

BETASHARES AUSTRALIAN ETF REVIEW

YEAR END 2018 REVIEW & MONTH ENDING DECEMBER 2018



AUSTRALIAN EXCHANGE TRADED FUND INDUSTRY: END OF YEAR REVIEW 2018

Shaken, not stirred!



- Notwithstanding dramatic sharemarket volatility in the final few months of the year, the Global ETF industry recorded significant growth in 2018, receiving its 2nd highest ever level of net inflows (US\$516B). In total the global industry ended the year at US\$4.8T¹. Total asset growth however was held back by significant asset value depreciation leading Global ETF assets under management to end up at approximately the same level as at end 2017.
- Comparatively, the local ETF industry's net flows were actually <u>higher</u> than the declines in asset values, leading the ETF industry to grow by 13%, (~\$5B). In our view, given the prevailing environment, this is a very strong result and indicates the continued interest in the ETF product structure by investors even in the face of very volatile markets.
- The Australian ETF industry's funds under management ended the year at ~\$41B, a touch below the record high of \$42B set in September, (2017 year end AuM, \$36B)
- As a result of sharp market falls at year's end, 100% of the year's industry growth came from net inflows, with \$6.2B flowing into the industry over the course of the year. In a similar result to the global industry, this represents the 2nd highest annual flows on record (the highest being \$7.8B, in 2017). Importantly, this strong 'unit' growth means that if and when asset prices recover, we will see some "bumper" growth months in the year ahead.

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¹ ETFGI

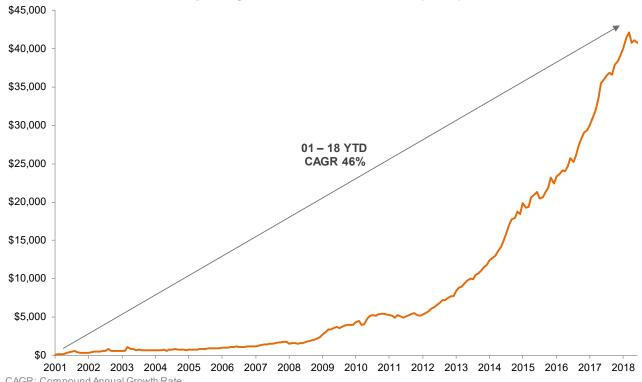
- While asset growth and inflows were below record levels, the industry did break a meaningful record in 2018, with ETF Trading activity levels reaching a fresh record high, with trading value increasing 14% compared to 2017, and over \$36B of value traded. We expect trading values to continue to trend upwards as ETFs become an increasingly mainstream way to express investment views.
- Flows by ETF manager continued to be concentrated, and more so than last year, with the top 2 players (Vanguard and BetaShares) receiving 62% of the industry's flow combined (compared to 56% for the top 2 players in 2017)
- In terms of product launches, 2018 produced the **2**nd **highest number of new product launches** on record, with **38** funds launched compared to 31 new products launched in 2017 and 40 new products launched in 2016.
- 7 products were closed in 2018, which is still a relatively small figure by global ETF standards. ETF issuers closing products were iShares and ETF Securities.
- By inflows, **passive products** captured the bulk of flows with **88%** share, however the Active ETF sector continued to grow its relative share with **12%** of flows vs. 8% in 2017¹.
- Within the passive category vanilla index-tracking funds once again dominated, with their share of flows remaining stable (78% of flows in 2018 v. 79% of flows in 2017), as did the share of flows in 'smart-beta' products (9% vs. 8% in 2017)².
- That notwithstanding, we expect both Active ETFs and 'smart-beta' exchange traded funds to continue to grow in popularity as new products are launched and the industry matures.
- The categories of ETFs capturing the largest amounts of new money over the course of 2018 were relatively stable compared to last year:
 - For the 4th year in a row, **international equities** products ranked #1 for inflows, with **\$2.9B** of net inflows, followed by **Australian equities** at ~\$1.5B
 - The **fixed income** category continued to grow at a rapid pace, with **record flows to this category** in 2018, picking up \$1.3B in net flows (vs. \$1.1B in 2017) and ranking 3rd in terms of asset category inflows. We believe it's very possible that we could see this category grow to the #2 most popular category in 2019, given increased product innovation and a greater investor understanding of the role that fixed income can play in portfolios
 - Outflows were limited, with only two categories receiving net outflows, and both due to profit taking by investors given market conditions (U.S Currency ETFs and Short Funds)
- The **best performing products of 2018** were the Palladlium ETF, followed by the Strong U.S. Dollar Hedge Fund (ASX: YANK) and Technology Equities oriented ETFs.
- The declines in asset prices muted the growth of the industry and therefore the 2018 industry forecast we
 made in our end-year 2017 review was not reached (forecast of \$47-\$49B, actual ~\$41B). That said,
 fundamental unit growth will continue to support the industry's rise, with extraordinary growth possible
 should asset values recover.
- We believe the industry will continue to grow strongly in 2019 and forecast total industry FuM at end 2019 to be in the range of \$50-\$55B.

