The problem with all-you-can-ETFs

Gorging off the index can also lead to indigestion

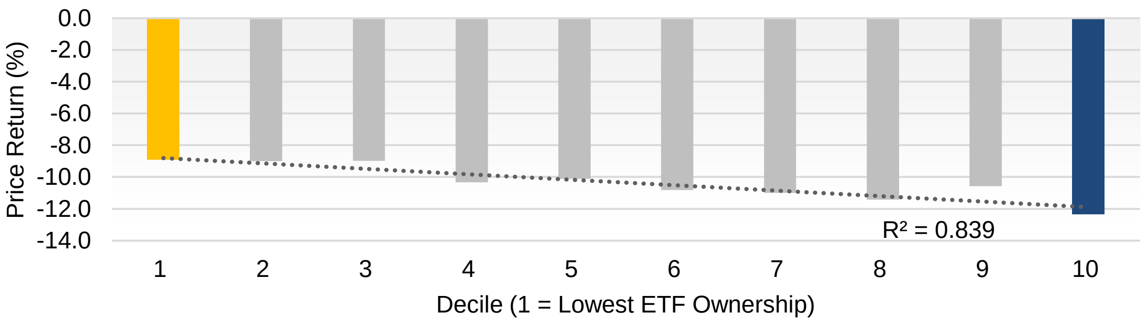
5th October 2015
Michael Newman

130x flow into ETF over mutual funds

ETFs are hitting the market faster than the dim-sum trolley can circle the banquet hall. Charles Schwab, in the 12mths to July 2015, saw a 130-fold preference in ETF over mutual funds given their relative simplicity, cost and transparency. It sure sounds good but for all the exotic flavours of ETFs one can feast on, one needs to be wary of indigestion when stomaching bear claws.

Higher ETF ownership caused greater under-performance

To show what an upset bear is capable of - the most recent stock market rout from Aug 17th, 2015 - stocks which had a higher percentage of ETF ownership suffered greater underperformance than those with less. The correlation was high with an R-squared of 84%. The study is best demonstrated below (Decile 1 = lowest ETF ownership, Decile 10 = highest ETF ownership). This is consistent with our report of Sept 4, 2015 which highlighted the higher excess volatility created by ETFs when confronted with bear market activity. With ETFs in Japan becoming a much larger part of traded value than several years ago, such excess volatility is likely to be exacerbated.

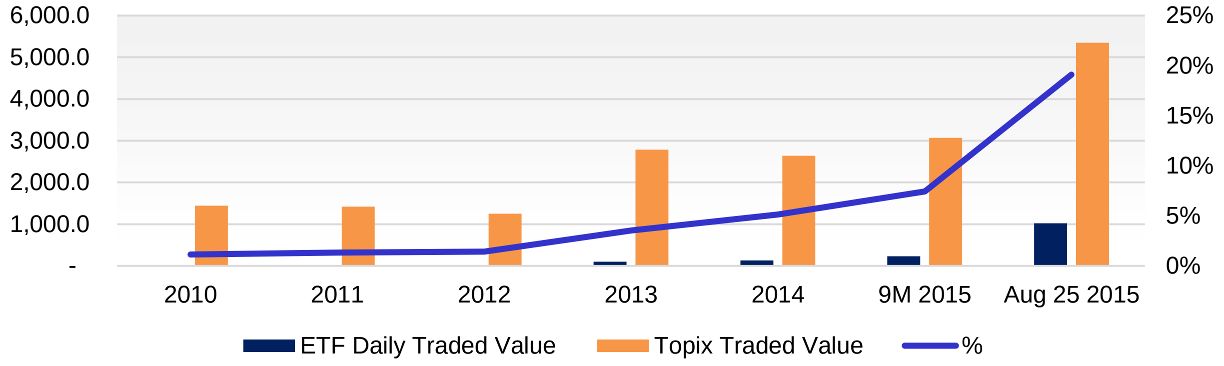


Source: Custom Products Research

ETFs in Japan hit 19% of TOPIX traded value on Aug 25

There are currently 217 ETFs in Japan vs a global market of 3,906 ETFs at the end of 2014. The AUM in Japan for ETF products in 2015 is around ¥15 trillion. The average daily traded value of ETFs in Japan was around ¥136bn in 2014 versus a market daily average of ¥2.6 trillion (5%). Although in August 2015, the Tokyo Stock Exchange reported that the daily average trading value for ETFs was ¥330bn versus an average TOPIX trading value for the month of ¥3.5 trillion (9.4%). On Monday August 25, the ETF market traded over ¥1 trillion for the first time versus a market of ¥5.3 trillion (i.e. **19.1%**) when the TOPIX plunged 5.9% which can be seen in the following chart.

