

Equity & Strategy Focus Point

The ETF-ization of the S&P 500, Part I

Bank of America
Merrill Lynch



02 July 2017

Is the S&P 500 as liquid as it seems?

The percentage of US domiciled equity fund assets that are passively managed has nearly doubled since the crisis, from 19% in 2009 to 37% today. The percentage of S&P 500 market cap held by Vanguard alone has doubled since 2010, to 6.8% today. Vanguard currently is a 5%+ shareholder of 491 stocks in the S&P 500, up from just 116 in 2010. The actual shares available, or “true float” (float shares less shares held by passive funds) for S&P 500 stocks, may be grossly overestimated. This, and other structural changes, are playing out in the market with implications for US investors.

How big can passive get? Apparently a lot bigger

We are often asked how much further this active to passive rotation can go before markets become dysfunctional. In Japan, nearly 70% of the assets under management (AUM) of Japan-focused equity funds is passive (granted, the BoJ has been buying ETFs) and their markets are still functioning. This is almost double the proportion of US passive. The victim in Japan has been active equity managers. Over the past three years of extreme ETF inflows, Japan-focused active funds suffered benchmark outperformance rates 12ppt lower than prior decade's average. As the ETF-ization of US stocks is likely to continue, we highlight four implications.

1. Avoid crowded stocks (especially right now)

Over the short-term, positioning matters more than anything: buying under-owned stocks has led to stronger three-month returns than investing in low P/E, high growth or high ROE stocks. [Crowded stocks have generally underperformed neglected stocks](#) as mutual funds are net sellers and passive funds are net buyers. Crowding risk is particularly acute at quarter-end when allocators tend to rebalance: in the first 15 days of the quarter, positioning alpha is 10x higher than average.

2. ETF fads can drive massive PE distortions

The meteoric rise in Low Volatility ETFs (150% annual asset growth since 2009) was a key driver of the 200%+ surge in relative valuations of low beta stocks to never before seen premia. Where might the next fad be? Our work suggests that the next ETF influx may be into [Value ETFs](#), [ESG strategies](#) and [short-term quant strategies](#).

3. Know your risk: a screen for stocks with low “true float”

Stocks most held by passive investors have seen higher volatility than the market, measured by both price declines and standard deviations. And the average price volatility of stocks with low “true float” (i.e. those with a high proportion of float held by passive) tripled in the last 12 months. But the earnings multiples of these stocks have generally been in-line to higher than that of the market, not necessarily reflecting heightened liquidity risk, in our view. (See inside for a screen of stocks with the lowest “true float”).

4. Time horizon arbitrage

[Our analysis](#) shows that fundamental signals have significantly improved in efficacy over longer time horizons, whereas algorithm-driven signals perform well in the short term, but the decay rate is extreme. Valuations explain almost 90% of the S&P 500's returns variability over a 10-year time horizon — we have yet to find any signal with even close to that level of predictive power over the short-term. And ironically, what should be an increasingly efficient market has shown signs of becoming less efficient over the long term — alpha opportunities, measured by the range of market prices, have shrunk on a short-term basis, but have demonstrably risen on a long-term basis.

BofA Merrill Lynch does and seeks to do business with issuers covered in its research reports. As a result, investors should be aware that the firm may have a conflict of interest that could affect the objectivity of this report. Investors should consider this report as only a single factor in making their investment decision.

Refer to important disclosures on page 11 to 13.

11761906

Timestamp: 02 July 2017 01:24PM EDT

Equity and Quant Strategy
United States

Savita Subramanian
Equity & Quant Strategist
MLPF&S
+1 646 855 3878
savita.subramanian@baml.com

Dan Suzuki, CFA
Equity & Quant Strategist
MLPF&S
+1 646 855 2827
dan.suzuki@baml.com

Alex Makedon
Equity & Quant Strategist
MLPF&S
+1 646 855 5982
alex.makedon@baml.com

Jill Carey Hall, CFA
Equity & Quant Strategist
MLPF&S
+1 646 855 3327
jill.carey@baml.com

Marc Pouey
Equity & Quant Strategist
MLPF&S
+1 646 855 1142
marc.pouey@baml.com

Jimmy Bonilla
Equity & Quant Strategist
MLPF&S
+1 646 556 4179
jimmy.bonilla@baml.com

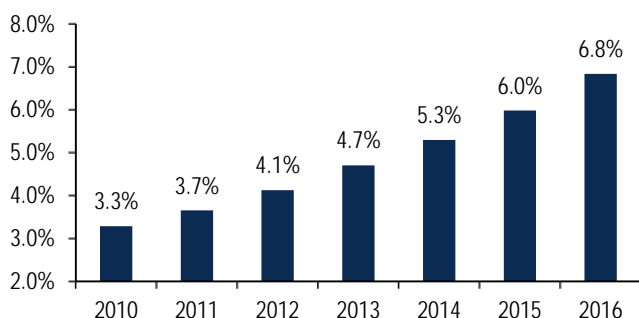
James Yeo
Equity & Quant Strategist
MLPF&S
+1 646 743 0187
james.h.yeo@baml.com

How liquid is the S&P 500, really?

Historically, large cap US equity managers have had the luxury — and curse — of a liquid, efficient market. On the one hand, capacity has been less of an issue for the S&P 500 than it has been for the Russell 2000, but on the other hand, it is much harder to have an edge on large, well-followed stocks than on smaller, less-followed peers.

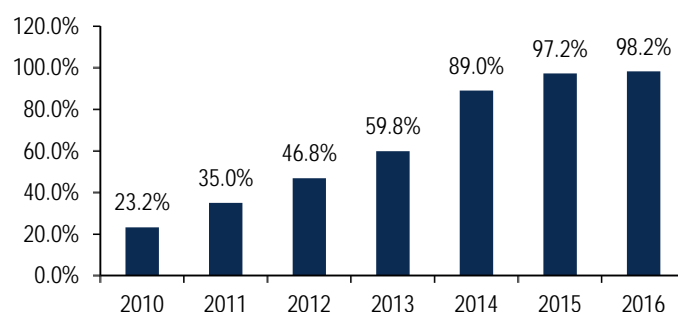
That liquidity is slowly being called into question by the “ETF-ization” of the S&P 500. US trading volume today is now 24% exchange traded funds (ETFs) and 76% single stocks versus 20% ETFs and 80% single stocks three years ago. The percentage of S&P 500 market cap held by Vanguard alone has doubled since 2010, to 6.8% today. In fact, Vanguard currently is a 5%+ shareholder of 491 stocks in the S&P 500, and owns more than 10% of over 80 stocks in the S&P 500 — up from just six in 2010. And the percentage of US domiciled equity fund assets that are passively managed has nearly doubled from 19% in 2009 to 37% today.

Chart 1: % S&P 500 market cap owned by Vanguard



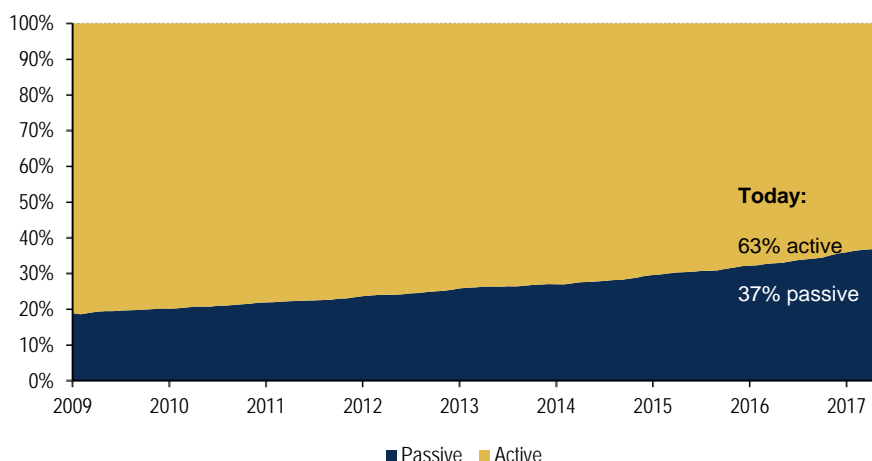
Source: BofA Merrill Lynch US Equity & US Quant Strategy, FactSet Ownership.

