

Theme Watch – Navigating a Transforming World

As part of our work on [A Transforming World](#), we continue to believe that investors should position for lower expected returns from financial markets by concentrating portfolios in assets related to our long-term themes. Theme Watch is a monthly report to help investors consider their tactical thematic asset allocations in light of current market conditions and macroeconomic events. It offers insights on performance, positioning, BofAML equity client trading flows, and the BofAML Style Cycle across the following themes: [climate change & extreme weather](#), [education](#), [energy efficiency](#), [food security](#), [longevity](#), [millennials](#), [obesity and health & wellness](#), [safety & security](#), [waste](#), and [water](#).

Performance: Obesity & Safety 14%, Waste +10%

We have benchmarked our thematic Primer Picks (Buy-rated names with material exposure) against the MSCI AC World since inception on 6 December 2013. 5 out of 8 themes are outperforming the benchmark. Obesity and Health & Wellness remained on top as the best performer since inception, +13.72%, follow by Safety +13.51%, Waste, +10.36%, Longevity, +6.77%, Education, +2.07% (vs +1.02% for MSCI AC World). Underperformers are Energy Efficiency, +0.52%, Climate Change, -0.19%, and Water, -12.31%. Food Security and Millennials are not included as we have <12m of data.

September Fed ahead, all trading signals point to Buy

Many themes proved resilient amidst the 10% crash in global equities last month, with Waste, Energy Efficiency, Obesity, and Safety outperforming. With September Fed looming, our [Chief Investment Strategist](#) believes we are likely to see a tactical rally post-announcement, barring a manufacturing recession, or financial system contagion. Our last [Theme Watch](#) and [Global Fund Manager Survey](#) showed that we have reached capitulation in EM/commodity-related themes. Currently, all 5 of our [trading signals](#) are now on a Buy: Global Breadth Rule, Global FMS Cash Rule, Bull & Bear Index, the Global Flow Trading Rule, and the EM Flows Rule.

Style Cycle: Buy Climate Change, Water, Food Security

While the Composite Macro Indicator improved at the slowest pace since it turned 6 months ago, the [BofAML Style Cycle](#) remains in the 'Recovery' phase of the cycle. In a 'Recovery', we prefer Value, low Quality, and high Risk. Our environmentally-focused themes – Climate Change, Water, Waste, along with Food Security, have the highest exposure to stocks that should outperform in this phase.

Early signs that clients are rotating into riskier themes

Indeed our positioning and flows data suggest that investors are beginning to rotate back into cheaper riskier thematic stocks, and out of expensive quality stocks. While themes showed 3rd straight month of outflows (-US\$10.5bn), it was at a lesser magnitude vs previous month's record -US\$17.2bn. Waste (+US\$401mn), Food Security (+US\$323mn), and Water (+US\$102mn) were all in the black. Conversely, positioning data showed that clients moved out of crowded winners – Safety, Longevity, Obesity, Waste.

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Refer to important disclosures on page 98 to 99.

Global
Thematic Investing

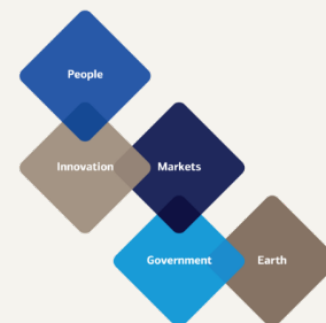
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A Transforming World



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Theme Watch

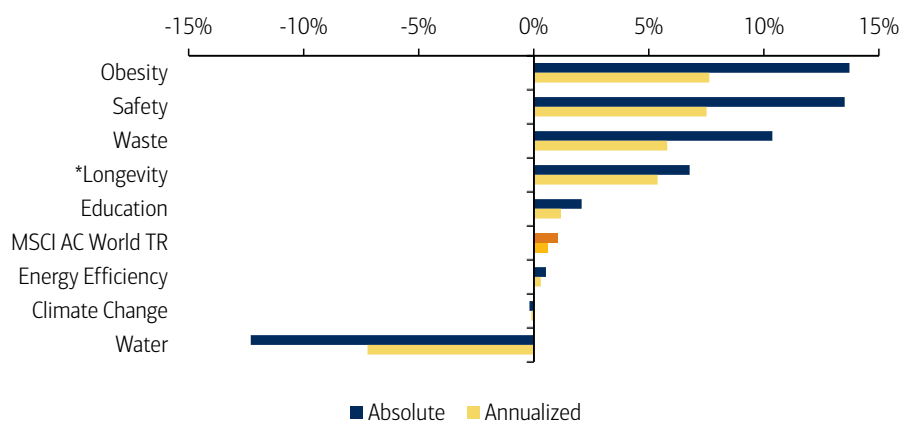
Theme Watch is designed to help investors consider their strategic thematic asset allocations in light of current market conditions and macroeconomic events. It offers insights on performance, positioning, BofAML equity client trading flows, and the BofAML Style Cycle across the following themes: [climate change & extreme weather](#), [education](#), [energy efficiency](#), [food security](#), [longevity](#), [millennials](#), [obesity and health & wellness](#), [safety & security](#), [waste](#), and [water](#).

Four key attributes

In this new monthly research product, we review our themes on performance, positioning, BofAML equity client trading flows, and the BofAML Style Cycle.

- **Performance – *how our Primer Picks (BUY-rated names with material thematic exposure) have fared.*** This measures the performance of our Primer Picks lists since inception (December 6, 2013, and June 6 2014 for Longevity) to the present.
- **Positioning – *where are you actually invested.*** We look at investor positioning in which we assess the FactSet snapshot of where 13k traditional long only funds/money is invested in our themes. This highlight crowded and neglected trades in the thematic investing sphere.
- **BofAML equity client trading flows – *recent trading trends.*** We provide an aggregated view of BofA Merrill Lynch client trading flows into and out of our stock lists (executed by the cash equities business of the firm). It is not meant to be predictive of the market, but aims to provide a view of trading flows within the thematic space.
- **Style Cycle – *what should you invest in?*** The BofAML Style Cycle model is produced by our Quant Research team and links the current phases of the economic cycle with investment style returns. It is a forward looking model that screens for stocks based on macro-economic indicators. We look at the universe of stocks which the Style Cycle implies will perform well in the current economic environment (Recovery) and highlight thematic stocks which fit with the Style Cycle's modelled outcomes.

Chart 1: Thematic Primer Picks performance since inception (through September 4 2015)



Source: BofA Merrill Lynch Global Research. Benchmark = MSCI AC World TR Gross (GDUEACWF). Past performance should not and cannot be viewed as an indicator of future performance. A complete performance record is available upon request. *Longevity inception date = 6-June-2014

BofAML Thematic Investing Stock Lists & Primer Picks

[Thematic Investing: A Transforming World – Q2 2015 Primer Picks 04 June 2015](#)

Since December 5 2013, we have been publishing a number of BofA Merrill Lynch Global Research lists of stocks and “Primer Picks” which have exposure to 10 equity themes – : [climate change & extreme weather](#), [education](#), [energy efficiency](#), [food security](#), [longevity](#), [millennials](#), [obesity and health & wellness](#), [safety & security](#), [waste](#), and [water](#). Our strategic view has been longer term and the names we have selected in each of these thematic stock lists are those which we believe should benefit in the long run from the theme. The aim of our stock lists has been to provide investors with information to understand company and sub-theme opportunities and risks inherent in the themes.

For each theme since the inception of each specific list, we have mapped a number of sector value chains to highlight various entry points or “sub-themes” within the theme. For each entry point, we have mapped opportunities and risks as we understand them to highlight a diverse range of entry points for investors wishing to invest in the theme. We have estimated the level and materiality of companies’ exposure to the energy efficiency themes, and the role of the themes as long-term drivers. We have characterised each company’s exposure as follows:

- **Low** – Theme-related products, technologies, services, and solutions are not material to global revenues and/or growth but are one factor, among others, for the business model, strategy and R&D of the company.
- **Medium** – Theme -related products, technologies, services, and solutions are an important factor for the business model, strategy and R&D of the company; material to sales and/or growth.
- **High** – Theme-related products, technologies, services, and solutions are core to the business model, strategy and R&D of the company; material sales and/or growth driver; pure play (i.e., 100% of sales).

Since the inception of our Thematic Investing Stock Lists, each quarter we have published: (i) a broader list mapping out the full universe of stocks exposed to a theme based on our Low/Medium/High methodology and (ii) a separate list of “Primer Picks” which are those stocks which have both a Buy rating from our fundamental equity team and that have Medium to High exposure to the theme under our methodology. Although it is difficult to accurately gauge the link between such exposure and share price performance (as many factors outside the scope of this analysis are likely to play a role in short- and long-term price development), we still consider its thematic exposure as an important and positive point to track given that they are “A Transforming World” themes with a 25Y+ lifespan.

A company can be in more than one theme stock list, sub-theme, or Primer Picks. Thematic stock lists are 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. The full rationale and investment thesis for our fundamental analyst’s recommendations on each stock is contained in the most recent report on the company, which we urge you to read.

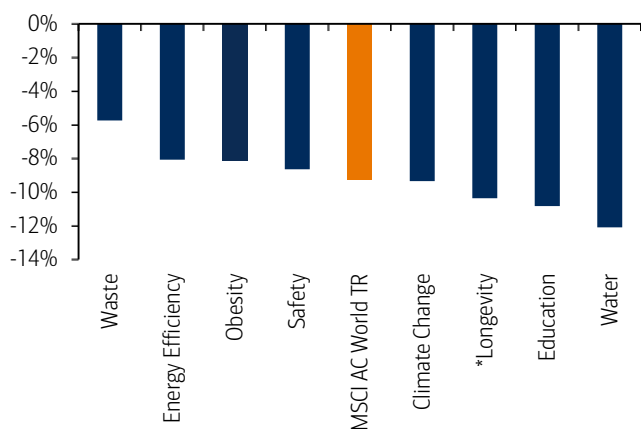
Performance – how themes fared

We began publishing our thematic stock lists and Primer Picks on December 5 2013. In viewing performance, we assess our Primer Picks for each theme, which have “material” - either High or Medium - exposure to the relevant theme and our fundamental analyst have a Buy rating. We assess them on an equal-weighted, total return basis. Although our medium-to long term strategic view focuses on the significance of the links between our themes and the business development and environment facing our covered companies, we caution investors that it is difficult to accurately gauge the link between such exposure and share price performance (as many factors outside the scope of this analysis are likely to play a role in short- and long-term price development), Investors should consider the fundamentals of the companies and their own individual circumstances / objectives before making any investment decisions. Moreover, past performance should not and cannot be viewed as an indicator of future performance. A complete performance record is available upon request. For a complete description of our performance methodology, please see the Methodology Appendix on page 85).

We use the MSCI AC World index because it represents equities within both developed and emerging markets, spanning large, mid and small cap segments. It is one of the most widely tracked indices in the world, and commonly used as a proxy for global equity. It is the index which best reflects our BofAML thematic universe, in our view. We use the gross, total return, USD-denominated version (GDUEACWF), in line with our performance representation

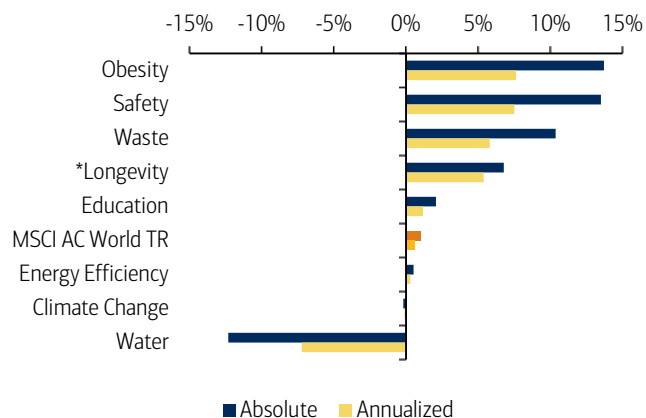
Stock lists are rebalanced both quarterly and published as A Transforming World - Quarterly Primer Picks, as well as when thematic primers and accompanying Primer Picks reports are updated (See Appendix of historical changes to stock lists on page 85).

Chart 2: Thematic Primer Picks 1M performance (through September 4 2015)



Source: BofA Merrill Lynch Global Research. BofA Merrill Lynch Global Research. Past performance should not and cannot be viewed as an indicator of future performance. A complete performance record is available upon request. Benchmark = MSCI AC World TR Gross (GDUEACWF)

Chart 3: Thematic Primer Picks performance since inception (through September 4 2015)



Source: BofA Merrill Lynch Global Research. Benchmark = MSCI AC World TR Gross (GDUEACWF). Past performance should not and cannot be viewed as an indicator of future performance. A complete performance record is available upon request. *Longevity inception date = 6-June-2014

Obesity and Safety remain on top +14%, Waste catches up +10%

As of September 4 2015, 5 out of the 8 BofAML thematic Primer Picks lists outperformed our benchmark MSCI AC World (GDUEACWF Index) since inception on Dec 6 2013 (we note that inception for Longevity was June 6 2014, and that the Food Security and Millennials Primer Picks list has <12m data, hence we cannot currently report performance). Obesity and Health & Wellness remained on top as the best performer since inception, up +13.72%, follow by Safety & security +13.51%, Waste, +10.36%, Longevity, +6.77%, Education, +2.07%, (vs +1.02% for MSCI AC World). Underperformers are Energy Efficiency, +0.52%, Climate Change, -0.19%, and Water, -12.31%.

Table 1: Thematic Primer Picks performance (through September 4 2015)

	1M	3M	1Yr	Since Inception	Annualized Since Inception
Climate Change	-9.34%	-18.07%	-14.43%	-0.19%	-0.11%
Education	-10.82%	-17.77%	-20.58%	2.07%	1.18%
Energy Efficiency	-8.06%	-16.14%	-10.27%	0.52%	0.30%
*Longevity	-10.35%	-8.63%	6.77%	6.77%	5.38%
Obesity	-8.11%	-6.88%	0.85%	13.72%	7.62%
Safety	-8.64%	-12.96%	-2.82%	13.51%	7.51%
Waste	-5.73%	-8.92%	-5.02%	10.36%	5.80%
Water	-12.08%	-22.09%	-23.05%	-12.31%	-7.23%
MSCI AC World TR	-9.27%	-10.66%	-8.82%	1.02%	0.58%

Source: BofA Merrill Lynch Global Research, Benchmark = MSCI AC World TR Gross (GDUEACWF), Inception date = 06-Dec-2013. Past performance should not and cannot be viewed as an indicator of future performance. A complete performance record is available upon request.

*Longevity inception date = 6-June-2014

Winners remain resilient, Longevity & Obesity continue to outperform

This past month, thematic Primer Picks performance was mixed relative to benchmark as global equities witnessed one of the worst crashes in recent years. Since August 19th,

- Global stocks lost \$5.8 trillion of market cap in 11 trading days
- The S&P 500 recorded its worst (6.3%) monthly loss since Sept'11
- The VIX index soared above 50

Nonetheless, many of our themes proved to be resilient. Obesity (-8.11%) and Safety (-8.64%) continued to outperform benchmark MSCI AC World (-9.27%) amidst the elevated market volatility this past month. This was driven by outperformance in biotech and sportswear & equipment for a 3rd month in a row. Education, Water, and Climate Change each sold off around 10-12%, caused by continued weakness in cleantech and EMs, particularly China and Brazil.

Relative valuation

On a risk adjusted basis, the same 5 out of 8 themes are showing alpha generation. Longevity (+0.15), Obesity (+0.13) and Safety (+0.13) exhibited the highest alpha generation since inception. Water, the worst performing theme at -12.31% since inception, also has the lowest alpha generation at -0.15. After the recent sell-off, Water and Education stocks are also trading at the lowest valuation relative to benchmark, at 12.9X and 12.5x median forward P/E vs 15.2X for MSCI AC World.