¹ "Passive" products defined as passive/rules-based products (i.e. rather than as legally defined by ASIC/ASX) and include products with an element of investment discretion. "Active" defined as Active ETFs

² 'Smart-beta' defined as products which weigh constituents based on a methodology other than strictly market capitalisation/price

MARKET SIZE AND GROWTH: CALENDAR YEAR 2018

Australian ETP Market Cap: July 2001 – December 2018 (A\$m)



CAGR: Compound Annual Growth Rate

Source: ASX, BetaShares

MARKET CAP

- ASX Exchange Traded Funds Market Cap: \$40.8B
- Market cap growth for year: 13%, + \$4.8B

NEW MONEY

- New unit growth for year (units outstanding by number): 21%
- Net new money (units outstanding by \$ value): +\$6.2B 2nd highest annual flows on record

PRODUCTS

- 247 Exchange Traded Products trading on the ASX
- New products: 38 new products launched in the year (vs. 31 in 2017), 7 products closed

TRADING VALUE

• Trading value increased 14% compared to 2017 – record trading year for ETFs - \$36B traded

PERFORMANCE

Palladium, Geared U.S. Dollar and Technology exposures the best performing products for 2018

TOP 10 PRODUCTS: END OF YEAR 2018

Ticker	Product	Issuer	Market Cap (this month)	Rank Movement for 2018
STW AU Equity	SPDR S&P/ASX 200 Fund	State Street	\$3,271,320,000	-
VAS AU Equity	Vanguard Australian Shares Index ETF	Vanguard	\$3,021,400,000	-
IVV AU Equity	iShares S&P 500	iShares	\$2,602,338,124	-
IOO AU Equity	iShares S&P Global 100	iShares	\$1,401,335,698	-
VTS AU Equity	Vanguard US Total Market Shares Index ETF	Vanguard	\$1,296,370,000	+2
AAA AU Equity	Betashares Australian High Interest Cash ETF	BetaShares	\$1,291,440,000	-
VGS AU Equity	Vanguard MSCI Index International Shares ETF	Vanguard	\$1,216,990,000	+5
VEU AU Equity	Vanguard All-World ex-US Shares Index ETF	Vanguard	\$1,186,050,000	-
MGE AU Equity	Magellan Global Equities Fund (Mgd Fund)	Magellan	\$1,120,390,000	+2
VAP AU Equity	Vanguard Australian Property Securities Index ETF	Vanguard	\$1,096,860,000	-1

Other products with > \$500m AUM: VHY, IOZ, VAF, Gold, IEU, IAF, MVW, IEM, SLF,

As predicted in our End of Year 2017 report, Vanguard's International Shares ETF was the "fastest mover" in the Top 10 list and joined the "big-leagues" this year. Magellan's MGE fund also become part of the top 10 for the first time. Biggest losers amongst the largest funds were iShares IOZ and Vanguard's VHY which dropped off this table relative to last year.

Top 10 Creations (by \$) - 2018

Ticker	Product	Creation Value
VAS AU Equity	Vanguard Australian Shares Index ETF	\$583,096,520
VGS AU Equity	Vanguard MSCI Index International Shares ETF	\$459,957,764
A200 AU Equity	BetaShaares Australia 200 ETF	\$426,993,569
MVW AU Equity	Market Vectors Australia Equal Weight	\$233,012,096
PIXX AU Equity	Platinum International Fund	\$197,216,727
VEU AU Equity	Vanguard All-World ex-US Shares Index ETF	\$193,384,940
HBRD AU Equity	BetaShares Active Australian Hybrids Fund	\$185,065,238
QPON AU Equity	BetaShares Australian Senior Bank Floating Rate Bond ETF	\$178,069,480
WDMF AU Equity	iShares Edge MSCI Multi-Factor ETF	\$165,119,570
VHY AU Equity	Vanguard Australian Shares High Yield ETF	\$151,188,027