Chart 2: % Stocks where Vanguard owns > 5% of float



Source: BofA Merrill Lynch US Equity & US Quant Strategy, FactSet Ownership.

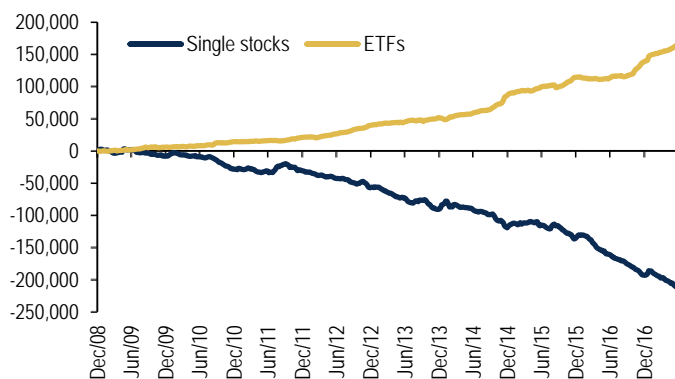
Chart 3: Asset split between active vs. passive US-domiciled equity funds, 2009-5/2017



Source: Strategic Insight SimFund, BofA Merrill Lynch US Equity & US Quant Strategy

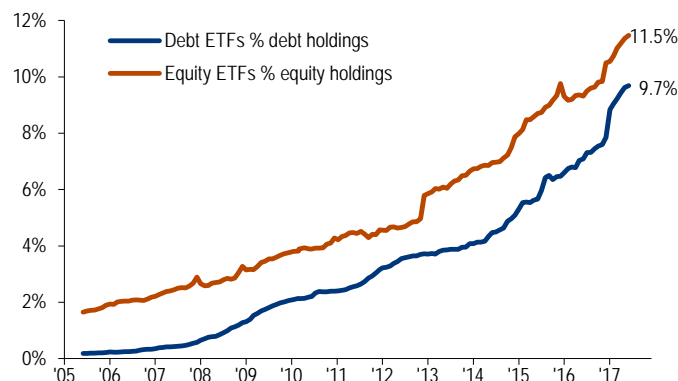
BofAML equity client flow data similarly suggests that investors have increasingly shifted to passive investments: clients have been net buyers of over \$160bn in ETFs vs. net sellers of over \$200bn in single stocks since 2009, and our Global Wealth & Investment Management clients’ equity and debt ETF allocations have risen to nearly 12% and 10%, respectively, today, from less than 2% in 2005.

Chart 4: BofAML clients' cumulative net purchases (sales) of ETFs vs. US single stocks (\$mn), 2009-present



Note: Based on BofAML institutional clients, hedge fund clients and private clients' net purchases/sales of US equities as published in our weekly report: [BofAML Equity Client Flow Trends: Lower for longer? Clients continue to buy yield stocks 27 June 2017](#).
Source: Bank of America Merrill Lynch

Exhibit 1: Merrill Lynch Global Wealth & Investment Management debt & equity ETF allocations as % AUM



Note: as of 6/22/17 as published in [The Flow Show: Bubble, bubble, oil & trouble 22 June 2017](#)
Source: BofA Merrill Lynch Global Investment Strategy, BAC data

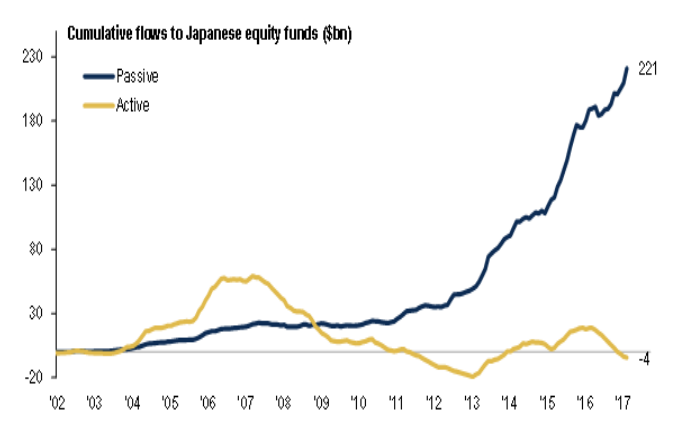
How big can passive get?

With a larger proportion of US stocks' market caps held by passive investors, fundamental market inefficiencies have increased – more markedly in the discrepancy between long term versus short term dispersion, and long-term versus short term fundamental strategy efficacy (more on this below, in 4) Time horizon arbitrage). A question we hear often is how much further can this go before the market becomes dysfunctional?

Japan case study: passive is two-thirds of AUM (vs. one-third for US domiciled funds)

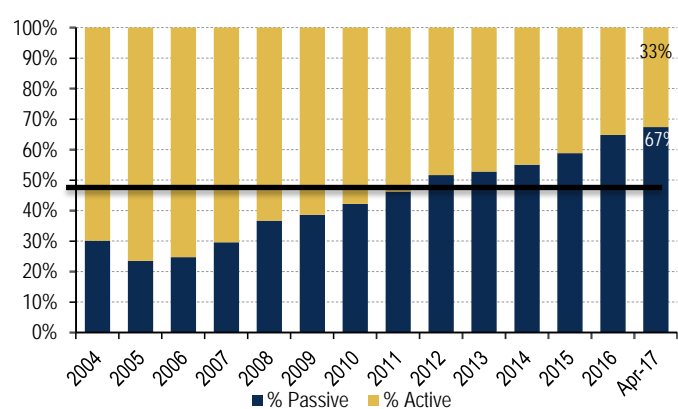
Nearly 70% of the AUM of Japan-focused equity funds is in passive strategies, and equity markets appear to be functioning. Granted, the Bank of Japan has been buying ETFs, which is not the case within the US, but the magnitude of passive exposure suggests that the tipping point in the US may be farther away than today. In Japan's case, the casualties may be the active equity business, where active managers have suffered outperformance rates 12ppt lower over the last three years of accelerating passive inflows vs. over the prior decade (34% of funds outperforming the TOPIX between 2014-2016 vs. 46% outperforming between 2002-2013).

Exhibit 2: Active vs. Passive flows in Japan Equity Funds, 2002-1Q17



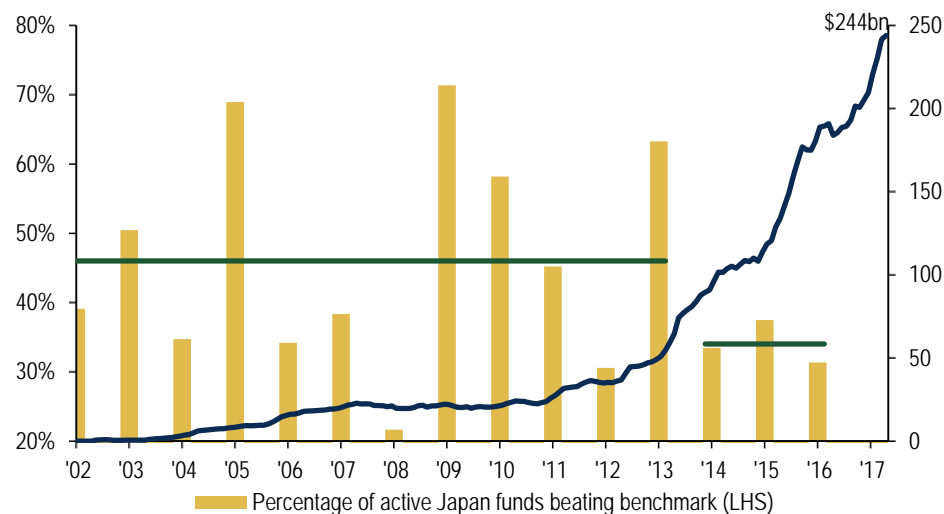
Source: EPFR, BofA Merrill Lynch Global Research