Table 2: Thematic Primer Picks beta relative to the market

	Raw Beta	Adjusted Beta	Alpha	Correlation
Climate Change	1.06	1.04	-0.01	0.87
Education	1.18	1.12	0.03	0.74
Energy Efficiency	1.08	1.05	0.00	0.91
Longevity	1.01	1.00	0.15	0.89
Obesity	0.80	0.86	0.13	0.81
Safety	1.07	1.05	0.13	0.85
Waste	0.91	0.94	0.10	0.85
Water	0.96	0.98	-0.15	0.76

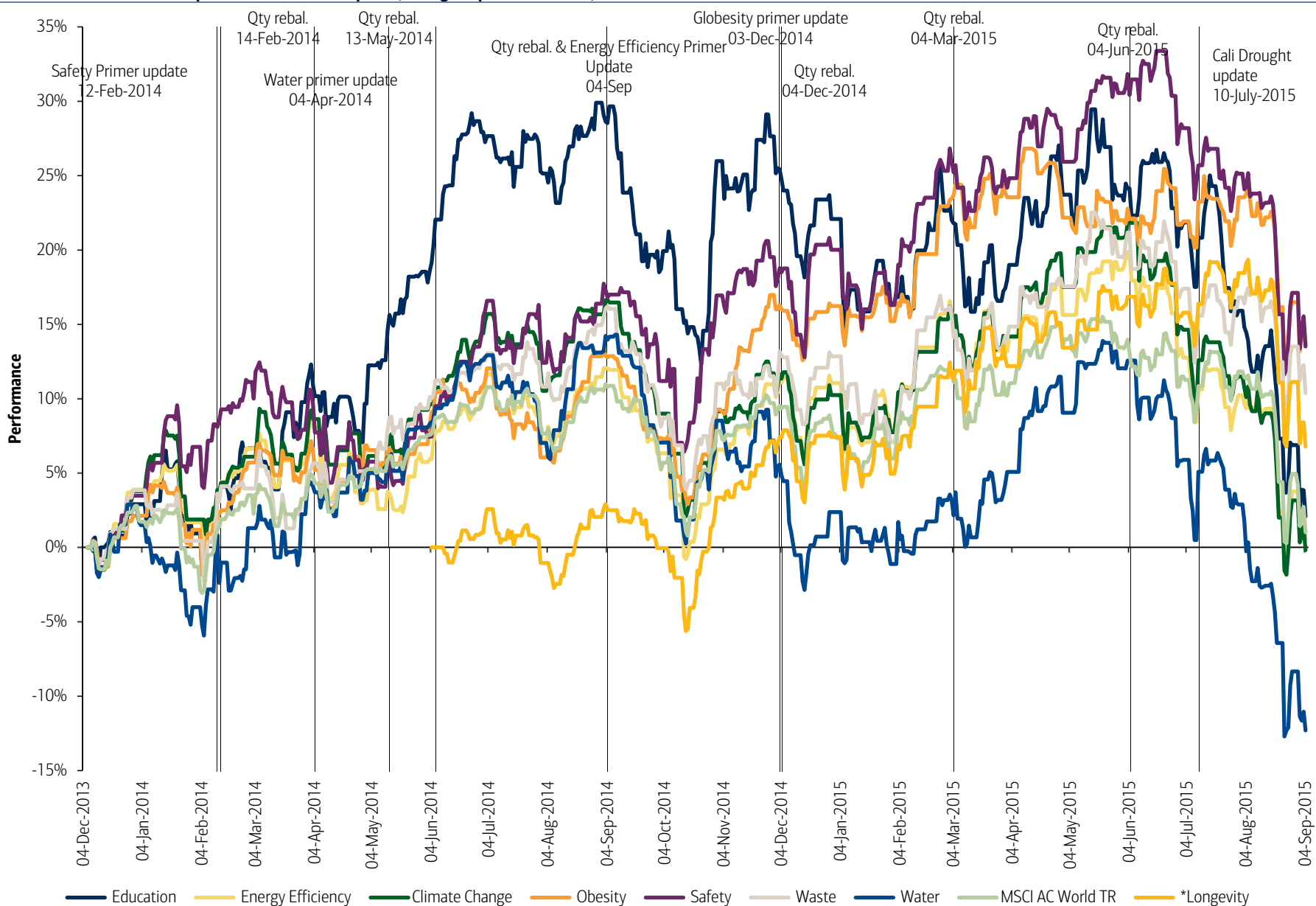
Source: BofA Merrill Lynch Global Research. Relative index=MSCI AC World TR (GDUEACWF Index).
Weekly observations since inception, through September 4 2015

Winners – Obesity and Longevity – are trading at premium multiples, whereas riskier themes – Water and Climate Change – are trading at a discount post recent sell-off.

Table 3: Theme Median P/E valuation

	Current		-1M		-2M	
	Forward PE		Forward PE		Forward PE	
Sub-Theme	Universe	Primer Picks	Universe	Primer Picks	Universe	Primer Picks
Climate Change	14.1x	14.0x	15.3x	15.0x	15.1x	15.0x
Education	13.5x	12.5x	14.6x	14.2x	14.9x	13.4x
Energy Efficiency	14.3x	14.1x	15.6x	15.2x	15.3x	15.1x
Food Security	14.2x	14.9x	15.7x	15.9x	15.6x	16.0x
Longevity	15.6x	15.4x	16.9x	16.8x	17.1x	16.8x
Millennials	16.4x	17.1x	18.1x	18.8x	17.7x	18.8x
Obesity	17.3x	17.0x	18.8x	18.2x	18.2x	18.2x
Safety	13.7x	14.6x	15.1x	15.6x	14.8x	16.4x
Waste	14.4x	15.2x	15.8x	16.4x	16.0x	16.0x
Water	13.7x	12.9x	14.9x	13.6x	14.6x	15.3x
Total Universe	14.8x	15.1x	16.0x	16.3x	16.0x	16.4x
MSCI AC World	15.2x		16.7x		16.5x	

Source: BofA Merrill Lynch Global Research. Forward P/E is based on consensus analyst earnings estimates for the next four quarters as compiled by Bloomberg.

Chart 4: Thematic Primer Picks performance since inception (through September 4 2015)

Source: BofA Merrill Lynch Global Research. See Appendix on Page 65 for list of Primer Picks rebalances. The themes have a base of 100 starting on December 6 2013, T+1 from the first publication of the Primer Picks list. Benchmark = MSCI AC World TR Gross (GDUEACWF)

Past performance should not and cannot be viewed as an indicator of future performance. A complete performance record is available upon request

*Longevity inception date = 6-June-2014

All eyes on Fed

[The Thundering Word: The Lonely Crash & the Fed 02 September 2015](#)

Our chief investment strategist Michael Hartnett believes that the recent 10% crash in global equities has been spurred by the start of Fed tightening, start of China devaluation, end of OPEC, all in combination with high equity exposure. A 20% correction (à la 1998, 2011) requires a financial “event” and/or unambiguous evidence of global manufacturing recession (global PMI’s falling <45; China export growth <-10%).

Our house view is for the Fed to hike and the markets to rally in September. Given the Forced selling of crowded winners, limited financial system contagion, China stimulus, and a very “dovish” Fed hike will likely spark a tactical rally.

If the Fed hikes, watch the long-end. Higher yields would equate to rally in banks, cyclicals and value stocks, “strong dollar” & “Fed tightening” positions deepened. Lower yields would mean cash, volatility & gold, and defensive growth the way to go.

If they don’t hike, it’s an admission that Wall Street threatens to reverse the recovery on Main Street. If investors don’t abandon hope on growth, then look for the “barbell of 1999” to reemerge: Über-growth & Über-value were massive outperformers after the Asia crisis.

All tactical trading signals are on Buy

[The Flow Show: EM Buy Signal 03 September 2015](#)

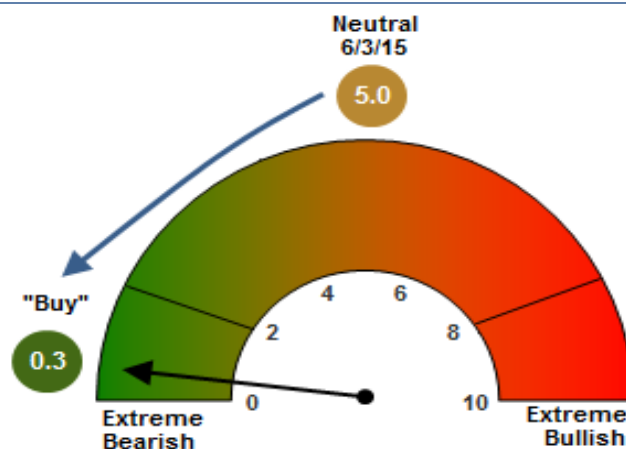
Bull & Bear Index: in extreme “fear” territory of 0.3 (scale of 0-10), which is the most bearish since Oct’11. As of last week, our EM Flows Rule was the last of 5 tactical trading signals to be triggered to a Buy. On the back of this, Michael expects volatility to fall, a post-Fed rally, all of which would be positive in September for risk assets.

Table 4: Buy, Buy, Buy, Close to Buy

BofAML Rule	Recommendation
Global Breath Rule	Buy
FMS Cash Rule	Buy
Global Flows Rule	Buy
Bull & Bear Index	Buy
EM Flows Rule	Buy

Source: BofA Merrill Lynch Global Investment Strategy

Chart 5: BofAML Bull & Bear Index



Source: BofAML Global Investment Strategy

BofAML asset allocation recommendations by region

[The Thundering Word: The Lonely Crash & the Fed 02 September 2015](#)

Table 5: Asset allocation recommendations

Asset class	Ticker	Core view (3-6 months)	Rationale
Equities	MXWD	Bullish	
North America	MXNA	Bullish	BofAML has an S&P 500 target of 2200 for YE 2015, which is based on an EPS forecast of \$117.50. Positives: low but rising rates, tame inflation, moderate EPS growth and an improving US economy are a sweet spot for stocks. Savita Subramanian recommends OW tech, energy, and industrials; UW utilities, telecom and consumer disc.
Eurozone	MXEM	Bullish	BofAML is constructive on Europe with increasing money supply driving economic recovery. Expectations are for 56% EPS beat and 57% revenue beat. James Barty and Manish Kabra recommend increasing exposure to banks, technology, and utilities, while rotating out of (UW) expensive defensives like materials, staples and over-owned autos. Base case 12 month outlook is Stoxx 600 at 450.
UK	MXGB	Bearish	GDP growth remains strong with +ve outlook, labor market strong but inflation fears linger; BoE on hold for immediate rate hikes. FTSE earnings are c. 80% internationally exposed and within, China/commodity exposure is high. More positive banks, selected homebuilders and retail plays, which are more geared to domestic growth.
Japan	MXJP	Bullish	Positives: expected end of deflation, new management mindset, record-high corporate profits, valuation expansion and public money flows to equities. Ajay Kapur recommends owning sectors that benefit from better domestic demand like retailing and telecom, and sectors to benefit from the end of deflation like banks and financials, as well as a weaker yen like semiconductors. Also, OW healthcare.
Pacific Rim	MXPCJ	Neutral	Region dependent on easing from PBoC; inflation data look weaker; Lower oil prices are a positive as most are net importers. Favor exporters to Europe. Falling growth and inflation should lead to CB easing, which is positive for equities. BofAML is UW Hong Kong; Neutral: Australia, New Zealand & Singapore.
EM Equities	MXEF	Neutral	Strong USD is negative for commodity producers, but positive for commodity consumers. EMEA & LatAm suffer while Asia benefits. Expect weaker currencies in LatAms which need government reform. Structurally BofAML is Neutral; but within EM is OW Brazil, India, Sth Africa, Taiwan; Neutral Russia, China, Poland, Thailand, Indonesia & Korea; UW Philippines, Malaysia, Mexico, Chile & Turkey.
Fixed Income	GFIM	Bearish	
Government	WOG1	Bearish	US: 10y expected to end 2015 at 2.35%, and position for September Fed rate hike. Rates are at the bottom end of recent range, have been helped by strong dollar and weaker commodities. Europe: Low government supply may keep lid on rates in August; we see risks of a slight sell-off in September driven by greater issuance.
Quasi Sovereign	GOLQ	Neutral	A shortage of new supply should counter the effects of Fed tapering. Regional economic outlook is brighter going forward, which is positive for some US municipal issuers, but oil dependent states are at risk.
Investment Grade	GOLC	Bearish	Expect IG credit spreads to widen in 2015. BofAML strategists prefer quality, and intermediate maturities; OW retail non-discounters, energy, diversified media; utilities & basic materials. UW healthcare, REITs, industrial products, aerospace/defense, chemicals, technology, cable media and banks/brokers.
High Yield	HW00	Bearish	Expect EU HY to outperform US HY; but look for value in US bank loans. Fundamentals in HY have not improved significantly. Upside risks to US economy are leading to earlier rate hiking cycle potential. BofAML strategists expect US high yield credit spreads to widen in 2015. Lower energy prices still a risk. Case for loan outperformance over bonds keeps getting stronger.
EM debt	IM00	Neutral	USD denominated yields are relatively attractive, but neutral non-USD sovereigns with risk from stronger USD. BofML ratings EM sovereigns: OW Indonesia & Uruguay; UW Philippines, Ukraine, Peru & Turkey.
Collateralized Debt	GOLL	Bullish	Look for incremental yield by moving down in credit in CLOs & non-agency MBS.
Commodities	MLCXTR	Neutral	
Energy	MLCXENTR	Neutral	Given seasonal demand weakness, renewed USD strength, negative China macro news and the Iran deal, recently lowered eop 3Q15 Brent target to \$48/bbl. BofAML 2015 forecast: Brent crude to average \$55.66/bbl and WTI to average \$50.13/bbl; 2016 forecast (period averages) Brent of \$55/bbl and WTI \$53/bbl.
Industrial Metals	MLCXIMTR	Bullish	Bullish nickel and zinc; Neutral lead & aluminum; UW iron ore, and copper
Precious Metals	MLCXPMTTR	Bearish	Neutral silver and gold
Agriculture	MLCXAGTR	Neutral	
Cash	G0B1	Bearish	

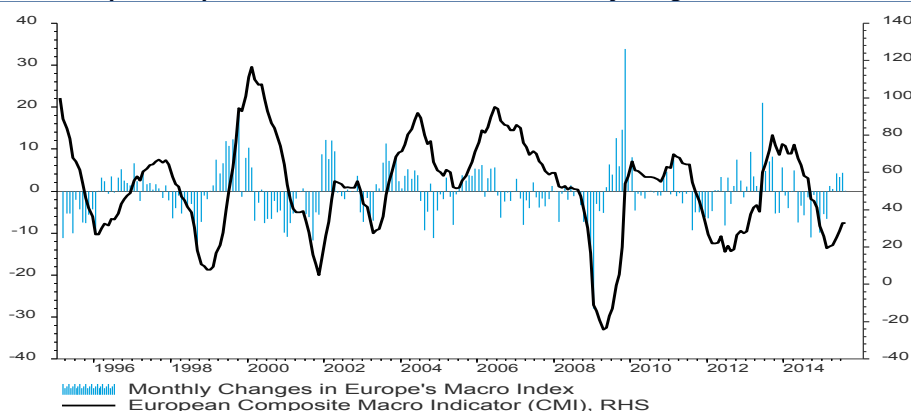
Source: BofA Merrill Lynch Global Investment Strategy

Style cycle – what should you invest in

Style Cycle is a proprietary BofAML model produced by our Quant Research Team. The 'Style Cycle' quantitative framework links phases of the economic cycle with investment style returns. Depending on the phase of the economic cycle, particular types of investment styles tend to perform better. The model assesses stocks according to their investment style (Value, Growth, Momentum, Quality, Risk, and Size). Investment styles are a stock's relative metrics within the context of a group of stocks. Hence, a stock's particular investment style metric will change depending on the group of stocks in which it is being considered. In this case, the group would be the Theme it is part of, or the overall Thematic Universe.

[Style Cycle: Uphill battle 21 August 2015](#)

Chart 6: European Composite Macro Indicator (CMI) and its monthly changes



Source: BofAML European Quant Strategy – Based on BY, GDP Forecasts, OECD, IFO Survey, PPI & EPS Revs

We have chosen Style Cycle due to its long track record (since 2004), and strength as proxy for global business cycles, which are most relevant for a tactical research product.

The Style Cycle prefers Water, Waste, Climate Change & Food Security, over Obesity, Longevity

We have applied the Style Cycle to our global thematic stock lists, assessing stocks and themes against the directional outputs implied by the Style Cycle. In April we moved into the 'Recovery' phase on the back of improving macro data. When screening across the thematic investing landscape – Water and Waste stocks have the highest exposure to the Style Cycle's 'Recovery' stock screen. Conversely stocks highly exposed to Obesity theme screen rank lower and thus should tend to underperform in the 'Recovery' phase.

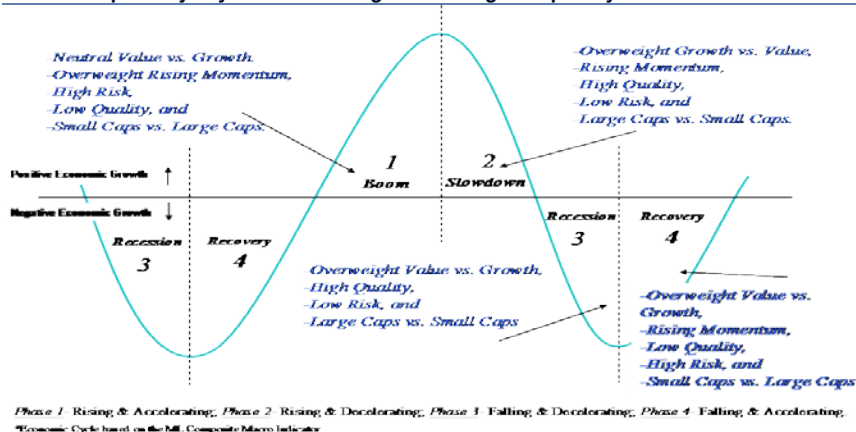
In the 'Recovery' phase of the cycle we prefer:

- Value vs Growth
- Low Quality
- High Risk
- Rising Momentum
- Small vs Large Caps

What makes a 'Recovery' stock

In April our Style Cycle quantitative model moved into a 'Recovery' phase on the back of improving Composite Macro Indicator (CMI) numbers, after staying in a 'Recession' over the previous 7 months. Rising GDP forecasts and improving business confidence outweighed the secular decline in bond yields. In a 'Recovery,' Value vs. Growth, Low Quality, High Risk, Rising Momentum and Small caps are likely to outperform in the market momentum ('Recovery' rank close to 100). Those with while stocks that rank lower in 'Recovery' characteristics are likely to underperform the market ('Recovery' rank close to 1).