ETFs in Japan vs Topix Traded Value - recently hit 19%

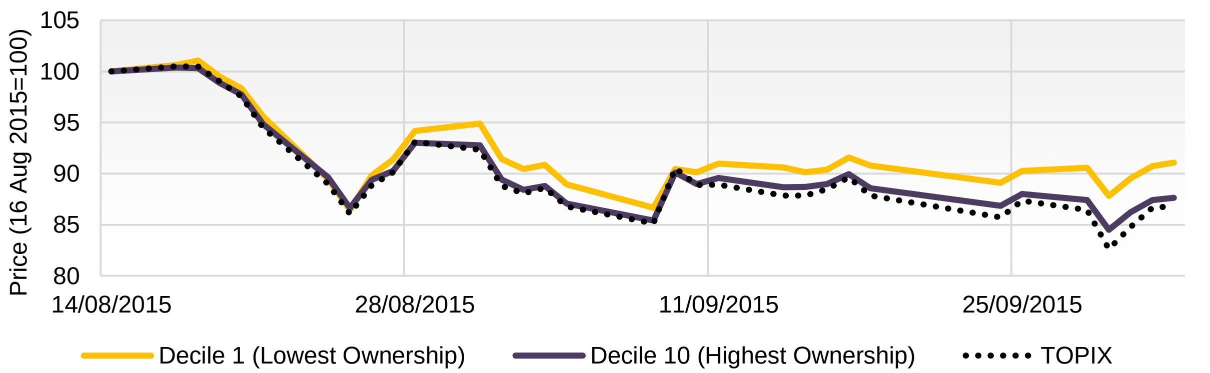


Source: TSE

The impact of ETFs on markets

Naturally market sell offs tend to be more acute than bull market rallies. As our research highlighted previously, ETF excess volatility rises in bear markets. The following chart shows as market weakness continued after August 17th, the spread between high and low ETF ownership widened. We would expect as ETFs rise as a percentage of overall market turnover, these spreads could expand ceteris paribus.

Low ETF ownership a safer haven in bear markets?



Source: Custom Products Research

Passive ETFs and fair value (?)

Passive (Dumb-Beta) ETFs as we know are not so caring of 'valuation' instead chasing the variety of indices they are linked to. We noted that some stocks were trading at significant premiums to traditional long term valuation metrics.

Pharma at a 76% PER premium

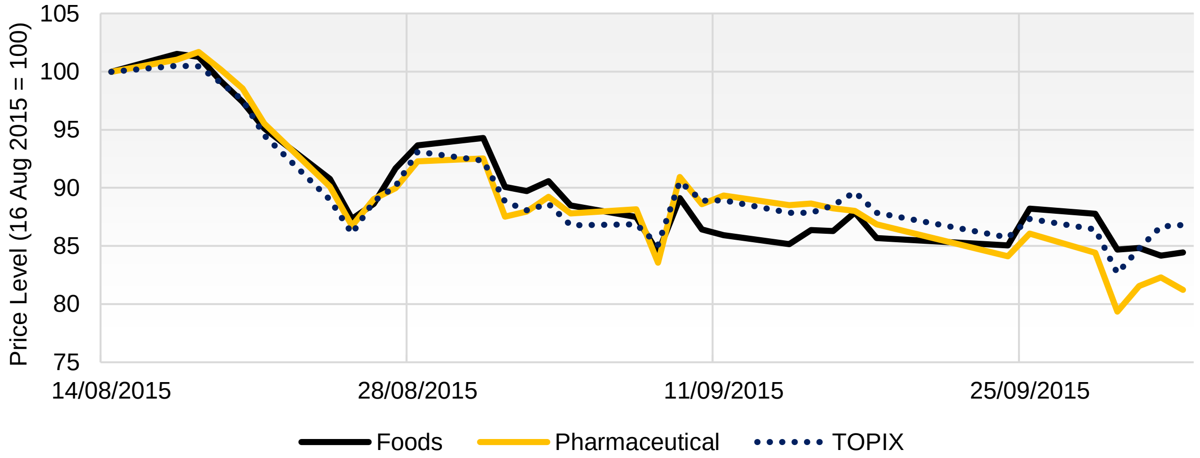
In our August 25th report of *'Why The Fancy Multiples?'* we noted that defensive sectors were trading at heady premiums in the week before the sharp decline (Aug, 17th 2015). The same defensive sectors were also expensive the week before Lehman Shock. This time, the TOPIX Pharmaceutical Index was trading at a 76% PER (1 year forward) premium, Retail Trade a 52% premium, Food a 21% premium and Land Transport a 15% premium to just prior to Lehman shock.

