe) on a 36-month rolling basis. Funds were selected from Morningstar's Multi-Sector Balanced category. Only funds with at least 48 months of return history were considered in the analysis. The policy portfolio was assumed to have an expense ratio of 2.0 bps per month (24 bps annually, or 0.24%).

Source: Vanguard calculations, using data from Morningstar, Inc.

This determines how our Diversified Funds are positioned across equities, fixed income and cash, based on our long-term capital market assumptions.

Our research covering Australia, the United States, Canada, the United Kingdom, Japan, and Hong Kong markets shows that the SAA decision drives the vast majority of portfolio return movement, rather than market-timing or security selection.

That's why the broad allocations to defensive (fixed income) and growth (equities) are the main determinants of the risk-return profiles of Vanguard's Diversified managed fund and ETF portfolios.

Does tactical asset allocation give investors an edge?

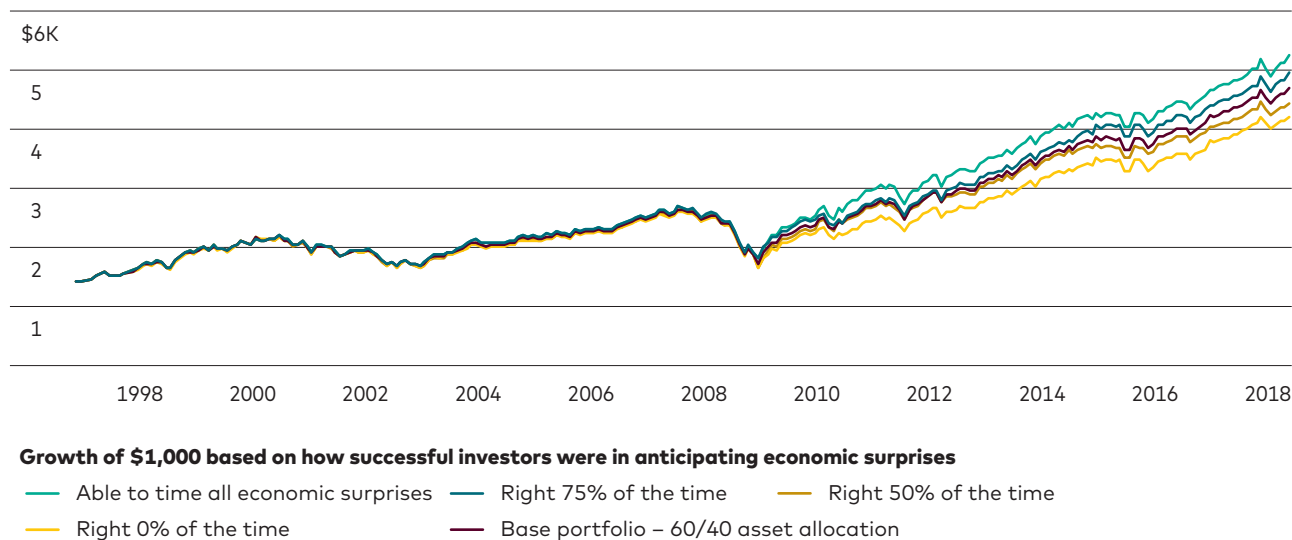
Along with long-term SAA, some investment managers incorporate tactical or dynamic tilts to asset classes based on their short-term market outlook.

Tactical asset allocation (TAA) or other dynamic approaches may seem like a sensible way to manage short-term market movements, but it involves an inherent market timing decision that is difficult to get right even most of the time.

For any tactical move to be successful, managers need to be right not just once but at least five times. They need to:

1. Identify a reliable indicator of short-term future market return.
2. Time the exit from an asset class or market, down to the precise day
3. Time re-entry to an asset class or the market, down to the precise day
4. Decide on the size of the allocation and how to fund the trade
5. Execute the trade at a cost less than the expected benefit