Chart 5: Japan-focused equity funds: % of AUM in passive vs. active



Source: Strategic Insight SimFund, BofA Merrill Lynch Global Research

Chart 6: Cumulative flows into passive Japan funds (2002-4/30/17, \$bn) and the annual % of Japan active mutual funds beating the benchmark



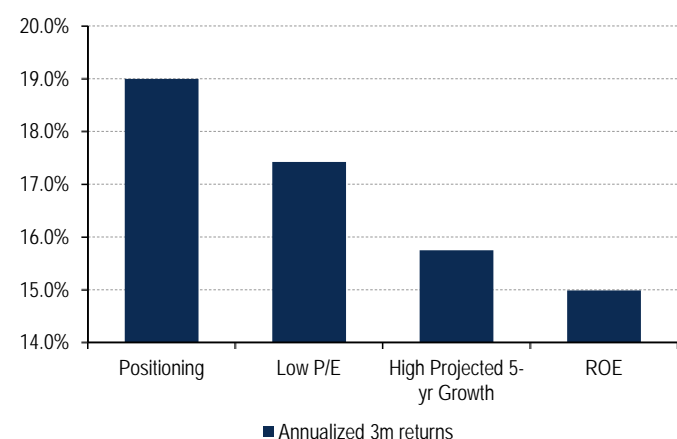
Source: BofA Merrill Lynch Global Research, Astra Manager, EPFR

Implications

1) Avoid crowded stocks – especially right now

Over the short-term, our work suggests that positioning matters more than fundamentals: buying stocks which are the most underweight by large cap active managers has led to stronger three-month returns than investing in Low P/E stocks or stocks with favorable growth or ROE (Chart 7). [Crowded stocks have generally underperformed neglected stocks](#) in recent years as mutual funds are net sellers and passive funds are net buyers. Crowding risk is particularly acute at quarter-end when allocators tend to rebalance: in the first 15 days of the quarter, positioning alpha is 10x higher than average (Table 1).

Chart 7: Annualized 3m factor returns (2008-1Q17)



Positioning: Top 10 S&P 500 stocks by low mutual funds ownership; Low P/E: Top 50 S&P 500 companies by low ratio of month-end price to trailing 12-month EPS; Projected 5-Year EPS Growth: Top 50 S&P 500 companies by IBES Mean Long Term Growth Estimate; ROE: Top 50 S&P 500 Companies by 1-yr net income divided by average equity provided
Source: BofA Merrill Lynch US Equity & US Quant Strategy

Table 1: Subsequent performance of most overweight and underweight stocks by large cap active managers each quarter

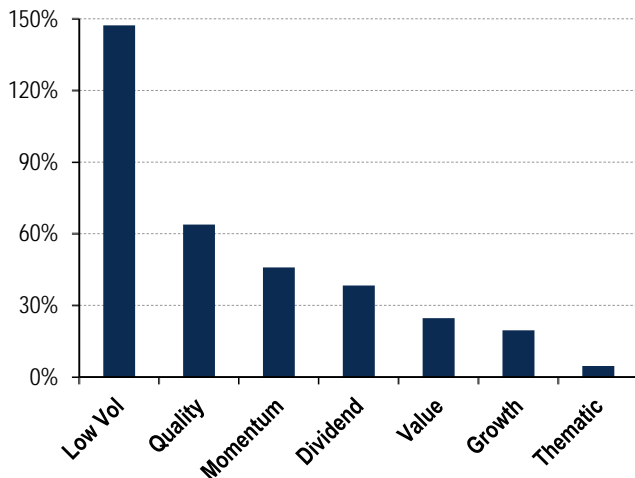
	15-day return post quarter end				90-day return post quarter end			
	10 most U/W stocks	10 most O/W stocks	Spread	Annldz Spread	10 most U/W stocks	10 most O/W stocks	Spread	Annldz Spread
12/31/2012	5%	2%	3%	91%	10%	2%	7%	32%
3/31/2013	0%	-2%	2%	79%	-2%	5%	-8%	-28%
6/30/2013	5%	6%	0%	-11%	6%	10%	-4%	-15%
9/30/2013	1%	0%	1%	33%	6%	8%	-3%	-11%
12/31/2013	1%	0%	1%	27%	10%	-1%	10%	49%
3/31/2014	-1%	-3%	2%	74%	7%	3%	4%	17%
6/30/2014	0%	-1%	1%	30%	1%	-2%	3%	13%
9/30/2014	-1%	-9%	8%	585%	12%	-1%	13%	63%
12/31/2014	3%	-7%	10%	875%	2%	0%	2%	8%
3/31/2015	1%	3%	-2%	-35%	-6%	-7%	1%	5%
6/30/2015	4%	1%	3%	111%	5%	-11%	16%	81%
9/30/2015	7%	6%	1%	21%	2%	14%	-12%	-42%
12/31/2015	-5%	-11%	6%	292%	5%	-1%	7%	30%
3/31/2016	0%	1%	0%	-9%	6%	-1%	7%	34%
6/30/2016	3%	4%	-1%	-26%	0%	12%	-12%	-40%
9/30/2016	-4%	-2%	-1%	-30%	4%	-2%	6%	26%
12/31/2016	3%	4%	-2%	-31%	1%	12%	-11%	-36%
3/31/2017	-1%	-3%	2%	61.1%	2%	-4%	6%	29.9%
				Avg. 119%				12%

Source: BofA Merrill Lynch US Equity & US Quant Strategy, FactSet Ownership

2) Watch out for ETF-driven valuation distortions

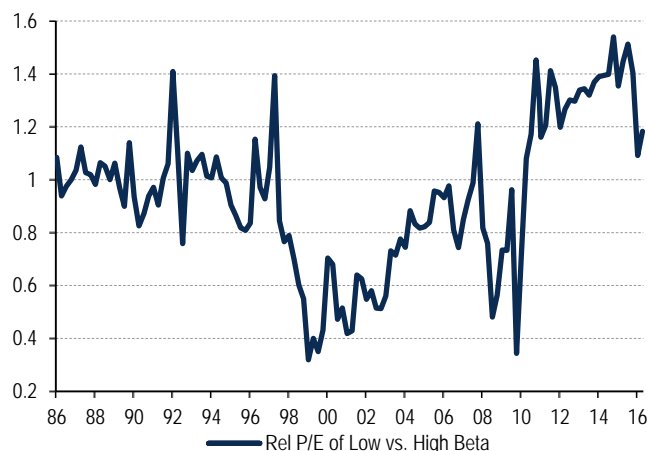
ETF trends can dramatically distort multiples: with the meteoric rise in Low Vol ETFs (150% annual asset growth since 2009) low beta stocks saw a >200% surge in relative valuations to never-before-seen premia. Where to spot this next? Our work suggests that the next influx may be into [Value ETF strategies](#), [ESG strategies](#) and [other quant funds](#).