Top 10 Redemptions (by \$) - 2018

Ticker	Product	Redemption Value
IOZ AU Equity	iShares Core S&P/ASX 200 ETF	(\$241,039,432)
USD AU Equity	BetaShares US Dollar ETF	(\$152,502,081)
MICH AU Equity	Magellan Infrastructure Fund - Currency Hedged	(\$143,262,229)
HVST AU Equity	BetaShares Australian Dividend Harvester	(\$81,376,218)
QOZ AU Equity	BetaShares FTSE RAFI Australia 200 ETF	(\$76,699,126)
IRU AU Equity	iShares Russell 2000	(\$74,945,017)
STW AU Equity	SPDR S&P/ASX 200 Fund	(\$70,325,523)
IXP AU Equity	iShares S&P Global Telecommunications	(\$48,651,160)
YMAX AU Equity	BetaShares Equity Yield Maximiser Fund	(\$46,192,305)
QRE AU Equity	BetaShares S&P/ASX 200 Resources ETF	(\$44,660,629)

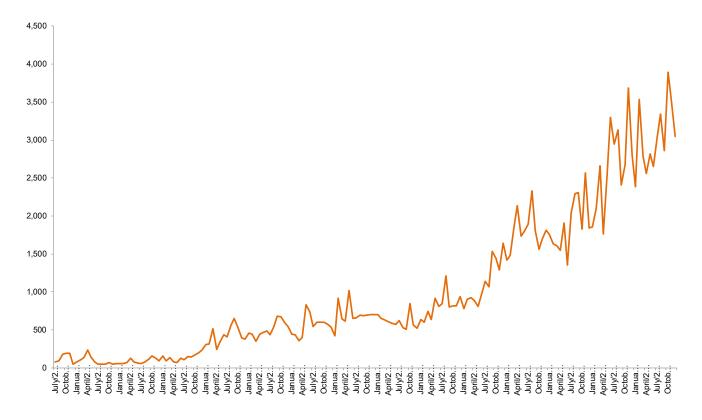
As per last year, a continued "changing of the guards" is occurring in broad Australian shares ETFs, with STW and IOZ losing share at the expense of alternative products - this included VAS, but A200 (lowest cost Australian shares ETF globall), which was launched this year to strong reception and ended up as the #3 products for flows. It was interesting to see 2 Active ETFs featuring in the Top 10 products for flows, namely Platinum's International Fund and BetaShares Active Hybrids Fund (HBRD). HBRD and QPON (Senior Bank Floating Rate Bonds) were the two largest non-equity ETFs by inflows this year.

By Average Daily Trading Value (12 month)

Ticker	Product	Issuer	ADTV 12 month	Rank Movement
STW AU Equity	SPDR S&P/ASX 200 Fund	State Street	\$14,205,614	-
VAS AU Equity	Vanguard Australian Shares Index ETF	Vanguard	\$10,344,799	+1
AAA AU Equity	Betashares Australian High Interest Cash ETF	BetaShares	\$9,660,951	-1
IOZ AU Equity	iShares Core S&P/ASX 200 ETF	iShares	\$5,470,758	+1
IVV AU Equity	iShares Core S&P 500	iShares	\$5,322,777	-1
VGS AU Equity	Vanguard MSCI Index International Shares ETF	Vanguard	\$3,918,507	-
A200 AU Equity	BetaShares Australia 200 ETF	BetaShares	\$3,090,274	NEW
VHY AU Equity	Vanguard Australian Shares High Yield ETF	Vanguard	\$2,719,300	-1
VEU AU Equity	Vanguard All-World ex-US Shares Index ETF	Vanguard	\$2,650,637	+5
VTS AU Equity	Vanguard US Total Market Shares Index ETF	Vanguard	\$2,640,959	+2

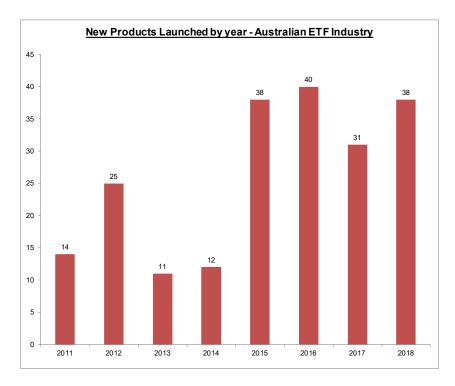
The most traded funds by value were relatively stable in 2018, with only small moves in ranking compared to 2017. The exception was BetaShares A200, which traded strongly this year, a trend we expect to continue going forward.