Chart 7: European 'Style Cycle' – Back-testing Results using 5 complete cycles



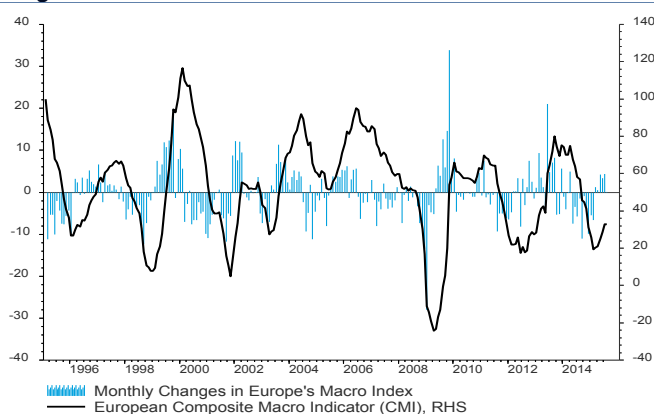
Source: BofA Merrill Lynch European Equity and Quant Strategy

Back testing period from Dec 1992 to Dec 2003. Actual Performance Jan 2004 to Dec 2010

'Recovery' fighting an uphill battle

Our Composite Macro Indicator (CMI) improves this month, albeit at the slowest pace since it turned six months ago. Two inputs rose (German IFO and Global Earnings Revision Ratio), one fell (y/y change in Pan-European bond yields), and the rest were flat.

Chart 8: European Composite Macro Indicator (CMI) and its monthly changes



Source: BofAML European Quant Strategy – Based on BY, GDP Forecasts, OECD, IFO Survey, PPI & EPS Revs

Table 6: Summary of Europe's macro signals

Inputs of EU Composite Macro Index

Pan European Cons. GDP Forecasts	Direction
12mth Change in Pan EU Bond Yield	FLAT
Producer Price Inflation	FALLING
OECD EU Leading Indicator	FLAT
German IFO Indicator	FLAT
Global Sell-Side EPS Revision Ratio	RISING
	RISING

Source: BofA Merrill Lynch European Equity and Quant Strategy

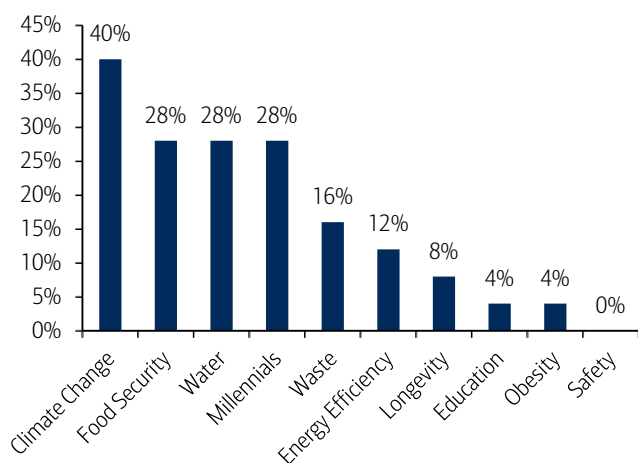
Style Cycle for thematics

Below we have screened across nine major themes to highlight 1) which themes screen as likely to out- or underperform during the 'Recovery' phase of the cycle and 2) which individual stocks screen as likely to out- or underperform. In the 'Recovery' phase stocks with a tilt towards Low Quality, High Risk, Small Cap and Value styles should outperform ('Recovery' rank = 100). Stocks with the opposite tilt tend to underperform ('Recovery' rank=1). The following pages screen for stocks based on the individual themes.

Climate Change, Food Security, Water, Waste over Longevity & Obesity

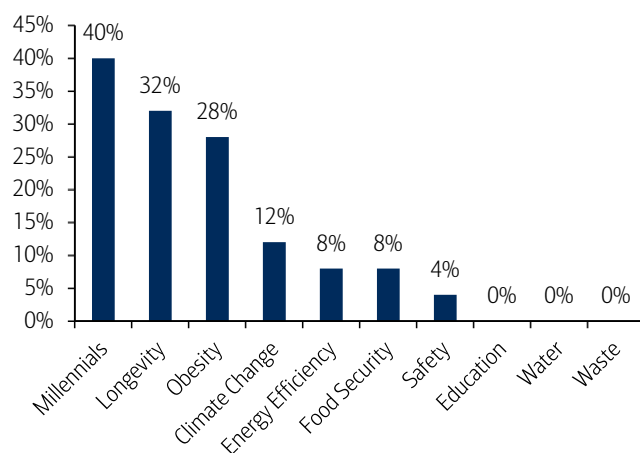
Within the current 'Recovery' phase, climate-rated themes have the highest exposure to stocks that tend to do well in this phase – Climate Change, 40%, Water, 28%, Food Security, 28%, and Waste, 16%. Conversely, Longevity and Obesity have the highest exposure to stocks that our model implies will do poorly in a 'Recovery', with 32% and 28% respectively.

Chart 9: Top 'Recovery' stocks exposure to Themes



Source: BofA Merrill Lynch Global Research

Chart 10: Bottom 'Recovery' stocks exposure to Themes



Source: BofA Merrill Lynch Global Research

Top and Bottom Thematic stocks during 'Recovery' phase

We highlight the top and bottom stocks within our Thematic Universe during the 'Recovery' phase of the economic cycle.

Table 7: Thematic Universe - Style Cycle Top/Bottom 25 stocks

Top Stocks				Bottom Stocks			
Sedol	Name	Theme	Recovery rank (100 = Top)	Sedol	Name	Theme	Recovery rank (1 = Bottom)
210972	Bombardier Inc -CI B	EE/Weather	100	245596	Biogen Idec Inc	Longevity	1
B0YBZJ	Cia Saneamento Min	Food/Water/Weather/Waste	100	B0X7DZ	Chipotle Mexican Grill Inc	Obesity/Millennials	1
630270	Ebara Corp	Food/Water	100	220910	Colgate-Palmolive Co	Longevity	1
B06YV4	Neste Oil	Weather	100	B8FMRX	Coloplast	Obesity/Longevity	1
B1FN8X	Outotec	Food/Water/Waste	100	B0JGGP	ITC	Food	1
BNGCT2	Performance Sports Group Ltd	Obesity/Millennials	100	B12155	Mastercard Inc	Millennials	1
282129	Schnitzer Steel Inds -CI A	Waste	100	284225	Starbucks Corp	Millennials	1
B83KH8	Abengoa (B)	Water/Weather	99	658248	Sun Pharmaceutical	Obesity/Longevity	1
201027	Agco Corp	Food/Weather	99	5958	ARM Holdings	EE/Weather	2
206672	Avon Products	Longevity	99	BP9DL9	Inditex	Millennials	2
511738	Bilfinger	Waste	99	628845	Jiangsu Hengrui Me	Longevity	2
B27WY8	Duratex Sa	Food/Water	99	B9M2WX	L Brands Inc	Millennials	2
454721	Lagardere	Education/Millennials	99	BHC8X9	Novo-Nordisk	Obesity/Longevity	2
537974	Obrascon Huar Lain	Weather	99	B798FW	Novozymes	Food/Weather	2
B5L2Q4	Salim Ivomas	Weather	99	BMMV2K	Tencent Hldgs Ltd	Millennials	2
B65R7B	Changyou.Com Ltd	Millennials	98	B2PZNO	Visa Inc	Millennials	2
B3P22V	China Modern Dairy	Food	98	259570	3M Co	Safety	3
B297KM	China Railway Grou	EE/Weather	98	620267	Advantech Co Ltd	EE/Weather	3
646557	Downer Edi Ltd	Food/Water	98	218234	Celgene Corp	Longevity	3
B1HMF2	First Solar Inc	Water/Weather	98	232052	Lauder (Estee) Cos Inc -CI A	Longevity	3
B19NKB	Home Retail Group	EE/Weather/Millennials	98	568743	Hennes & Mauritz	Millennials	3
B4MFOQ	Select Medical Holdings	Longevity	98	656039	Naver Corp	Millennials	3
B03J9L	Airasia Bhd	Millennials	97	264014	Nike Inc	Obesity/Millennials	3
216224	Cablevision Sys Corp -CI A	Millennials	97	B2QKY0	Shire	Obesity	3
B2NRDY	Cebu Air Inc	Millennials	97	B24CGK	Reckitt Benckiser	Obesity	4

Source: BofA Merrill Lynch Global Research. Top and bottom 25 stocks are based on a relative ranking within our Thematic universe. BofAML Thematic stock lists are 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.

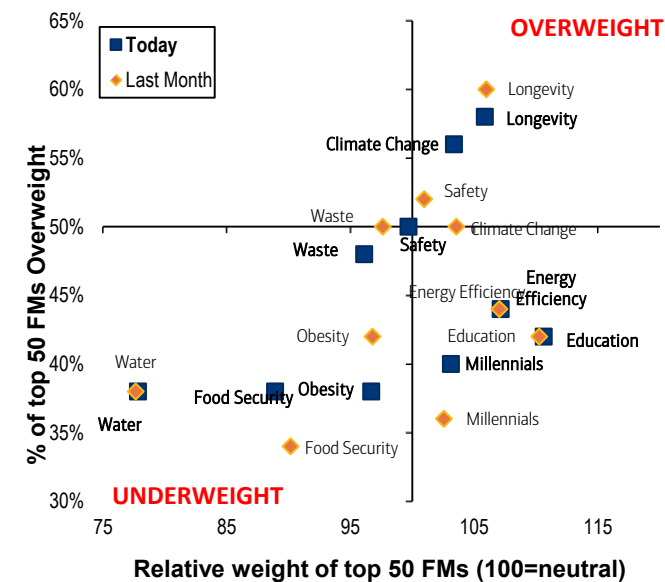
Ownership – where are you invested

To look at investor positioning, we looked at publicly disclosed fund holdings of over 13,000 institutions, 30,000 unique mutual fund portfolios, and 200,000 non-institutional ‘insider/stake holders globally. We looked at the 50 largest holders of the Thematic Universe and assessed their positioning relative to the active benchmark. (see Methodology Appendix on page 85).

Thematic level – investors increased exposure higher risk names, decreased allocation to winners

Investors have been increasing exposure to environmentally-related themes that tend to be value, higher risk– Climate Change and Food Security, as well as Millennials. Investors decreased exposure the themes that was had the best performance and have been the crowded overweights – Safety, Longevity, Obesity and Waste. This represents a reversal of a trend we have seen the past few months.

Chart 11: Positioning and ownership across all themes



Source: BofA Merrill Lynch Global Research

Table 8: MoM theme ownership change

Increased ownership

Climate Change
Food Security
Millennials

Unchanged ownership

Water
Education
Energy Efficiency

Decreased ownership

Safety
Longevity
Obesity
Waste

Source: BofA Merrill Lynch Global Research

Rotating out of crowded winners, into cyclical and riskier names

Relative to last month, investors decreased exposure to this year’s crowded winners, including pharmaceuticals & healthcare, medical technology, sports apparel & equipment, IoT and IT. While we are not seeing clients increasing exposure to EM/commodity-linked sub-themes, such as renewables companies, they are moving further Overweight selected riskier sub-themes. This includes Agricultural Equipment, Cybersecurity, Consumer, amongst others.

Climate Change: IT over infrastructure

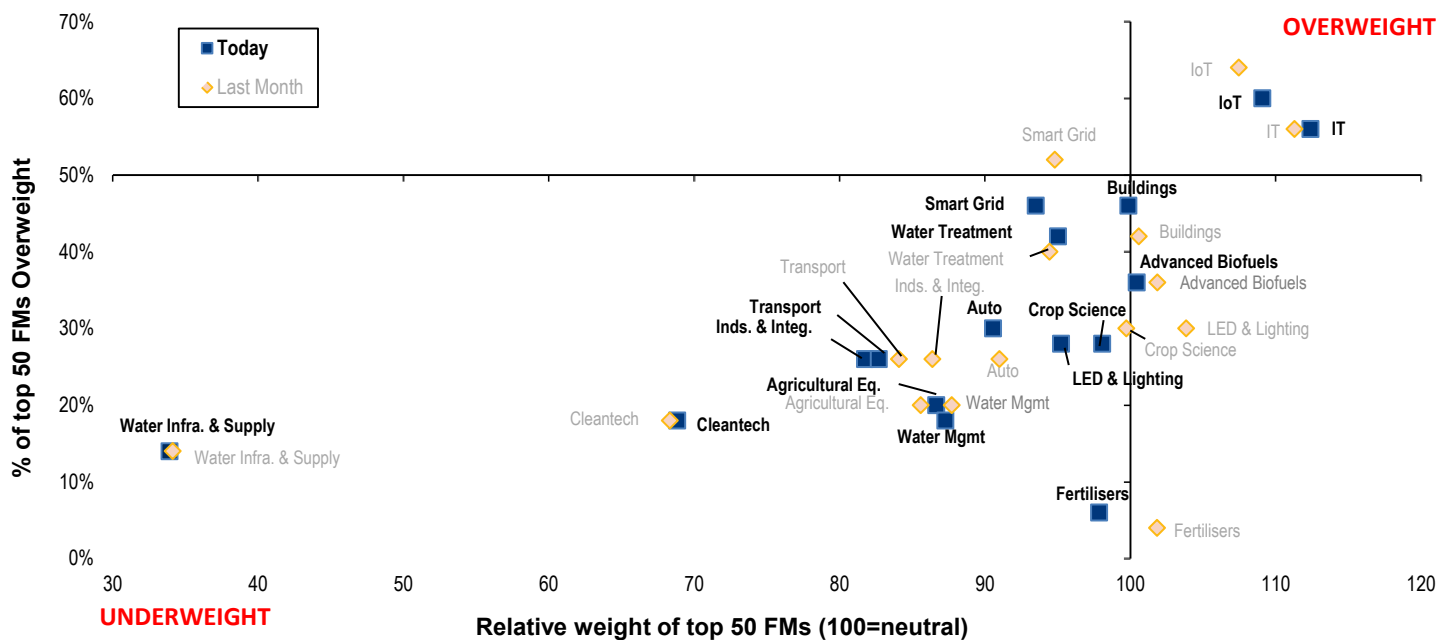
Investors appear to be overweight IT solutions – cloud computing, data centres, power management, virtualization, and semis. They appear to be relatively underweight Water Infrastructure – engineering, construction, equipment.

Table 9: Climate change sub-themes

Sub-theme	Description
Advanced Biofuels	Cellulosic ethanol, algae fuel, biohydrogen, biomethanol, DMF, biohydrogen diesel etc.
Agricultural Equipment	Agribusiness, Agri equipment, irrigation, precision farming, supply chain management etc.
Cleantech	Electric vehicles (EVs), wind, solar, among others.
Crop Science	Agronomy, enzymes, fungicides, genetically modified (GM) crops, pesticides, etc.
Fertilisers	Agribusiness, ammonia, fertilizers, nitrogen, phosphates, potash, urea etc.
Water Infra. & Supply	Engineering & construction, pipes, pumps and valves, and water utilities
Water Management	Irrigation, drought resistant seeds and crops, precision agriculture, smart meters etc.
Water Treatment	Wastewater, industrial treatment, chemicals, desalination, water quality, bottled water, TIC etc.
Auto	Autocatalysts, EVs, engine components etc.
Buildings	Appliances; building materials; home renovation; HVAC; insulation materials etc.
Inds. & Integ.	Automation, controls, heat transfer, T&D etc.
IT	Cloud computing, data centres, heating and cooling, power management, semiconductors etc.
IoT	Sensors, middleware, platform software, Cloud-based applications, and wireless technology.
LED & Lighting	Chips, CFLs, CCFLs, LEDs, lighting management, luminaries, process equipment etc.
Smart Grid	Automatic meter reading; grid storage; distributed grid mgmt; EV charging infrastructure; ICT etc.
Transport	Lightweighting, rail & bus services, jet engines etc.

Source: BofA Merrill Lynch Global Research

Chart 12: Climate Change - Positioning and ownership by sub-themes



Source: BofA Merrill Lynch Global Research

Education: Edtech over K-12 & childcare

Investors appear to be overweight Education Technology (EdTech) sub-theme, including digital and online learning. The biggest underweight is K-12 & childcare.