When we explored deeper on a per stock basis, the Pharmaceutical sector had Eisai, ONO Pharmaceutical, Takeda and Kyowa Hakko at 100-400% premiums over the same period. Food was lightly less exaggerated with Itoen, Rock Field, Kikkoman, Kirin and Dydo Drinco at 50-150% premiums.

Smart beta to address quality?

As we can see below the performance of these sectors was hit harder as the market sold off. In part due to the ETF weight but also as a function of the relatively 'expensive' valuations versus their history.

Pharma & Foods Underperform Topix



Source: Custom Products Research

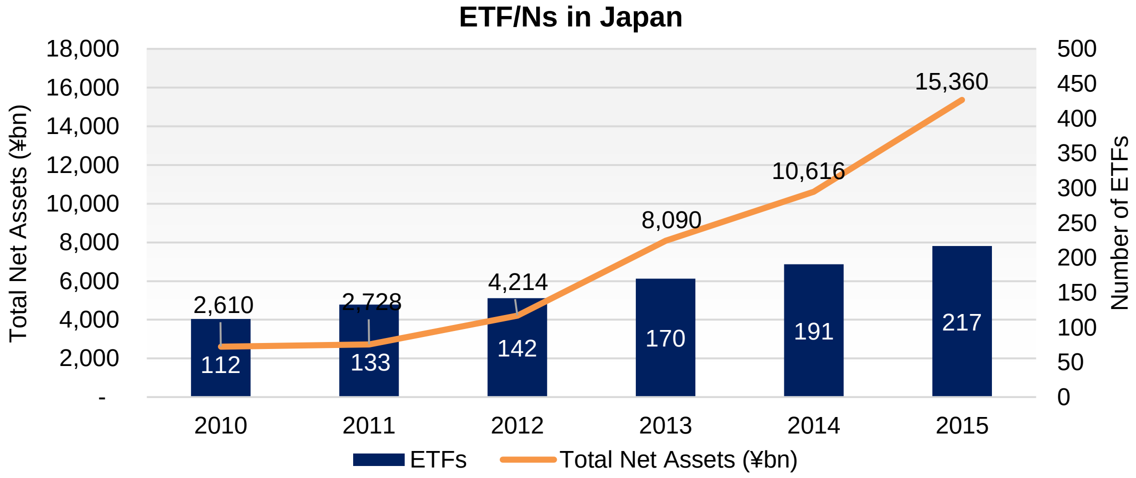
Japan 4% of ETF market globally but…

The advent of Smart Beta ETFs will hope to address this 'qualitative' gap somewhat but as a tiny proportion of overall ETFs at present, sell-side price target forecasting becomes even less relevant.

ETFs in Japan

…now 12% of global AUM raised in 2015 to date

The ETF market in Japan represents around 5% of total ETF product globally and around 4% of total assets under management (AUM) at ¥10.62 trillion as of 2014 end. The US ETF market is around 40% of all ETFs and 70% of AUM. US equity product makes up around 27% of ETF AUM vs. around three quarters in Japan.