Figure 6. The difference in long-term return from market-timing is marginal



Notes: The MSCI USA Index and the Bloomberg U.S. Aggregate Bond Index were used as proxies for U.S. equities and U.S. fixed income. The lines show the growth of hypothetical portfolios with initial balances of \$1,000 as of the start of 1992 growing through August 2018. Final balances ranged from \$4,196 to \$5,237. Significant changes in nonfarm payrolls were used as economic surprises. The hypothetical investors would change the asset allocation to either 80% equities and 20% fixed income in anticipation of a positive economic surprise, or to 40% equities and 60% fixed income in anticipation of a negative surprise. An investor who was correct half the time (the equivalent of a coin toss) would underperform the static 60/40 portfolio. The 75% correct investor would have had a balance only \$252 greater than the base portfolio. Trading costs were not factored into the scenarios. Methodology originally published in the Vanguard paper *Here Today, Gone Tomorrow: The Impact of Economic Surprises on Asset Returns*, November 2018. Past performance information is given for illustrative purposes only and should not be relied upon as, and is not, an indication of future performance.

Sources: Vanguard calculations, using data from the U.S. Bureau of Economic Analysis, the U.S. Bureau of Labor Statistics, Bloomberg, and Refinitiv.

Even if managers can get it right most of the time, the value-add from successfully timing the market is marginal.

Vanguard has conducted research on the incremental benefits of market timing, based on how frequently an investor was successful in anticipating economic surprises.

In the hypothetical scenario presented below, an investor would have to be correct 75% of the time or better to get a return only slightly higher than that of a fixed portfolio of 60% U.S. equities and 40% U.S. fixed income.

Annual performance data shows that the relative performance of various Australian and global market sectors follows no discernible

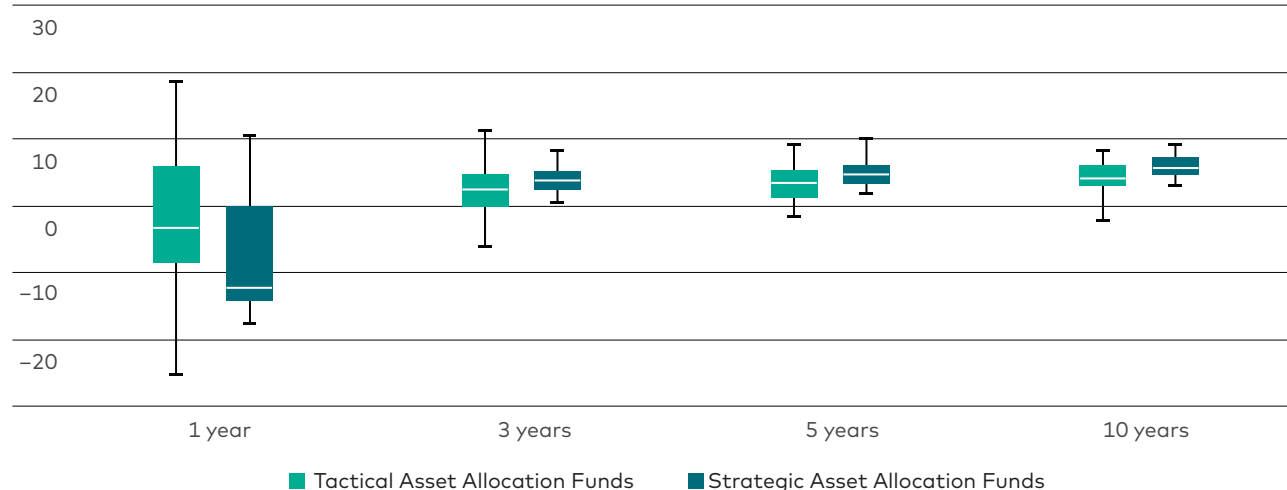
pattern, and that strategies that tilt or time the portfolio in an effort to outperform also run the risk of substantial underperformance relative to the broad market.

As the chart below shows, SAA funds generate higher median returns with less dispersion (less risk) than funds with tactical allocations over medium to long term investment horizons.

So what can investors do to give themselves the best chance of achieving their investment goals?

At Vanguard, the answer is simple, but not always easy. Stay the course with their strategic asset allocation.

Figure 3. Distribution of annualised returns favours SAA funds over extended time horizons



Sources: Vanguard calculations, using U.S. data from Morningstar, Inc., as of June 30, 2022.

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