

Vanguard[®]

Vanguard ETF Quarterly Report

June quarter 2018

In this report:

- Strong returns help drive industry towards \$40 billion
- Global equities continue to attract over half of all new cash flows
- Vanguard receives almost 40% of total ETF cash flows

Quarterly market review

The second quarter of 2018 was positive for ETF investors, and most major asset classes delivered healthy returns. Australian Shares was the best performing asset class, with property (VAP +10%) and large companies (VLC +9%) providing investors with the highest returns over the period.

In Australia, the recurring themes of low inflation, low wage growth, high house prices and household debt levels remained the Reserve Bank of Australia's key concerns. Whilst the headline interest rates remained on hold at 1.5%, rising short term funding costs has seen some of the smaller lenders raise their mortgage rates out of cycle with the RBA.

Despite a number of disruptive announcements during the second quarter of 2018, most notably the US trade tariffs, most of the major equity and fixed interest markets delivered positive returns for investors.

In the US, positive economic data and strong corporate results overshadowed the news of a potential trade war. As anticipated the Federal Reserve raised rates 0.25% during the quarter.

However, the rising US dollar and trade restrictions had a significant impact on emerging markets (-6% VGE) and Asian equities (-2% VAE), which were both hit hard in the June quarter.



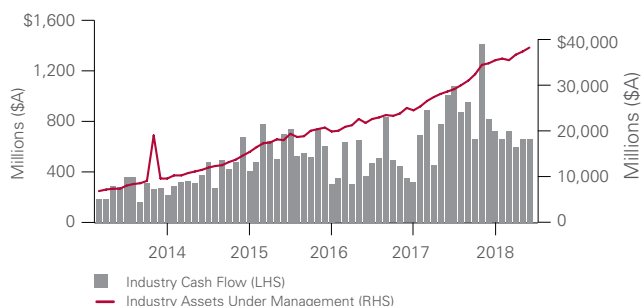
In international equities, US shares (VTS +19%) and developed world ex Australia (VGS +15%) ETFs delivered the best returns. Over the year to June 2018, the Australian dollar fell 3.7% against the US dollar, which provided a boost to unhedged international investments.

In Europe, concerns surrounding the Italian election dominated the headlines and caused markets concern, however these eventually subsided when the government was formed. Rates were on hold throughout the region and the market still awaits news of what the EU will look like post-Brexit, with the March 29 2019 deadline slowly creeping up.

ETF industry cash flow over time

The Australian ETF industry has shown remarkably steady growth in assets under management (AUM) over the past five years as it approaches \$40 billion. ETF cash flows are also trending higher and while 2016 saw the growth rate in cash flows diminish, 2017 was the strongest year ever. The compound annual growth rate for the industry has been a remarkable 38% p.a. over the last five years.

Figure 1: ETF Industry CF vs AUM



Source: ASX Monthly Report and Vanguard.

ETF trading

Australian ETFs attracted \$1.1 billion in new cash flows in the second quarter of 2018, which is \$400 million less than the first quarter of the year. Strong market returns helped the industry AUM grow \$2.5 billion over the quarter to approximately \$39 billion.

\$2.5B

ETF AUM growth for the quarter

ETF investors continue to favour global equity ETFs, which attracted over half of all ETF cash flows for the quarter. Pleasingly, fixed income products collected around 25% of total cash flows, however the proportion of flows to this asset class are significantly less than what we are seeing flow into Vanguard's ETFs in other regions globally.

Increasingly investors are choosing to diversify their portfolios through a single transaction via the diversified ETFs. The multi-asset class sector received just under 5% of flows for the quarter, Vanguard's diversified ETFs now hold over \$130 million in AUM.

Vanguard continues to see strong cash flows attracting nearly 40% of total ETF cash flows year to date.