Chart 8: Avg. annual AUM growth in smart beta ETFs, 2009-2016



Source: Strategic Insight SimFund, BofA Merrill Lynch Global Research

Chart 9: Relative forward P/E of S&P 500 low vs. high beta quintiles (1986-1Q17)

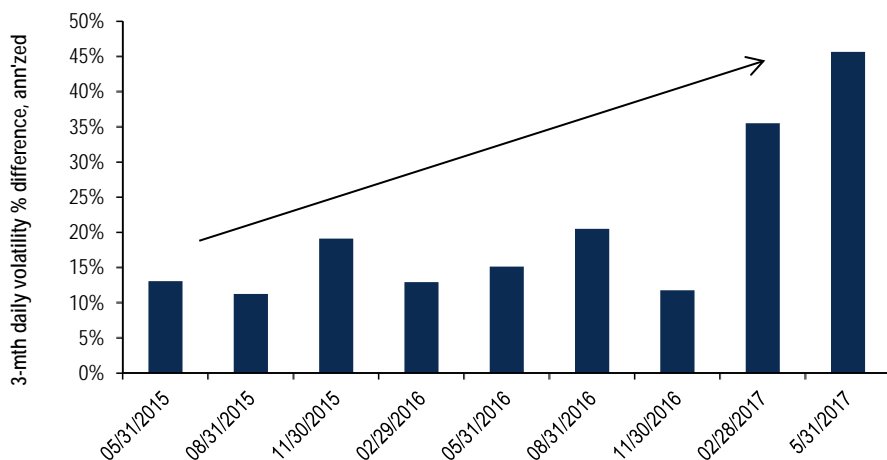


Source: BofA Merrill Lynch US Equity & US Quant Strategy

3) Know your risk – true float may be overstated

If passive funds own a large percentage of stocks and will only buy and sell based on changes in market capitalization or other metrics, the actual float of a stock may be far lower than we think. Our analysis of stocks most held by passive funds suggests that the volatility of stocks (measured by both standard deviation and price declines) with a larger proportion of shares held by passive investors has systematically increased, as the market begins to appreciate the fact that the actual liquidity profile is overestimated. In fact, excess price volatility of stocks with low “true float” (i.e. those with a high proportion of float held by passive) tripled in the last twelve months.

Chart 10: Excess Volatility: Top 100 by passive ownership vs the rest (ex. REITs)



Source: BofA Merrill Lynch US Equity & US Quant Strategy, FactSet Ownership.

But the multiples of stocks with lower “true” float may not be fully reflecting this risk. As their volatility profiles have increased, stocks with low “true float” have seen some

multiple compression, but still trade in line with their more liquid peers, where in our view a discount might be warranted.

Chart 11: Relative P/E of sector-neutral top quintile by passive ownership (low “true float”)



Source: BofA Merrill Lynch US Equity & US Quant Strategy, FactSet Ownership.

Moreover, their peak to trough price declines are significantly deeper, further corroborating their impaired relative liquidity. We screen for stocks with the highest passive ownership in Table 3 at the end of this report.

Table 2: Top 100 stocks by float in passive funds vs. S&P 500 (ex REITs)

	Wtd Mkt Cap	Fwd EPS Yield	Dividend Yield	Max 5-yr Price Decline	Beta	Historical Volatility	True Float %(*)
Top 100	13,604	18.0	2.1	-30.3	1.01	24.5	81.5%
All	191,723	17.7	1.7	-23.7	1.02	20.9	85.2%

Source: BofA Merrill Lynch US Equity & US Quant Strategy, FactSet Ownership.

Historical volatility is calculated as annualized 60-mth monthly stock price volatility.

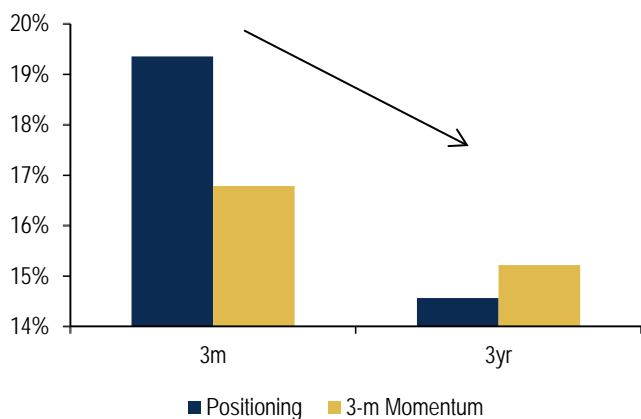
True Float % = (Float shares – Shares held by passive funds) / Float shares.

Fwd EPS Yield, Dividend Yield, Max 5-yr Price Decline, Beta, Historical Volatility and True Float are median values.

4) Time horizon arbitrage

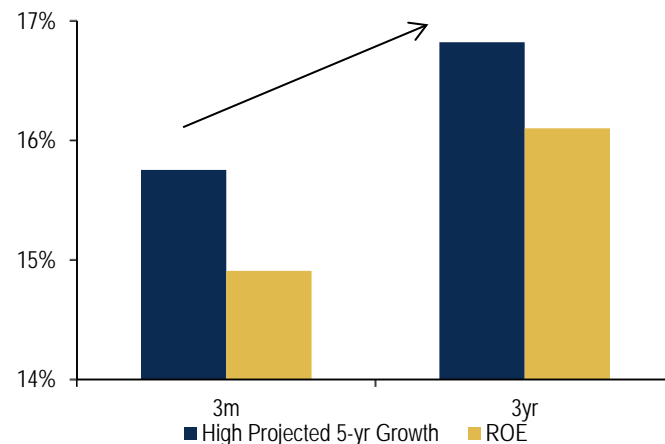
[Our analysis](#) shows that fundamental signals have significantly improved in efficacy over longer time horizons, whereas algorithm-driven signals perform well in the short term, but the decay rate is extreme (Chart 12-Chart 13). Valuations explain almost 90% of the S&P 500's returns variability over a ten-year time horizon (Chart 14) – we have yet to find any signal with even close to that level of predictive power over the short-term. And ironically, what should be an increasingly efficient market has shown signs of becoming less efficient over the long term - alpha opportunities, measured by the range of market prices, have shrunk on a short-term basis, but have demonstrably risen on a long-term basis (Chart 15-Chart 16).

Chart 12: Annualized returns of neglected stocks (bottom 10 by large cap active managers' holdings) and top decile of S&P 500 by 3-month price momentum (2008-9/2016)



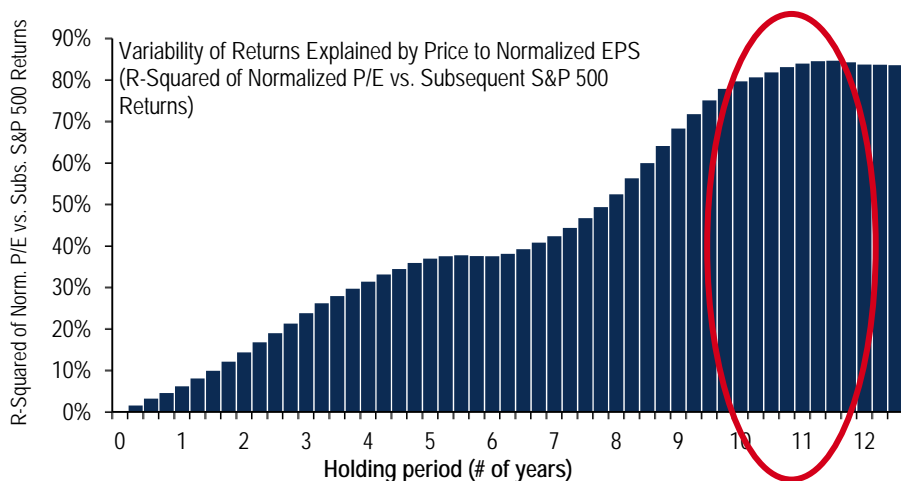
Source: FactSet, BofA Merrill Lynch US Equity & US Quant Strategy

Chart 13: Annualized returns of S&P 500 top decile by High Projected Long-Term Growth and High ROE (2008-9/2016)



Source: FactSet, BofA Merrill Lynch US Equity & US Quant Strategy

Chart 14: Price to normalized earnings predictive power on subsequent holding period returns (since 1987)