AUSTRALIAN ETF INDUSTRY – MONTHLY TRADING VALUE



The long term 'value traded' chart shows the dramatic increase in trading value over time, with 2018 receiving record traded values.

NEW PRODUCT LAUNCHES – 2018



As we predicted last year, product development was strong in 2018, with 38 new products launched for the year, taking the total number of products launched in the last 4 years to 150. This fast pace of product growth is expected to continue into 2019, in particular via Active ETFs (of which 9 were launched in 2018).

7 products were closed in 2018, which is amongst the highest on record, but is still relatively small by the standards of more mature ETF industries. This included 5 closures by iShares and 2 by ETF Securities

ANALYSIS OF INFLOWS: 2018

	Inflow Value - 2018	2018 (%)	2017 (%)	2016 (%)
Passive	\$5,461,891,233	88%	92%	89%
Active	\$770,196,731	12%	8%	11%

In terms of net inflows, the bulk of flows this year continued to be in "Passive" products. The increased share of flows into Active ETFs is notable however and we do believe will edge up over time as more of these types of products are launched. The table below shows that, in fact, that Active ETFs outsold 'smart beta' ETFs in 2018, which themselves were slightly up in terms of share of flows compared to 2017.

Inflows by Product Style (by \$) - YTD

Product Style	Inflow Value - 2018	2018 (%)	2017 (%)	2016 (%)
Index	\$4,883,379,845	78%	79%	67%
Active	\$770,196,731	12%	13%	21%
Smart Beta	\$578,511,389	9%	8%	11%

Top 5 Category Inflows (by \$) - YTD

High Level Category	Inflow Value	Change in rank v 2017
International Equities	\$2,899,669,738	-
Australian Equities	\$1,492,522,567	-
Fixed Income	\$1,303,236,081	-
Multi-Asset	\$283,997,815	+8
Cash	\$229,152,702	-1

Compared to 2017, the ranking of inflows into high level categories were relatively similar. Notably, there was almost of much inflow into Fixed Income ETFs (\$1.3B), as Australian equities this year (\$1.5B), albeit international equities continued to dramatically outsell all other forms of ETF by category (\$2.9B). Multi-Asset class ETFs entered the Top 5 table for the first time, albeit at much smaller levels than the top 3 categories. We expect international equities exposures to continue to drive the ETF industry for some time to come, and would additionally not be surprised to see Fixed Income ETF outsell Australian equities exposures in 2019.

Sub-Category	Inflow Value	Change in rank v 2017
International Equities - Developed World	\$1,810,617,753	+1
Australian Bonds	\$1,205,732,313	+1
Australian Equities - Broad	\$944,973,977	-2
Multi-Asset	\$283,997,815	+6
International Equities - Asia	\$281,348,280	+8

At a sub-category level, there was a little more movement in ranking relative to last year. We saw good inflows into Asian equities exposures, a category that has traditionally not featured in the Top 5. We saw strong interest for example in our Asian Technology Tigers ETF (ASX: ASIA) which launched in September. For the second year in a row, the "Australian Equities – High Yield" sub-category dropped out of Top 5, as yield oriented stocks underperformed and were eschewed by investors.

Top Category Outflows (by \$) - YTD

High Level Category	Outflow Value
Currency	(\$174,213,824)
Short	(\$34,123,205)

Relatively low outflows were recorded by category again this year, with the two categories that did receive net outflows likely doing so due to profit taking by investors.

Top Performing Products – 2018

Ticker	Product Name	Performance (%)
ETPMPD	ETFS Physical Palladium	32.2%
YANK	BetaShares Strong U.S. Dollar Hedge Fund	24.4%
TECH	ETFS Morningstar Global Technology ETF	13.9%
HACK	BetaShares Global Cybersecurity ETF	12.9%
USD	BetaShares US Dollar ETF	12.4%

The league tables of investment performance were significantly affected by the dramatic falls in equities in November and December of 2018, with the best performing exposure ending up being physical palladium, geared U.S. Dollars followed by technology equities ETFs which managed to eke out decent returns notwithstanding the sell off as at year end.