Table 10: Education sub-themes

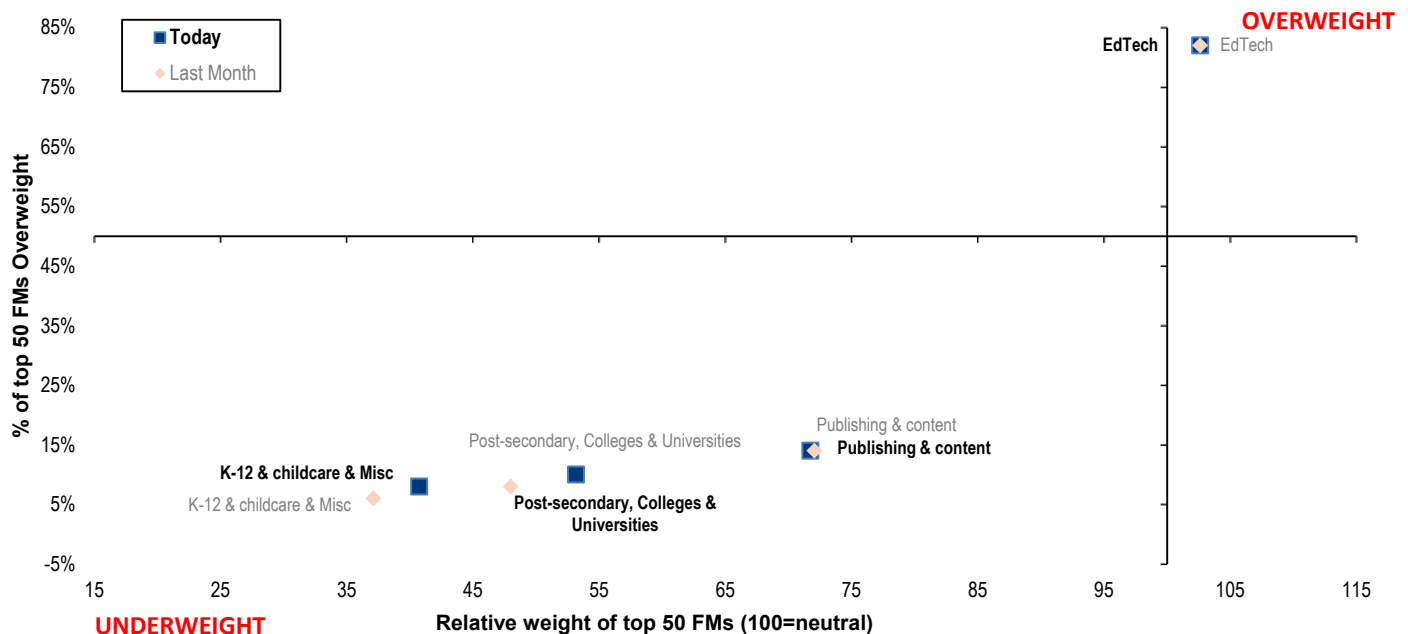
Sub-themes	Description
EdTech	Products, technologies and services which facilitate and enable the shift from print to digital and from classroom to on-line learning
K-12 & childcare & Misc.	K-12 is a designation for the sum of primary and secondary education.
Post-secondary, Colleges & Universities	This encompasses higher, post-secondary, tertiary or third level education.
Publishing & content	Includes academic publishing (books and journals), textbooks / course books, academic research and scholarship, preparatory materials, training materials, other educational materials – as well as retailers and distributors of such materials.

Source: BofA Merrill Lynch Global Research

Increased exposure to K-12 & Childcare, Post-secondary, Colleges & Universities

Investors appeared to have increased exposure to K-12 & Childcare, Post-secondary, Colleges & Universities. Education Technology and Publishing & Content were sub-themes that remain relatively steady.

Chart 13: Education - Positioning and ownership by sub-themes



Source: BofA Merrill Lynch Global Research

Energy Efficiency: IT and IoT over Transport

Investors appear to be overweight IT solutions including cloud computing, data centres, power management, virtualization, and semis. They appear to be underweight Transports including bus and lightweighting, as well as Autos and Industrials.

Table 11: Energy Efficiency sub-themes

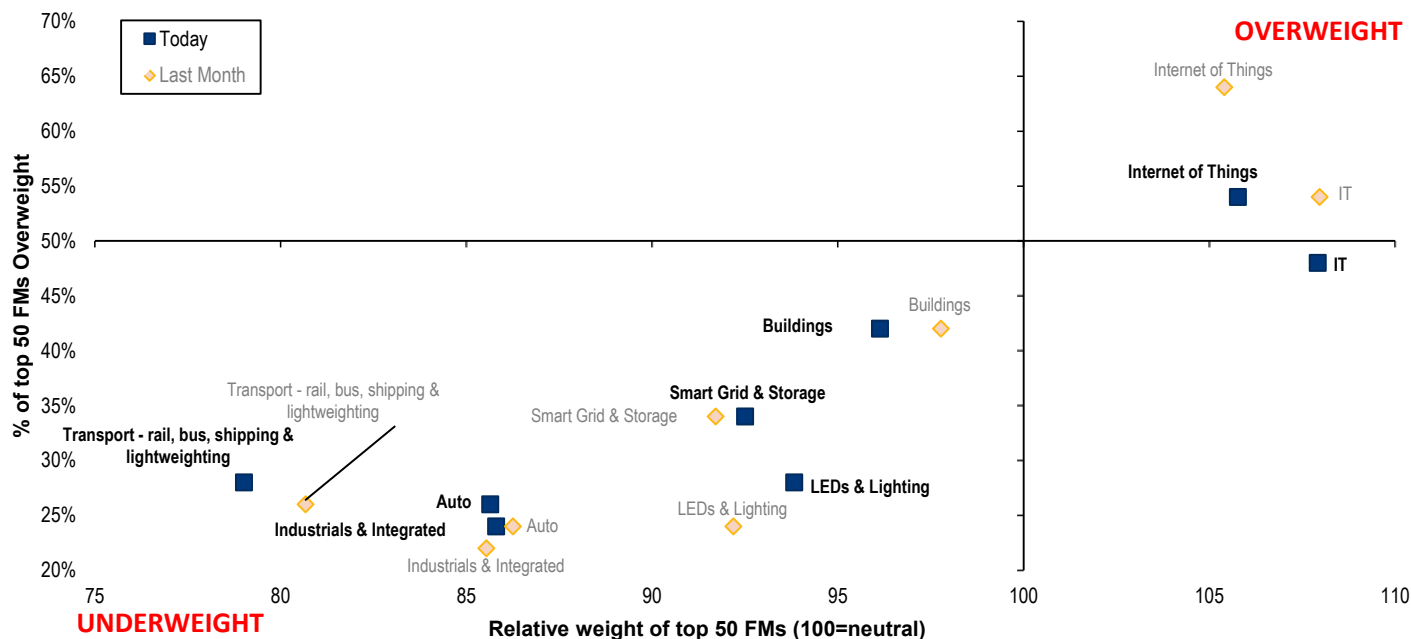
Sub-themes	Description
Auto	Autocatalysts, electric vehicles (EVs), engine and transmission components etc.
Buildings	Stocks involved in appliances; building materials; home renovation; HVAC; insulation materials etc.
Inds. & Integ.	Stock involved in automation, controls, heat transfer, T&D etc.
Internet of Things	Sensors, middleware, platform software, Cloud-based applications, and wireless technology.
IT	Cloud computing, data centres, power management, semiconductors etc.
LED & Lighting	Chips, CFLs, CCFLs, LEDs, lighting management, luminaries, process equipment etc.
Smart Grid	Automatic meter reading; grid storage; distributed grid mgmt; EV charging infrastructure; ICT etc.
Transport	Lightweighting, rail services, public bus and coach operators, aircraft engines etc.

Source: BofA Merrill Lynch Global Research

Decreased exposure to IoT and IT, increased exposure to LEDs and Industrials

For the first time this quarter, investors decreased exposure to the most overweight sub-theme within Energy Efficiency – Internet of Things and IT. They increased exposure to sub-themes that are relatively underweight – LEDs & Lighting, and Industrials.

Chart 14: Energy Efficiency - Positioning and ownership by sub-themes



Source: BofA Merrill Lynch Global Research

Food Security: Food Safety over Farming

Investors appear to be overweight Food Safety & Animal Health solutions including Medical devices, medicines and vaccines, supplements and pathogen testing. They appear to be underweight Farming including plantations, palm oil, sugar, soybean, canola, etc.

Table 12: Food security sub-themes

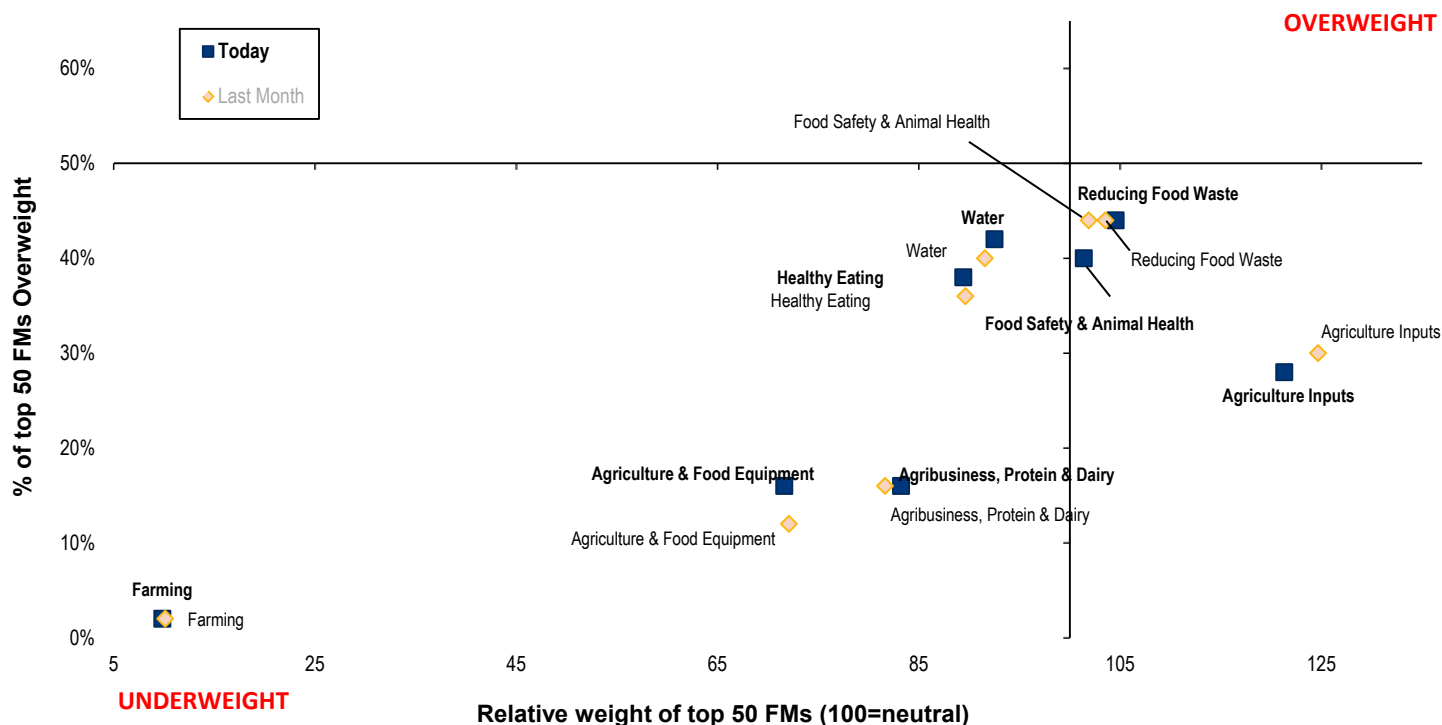
Sub-themes	Description
Agricultural Equipment	Application equipment, big data analytics, harvesters, engines, nutrient application, power generation, precision Ag, tillage and tractors.
Agricultural Inputs	Agronomy, crop protection, enzymes, fertilizers, seeds (conventional and GM).
Agribusiness, Protein & Dairy	Ag services, crop sourcing, dairy, exporters, feed, food ingredients, meat (beef, chicken, pork, poultry) , oilseeds, processing, storage and transportation.
Farming	Plantations, palm oil, sugar, soybean, canola, processing and corn.
Food Safety & Animal Health	Medical devices, medicines and vaccines, supplements and pathogen testing.
Healthy Eating	H&W-centred product portfolios (e.g., naturally healthy, organic produce etc.) and reformulating the nutritional profile of portfolios (i.e., less fat, sugar etc.).
Reducing Food Waste	Aseptic packaging, biodegradable packaging, bottles, boxes, cans, cold chain.
Water	Water treatment, water management, water Infrastructure and supply, and waterfriendly energy.

Source: BofA Merrill Lynch Global Research

Increased exposure to Ag equipment, decreased exposure to Ag inputs

Investors increased exposure to Agricultural Equipment, which includes big data analytics, harvesters, engines, nutrient application, power generation, precision Ag, tillage and tractors. They decreased exposure to Agricultural inputs, which includes Agronomy, crop protection, enzymes, fertilizers, seeds (conventional and GM).

Chart 15: Food Security - Positioning and ownership by sub-themes



Source: BofA Merrill Lynch Global Research

Longevity: Asset & Wealth Management over Incontinence, Hearing Aids, and Retail

Investors are overweight Asset & Wealth Management, which includes mutual funds, wealth management, and estate planning. The underweights are in the consumer-related areas such as Incontinence & Ostomy, Hearing Aids, and Retail focused on the elderly.

Table 13: Longevity sub-themes

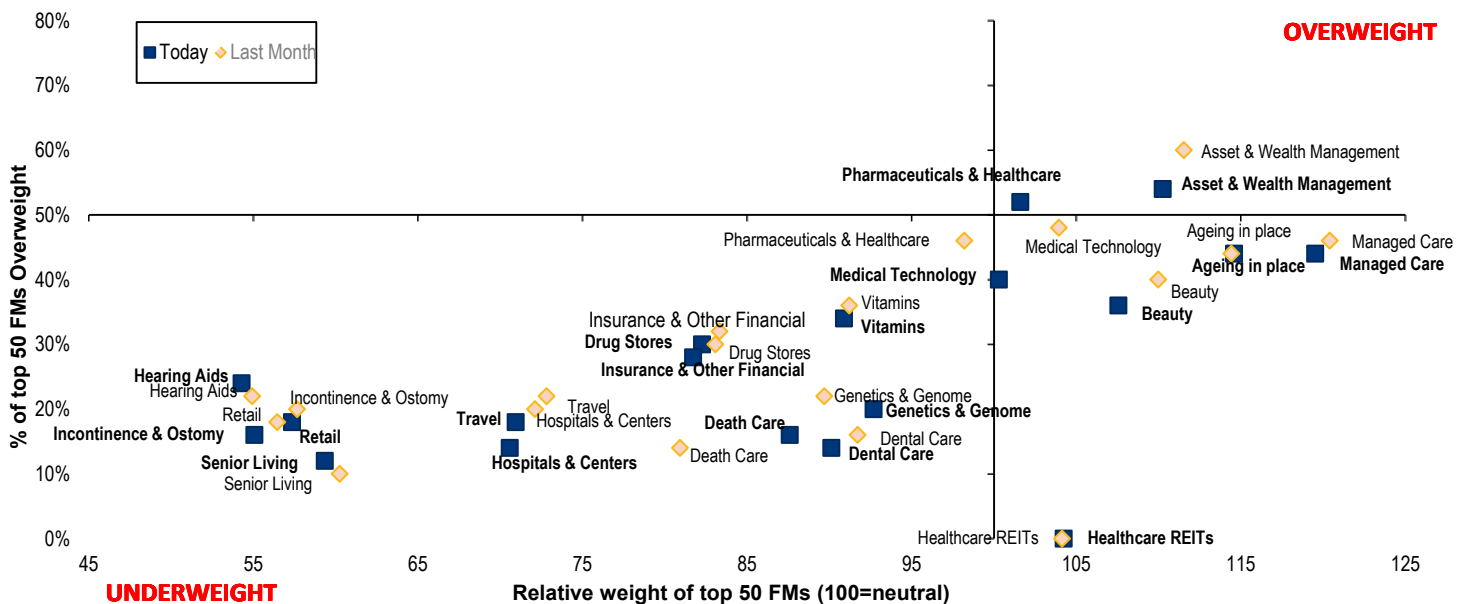
Sub-themes	Description
Pharmaceuticals & Healthcare	Companies treating cancer, cardiovascular disease, dementia, diabetes, osteoporosis etc.
Medical Technology	Devices used in treatment, diagnosis and monitoring
Dental Care	Dental equipment, consumables and services
Hearing Aids	Hearing aid devices and related services
Incontinence & Ostomy	Ostomy and continence care products
Hospitals & Centers	Hospitals, rehabilitation and nursing centres
Healthcare REITs	REITs owning senior housing & real estate
Managed Care	Managed care organizations that provide and administer health insurance
Senior Living	Operators of senior housing facilities
Ageing in place	Home improvement retailers & building products
Beauty	Anti-wrinkle skincare, plastic surgery and hair restoration
Drug Stores	Stores retailing prescription drugs
Retail	Department stores and other retailers
Death Care	Death care products and services
Travel	Casinos, cruise lines, tour operators etc.
Vitamins	Vitamin producers and retailers
Asset & Wealth Management	Mutual funds, wealth mgmt, estate planning & private wealth
Insurance & Other Financial	Life and general insurance, pensions and annuities

Source: BofA Merrill Lynch Global Research

Decreased exposure to MedTech, Asset & Wealth Management, Beauty, Travel

Investors decreased their exposure to almost all sub-themes within Longevity, including Asset & Wealth Management, Medical Technology, and consumer related sub-themes like Beauty and Travel.