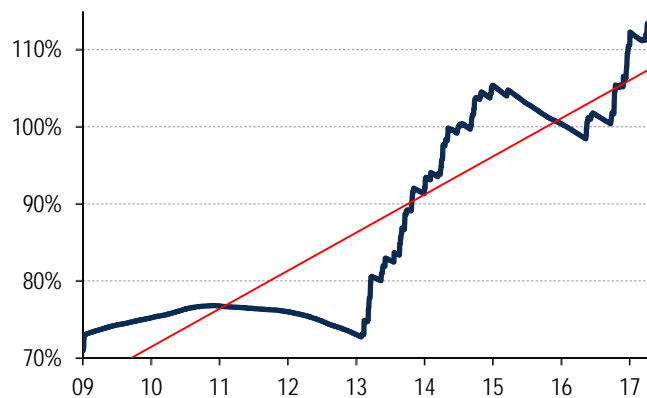
Source: BofA Merrill Lynch US Equity & US Quant Strategy

Chart 15: S&P 500 1-year price range [(Max-Min)/Avg], March 2009-present



Source: S&P, BofAML US Equity & US Quant Strategy

Chart 16: S&P 500 10-year price range [(Max-Min)/Avg], March 2009-present



Source: S&P, BofAML US Equity & US Quant Strategy

Stock screen: high passive ownership

Below we screened for S&P 500 stocks (ex-REITs) with the highest ownership of float shares by passive funds.

Table 3: Top 100 stocks by highest % of float in passive funds (ex. REITs)

Ticker	Name	Sector	Shares				True Float, mn shares
			Float Shares (mn)	Passive Funds (mn)	% Float in Passive	True Float, %	
PBCT	People's United Financial Inc	Financials	343.5	90.6	26.4%	73.6%	252.9
LEG	Leggett & Platt	Consumer Discretionary	133.7	31.5	23.5%	76.5%	102.3
NEM	Newmont Mining Corp	Materials	531.5	120.6	22.7%	77.3%	410.9
CINF	Cincinnati Financial Corp	Financials	149.9	33.4	22.3%	77.7%	116.5
HP	Helmerich & Payne Inc	Energy	108.6	23.8	22.0%	78.0%	84.7
PNW	Pinnacle West Capital (AZ)	Utilities	111.3	24.0	21.5%	78.5%	87.4
ETR	Entergy Corp	Utilities	179.4	37.6	20.9%	79.1%	141.8
OKE	ONEOK Inc	Energy	210.8	43.3	20.5%	79.5%	167.5
SCG	SCANA Corp	Utilities	142.9	29.1	20.4%	79.6%	113.8
CTAS	Cintas Corp	Industrials	86.1	17.5	20.3%	79.7%	68.6
RRC	Range Resources Corp	Energy	188.1	38.0	20.2%	79.8%	150.1
KSS	Kohl's Corp	Consumer Discretionary	176.5	35.6	20.2%	79.8%	140.9
MAT	Mattel Inc	Consumer Discretionary	342.4	68.7	20.1%	79.9%	273.7
GPC	Genuine Parts Co	Consumer Discretionary	148.4	29.8	20.1%	79.9%	118.6
CHK	Chesapeake Energy Corp	Energy	761.7	152.7	20.0%	80.0%	609.0
R	Ryder System Inc	Industrials	53.5	10.7	20.0%	80.0%	42.8
NAVI	Navient Corp	Financials	291.0	58.2	20.0%	80.0%	232.8
XRX	Xerox Corp	Information Technology	853.9	170.6	20.0%	80.0%	683.3
MUR	Murphy Oil Corp	Energy	162.1	32.3	20.0%	80.0%	129.7
CF	CF Industries Holdings	Materials	233.1	46.4	19.9%	80.1%	186.7
GRMN	Garmin Ltd	Consumer Discretionary	115.0	22.8	19.8%	80.2%	92.2
HRL	Hormel Foods Corp	Consumer Staples	269.7	53.4	19.8%	80.2%	216.3
LNT	Alliant Energy Corp	Utilities	227.7	44.5	19.5%	80.5%	183.2
SPLS	Staples Inc	Consumer Discretionary	650.5	126.3	19.4%	80.6%	524.2
PDCO	Patterson Cos Inc	Health Care	82.2	16.0	19.4%	80.6%	66.3
MKC	McCormick & Co	Consumer Staples	113.7	22.0	19.4%	80.6%	91.6
JBHT	Hunt J.B. Transport Services	Industrials	86.8	16.8	19.4%	80.6%	70.0
AJG	Gallagher Arthur J. & Co	Financials	178.6	34.4	19.2%	80.8%	144.2
EXPD	Expeditors Intl of WA Inc	Industrials	180.1	34.6	19.2%	80.8%	145.5
RIG	Transocean Ltd	Energy	389.3	74.7	19.2%	80.8%	314.6
CLX	Clorox Co	Consumer Staples	128.3	24.6	19.1%	80.9%	103.7
WEC	WEC Energy Group Inc	Utilities	315.6	60.0	19.0%	81.0%	255.5
GPS	Gap Inc	Consumer Discretionary	219.4	41.6	18.9%	81.1%	177.8
DTE	DTE Energy Co	Utilities	179.4	33.8	18.9%	81.1%	145.6
AMD	Advanced Micro Devices	Information Technology	771.4	145.3	18.8%	81.2%	626.1
CNP	Centerpoint Energy Inc	Utilities	430.7	80.9	18.8%	81.2%	349.8
DRI	Darden Restaurants Inc	Consumer Discretionary	124.2	23.3	18.8%	81.2%	100.8
AIZ	Assurant Inc	Financials	55.6	10.4	18.7%	81.3%	45.2
NWSA	News Corp A	Consumer Discretionary	381.7	71.4	18.7%	81.3%	310.3
HRB	Block H & R Inc	Consumer Discretionary	207.1	38.6	18.6%	81.4%	168.5
MNK	Mallinckrodt plc	Health Care	99.3	18.5	18.6%	81.4%	80.8
NI	Nisource Inc	Utilities	323.4	60.3	18.6%	81.4%	263.2
PHM	Pulte Group Inc	Consumer Discretionary	286.1	53.1	18.6%	81.4%	232.9
CMS	CMS Energy Corp	Utilities	279.9	51.9	18.6%	81.4%	228.0
CHRW	CH Robinson Worldwide Inc	Industrials	141.4	26.2	18.5%	81.5%	115.2
ZION	Zions Bancorp (UT)	Financials	202.4	37.3	18.4%	81.6%	165.1
TMK	Torchmark Corp	Financials	109.5	20.1	18.4%	81.6%	89.4
CHD	Church & Dwight Co	Consumer Staples	254.6	46.7	18.3%	81.7%	208.0
AES	AES Corp	Utilities	659.2	120.6	18.3%	81.7%	538.6
XLNX	Xilinx Inc	Information Technology	248.9	45.4	18.2%	81.8%	203.6
AKAM	Akamai Technologies Inc	Information Technology	173.2	31.4	18.2%	81.8%	141.7
ES	Eversource Energy	Utilities	316.9	57.5	18.2%	81.8%	259.4
TSO	Tesoro Corp	Energy	117.0	21.1	18.1%	81.9%	95.9
STX	Seagate Technology	Information Technology	295.2	53.2	18.0%	82.0%	242.0
MOS	Mosaic Co	Materials	350.2	63.1	18.0%	82.0%	287.1
M	Macy's Inc	Consumer Discretionary	304.1	54.7	18.0%	82.0%	249.4
CTL	CenturyLink Inc	Telecommunication Services	546.6	97.9	17.9%	82.1%	448.7

Table 3: Top 100 stocks by highest % of float in passive funds (ex. REITs)