AUSTRALIAN EXCHANGE TRADED FUND INDUSTRY: MONTH OF DECEMBER 2018

MARKET CAP & NEW MONEY

- Market cap growth for month: -0.9%, -\$347.5m
- New unit growth for month (units outstanding by number): 1.2%
- Net new money (units outstanding by \$ value): +\$453.9m
- 1 new product launched this month a new Active ETF by Fidante

TRADING VALUE

• Trading value decreased 13% month on month

PERFORMANCE

 BetaShares U.S. Equities Strong Bear Hedge Fund (ASX: BBUS) the best performing product, followed by Global Gold Miner equities exposures

TOP 10 PRODUCTS: DECEMBER 2018

By Average Daily Trading Value (20 day)

Ticker	Product	Issuer	ADTV 20 day	Rank Movement
STW AU Equity	SPDR S&P/ASX 200 Fund	State Street	\$18,888,858	-
VAS AU Equity	Vanguard Australian Shares Index ETF	Vanguard	\$16,659,816	+1
AAA AU Equity	Betashares Australian High Interest Cash ETF	BetaShares	\$10,812,947	-1
IOZ AU Equity	iShares Core S&P/ASX 200 ETF	iShares	\$8,126,063	+1
A200 AU Equity	BetaShares Australian 200 ETF	BetaShares	\$6,744,990	-1
IVV AU Equity	iShares S&P 500	iShares	\$5,087,673	-
USD AU Equity	BetaShares US Dollar ETF	BetaShares	\$3,705,044	+16
VGS AU Equity	Vanguard MSCI Index International Shares ETF	Vanguard	\$3,607,000	-1
MGE AU Equity	Magellan Global Equities Fund (Mgd Fund)	Magellan	\$3,473,550	+9
VHY AU Equity	Vanguard Australian Shares High Yield ETF	Vanguard	\$3,408,572	+4

Top 10 Creations (by \$) - Month

Ticker	Product	Creation Value
A200 AU Equity	BetaShares Australia 200 ETF	\$93,058,515
VAS AU Equity	Vanguard Australian Shares Index ETF	\$75,926,104
VGS AU Equity	Vanguard MSCI Index International Shares ETF	\$43,394,802
IGB AU EQUITY	iShares UBS Treasury Index Fund	\$29,298,612
IOZ AU Equity	iShares Core S&P/ASX 200 ETF	\$26,039,138
VGAD AU Equity	Vanguard MSCI Index International Shares ETF Hedged	\$19,759,578
VEU AU Equity	Vanguard All-World ex-US Shares Index ETF	\$19,366,509
NDQ AU Equity	BetaShares Nasdaq 100 ETF	\$19,007,040
WDMF AU Equity	iShares Edge MSCI World Multifactor ETF	\$16,565,360
VAF AU Equity	Vanguard Australian Fixed Interest ETF	\$15,763,264

Top 10 Redemptions (by \$) - Month

Ticker	Product	Redemption Value
STW AU Equity	SPDR S&P/ASX 200 Fund	(\$85,735,813)
USD AU Equity	BetaShares US Dollar ETF	(\$51,858,585)
IVV AU Equity	iShares S&P 500	(\$14,186,944)
IAF AU Equity	iShares UBS Composite Bond Index Fund	(\$9,704,196)
ZUSD AU EQUITY	ANZ ETFS Physical US Dollar ETF	(\$8,060,942)
RDV AU Equity	Russell High Dividend Australia Shares ETF	(\$7,908,570)
IJP AU Equity	iShares MSCI Japan	(\$6,975,914)
BBUS AU Equity	BetaShares US Equities Strong Bear Hedge Fund	(\$6,122,813)
BBOZ AU Equity	BetaShares Australian Equities Strong Bear Hedge Fund	(\$5,855,885)
IJH AU Equity	iShares S&P MidCap 400	(\$4,616,527)

Top 5 Category Inflows (by \$) - Month

Broad Category	Inflow Value
International Equities	\$211,201,578
Australian Equities	\$160,299,582
Fixed Income	\$99,894,168
Multi-Asset	\$28,787,229
Australian Listed Property	\$18,337,451

Top Category Outflows (by \$) - Month

Broad Category	Outflow Value
Currency	(\$61,442,727)
Short	(\$13,456,748)

Top Performing Products – Month

Ticker	Product Name	Performance (%)
BBUS	BetaShares US Equities Strong Bear Hedge	21.2%
GDX	Market Vectors Gold Miners ETF	15.0%
MNRS	BetaShares Global Gold Miners ETF	14.0%
ETPMAG	ETFS Physical Silver	12.6%
Gold	ETFS Physical Gold	9.2%