Chart 16: Longevity - Positioning and ownership by sub-themes



Source: BofA Merrill Lynch Global Research

Millennials: Tech and Education over Dining & Wellness

Investors appear to be overweight Education, and Technology, including devices, eCommerce, apps, media, dating, games and wearables. They appear to be underweight

Drinking, Dining and Health & Wellness, including healthy eating, quick-casual & online dining, and beverages.

Table 14: Millennials sub-themes

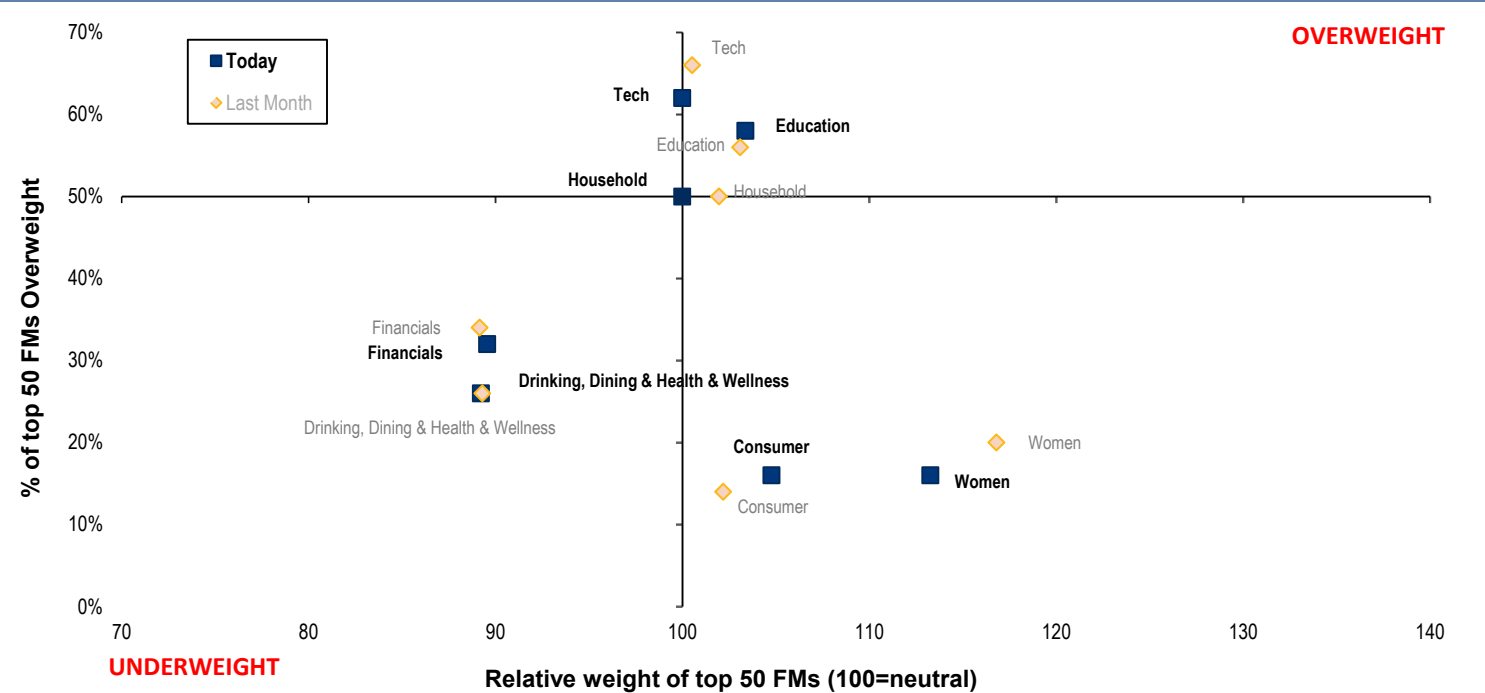
Sub-themes	Description
Consumers	Clothing & apparel, affordable premium, beauty & cosmetics, travel & leisure
Drinking, Dining and Health & Wellness	Healthy eating, quick-casual & online dining, beverages, physical activity
Education	Post-secondary, publishing & content, EdTech, childcare
Financials	EdTech, childcare FinTech, low-cost, mBanking, wealth management, cashless society
Households & Housing	Household formation, homebuilders, DIY, white goods
Technology	Devices, eCommerce, apps, media, dating, games, wearables
Women	Child care, clothing & apparel, affordable premium, beauty & cosmetics

Source: BofA Merrill Lynch Global Research

Increased exposure to Consumer, Decreased exposure to Tech

Investors increased their exposure to Consumer sub-theme, which includes clothing & apparel, affordable premium, beauty & cosmetics, travel & leisure. They appeared to have reduced exposure to Tech, including devices, eCommerce, apps, media, dating, games, wearables.

Chart 17: Millennials - Positioning and ownership by sub-themes



Source: BofA Merrill Lynch Global Research

Obesity: Pharma over Sports Apparel

Investors appear to be overweight Pharmaceuticals & Healthcare, which have involvement in cardiac care, diabetes, dialysis, bariatric devices, and patient handling systems. They appear to be underweight Spots apparel & equipment, as well as Commercial weight management, diet & nutrition.

Table 15: Obesity sub-themes

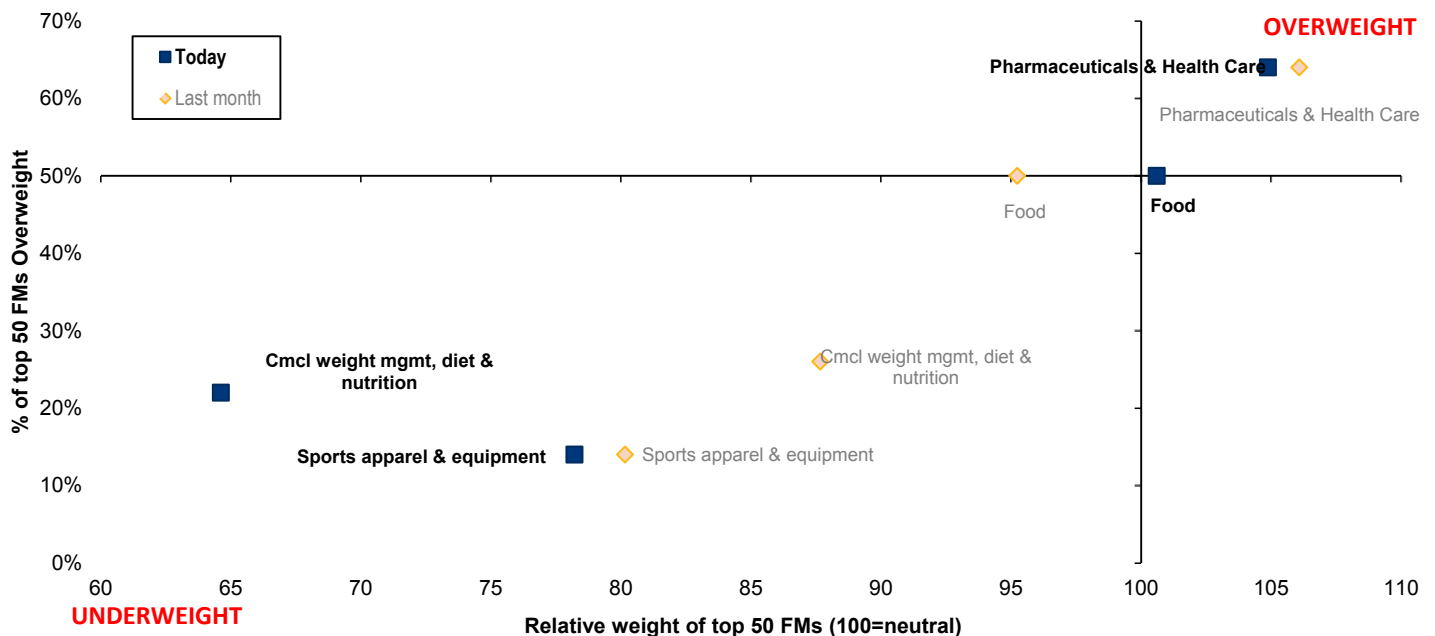
Sub-themes	Description
Pharmaceuticals & Health Care	Cardiac care/cardiovascular devices, dialysis services, emergency medical equipment, gastric bands/balloons, orthopaedic devices, ostomy, patient-handling equipment, wound care etc.
Food	H&W product portfolios (e.g., naturally healthy, fortified/functional, better for you, organic, fresh produce, fresh juices, etc.) and reformulating the nutritional profile of portfolios (i.e., less fat, sugar and sodium, fewer calories and artificial ingredients, and more beneficial ingredients)
Comcl weight mgmt, diet & nutrition	Commercial weight-loss centre chains, dietary and weight-management supplements, meal replacement products, multi-level marketers that sell weight management products, nutrition, and the VMS industry
Sports apparel & equipment	Fitness, footwear, gyms, leisure, manufacturers and retailers of sports apparel, recreational sports and activities, specialty sports, sports apparel, sports clothing, sports lifestyle products, sports retailers and sports venues

Source: BofA Merrill Lynch Global Research

Increased exposure to Food, decreased exposure to Sports apparel & equipment, Commercial Weight Management, Pharma

Investors appear to have decreased exposure to all sub-themes including Commercial weight management, diet & nutrition, Sports apparel & equipment, and Pharmaceuticals & Healthcare. The only sub-theme to move more Overweight is Food, including companies have H&W product portfolios and that help with reformulating the nutritional profile of portfolios (i.e., less fat, sugar and sodium, fewer calories and artificial ingredients).

Chart 18: Obesity - Positioning and ownership by sub-themes



Source: BofA Merrill Lynch Global Research

Safety: Workplace and Commercial/Residential over TIC

Investors appear to be overweight Commercial/Residential and Workplace Security, including workwear, protective gloves and glasses, and body armour. They appear to be underweight the Testing Inspection Certification (TIC) sector.

Table 16: Safety sub-themes

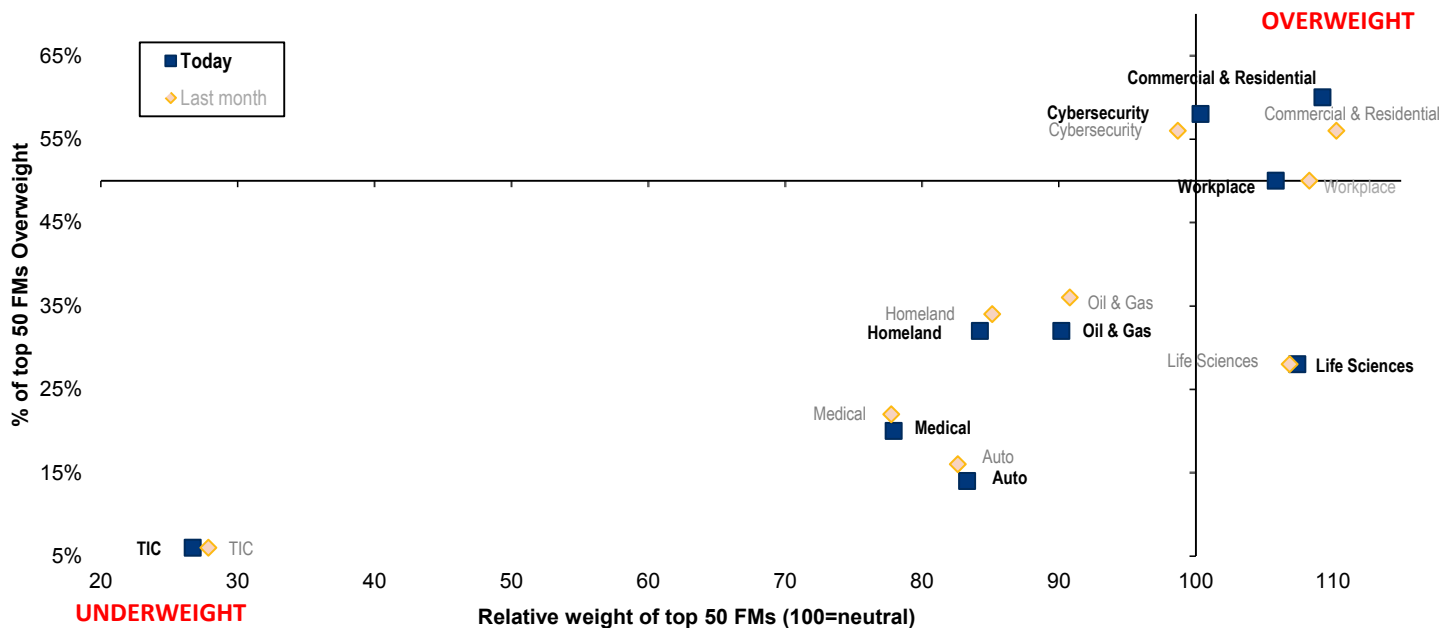
Sub-themes	Description
Auto	ABS, airbags, braking, crash avoidance, parking assist, passenger restraints, proximity detectors, seatbelts, tyres etc.
Commercial & Residential	Access control, alarm protection, armoured transport, cash handling, fire safety and security, intrusion protection, cybersecurity, locks, security guards etc.
Homeland	Critical infrastructure, CBRNE threats, biometric identification, airports, ports and borders, counterterrorism intelligence etc.
Cybersecurity	Antivirus, back-up & recovery, cloud, data encryption, enterprise security, firewalls, ID management, mobile security, networks, SaaS, virtualisation, VPN etc.
Life Sciences	Providers of analytical instruments and lab equipment etc.
Medical	Providing medical services and associated products
Oil & Gas	Rig builders, drillers, drilling equipment, pipeline infrastructure, insurance etc.
TIC	Testing, inspection, verification, audit, accreditation and consulting services, etc.
Workplace	Workwear, protective gloves, footwear, headgear, protective glasses, breathing appliances, fall protection, life jackets, body armour etc.

Source: BofA Merrill Lynch Global Research

Increased exposure to Cyber, decreased exposure to Oil & Gas and Workplace

Investors appeared to have increased exposure to Cybersecurity, including antivirus, back-up & recovery, cloud, data encryption, enterprise security, firewalls, ID management, mobile security, networks, SaaS, virtualisation, VPN. They appeared to have decreased exposure to Workplace safety and Oil & Gas.

Chart 19: Safety - Positioning and ownership by sub-themes



Source: BofA Merrill Lynch Global Research

Waste: Treatment over TIC, Sewage and E&C

Investors appear to be overweight waste Treatment, including chemical and industrial companies that deal with waste generated in the industrials, energy, medical, and residential space. They appear to be Underweight E&C, TIC, and Wastewater & Sewage which mainly encompass the utilities that process wastewater.