Ticker	Name	Sector	Shares in				True Float, mn shares
			Float Shares (mn)	Passive Funds (mn)	% Float in Passive	True Float, %	
MCHP	Microchip Technology Inc	Information Technology	216.4	38.7	17.9%	82.1%	177.7
INCY	Incyte Corp	Health Care	169.2	30.3	17.9%	82.1%	138.9
DOV	Dover Corp	Industrials	155.5	27.8	17.9%	82.1%	127.7
AN	AutoNation Inc	Consumer Discretionary	65.6	11.7	17.9%	82.1%	53.9
HAS	Hasbro Inc	Consumer Discretionary	111.9	20.0	17.9%	82.1%	91.9
AEE	Ameren Corp	Utilities	242.6	43.2	17.8%	82.2%	199.4
CSRA	CSRA Inc	Information Technology	145.2	25.9	17.8%	82.2%	119.3
ALB	Albemarle Corp	Materials	112.6	20.0	17.8%	82.2%	92.6
CA	CA Inc	Information Technology	313.5	55.6	17.7%	82.3%	257.9
PNR	Pentair PLC	Industrials	167.2	29.7	17.7%	82.3%	137.5
BCR	Bard C.R. Inc	Health Care	72.0	12.7	17.6%	82.4%	59.4
RF	Regions Financial Corp	Financials	1205.3	212.0	17.6%	82.4%	993.3
AWK	American Water Works Co Inc	Utilities	178.2	31.2	17.5%	82.5%	147.0
TDC	Teradata Corp	Information Technology	130.9	22.9	17.5%	82.5%	108.0
DHI	Horton D.R. Inc	Consumer Discretionary	339.8	59.4	17.5%	82.5%	280.4
VAR	Varian Medical Systems Inc	Health Care	93.5	16.3	17.5%	82.5%	77.1
GWW	Grainger W.W. Inc	Industrials	54.1	9.4	17.4%	82.6%	44.7
WRK	WestRock Co	Materials	250.4	43.5	17.4%	82.6%	206.9
JWN	Nordstrom Inc	Consumer Discretionary	113.9	19.8	17.4%	82.6%	94.1
IDXX	IDEXX Laboratories Inc	Health Care	88.0	15.3	17.4%	82.6%	72.7
NRG	NRG Energy	Utilities	316.0	54.8	17.3%	82.7%	261.2
LEN	Lennar Corp A	Consumer Discretionary	203.2	35.2	17.3%	82.7%	168.0
NFX	Newfield Exploration Co	Energy	198.9	34.4	17.3%	82.7%	164.5
CTXS	Citrix Systems Inc	Information Technology	156.4	27.0	17.3%	82.7%	129.4
SYMC	Symantec Corp	Information Technology	618.8	106.8	17.3%	82.7%	512.0
KLAC	KLA-Tencor Corporation	Information Technology	156.7	27.0	17.2%	82.8%	129.7
TIF	Tiffany & Co	Consumer Discretionary	107.0	18.5	17.2%	82.8%	88.6
ETFC	E*TRADE Financial Corp	Financials	274.7	47.3	17.2%	82.8%	227.3
HBAN	Huntington Bancshares (OH)	Financials	1085.9	187.1	17.2%	82.8%	898.7
VRSN	VeriSign Inc	Information Technology	89.0	15.3	17.2%	82.8%	73.7
FAST	Fastenal Co	Industrials	289.3	49.8	17.2%	82.8%	239.5
BBY	Best Buy Co Inc	Consumer Discretionary	270.8	46.6	17.2%	82.8%	224.2
JNPR	Juniper Networks Inc	Information Technology	382.0	65.7	17.2%	82.8%	316.3
WU	Western Union Co	Information Technology	480.9	82.5	17.2%	82.8%	398.4
SNPS	Synopsys Inc	Information Technology	150.5	25.8	17.1%	82.9%	124.7
EQT	EQT Corporation	Energy	173.3	29.6	17.1%	82.9%	143.7
ADSK	Autodesk Inc	Information Technology	195.8	33.4	17.1%	82.9%	162.4
LRCX	Lam Research Corp	Information Technology	162.8	27.7	17.0%	83.0%	135.1
WYNN	Wynn Resorts Ltd	Consumer Discretionary	79.5	13.5	17.0%	83.0%	66.0
SWKS	Skyworks Solutions Inc	Information Technology	184.9	31.3	16.9%	83.1%	153.6
HSIC	Schein Henry Inc	Health Care	79.2	13.4	16.9%	83.1%	65.8
NOV	National Oilwell Varco Inc	Energy	378.7	64.1	16.9%	83.1%	314.6

Source: BofA Merrill Lynch US Equity & US Quant Strategy, FactSet Ownership.

True Float % = (Float shares – Shares held by passive funds) / Float shares.

True Float shares = Float shares – Shares held by passive funds.

This screen is not a recommended list either individually or as a group of stocks. Investors should consider the fundamentals of the companies and their own individual circumstances/objectives before making any investment decisions.

Disclaimer: The screen identified as *Top 100 stocks by highest % of float in passive funds (ex. REITs)* above is intended to be an indicative metric only and may not be used for reference purposes or as a measure of performance for any financial instrument or contract, or otherwise relied upon by third parties for any other purpose, without the prior written consent of BofA Merrill Lynch Global Research. This screen was not created to act as a benchmark.

Disclosures

Important Disclosures

FUNDAMENTAL EQUITY OPINION KEY: Opinions include a Volatility Risk Rating, an Investment Rating and an Income Rating. **VOLATILITY RISK RATINGS**, indicators of potential price fluctuation, are: A - Low, B - Medium and C - High. **INVESTMENT RATINGS** reflect the analyst's assessment of a stock's: (i) absolute total return potential and (ii) attractiveness for investment relative to other stocks within its Coverage Cluster (defined below). There are three investment ratings: 1 - Buy stocks are expected to have a total return of at least 10% and are the most attractive stocks in the coverage cluster; 2 - Neutral stocks are expected to remain flat or increase in value and are less attractive than Buy rated stocks and 3 - Underperform stocks are the least attractive stocks in a coverage cluster. Analysts assign investment ratings considering, among other things, the 0-12 month total return expectation for a stock and the firm's guidelines for ratings dispersions (shown in the table below). The current price objective for a stock should be referenced to better understand the total return expectation at any given time. The price objective reflects the analyst's view of the potential price appreciation (depreciation).

Investment rating	Total return expectation (within 12-month period of date of initial rating)	Ratings dispersion guidelines for coverage cluster*
Buy	≥ 10%	≤ 70%
Neutral	≥ 0%	≤ 30%
Underperform	N/A	≥ 20%

* Ratings dispersions may vary from time to time where BofA Merrill Lynch Research believes it better reflects the investment prospects of stocks in a Coverage Cluster.

INCOME RATINGS, indicators of potential cash dividends, are: 7 - same/higher (dividend considered to be secure), 8 - same/lower (dividend not considered to be secure) and 9 - pays no cash dividend. Coverage Cluster is comprised of stocks covered by a single analyst or two or more analysts sharing a common industry, sector, region or other classification(s). A stock's coverage cluster is included in the most recent BofA Merrill Lynch report referencing the stock.

BofA Merrill Lynch Research Personnel (including the analyst(s) responsible for this report) receive compensation based upon, among other factors, the overall profitability of Bank of America Corporation, including profits derived from investment banking. The analyst(s) responsible for this report may also receive compensation based upon, among other factors, the overall profitability of the Bank's sales and trading businesses relating to the class of securities or financial instruments for which such analyst is responsible.

Other Important Disclosures

Prices are indicative and for information purposes only. Except as otherwise stated in the report, for the purpose of any recommendation in relation to: (i) an equity security, the price referenced is the publicly traded price of the security as of close of business on the day prior to the date of the report or, if the report is published during intraday trading, the price referenced is indicative of the traded price as of the date and time of the report; or (ii) a debt security (including equity preferred and CDS), prices are indicative as of the date and time of the report and are from various sources including Bank of America Merrill Lynch trading desks.

The date and time of completion of the production of any recommendation in this report shall be the date and time of dissemination of this report as recorded in the report timestamp.