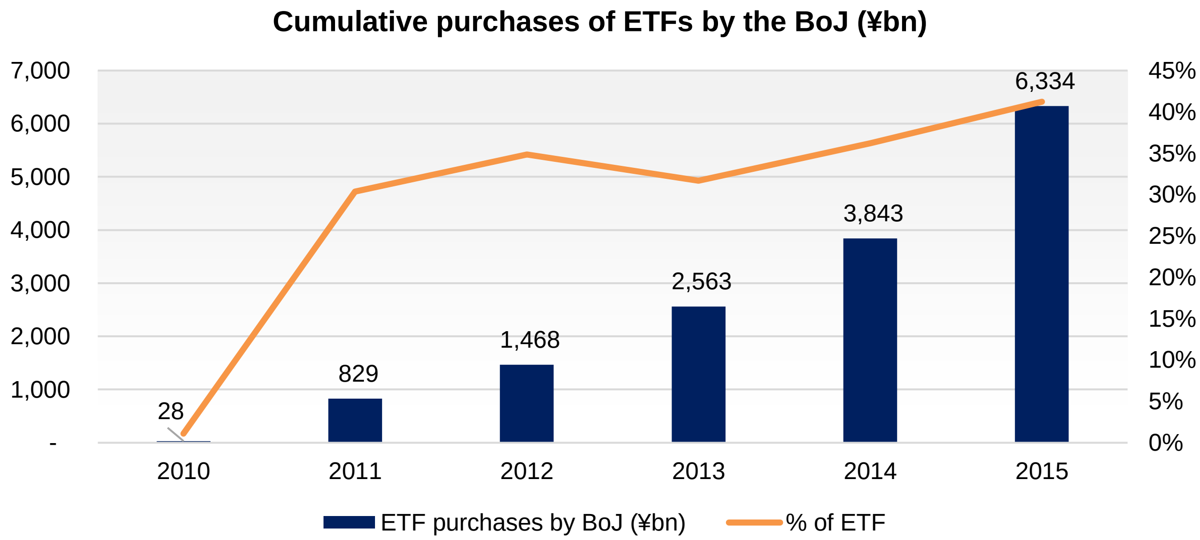


Source: TSE, Value Walk

BoJ gorging off ETFs

ETFGI estimates that Japanese ETFs are garnering new funds at [59% faster] than previously. In the first seven months, net new assets grew ¥2.86 trillion smashing the ¥1.8 trillion raised in the same period last year. To that extent Japan's contribution to global ETF markets is around 12%, or 4x its contribution last year.

ETF ownership

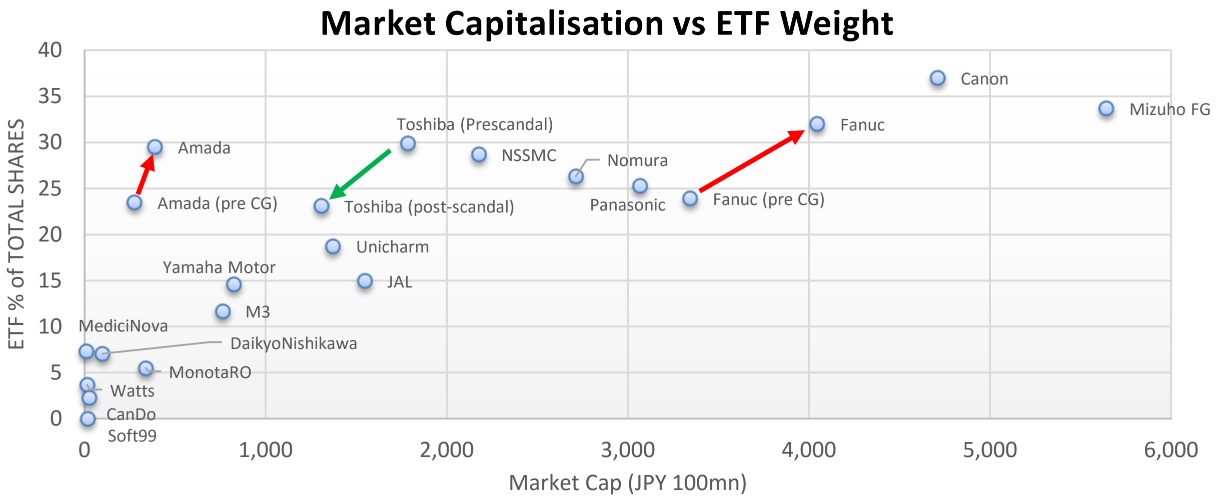


Source: BoJ, TSE, Custom Products Research

It should be noted that the Bank of Japan (BoJ) has been an active purchaser of ETF products in Japan. In 2014 it acquired ¥1.28 trillion in ETFs and to date in 2015 it has bought a further ¥2.49 trillion. These statistics are available from the BoJ website [here]. Cumulatively the BoJ owns approximately ¥6.3tn in ETFs or 41% of the ETF market in Japan.

ETF Ownership & Market Capitalisation

The following chart highlights the perhaps not unsurprising nature of ETFs – the higher the level of market cap generally equates to the greater the proportion of ETF ownership as a percentage of total shareholders.