Table 17: Waste sub-themes

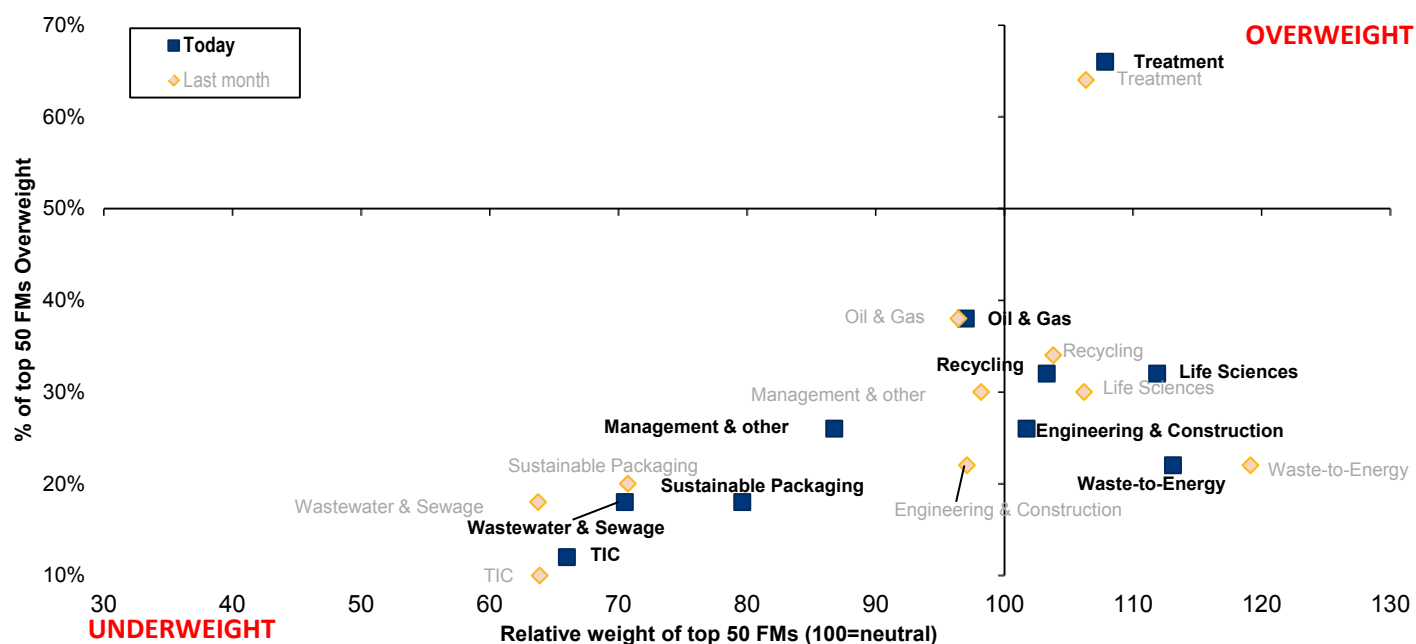
Sub-themes	Description
E&C	Provides of engineering & construction services to the waste industry
Life Sciences	Waste & wastewater analysis tools and solutions
Management & other	Facility operators and provides of collection, treatment & disposal services
O&G	Drilling waste and produced water treatment
Recycling	Scrap metal and e-waste recyclers
Sustainable Packaging	Waste paper recyclers & collectors, solution provides and lightweighting
TIC	Quality assurance, monitoring, water and wastewater analysis etc.
Treatment	Waste collection and transport, industrial waste treatment & recycling and chemicals
Waste-to-Energy	Incineration, landfills, treatment facilities and utilities making use of WTE technology
Wastewater & Sewage	Wastewater & Sewage collection and treatment

Source: BofA Merrill Lynch Global Research

Increased exposure to E&C, Life Sciences, decreased exposure to Management and Waste-to-energy

Investors appeared to have increased their exposure to Engineering & Construction, and Life Sciences, including waste & wastewater analysis tools and solutions. They appear to have decreased exposure to Waste management and Waste-to-energy.

Chart 20: Waste - Positioning and ownership by sub-themes



Source: BofA Merrill Lynch Global Research

Water: Treatment over Equipment and Utilities

Investors appear to be overweight Water Treatment – wastewater, desalination, PV solar, and bottled water. They are underweight makers of water equipment like Pipes, Pumps & Valves, as well as water Utilities.

Table 18: Water sub-themes

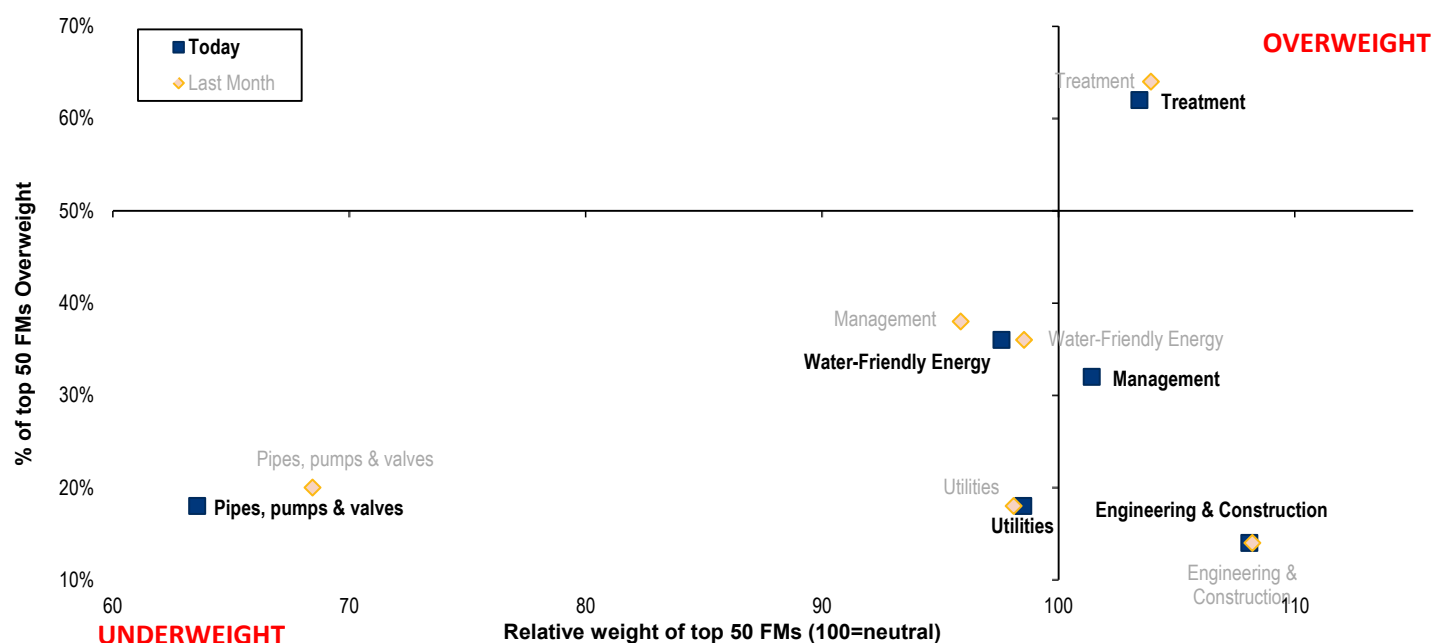
Sub-themes	Description
Engineering & Construction	Engineering, procurement, construction and consulting of water infra and supply
Management	Irrigation, drought resistant seeds and crops, precision agriculture, smart meters etc.
Pipes, pumps & valves	Companies involved in water pipes, pumps & valves
Treatment	Wastewater, industrial treatment, chemicals, desalination, water quality, bottled water, TIC etc.
Utilities	Water, wastewater and sewage treatment utilities
Water-Friendly Energy	Wind, solar and geothermal energy, CHP, smart irrigation and precision agriculture

Source: BofA Merrill Lynch Global Research

Increased exposure to Water Treatment, Utilities, decreased exposure to Pipes, Pumps & Valves

Investors appeared to increased their exposure to Utilities, and Water Treatment. They decreased their exposure to Water management, including irrigation, drought resistant seeds and crops, precision agriculture, and smart meters

Chart 21: Water - Positioning and ownership by sub-themes



Source: BofA Merrill Lynch Global Research

Equity Flows – Recent trading

We define BofAML equity net trading flows as USD notional buys minus sells executed by BofAML equity trading platform for our clients. The August 5 through September 4 2015 period showed continued outflows from the thematic universe of -US\$10.5bn. While clients are still taking money off the table, the pace of outflows has eased relative to last month, which was the largest since inception of September 2014. Cumulative net flows now stands at -US\$18.9bn.

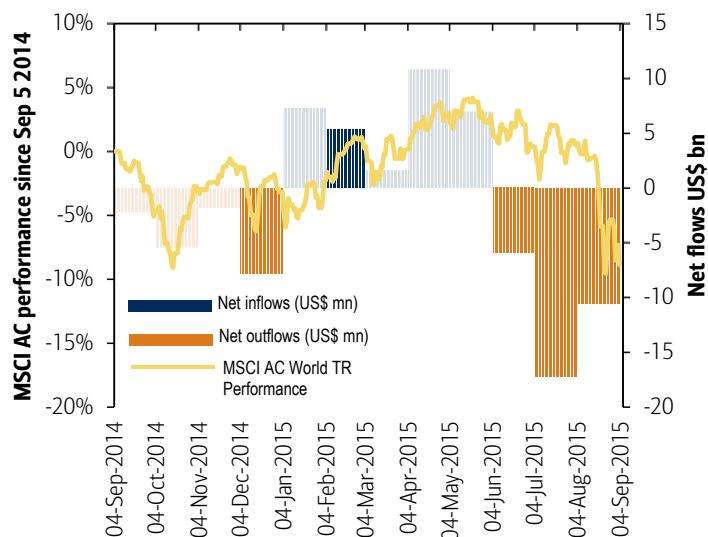
Last month period (July flows) is August 5 2015 – September 4 2015

Table 19: BofAML client net trading flows by theme (US\$mn)

Theme	Last month ending Sep 4 2015	Aug 4 2015	Jul 4 2015	Jun 4 2015	May 4 2015	Apr 4 2015	Cumulative 3 month Net flows	avg.
Climate change	-1,897	-3,040	-815	1,016	1,625	-661	-3,495	-1,917
Education	-1,686	-1,261	-1,725	10	1,613	255	-889	-1,557
Energy Efficiency	-1,966	-2,145	-1,436	-26	1,907	266	-487	-1,849
Food Security	323	-1,342	-97	1,497	805	NA	1,186	-372
Longevity	-4,386	-2,848	-59	1,172	1,966	1,919	-11,339	-2,431
Millennials	-566	-3,142	-2,010	NA	NA	NA	-5,718	-1,906
Obesity	-751	-1,705	699	398	1,563	1,808	-1,465	-586
Safety	-92	-781	443	1,147	894	-475	4,165	-143
Waste	401	-1,056	-895	712	224	-1,192	-559	-517
Water	102	88	-52	1,057	250	-304	-307	46
Total	-10,519	-17,231	-5,946	6,983	10,847	1,618	-18,909	-11,232

Source: BofA Merrill Lynch; Cumulative net flows with Sep 5 2014 as starting point. Average flows=average net flow between specified period.

Chart 22: MSCI AC World TR performance and BofAML client net trading flows in thematic universe



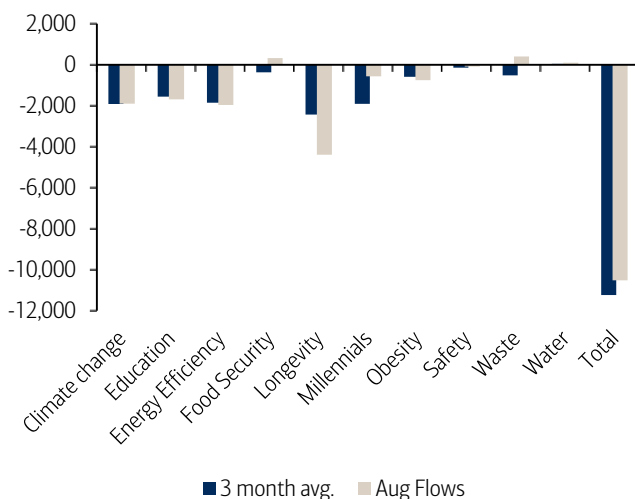
Source: BofA Merrill Lynch

Outflows continue but at lesser magnitude

While outflows continued this month's totally -US\$10.5bn, the pace was significantly muted relative to last month's record -US\$17.2bn, which was the largest magnitude since we began monitoring in September 2014. Whereas last month nearly every theme experience outflows, we saw 3 themes in the black this month – Waste (+US\$401mn), Food Security (+US\$323mn), and Water (+US\$102mn). Longevity suffered the highest outflows with – US\$4.4bn, which corroborates our positioning data. This signals forced selling of previous winners, particularly healthcare names. Safety maintains the highest cumulative net flows with +US\$4.2bn to date, which also happens to be the best performing theme.

The 3 themes with inflows (Waste, Water, Food Security) are also themes that screen attractive according to the Style Cycle.

Chart 23: BofAML client net trading flows by theme (US\$mn)



Source: BofA Merrill Lynch; Aug Flows signify the period from Aug 5 2015 to Sep 4 2015

Table 20: BofAML client net trading flows by region (US\$mn)

Theme	Last month ending (Sep 4 2015)	3 month avg.	Cumulative Net flows
AMRS	-10,741	-10,849	-34,033
APAC	183	-640	933
EMEA	39	257	14,192
Total	-10,519	-11,232	-18,909

Source: BofA Merrill Lynch, Cumulative net flows with Sep 5 2014 as starting point, Average flows = average flows between specified period

Themes

Climate change & extreme weather - A perfect storm

[Thematic Investing: Extreme weather primer –weathering the perfect storm](#)
[12 September 2013](#)

Extreme weather: welcome to the new normal - Climate anomalies are on the rise globally with 2013 marking the 28th consecutive year with a global temperature above the 20th century average (Source: NOAA). Extreme weather is becoming the new normal, with extremes now covering 10% of the globe vs. 0.1% to 0.2% from 1951-1980 (Source: NASA). While no single incident can be definitively attributed to climate change, there is overwhelming scientific evidence that we should expect more damaging extreme weather events, with up to 40% of global land area at risk from extreme heat by 2040E (Source: Coumou et. al.).

Losses are skyrocketing: we're not sufficiently prepared - Global climate-related losses have risen to as much as US\$200bn in 2005 as a result of Hurricane Katrina. 2011 and 2012 were the two worst years on record for extreme weather events, which caused a total of more than \$170 billion in damages, much of that to businesses (Source: NOAA). 90% of the S&P Global 100 across industry sectors identify extreme weather and climate change as current or future business risks (Source: C2ES). But worryingly, less than 50% of companies have integrated climate change adaptation into their business strategies (Source: CDP)

It's getting warmer: on track for a 2-4°C warmer world - Without further action to reduce greenhouse gas emissions (GHGs), scientists are predicting a 2-4°C rise in temperatures by 2100 and it could happen as early as the 2060s. This would mean unprecedented heat waves, severe drought, and major floods in many regions with serious impacts on human systems and ecosystems and new risks that would threaten our future adaptation needs (Source: World Bank). The U.S. National Climate Change Assessment (NCA) – released in May 2014 warns of climate change-related problems that are already disrupting the lives of ordinary Americans (e.g. extreme weather, sea-level rise, thawing of Arctic sea ice, shift in growing seasons et. al.) and calls for action to reduce GHG emissions.

A perfect storm is brewing: food-water-energy security - By 2030E, global food demand is set to increase by up to 50%, water demand by up to 40% and energy demand by up to 50%. Given how closely food, water and energy security are connected, this will mean increasing trade-offs and resource rationing. It also threatens to create a “perfect storm” of global events, which poses key questions for governments, stakeholders, corporates and investors as to how to meet these demands while adapting to and mitigating climate change.

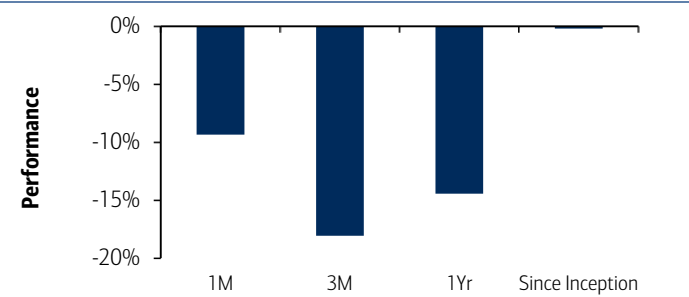
Cleantech is a major part of the solution – “Cleantech” – including solar and wind – continues to gain traction with more than \$300bn in new investments in 2014 (+15% YoY), and renewables including hydro now accounting for a growing share of power production (13% in the US; 19% in the UK; 22% in China – source: BNEF). Building new coal, nuclear and hydro plants is increasingly more difficult, thus wind, solar and, to an extent gas, seem the most viable options. Wind and solar are likely to dominate 2015-30 global electricity generation capacity additions (up to 80% joint share). Cleantech power generation capacity is expected to reach 279GW by 2030. China's low-carbon additions from 2015-30E are expected to be equivalent to 90% of US 2015 capacity – source: BNEF). Energy storage is also emerging as the “Holy Grail” technological breakthrough that could change how energy is produced, consumed and valued.

Weathering the storm: 7 entry points for long-term solutions - In our view, a number of stocks are placed to benefit from their role as long-term solution providers for the perfect storm of food-water-energy security in an extreme weather and climate change constrained

world. We have identified c200 stocks covered by BofAML Global Research across seven entry points: 1) Water; 2) Fertilizers; 3) Crop Science; 4) Farming and Agricultural Equipment; 5) Second Generation Biofuels; 6) Energy Efficiency; and 7) Renewables and Cleantech.