This report may refer to fixed income securities that may not be offered or sold in one or more states or jurisdictions. Readers of this report are advised that any discussion, recommendation or other mention of such securities is not a solicitation or offer to transact in such securities. Investors should contact their BofA Merrill Lynch representative or Merrill Lynch Financial Global Wealth Management financial advisor for information relating to fixed income securities.

Officers of MLPF&S or one or more of its affiliates (other than research analysts) may have a financial interest in securities of the issuer(s) or in related investments.

BofA Merrill Lynch Global Research policies relating to conflicts of interest are described at <http://go.bofa.com/col>.

'BofA Merrill Lynch' includes Merrill Lynch, Pierce, Fenner & Smith Incorporated ('MLPF&S') and its affiliates. Investors should contact their BofA Merrill Lynch representative or Merrill Lynch Global Wealth Management financial advisor if they have questions concerning this report. 'BofA Merrill Lynch' and 'Merrill Lynch' are each global brands for BofA Merrill Lynch Global Research.

Information relating to Non-US affiliates of BofA Merrill Lynch and Distribution of Affiliate Research Reports:

MLPF&S distributes, or may in the future distribute, research reports of the following non-US affiliates in the US (short name: legal name, regulator): Merrill Lynch (South Africa): Merrill Lynch South Africa (Pty) Ltd., regulated by The Financial Service Board; MLI (UK): Merrill Lynch International, regulated by the Financial Conduct Authority (FCA) and the Prudential Regulation Authority (PRA); Merrill Lynch (Australia): Merrill Lynch Equities (Australia) Limited, regulated by the Australian Securities and Investments Commission; Merrill Lynch (Hong Kong): Merrill Lynch (Asia Pacific) Limited, regulated by the Hong Kong Securities and Futures Commission (HKSF); Merrill Lynch (Singapore): Merrill Lynch (Singapore) Pte Ltd, regulated by the Monetary Authority of Singapore (MAS); Merrill Lynch (Canada): Merrill Lynch Canada Inc, regulated by the Investment Industry Regulatory Organization of Canada; Merrill Lynch (Mexico): Merrill Lynch Mexico, SA de CV, Casa de Bolsa, regulated by the Comisión Nacional Bancaria y de Valores; Merrill Lynch (Argentina): Merrill Lynch Argentina SA, regulated by Comisión Nacional de Valores; Merrill Lynch (Japan): Merrill Lynch Japan Securities Co., Ltd., regulated by the Financial Services Agency; Merrill Lynch (Seoul): Merrill Lynch International Incorporated (Seoul Branch) regulated by the Financial Supervisory Service; Merrill Lynch (Taiwan): Merrill Lynch Securities (Taiwan) Ltd., regulated by the Securities and Futures Bureau; DSP Merrill Lynch (India): DSP Merrill Lynch Limited, regulated by the Securities and Exchange Board of India; Merrill Lynch (Indonesia): PT Merrill Lynch Sekuritas Indonesia, regulated by Otoritas Jasa Keuangan (OJK); Merrill Lynch (Israel): Merrill Lynch Israel Limited, regulated by Israel Securities Authority; Merrill Lynch (Russia): OOO Merrill Lynch Securities, Moscow, regulated by the Central Bank of the Russian Federation; Merrill Lynch (DIFC): Merrill Lynch International (DIFC Branch), regulated by the Dubai Financial Services Authority (DFSA); Merrill Lynch (Spain): Merrill Lynch Capital Markets Espana, S.A.S.V., regulated by Comisión Nacional del Mercado De Valores; Merrill Lynch (Brazil): Bank of America Merrill Lynch Banco Multiplo S.A., regulated by Comissão de Valores Mobiliários; Merrill Lynch KSA Company, Merrill Lynch Kingdom of Saudi Arabia Company, regulated by the Capital Market Authority.

This research report: has been approved for publication and is distributed in the United Kingdom (UK) to professional clients and eligible counterparties (as each is defined in the rules of the FCA and the PRA) by MLI (UK) and Bank of America Merrill Lynch International Limited, which are authorized by the PRA and regulated by the FCA and the PRA, and is distributed in the UK to retail clients (as defined in the rules of the FCA and the PRA) by Merrill Lynch International Bank Limited, London Branch, which is authorized by the Central Bank of Ireland and subject to limited regulation by the FCA and PRA - details about the extent of our regulation by the FCA and PRA are available from us on request; has been considered and distributed in Japan by Merrill Lynch (Japan), a registered securities dealer under the Financial Instruments and Exchange Act in Japan; is issued and distributed in Hong Kong by Merrill Lynch (Hong Kong) which is regulated by HKSF; is issued and distributed in Taiwan by Merrill Lynch (Taiwan); is issued and distributed in India by DSP Merrill Lynch (India); and is issued and distributed in Singapore to institutional investors and/or accredited investors (each as defined under the Financial Advisers Regulations) by Merrill Lynch International Bank Limited (Merchant Bank) (MLBLMB) and Merrill Lynch (Singapore) (Company Registration Nos F 06872E and 198602883D respectively). MLBLMB and Merrill Lynch (Singapore) are regulated by MAS. Bank of America N.A., Australian Branch (ARBN 064 874 531), AFS License 412901 (BANA Australia) and Merrill Lynch Equities (Australia) Limited (ABN 65 006 276 795), AFS License 235132 (MLEA) distribute this report in Australia only to 'Wholesale' clients as defined by s.761G of the Corporations Act 2001. With the exception of BANA Australia, neither MLEA nor any of its affiliates involved in preparing this research report is an Authorised Deposit-Taking Institution under the Banking Act 1959 nor regulated by the Australian Prudential Regulation Authority. No approval is required for publication or distribution of this report in Brazil and its local distribution is by Merrill Lynch (Brazil) in accordance with applicable regulations. Merrill Lynch (DIFC) is authorized and regulated by the DFSA. Research reports prepared and issued by Merrill Lynch (DIFC) are done so in accordance with the requirements of the DFSA conduct of business rules. Bank of America Merrill Lynch International Limited, Frankfurt Branch (BAMLI Frankfurt) distributes this report in Germany and is regulated by BaFin.

This research report has been prepared and issued by MLPF&S and/or one or more of its non-US affiliates. MLPF&S is the distributor of this research report in the US and accepts full

responsibility for research reports of its non-US affiliates distributed to MLPF&S clients in the US. Any US person receiving this research report and wishing to effect any transaction in any security discussed in the report should do so through MLPF&S and not such foreign affiliates. Hong Kong recipients of this research report should contact Merrill Lynch (Asia Pacific) Limited in respect of any matters relating to dealing in securities or provision of specific advice on securities or any other matters arising from, or in connection with, this report. Singapore recipients of this research report should contact Merrill Lynch International Bank Limited (Merchant Bank) and/or Merrill Lynch (Singapore) Pte Ltd in respect of any matters arising from, or in connection with, this research report.

General Investment Related Disclosures:

Taiwan Readers: Neither the information nor any opinion expressed herein constitutes an offer or a solicitation of an offer to transact in any securities or other financial instrument. No part of this report may be used or reproduced or quoted in any manner whatsoever in Taiwan by the press or any other person without the express written consent of BofA Merrill Lynch. This research report provides general information only, and has been prepared for, and is intended for general distribution to, BofA Merrill Lynch clients. Neither the information nor any opinion expressed constitutes an offer or an invitation to make an offer, to buy or sell any securities or other financial instrument or any derivative related to such securities or instruments (e.g., options, futures, warrants, and contracts for differences). This report is not intended to provide personal investment advice and it does not take into account the specific investment objectives, financial situation and the particular needs of, and is not directed to, any specific person(s). This report and its content do not constitute, and should not be considered to constitute, investment advice for purposes of ERISA, the US tax code, the Investment Advisers Act or otherwise. Investors should seek financial advice regarding the appropriateness of investing in financial instruments and implementing investment strategies discussed or recommended in this report and should understand that statements regarding future prospects may not be realized. Any decision to purchase or subscribe for securities in any offering must be based solely on existing public information on such security or the information in the prospectus or other offering document issued in connection with such offering, and not on this report.