Source: Custom Products Research

Small vs Large cap ETFs

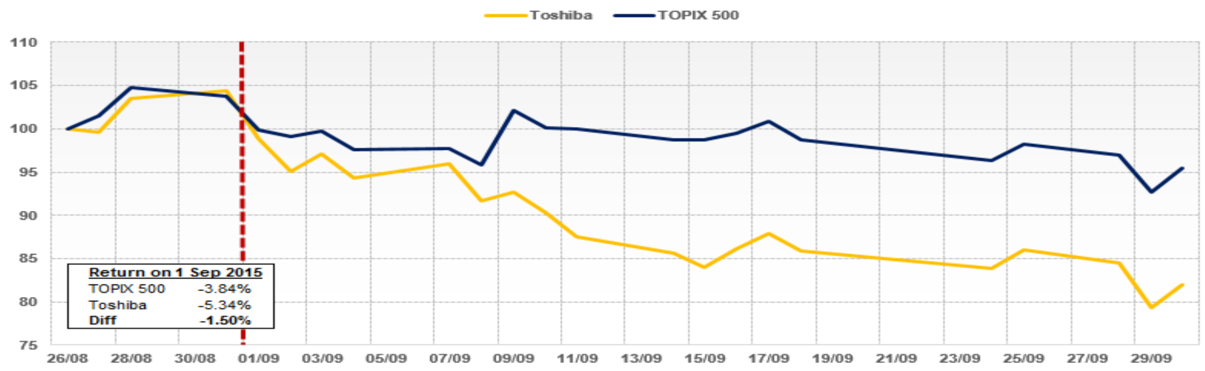
Liquidity of course is a factor and small cap ETFs are not only few in number but smaller in AUM. The iShares MSCI Japan Small Cap ETF (SCJ) holds 798 shares with its $160mn AUM (an average of $200,000 per holding). Compare this to the $18.9bn iShares MSCI Japan (EWJ) fund which holds 313 stocks (or $60.34mn per stock). Of course stocks are not held in equal weight but it gives an idea of the importance of liquidity to make these ETFs attractive to investors.

Amada & Fanuc vs. Toshiba

Fanuc (6954) which has often been criticised for its poor standard of disclosure has shown higher ETF ownership post complying with the TSE's requirement for two independent directors. Amada (6113) saw a sharp jump in ETF ownership thanks to its much publicised move to payout 100% of dividends as part of an attempt to ensure inclusion into the JPX-Nikkei 400 index representing good corporate governance. Toshiba's (6502) fall from grace from the accounting scandal showed this process in reverse, having lost its spot in the JPX-Nikkei 400 on August 31, 2015.

Toshiba dumped

In the following chart the impact of Toshiba's exclusion is evident. On September 1 Toshiba lost around 1.5% more than the index that day. Toshiba held a 0.337% weight in TOPIX 500, and 0.75% of the JPX-Nikkei 400. Toshiba underperformed TOPIX by 13.4% for the month after exclusion.

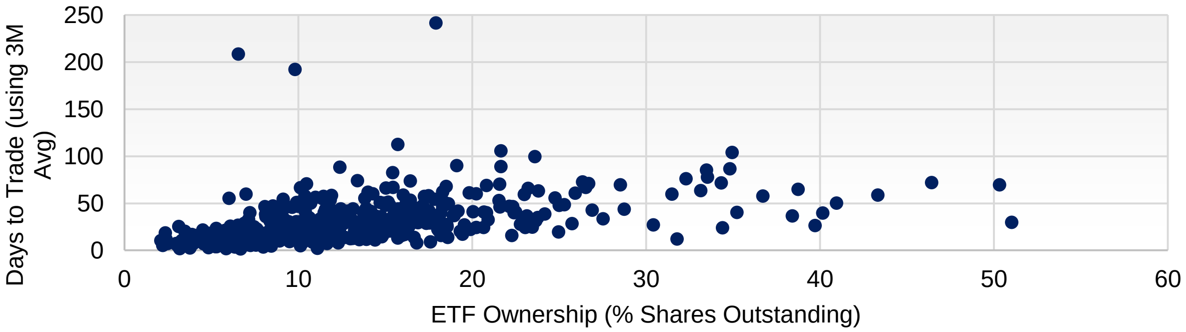


Source: Custom Products Research

Days to trade

We also investigated the impact of ETFs on 'days to trade' were a liquidation required. In Toshiba's case, were all ETFs to sell all their holdings, assuming 100% of volume was ETF then it would take 9 trading days to complete, which in and of itself is an exaggerated number due to the scandal triggering much more intense turnover. To put it into perspective, Toyota (7203) would require 40 days of trading to exit all ETF holdings. Of course the likelihood of a wholesale dumping of a stock from all ETFs that hold it is unlikely but still shows how large a percentage of liquidity they've become. Custom Products Research is happy to provide more detail on individual stocks if required.

ETF Ownership vs. Days to Trade



Source: Custom Products Research

Direxion Daily Japan Bull 3x ETF

So perhaps in a market where valuation metrics haven't seemed to matter perhaps the safe haven stocks are those which have relatively little or no ETF exposure. Smart-Beta ETF makes up around 10% of the Japanese ETF market meaning 'dumb-beta' ETFs (i.e. passives) is the overwhelming majority by asset weight. As we have written about before, ETFs, especially in weak markets, create higher market volatility. The Direxion Daily Japan Bull 3x ETF (JPNL) in the last month lost 23.81% vs the MSCI Japan Index down 6.13% showing once again that levered funds bleed delta, especially down markets. With AUM dwindling to around $11mn it is at risk of being closed.