Figure 2a: Industry cash flow by asset class

Asset class	Quarter		YTD	
	(\$m)	%	(\$m)	%
Australian Equity	141.0	12.6	446	17.6
Global Equity	595.7	53.4	1490	58.6
Infrastructure	18.5	1.7	44	1.7
Australian Fixed Income	232.1	20.8	415	16.3
Global Fixed Income	52.5	4.7	120	4.7
Australian Property	7.9	0.7	-3	-0.1
Global Property	25.2	2.3	39	1.5
Commodity	23.9	2.1	30	1.2
Currency	-31.3	-2.8	-40	-1.6
Mixed	50.9	4.6	108	4.3
TOTAL	1,116.4		2,649	

Source: ASX Monthly Report and Vanguard.

Figure 2b: YTD cash flow and AUM by issuer

Issuer	Cash flow \$m	Cash flow %	AUM \$m
AMP/BetaShares	-3.6	-0.1%	67.3
Aurora	-0.7	0.0%	6.9
Beta Shares	400.7	15.1%	4945.6
ETFS	137.3	5.2%	1045.0
InvestSMART	34.3	1.3%	34.3
iShares	269.5	10.2%	10853.1
K2	-3.6	-0.1%	31.1
Legg Mason/BetaShares	22.7	0.9%	23.4
Magellan	74.2	2.8%	1297.8
Montgomery	13.8	0.5%	81.3
Perennial	17.1	0.6%	17.7
Russell	25.7	1.0%	639.4
Schroders	2.0	0.1%	47.2
State Street	114.1	4.3%	5938.1
Switzer	-0.5	0.0%	77.5
The Perth Mint	3.9	0.1%	132.5
Platinum	155.4	5.9%	303.1
UBS	6.5	0.2%	285.7
VanEck	353.5	13.3%	1824.6
Vanguard	1,026.8	38.8%	11,220.2
TOTAL	2,649.2	100%	38,871.6

Source: ASX Monthly Report and Vanguard.



Growth in the ETF market

The strong growth of the Australian ETF market is well documented, however what is discussed less frequently are the benefits this market growth delivers for investors. The benefits of a growing ETF market are many, but the most meaningful impact of increased trading volume is a reduction in the spreads that investors pay when buying and selling ETFs on the exchange.

Increases in trading volume draws the attention of the market makers encouraging them to provide greater coverage of that ETF or the market in general. It also increases the chances that individual buyers and sellers will transact with each other. All of this increases the competition for ETFs and leads to a reduction in trading spreads. The charts below (Figure 3a and 3b) highlight the impact that increased trading volume has on spreads.

What these charts show is that as trading volume increases the average on-screen spread decreases. This in turn provides investors greater confidence in trading larger, more established products in the screen.

New ETFs recently launched to the market may exhibit wider on-screen spreads until the level of interest picks up. Investors however can still trade new products with tight spreads and in large size, however it can be beneficial to contact the ETF provider for assistance with trading newer ETFs to ensure the most efficient execution.

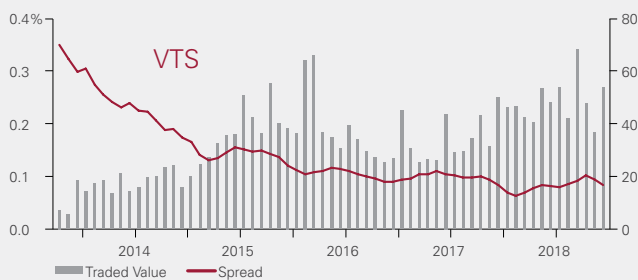
Has growth caused greater volatility?

Indexing has grown considerably over the past decade and ETFs have been a large beneficiary of this shift in investor preference. This shift has helped the Australian ETF market grow to just under \$40 billion as at the end of June 2018. The speed and extent of the growth has led some commentators to suggest that ETFs are having a negative impact on investment markets and have reduced the price discovery of underlying securities.