Securities and other financial instruments discussed in this report, or recommended, offered or sold by Merrill Lynch, are not insured by the Federal Deposit Insurance Corporation and are not deposits or other obligations of any insured depository institution (including, Bank of America, N.A.). Investments in general and, derivatives, in particular, involve numerous risks, including, among others, market risk, counterparty default risk and liquidity risk. No security, financial instrument or derivative is suitable for all investors. In some cases, securities and other financial instruments may be difficult to value or sell and reliable information about the value or risks related to the security or financial instrument may be difficult to obtain. Investors should note that income from such securities and other financial instruments, if any, may fluctuate and that price or value of such securities and instruments may rise or fall and, in some cases, investors may lose their entire principal investment. Past performance is not necessarily a guide to future performance. Levels and basis for taxation may change.

This report may contain a short-term trading idea or recommendation, which highlights a specific near-term catalyst or event impacting the issuer or the market that is anticipated to have a short-term price impact on the equity securities of the issuer. Short-term trading ideas and recommendations are different from and do not affect a stock's fundamental equity rating, which reflects both a longer term total return expectation and attractiveness for investment relative to other stocks within its Coverage Cluster. Short-term trading ideas and recommendations may be more or less positive than a stock's fundamental equity rating.

BofA Merrill Lynch is aware that the implementation of the ideas expressed in this report may depend upon an investor's ability to "short" securities or other financial instruments and that such action may be limited by regulations prohibiting or restricting "shortselling" in many jurisdictions. Investors are urged to seek advice regarding the applicability of such regulations prior to executing any short idea contained in this report.

Foreign currency rates of exchange may adversely affect the value, price or income of any security or financial instrument mentioned in this report. Investors in such securities and instruments, including ADRs, effectively assume currency risk.

UK Readers: The protections provided by the U.K. regulatory regime, including the Financial Services Scheme, do not apply in general to business coordinated by BofA Merrill Lynch entities located outside of the United Kingdom. BofA Merrill Lynch Global Research policies relating to conflicts of interest are described at <http://go.bofa.com/coi>.

MLPF&S or one of its affiliates is a regular issuer of traded financial instruments linked to securities that may have been recommended in this report. MLPF&S or one of its affiliates may, at any time, hold a trading position (long or short) in the securities and financial instruments discussed in this report.

BofA Merrill Lynch, through business units other than BofA Merrill Lynch Global Research, may have issued and may in the future issue trading ideas or recommendations that are inconsistent with, and reach different conclusions from, the information presented in this report. Such ideas or recommendations reflect the different time frames, assumptions, views and analytical methods of the persons who prepared them, and BofA Merrill Lynch is under no obligation to ensure that such other trading ideas or recommendations are brought to the attention of any recipient of this report.

In the event that the recipient received this report pursuant to a contract between the recipient and MLPF&S for the provision of research services for a separate fee, and in connection therewith MLPF&S may be deemed to be acting as an investment adviser, such status relates, if at all, solely to the person with whom MLPF&S has contracted directly and does not extend beyond the delivery of this report (unless otherwise agreed specifically in writing by MLPF&S). MLPF&S is and continues to act solely as a broker-dealer in connection with the execution of any transactions, including transactions in any securities mentioned in this report.

Copyright and General Information regarding Research Reports:

Copyright 2017 Bank of America Corporation. All rights reserved. iQmethod, iQmethod 2.0, iQprofile, iQtoolkit, iQworks are service marks of Bank of America Corporation. iQanalytics®, iQcustom®, iQdatabase® are registered service marks of Bank of America Corporation. This research report is prepared for the use of BofA Merrill Lynch clients and may not be redistributed, retransmitted or disclosed, in whole or in part, or in any form or manner, without the express written consent of BofA Merrill Lynch. BofA Merrill Lynch Global Research reports are distributed simultaneously to internal and client websites and other portals by BofA Merrill Lynch and are not publicly-available materials. Any unauthorized use or disclosure is prohibited. Receipt and review of this research report constitutes your agreement not to redistribute, retransmit, or disclose to others the contents, opinions, conclusion, or information contained in this report (including any investment recommendations, estimates or price targets) without first obtaining expressed permission from an authorized officer of BofA Merrill Lynch.

Materials prepared by BofA Merrill Lynch Global Research personnel are based on public information. Facts and views presented in this material have not been reviewed by, and may not reflect information known to, professionals in other business areas of BofA Merrill Lynch, including investment banking personnel. BofA Merrill Lynch has established information barriers between BofA Merrill Lynch Global Research and certain business groups. As a result, BofA Merrill Lynch does not disclose certain client relationships with, or compensation received from, such issuers in research reports. To the extent this report discusses any legal proceeding or issues, it has not been prepared as nor is it intended to express any legal conclusion, opinion or advice. Investors should consult their own legal advisers as to issues of law relating to the subject matter of this report. BofA Merrill Lynch Global Research personnel's knowledge of legal proceedings in which any BofA Merrill Lynch entity and/or its directors, officers and employees may be plaintiffs, defendants, co-defendants or co-plaintiffs with or involving issuers mentioned in this report is based on public information. Facts and views presented in this material that relate to any such proceedings have not been reviewed by, discussed with, and may not reflect information known to, professionals in other business areas of BofA Merrill Lynch in connection with the legal proceedings or matters relevant to such proceedings.

This report has been prepared independently of any issuer of securities mentioned herein and not in connection with any proposed offering of securities or as agent of any issuer of any securities. None of MLPF&S, any of its affiliates or their research analysts has any authority whatsoever to make any representation or warranty on behalf of the issuer(s). BofA Merrill Lynch Global Research policy prohibits research personnel from disclosing a recommendation, investment rating, or investment thesis for review by an issuer prior to the publication of a research report containing such rating, recommendation or investment thesis.

Any information relating to the tax status of financial instruments discussed herein is not intended to provide tax advice or to be used by anyone to provide tax advice. Investors are urged to seek tax advice based on their particular circumstances from an independent tax professional.

The information herein (other than disclosure information relating to BofA Merrill Lynch and its affiliates) was obtained from various sources and we do not guarantee its accuracy. This report may contain links to third-party websites. BofA Merrill Lynch is not responsible for the content of any third-party website or any linked content contained in a third-party website. Content contained on such third-party websites is not part of this report and is not incorporated by reference into this report. The inclusion of a link in this report does not imply any endorsement by or any affiliation with BofA Merrill Lynch. Access to any third-party website is at your own risk, and you should always review the terms and privacy policies at third-party websites before submitting any personal information to them. BofA Merrill Lynch is not responsible for such terms and privacy policies and expressly disclaims any liability for them.

Certain outstanding reports may contain discussions and/or investment opinions relating to securities, financial instruments and/or issuers that are no longer current. Always refer to the most recent research report relating to an issuer prior to making an investment decision.

In some cases, an issuer may be classified as Restricted or may be Under Review or Extended Review. In each case, investors should consider any investment opinion relating to such issuer (or its security and/or financial instruments) to be suspended or withdrawn and should not rely on the analyses and investment opinion(s) pertaining to such issuer (or its securities and/or financial instruments) nor should the analyses or opinion(s) be considered a solicitation of any kind. Sales persons and financial advisors affiliated with MLPF&S or any of its affiliates may not solicit purchases of securities or financial instruments that are Restricted or Under Review and may only solicit securities under Extended Review in accordance with firm policies.

Neither BofA Merrill Lynch nor any officer or employee of BofA Merrill Lynch accepts any liability whatsoever for any direct, indirect or consequential damages or losses arising from any use of

this report or its contents.