ProShares

A competitor levered fund, ProShares Ultra MSCI Japan (EZJ) 2x showed similar delta bleed with the fund losing 15.86% to the MSCI Japan Index of -6.13%. That is to say 2.6x return not 2x.

Volatility in ETFs – the US experience

Excess volatility of ETFs

ETFs, despite increasing levels of sophistication, have brought about higher levels of market volatility. Studies have shown that a one standard deviation move of S&P500 ETF ownership as a percentage of total outstanding shares carries 21% excess intraday volatility. Regulators are also realising that limit up/down rules are exacerbating risk pricing and are seeking to revise as early as October 2015. In less liquid markets excess volatility has proved to be 54% higher with ETFs than the actual underlying indices. As more bearish market activity has arrived since August 2015 we investigate how ETFs may impact given a large part of recent existence has been under more favourable conditions. We also look at the real excess volatility of leveraged funds which in one case has average returns of +/- 10x versus its 3x product description.

Flash crash

Of note the US Securities and Exchange Commission (SEC) has been investigating whether it should impose new rules to 'dampen' the volatility of ETFs especially given the flash crash of August 24, 2015. Amendments are expected in October 2015. Since 2013 ETFs have been included in the limit up/down rules.

Trading limit short-comings

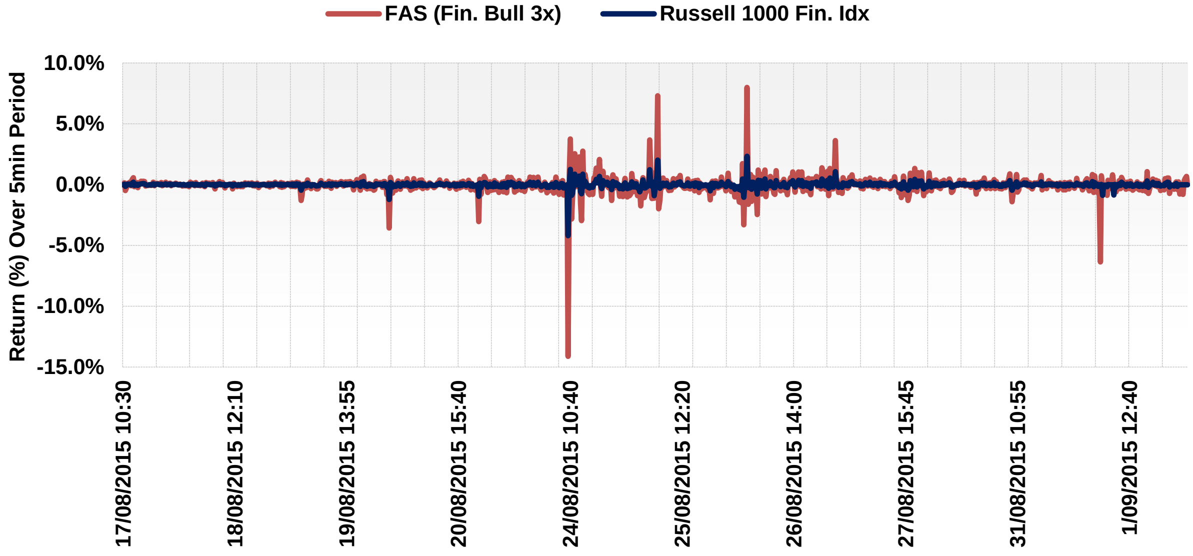
At present limit up/down rules create challenges. If an S&P ETF is trading yet half of its constituent stocks are not open it is difficult to correctly price. The Guggenheim S&P500 (RSP) ETF provides a good example when it sunk under $50 during the flash crash despite fair value of over $70. An investor has to claim an erroneous trade to the exchange within 30 minutes. Perhaps the best option is to remove limit up/down regulation such that ETFs can reprice effectively.

The SEC's view

Interestingly the SEC talked down the risks of excess volatility in March 2015 despite a study on its own website in the same month, *'Do ETFs Increase Volatility?'* showing that it is of concern. Going back to January 2014 a report with the same title but different authors shows that a one standard deviation in ETF ownership on S&P500 raised daily stock volatility 16% and 21% intraday volatility. The ETF market makers (i.e. the Authorised Participants (APs)) can create and redeem shares in the ETF to respond to large demand/supply imbalances. The study from the Fisher College of Business at the Ohio State University said this phenomenon occurred 71% of the trading days during the period conducted the report. SPY saw flows in and out of the fund 99.2% of the trading days in 2012.