Vanguard's US Investment Strategy Group analysed the impact that passive investing is having on the US investment market (passive investment makes up a much greater proportion of investable assets in the US than Australia) and they found no evidence that the increase in volumes to passive investment undermines price discovery.

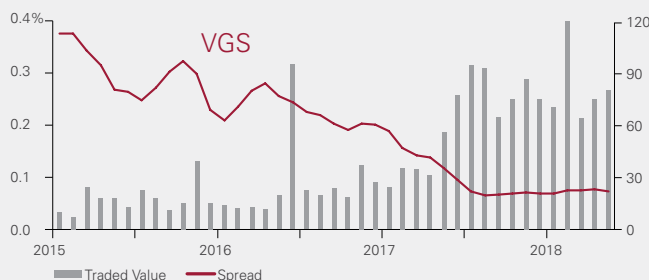
One argument raised is that indexing increases correlations among a market's securities, which in turn leads to active management underperformance. The chart (Figure 4a) shows the dispersion of returns (the percentage of securities that have either outperformed or underperformed the index) over time against the growth of indexing. It is clear from the chart that the growth in indexing does not have an impact on the dispersion of returns and active managers have the same chance to outperform as they always have.

Figure 3a: Impact of increased trading volume on spreads



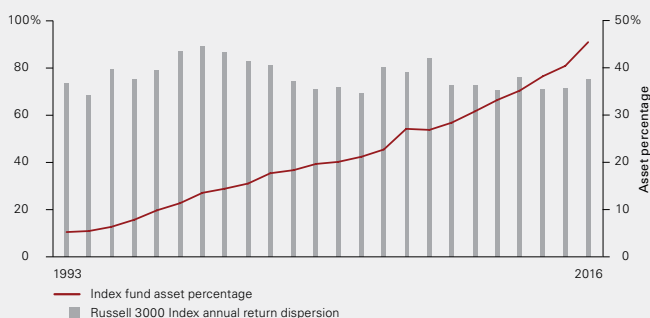
Source: ASX Monthly Report and Vanguard.

Figure 3b: Impact of increased trading volume on spreads



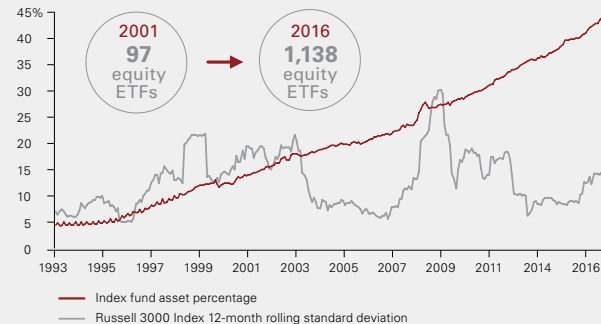
Source: ASX Monthly Report and Vanguard.

Figure 4a: No connection between indexing and price dispersion



Notes: Dispersion is defined as the percentage of stocks in the Russell 3000 Index that have either outperformed or underperformed the index by at least ten percentage points. Index fund asset percentage is the percentage of assets in U.S.-domiciled equity funds invested in index funds. Sector funds are included.
Source: Vanguard calculations, using data provided by FactSet and Morningstar, Inc.

Figure 4b: The growth of indexing and market volatility



Notes: Index fund asset percentage is the percentage of assets in U.S.-domiciled equity funds invested in index funds. Sector funds are included.
Source: Vanguard calculations, using data provided by FactSet and Morningstar, Inc.

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It has also been argued that the rise in indexing causes market volatility. We find that such a relationship does not exist. The chart (Figure 4b) shows the price volatility of the Russell 3000 Index compared with the growth of indexing for US equity funds (shown as index funds as a proportion of total US equity funds).

Whilst the percentage of index assets has grown, market volatility has risen and fallen in a seemingly random pattern, with notable spikes around the tech bubble and the GFC. The charts (Figure 4a and 4b) show that indexing has no impact on price discovery or market volatility.