Primer Picks performance

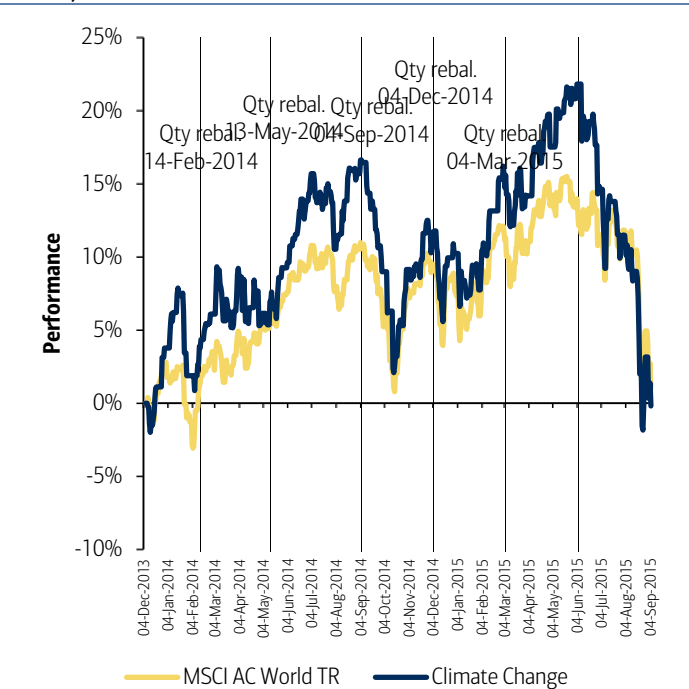
Chart 24: Climate Change Primer Picks performance (through September 4 2015)



BofA Merrill Lynch Global Research. Inception is Dec 6 2013.

Climate change & extreme weather Primer Picks is flat at -0.19% since Dec 6, 2013. The theme underperformed in the last 3 months, losing -18.07%. During the last month, climate change Primer Picks sold off by -9.34%, erasing much of this year’s gains.

Chart 25: Climate Change Primer Picks performance (through September 4 2015)



Source: BofA Merrill Lynch Global Research. See Appendix on Page 65 for list of Primer Picks rebalances. Qty rebal = Quarterly Primer Picks update. Past performance should not and cannot be viewed as an indicator of future performance. A complete performance record is available upon request.

Table 21: Climate Change Primer Picks beta relative to the market

Raw Beta	1.06
Adjusted Beta	1.04
Alpha	-0.01
R^2 (Correlation^2)	0.75
Correlation	0.87

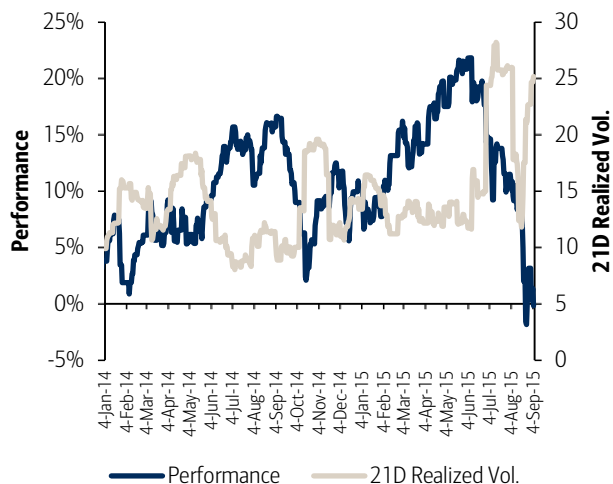
Source: BofA Merrill Lynch Global Research. Relative index=MSCI AC World TR (GDUEACWF Index). Weekly observations since inception, through September 4 2015

Chart 26: Relative performance of Climate Change Primer Picks vs. MSCI AC World (through September 4 2015)



Source: BofA Merrill Lynch Global Research. Benchmark = MSCI AC World TR Gross (GDUEACWF). Past performance should not and cannot be viewed as an indicator of future performance

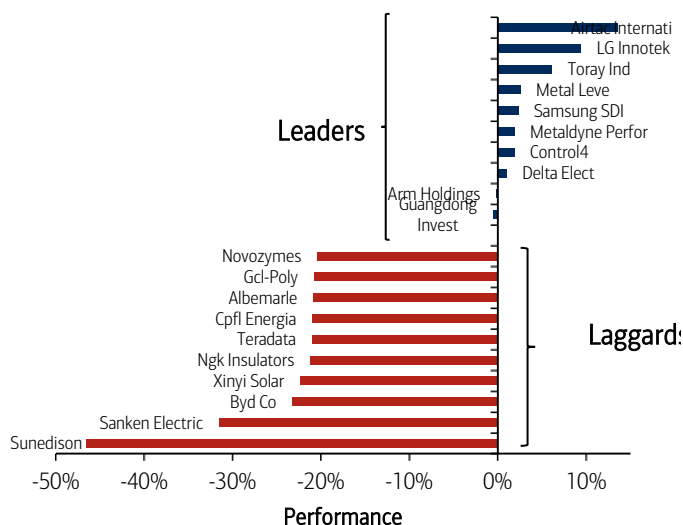
Chart 27: Climate Change - Primer Picks performance and 21-day realized volatility



Source: BofA Merrill Lynch Global Research. 21D Realized Vol is the rolling 21-day (business day) realized volatility of the Primer Picks performance. Past performance should not and cannot be viewed as an indicator of future performance.

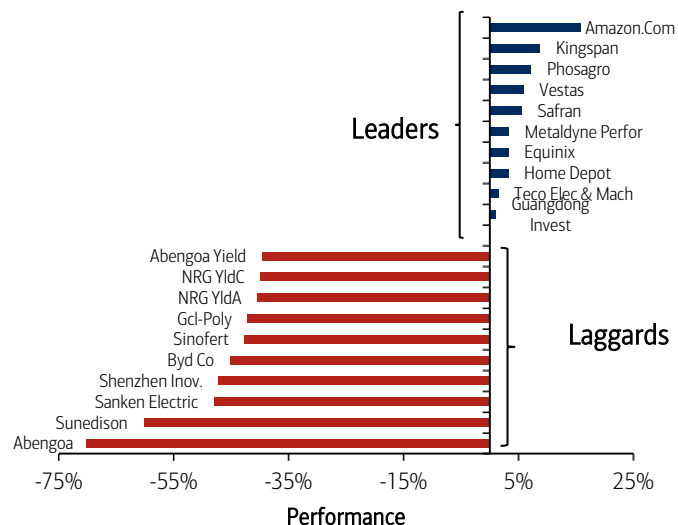
Leaders and laggards

Chart 28: 1M top/bottom total return performance of Climate Change Primer Picks



Source: BofA Merrill Lynch Global Research; Bloomberg

Chart 29: 3M top/bottom total return performance of Climate Change Primer Picks

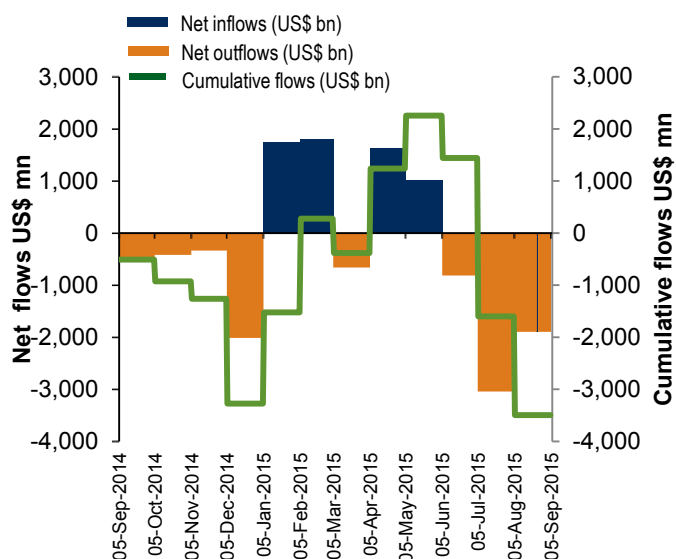


Source: BofA Merrill Lynch Global Research; Bloomberg

Flows

In our wider climate change thematic stock list, BofAML global equity trading showed - \$1,897mn of outflows for the August period. Cumulative net flows are now back - US\$3,495mn in the past 12 month period.

Chart 30: Climate change – BofAML client monthly net flows and cumulative flows



Source: Source: BofA Merrill Lynch, cumulative net flows with Sept 5 2014 as starting point

Table 22: Climate change BofAML client net trading flows (US\$ mn)

Last month ending Sep 4 2015	-1,897
Aug 4 2015	-3,040
Jul 4 2015	-815
Jun 4 2015	1,016
May 4 2015	1,625
Apr 4 2015	-661
Mar 4 2015	1,800
Feb 4 2015	1,751
Jan 4 2015	-2,012
Dec 4 2014	-336
Nov 4 2014	-417
Oct 4 2014	-510
Cumulative Net flows	-3,495
3 month avg.	-1,917

Source: BofA Merrill Lynch. Cumulative net flows with Sep 5 2014 as starting point. Average flows=average net flow between specified period

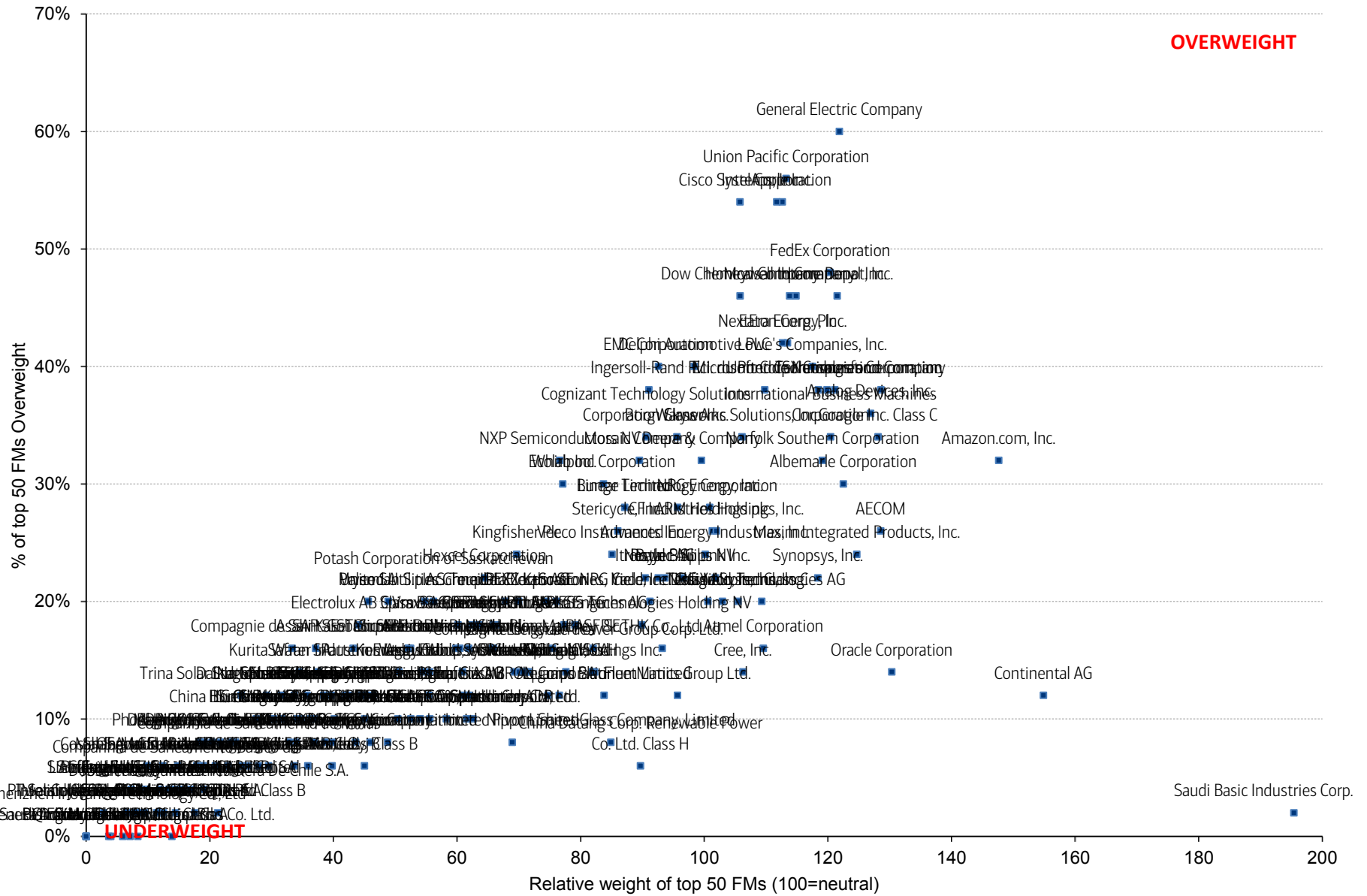
Table 23: Climate Change Theme and Sub-theme P/E valuation

Sub-Theme	Forward PE	
	Universe	Primer Picks
Advanced Biofuels	13.7x	27.5x
Agricultural Equipment	17.1x	NA
Aircraft Engines	16.3x	15.7x
Bus	11.2x	11.1x
Cleantech	13.2x	12.7x
Crop Science	14.9x	27.2x
Efficiency - Auto	11.9x	12.7x
Efficiency - Buildings	14.5x	14.2x
Efficiency - Inds. & Integ.	14.5x	15.1x
Farming	9.9x	8.7x
Fertilisers	11.0x	10.2x
IoT	15.1x	14.9x
IT	17.1x	17.6x
LEDs & Lighting	15.7x	14.1x
Lightweighting	13.5x	15.5x
Rail & Rail Equipment	12.6x	12.1x
Smart Grid & Storage	13.2x	12.0x
Water Infra. & Supply	14.4x	16.0x
Water Management	24.0x	31.0x
Water Treatment	15.5x	20.6x
Climate Change	14.1x	14.0x
MSCI AC World	15.2x	

Source: BofA Merrill Lynch Global Research. Forward P/E is based on consensus analyst earnings estimates for the next four quarters as compiled by Bloomberg. NA - Primer Picks includes stocks only with Buy and High/Medium exposure. Some sub-themes do not have Primer Picks companies within them.

Positioning of climate change stocks

Chart 31: Positioning and ownership – Climate Change



Source: BofAML Global Research

Positioning of climate change stocks

Table 24: Top Overweight and Underweight stocks in Extreme Weather & Climate Change

Top Overweight			Top Underweight		
	Weightings	% top holders overweight		Weightings	% top holders overweight
General Electric Company	122	60%	Shenzhen Inovance Technology Co., Ltd Class A	0	0%
Union Pacific Corporation	113	56%	Inox Wind Ltd.	0	0%
Apple Inc.	113	54%	Saudi Arabian Fertilizer Co.	0	0%
Intel Corporation	112	54%	Renesas Electronics Corporation	0	0%
Cisco Systems, Inc.	106	54%	BYD Co. Ltd. Class A	0	0%
FedEx Corporation	120	48%	Uralkali PJSC	4	0%
Home Depot, Inc.	122	46%	Siemens Limited	4	0%
Honeywell International Inc.	115	46%	Petronas Chemicals Group Bhd	6	0%
Monsanto Company	114	46%	Qingdao Haier Co., Ltd. Class A	7	0%
Dow Chemical Company	106	46%	Xinyi Solar Holdings Ltd.	8	0%
Eaton Corp. Plc	113	42%	Hong Kong & China Gas Co. Ltd.	14	0%
NextEra Energy, Inc.	113	42%	CPFL Energia S.A.	8	2%
Lowe's Companies, Inc.	117	40%	Inversiones Aguas Metropolitanas S.A.	9	2%
Delphi Automotive PLC	98	40%	Aguas Andinas S.A. Series A	12	2%
EMC Corporation	93	40%	Advantech Co., Ltd.	18	2%

Source: BofAML Global Research. BofAML Thematic stock lists are 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.

Style Cycle

According to the Style Cycle model, stocks that are highest ranked within the Climate Change theme constitute a mix of water infrastructure, renewables, and LEDs & lighting. Stocks that are lowest ranked are within water treatment, rail & rail equipment sub-theme.

Table 25: Climate Change & Extreme Weather - Style Cycle Top/Bottom 15 stocks

Top				Bottom			
Sedol	Name	Sub-theme	Recovery rank (100 = Top)	Sedol	Name	Sub-theme	Recovery rank (1 = Bottom)
210972	Bombardier Inc -CI B	Rail & Rail Equipment	100	620267	Advantech Co Ltd	Efficiency - Inds. & Integ./IoT/Smart Grid & Storage	1
B0YBZJ	Cia Saneamento Min	Water Infra. & Supply	100	5958	ARM Holdings	IoT/IT	1
B06YV4	Neste Oil	Advanced Biofuels	99	253676	Lowe's Companies Inc	Efficiency - Buildings	1
537974	Obrascon Huar Lain	Water Infra. & Supply	99	B798FW	Novozymes	Advanced Biofuels/Crop Science	1
B83KH8	Abengoa (B)	Cleantech	98	230422	Ecolab Inc	Water Treatment	2
B5L2Q4	Salim Ivomas	Farming	98	BKM4JZ	Google Inc	IoT/IT	3
201027	Agco Corp	Agricultural Equipment	97	243420	Home Depot Inc	Efficiency - Buildings	3
B19NKB	Home Retail Group	Efficiency - Buildings	97	B929F4	Asml Holding NV	IT	4
B297KM	China Railway Grou	Rail & Rail Equipment	96	291473	Union Pacific Corp	Rail & Rail Equipment	4
713083	Nexans	Efficiency - Inds. & Integ.	96	225701	Cognizant Tech Solutions	IT	5
B1YCHL	Sabesp Cia Saneame	Water Infra. & Supply	95	258817	Microsoft Corp	IoT	5
B1DN3X	China Bluechemical	Fertilisers	94	BXC8BS	Atlas Copco (A)	Efficiency - Inds. & Integ.	6
B2PFVH	China Railway Cons	Rail & Rail Equipment	94	712387	Nestle	Water Treatment	6
B05M8B	Lanxess	Water Treatment/Efficiency - Auto	94	204625	Apple Inc	IoT/IT	7
B1HMF2	First Solar Inc	Cleantech	93	251683	Linear Technology Corp	IT	7

Source: BofA Merrill Lynch Global Research. Top and bottom 15 stocks are based on a relative ranking within our Climate change & Extreme Weather theme. BofAML Thematic stock lists are 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.