Blackrock's view of ETF volatility

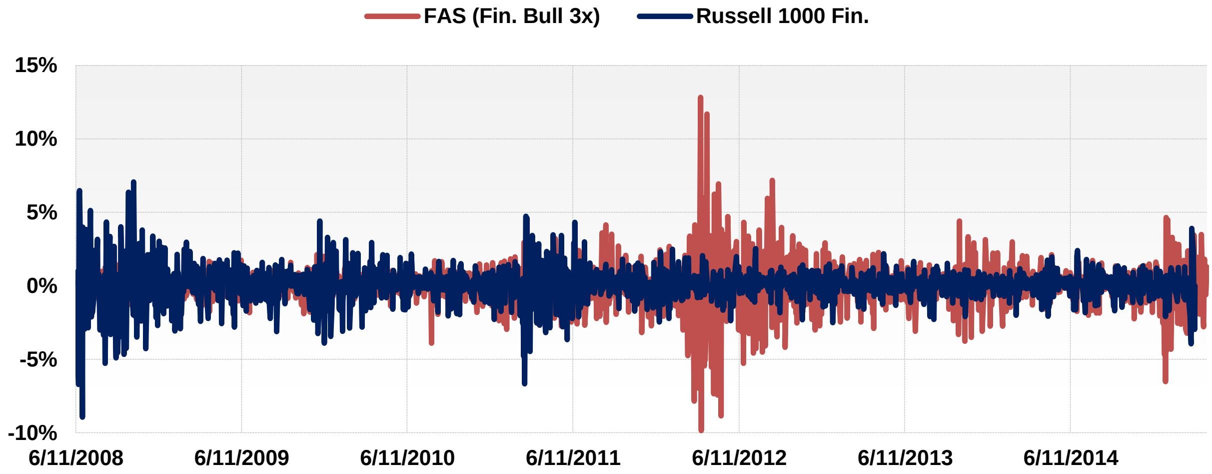
CEO Larry Fink of Blackrock, the world's largest ETF creator, has made it clear that leveraged ETFs (at present 1.2% of total ETF AUM) have the potential to *"blow up the whole industry one day."* The argument is that the underlying assets that provide the leverage (which tend to have less liquidity) could cause losses very quickly in volatile markets. To put this in perspective we looked at the Direxion Daily Fin Bull 3x (FAS) 3x leverage of the Russell 1000 Financial Services Index. As illustrated in the following chart FAS in volatile markets tends to overshoot aggressively. We have not really seen any sharp sell offs as in recent times such as those around GFC.



Source: Custom Products Research

Leveraged ETFs bleed delta

The point Mr Fink is driving at is more obvious with the following chart which shows in volatile markets, the average daily return is closer to 10x (in both directions) than the 3x it is seeking to offer. This is post any market meltdown. On a daily basis the minimum and maximum has ended up being -1756x to 1483x of the index return, albeit those extremes driven by the law of small numbers of the return of the underlying index. Which suggests that in a nasty downturn the ETF performance of the leveraged plays could be well outside the expectations of the holders.