If a market event severely disrupts the ability to price the underlying investments of an ETF (for pricing or hedging purposes), then it is expected that the pricing of the ETF will

suffer the same disruption. ETFs are managed funds that invest in a basket of securities and the price of the ETF will move up and down during market hours with the value of the underlying securities (for securities open during our trading day) or with currency and futures market movements (for securities that are closed).

In the highly unusual event that an ETF spread widens considerably because the market makers temporarily step out of the screen, it is wise for ETF investors to hold off on trading until such time as markets return to normal. ETFs do not cause disruptions to underlying securities or futures markets, but they can be impacted by them. In fact, ETF trading should always reflect what is going on with the underlying securities.

Vanguard product summary

	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	\$79.8	0.14%	8.33%	13.13%	9.00%	\$110.7	\$2,834.0
Property	VAP	\$80.1	0.23%	9.72%	13.01%	9.90%	\$18.1	\$1,024.3
High Yield	VHY	\$59.4	0.25%	4.49%	2.62%	3.93%	\$28.5	\$1,075.5
Large Companies	VLC	\$63.9	0.20%	8.65%	10.59%	5.73%	\$0.0	\$83.9
Small Companies	VSO	\$58.0	0.30%	6.61%	18.93%	14.08%	\$25.2	\$189.3
International Equity ETFs								
Developed Markets	VGS	\$69.5	0.18%	5.55%	15.44%	10.06%	\$96.7	\$1,097.5
Developed (\$ hedged)	VGAD	\$65.7	0.21%	3.66%	11.46%	9.79%	\$8.5	\$412.9
All world ex US	VEU	\$70.0	0.11%	0.51%	10.85%	6.55%	\$67.3	\$1,243.3
Total US Market	VTS	\$190.6	0.04%	7.97%	19.21%	13.06%	\$26.6	\$1,344.1
Developed Europe	VEQ	\$55.1	0.35%	1.81%	8.51%	n/a	\$29.2	\$193.6
Asia ex Japan	VAE	\$65.1	0.40%	-2.13%	12.59%	n/a	\$28.2	\$97.3
Emerging Markets	VGE	\$63.7	0.48%	-6.31%	9.22%	4.32%	\$5.8	\$203.8
Minimum Volatility - Active	VMIN	\$51.9	0.28%	n/a	n/a	n/a	\$2.2	\$2.1
Global Value - Active	VVLU	\$52.6	0.28%	n/a	n/a	n/a	\$5.7	\$6.3
Fixed Interest ETFs								
Australian Composite	VAF	\$48.9	0.20%	0.74%	2.92%	3.25%	\$1.3	\$704.8
Australian Government	VGB	\$49.2	0.20%	0.77%	2.82%	3.18%	\$0.1	\$137.2
Australian Corporate	VACF	\$50.6	0.26%	0.66%	3.70%	n/a	\$26.5	\$126.7
International Treasury (\$A hedged)	VIF	\$48.4	0.20%	0.21%	2.25%	n/a	\$26.2	\$196.3
International Credit (\$A hedged)	VCF	\$47.5	0.30%	-0.20%	1.03%	n/a	-\$15.8	\$99.4
Global Aggregate (\$A hedged)	VBND	\$49.9	0.20%	0.04%	n/a	n/a	\$8.7	\$16.7
Diversified ETFs								
Conservative	VDGO	\$50.9	0.27%	1.89%	n/a	n/a	\$5.1	\$9.7
Balanced	VDDBA	\$51.4	0.27%	3.00%	n/a	n/a	\$11.7	\$23.7
Growth	VDGR	\$51.8	0.27%	4.13%	n/a	n/a	\$13.9	\$33.4
High Growth	VDHG	\$52.3	0.27%	5.29%	n/a	n/a	\$18.1	\$64.9
TOTAL							\$548.5	\$11,220.7

Returns assume that an investor purchased shares at Net Asset Value and does 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.

Source: Vanguard and Bloomberg.

For more information

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