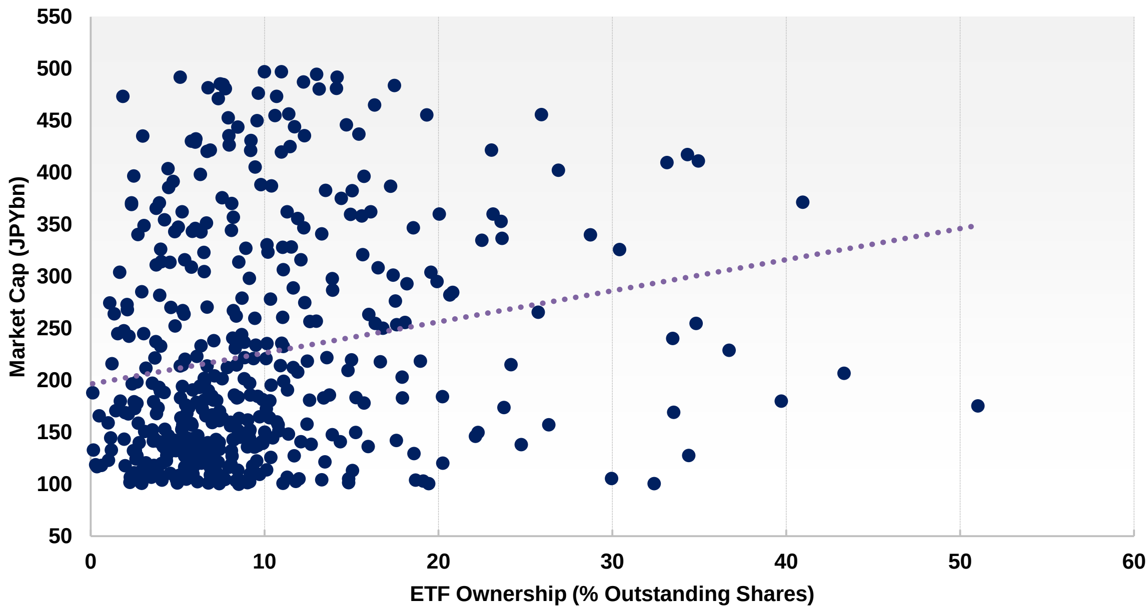
Source: Custom Products Research

Small Caps & ETFs

Small cap ETF

It comes as no surprise to know small caps are less liquid than their large cap brethren. With that, ETF inclusion for small caps tends to have a larger impact on creation units. The chart below shows the correlation between market cap and ETF ownership as a percentage of outstanding shares. In contrast, large cap stocks shows little correlation in terms of gross market performance.

Small Cap Market Cap vs. ETF Ownership



Source: Custom Products Research

Small cap ETF AUM in Japan is $720mn

Looking at the four main small cap ETFs in Japan, the performance is as follows. The AUM of the four ETFs is around $720mn (¥86bn). In the recent sell down of the market all four have underperformed the benchmark MSCI Japan Small Cap index.

Performance (as of 09/28/15]	1 Month	3 Month	YTD	1 Year	3 Years	5 Years
Benchmark: MSCI Japan Small Cap	**-2.75%**	**-6.75%**	**6.86%**	**3.06%**	**10.99%**	**8.34%**
SCJ iShares MSCI Japan Small-Cap	-4.46%	-9.53%	5.80%	0.11%	9.98%	7.50%
SCJ (NAV)	-2.80%	-6.91%	6.50%	2.51%	10.35%	7.85%
DFJ WisdomTree Japan Small Cap Dividend	-5.06%	-8.67%	8.57%	1.39%	9.34%	7.40%
DFJ (NAV)	-3.34%	-6.36%	9.22%	3.78%	9.69%	7.68%
DXJS WisdomTree Jpn Hedged Small Cap Equity	-6.40%	-12.05%	7.05%	9.77%	--	--
DXJS (NAV)	-4.23%	-9.59%	8.71%	12.99%	--	--
JSC (NAV)	-3.23%	-6.77%	6.47%	1.81%	8.99%	7.00%

Source: ETF.com

Active managed funds have a place

Given the higher amounts of alpha that can be generated with small caps it seems feasible to assume that active fund management will avoid the speed at which large cap funds have been replaced by ETFs. Much of the alpha made in small caps comes from early discovery of business models that have failed to come onto the radar screens of the broader market.

In Summary

As we have consistently argued, higher ETF excess volatility in market sell-offs continues to be misunderstood by the market. As asset accumulation and traded volume into ETF products in Japan hit new records, we should expect to see that excess volatility become greater, especially if weaker markets continue. The strong correlation (R-squared of 84%) of higher ETF ownership as a percentage of outstanding shares and underperformance in falling markets should give some better understanding of why the market is not behaving in a rational manner in a traditional sense. While we have yet to see conclusive sustainable evidence that smart-beta can restore some of that rationality, passive ETFs remain the majority of AUM in Japan and will continue to create valuation distortions as a result. ETF index exclusions such as seen with Toshiba highlight the risks of heightened underperformance once these products adjust for the change. So the message is simple. ETFs should continue to grow at a strong pace but that means conventional active fund management will need to get its head around dealing with the relative quality and serving sizes of the dishes on the smorgasbord. Too much indigestion could lead to regurgitation so eat in moderation. One could say in the reverse that investment just got easier. It isn't about the valuation but the relative money flow on a stock basis.

Which begs the ultimate question. If ETFs continue to grow as a larger percentage of outstanding shares (thus by deduction reducing the weight of 'human' managers) will the risk of heightened excess volatility end up outweighing the savings made from a switch to actively managed funds? Because if so perhaps the sell-side/buy-side industry could make a case for itself again – albeit at a fraction of the cost.

In the meantime though, instead of the sell side focusing on commoditised large cap coverage, perhaps the value added to the remainder of the active buy-side is to accelerate small-mid cap coverage of the undiscovered universe. The ETF market certainly seems to point that way.

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