Education - Stay in school

[Thematic Investing: Global Education Primer - Stay in school 01 November 2013](#)

One of the most pressing socio-economic challenges - We believe that education presents one of the most pressing socioeconomic challenges today, with 100m children never having attended school, tens of millions of dropouts, 800m illiterate adults, and major gaps in lifelong skills and training in both emerging and developed markets. We also believe that education for all (EFA) offers a once-in-a-generation investment opportunity to build healthy, prosperous and equitable societies, with every dollar invested in education generating US\$10-15 in economic returns (source: UN).

US\$4.5-5.1tn market today, US\$5.9-7.8tn by 2017E - The global education sector is worth US\$4.5-5.1tn today, encompassing K-12, post-secondary, corporate and government learning, e-learning, child care and language learning. Going forward, we see the fastest growth coming from e-learning and for-profit education, as well as from emerging markets' increasing focus and spend (notably China and Brazil). By 2017E, global education is on target to become a US\$5.9-7.8tn market (source: GSV Advisors, BofA Merrill Lynch estimates).

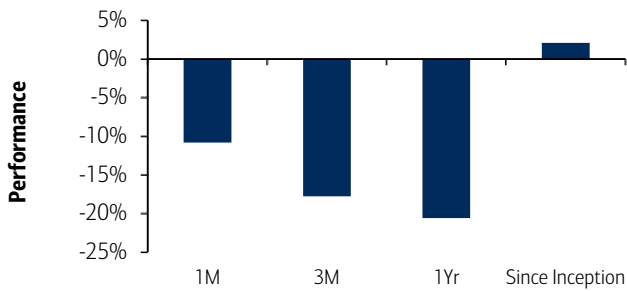
Strong growth drivers, EMs leading the way - Growth drivers include strong spending (c5% of global GDP), increasing enrolment rates (90% for primary completion, 71% for secondary enrolment), demographic opportunities (booming population of 5-17 year olds in EMs), more women in education, EMs upping their spend on education (disposable spending on education in China, India and Brazil is 10-13%), increasing global mobility, and a growing realisation of employment, earnings and economic development needs and opportunities (developed market graduates earn >US\$1m more than high school dropouts over their lifetime).

Structural shifts, for-profit/private & EdTech - We believe the high cost of education is placing a burden on cash-strapped governments and households, which means increasing dependence on private spending (32% of funding for higher education in the OECD, 62% in the US), a growing role for for-profit education companies, and an increasing focus on affordability and results. Further, we think the integration of ICT and the shift to EdTech (from print to digital and from classroom to online learning) means e-learning is set to become a US\$250bn+ market by 2017E, posing threats and opportunities for many incumbents.

Four major entry points for investors - We have mapped education across a number of sectors' value chains to highlight the diverse range of entry points available to those wishing to invest in the theme: 1) K-12, 2) post-secondary, 3) content and 4) EdTech.

Primer Picks performance

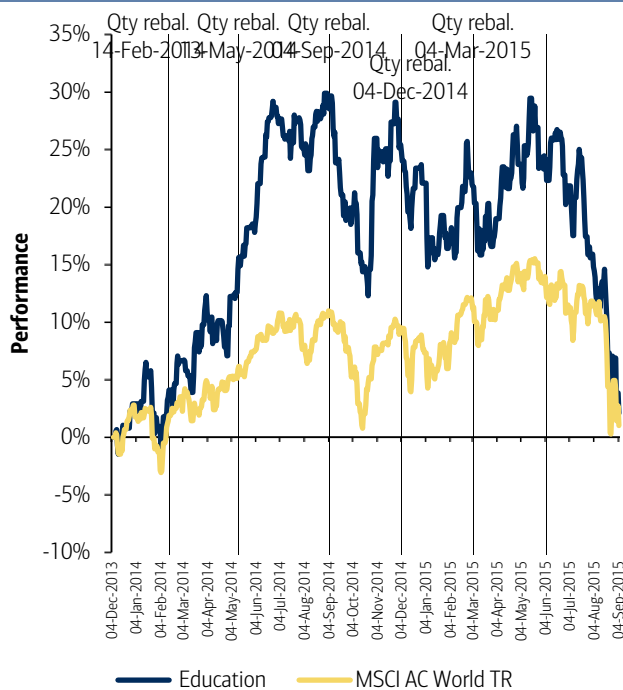
Chart 32: Education Primer Picks performance (through September 4 2015)



BofA Merrill Lynch Global Research. Inception is Dec 6 2013.

Education Primer Picks is up +2.07% since Dec 6, 2013. It is down -17.77% during the past 3 months. During the last month, Education Primer Picks sold off -10.82%, making it the 2nd worst performer during this period.

Chart 33: Education Primer Picks performance (through September 4 2015)



Source: BofA Merrill Lynch Global Research. See Appendix on Page 65 for list of Primer Picks rebalances. Qty rebal = Quarterly Primer Picks update.
Past performance should not and cannot be viewed as an indicator of future performance. A complete performance record is available upon request.

Table 26: Education Primer Picks beta relative to the market

Raw Beta	1.18
Adjusted Beta	1.12
Alpha	0.03
R^2 (Correlation^2)	0.55
Correlation	0.74

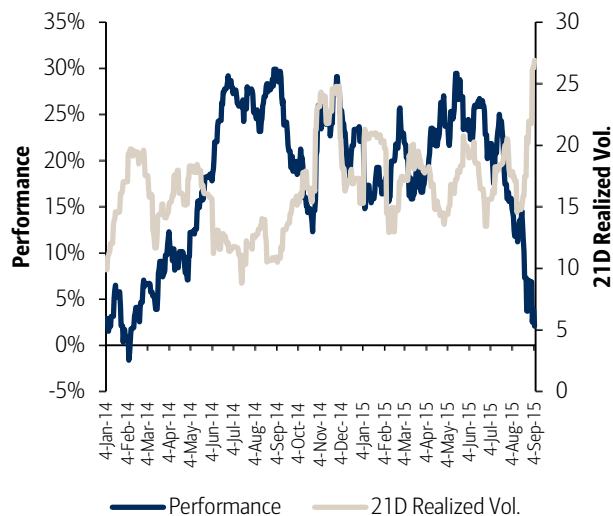
Source: BofA Merrill Lynch Global Research. Relative index=MSCI AC World TR (GDUEACWF Index). Weekly observations since inception, through September 4 2015

Chart 34: Relative performance of Education Primer Picks vs. MSCI AC World (through September 4 2015)



Source: BofA Merrill Lynch Global Research. Benchmark = MSCI AC World TR Gross (GDUEACWF). Past performance should not and cannot be viewed as an indicator of future performance

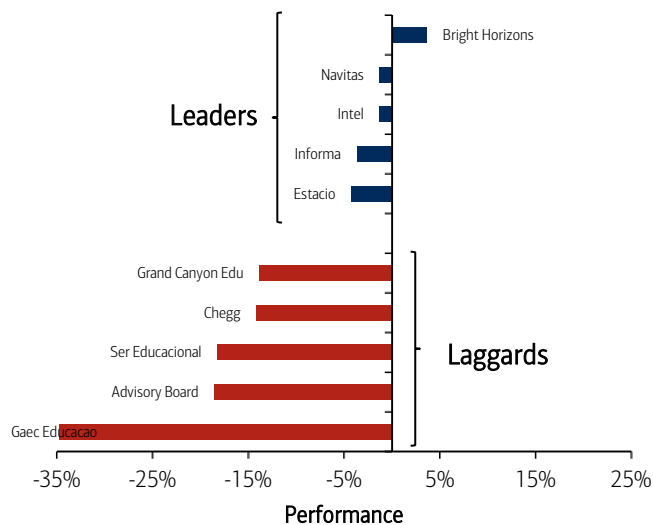
Chart 35: Education - Primer Picks performance and 21-day realized volatility



Source: BofA Merrill Lynch Global Research. 21D Realized Vol is the rolling 21-day (business day) realized volatility of the Primer Picks performance. Past performance should not and cannot be viewed as an indicator of future performance.

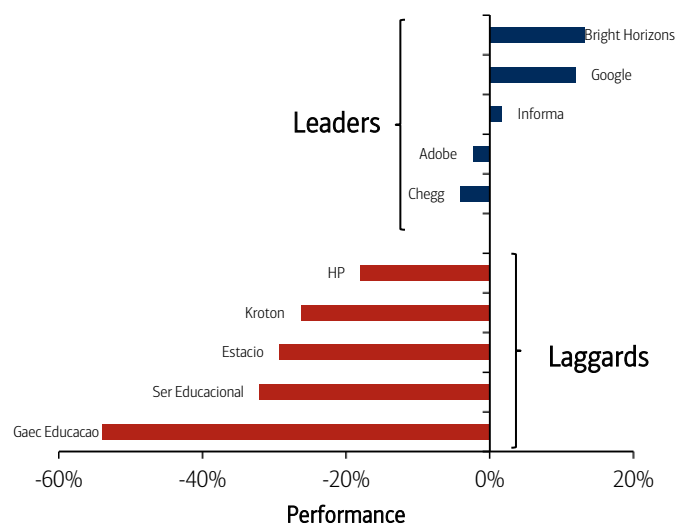
Leaders and laggards

Chart 36: 1M top/bottom total return performance of Education Primer Picks



Source: BofA Merrill Lynch Global Research; Bloomberg

Chart 37: 3M top/bottom total return performance of Education Primer Picks

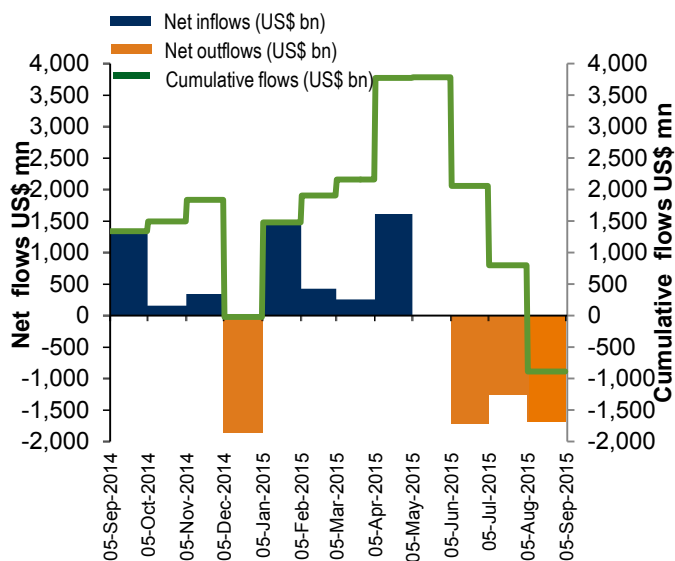


Source: BofA Merrill Lynch Global Research; Bloomberg

Flows

In our wider Education thematic stock list, BofAML global equity trading showed net outflows of -US\$1,686mn for the August period. This brings cumulative net flows into the red at -US\$1,557mn in the past 12 month period.

Chart 38: Education – BofAML client monthly net flows and cumulative flows



Source: Source: BofA Merrill Lynch, cumulative net flows with Sept 5 2014 as starting point

Table 27: Education BofAML client net trading flows (US\$ mn)

Last month ending Sep 4 2015	-1,686
Aug 4 2015	-1,261
Jul 4 2015	-1,725
Jun 4 2015	10
May 4 2015	1,613
Apr 4 2015	255
Mar 4 2015	427
Feb 4 2015	1,501
Jan 4 2015	-1,860
Dec 4 2014	342
Nov 4 2014	157
Oct 4 2014	1,338
Cumulative Net flows	-889
3 month avg.	-1,557

Source: BofA Merrill Lynch. Cumulative net flows with Sep 5 2014 as starting point. Average flows=average net flow between specified period

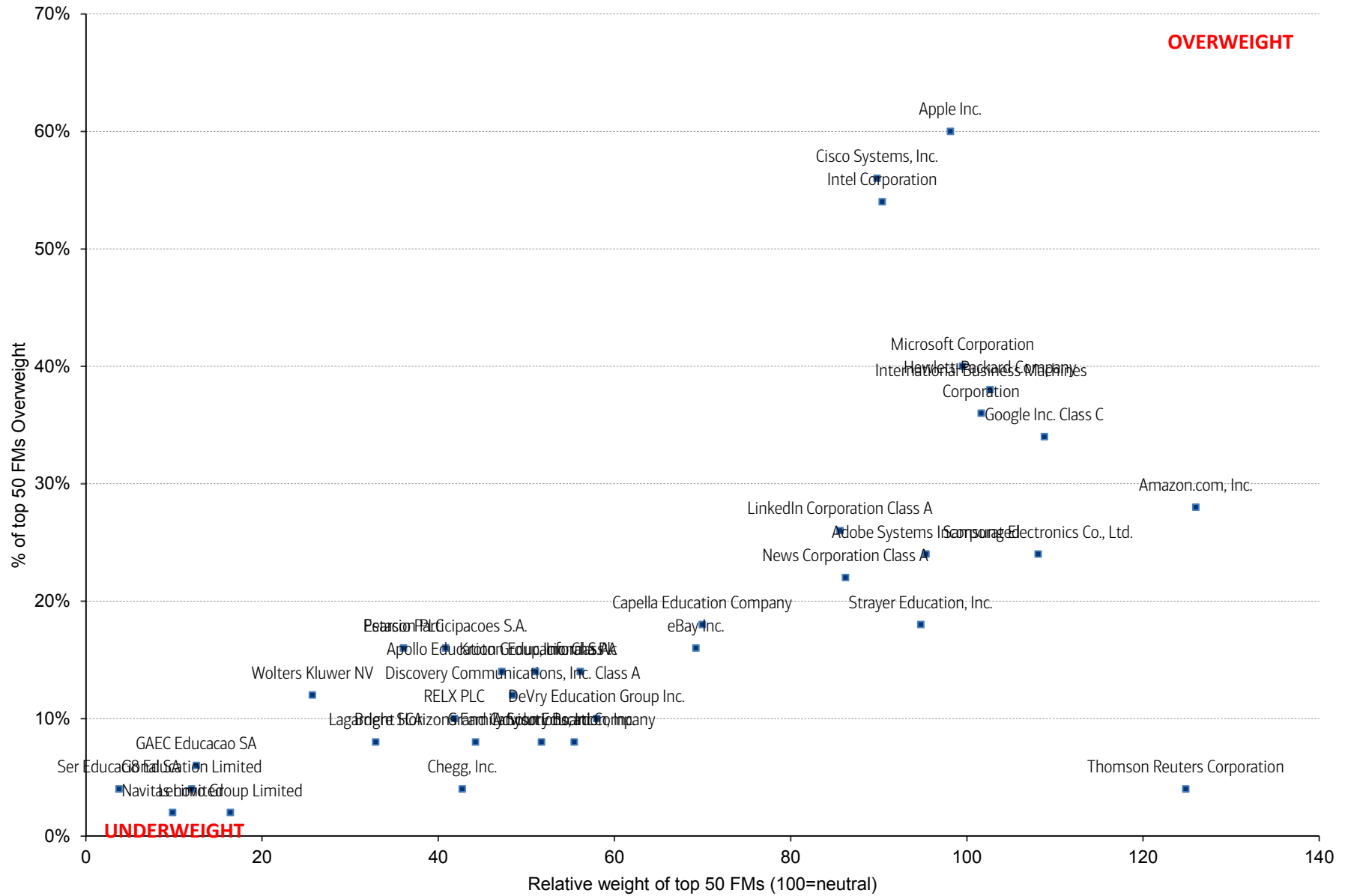
Table 28: Education Theme and Sub-theme P/E valuation

Sub-Theme	Forward PE	
	Universe	Primer Picks
EdTech	11.6x	17.8x
K-12 & childcare	11.1x	11.1x
Miscellaneous	16.7x	16.7x
Post-secondary, Colleges & Universities	9.4x	6.5x
Publishing & content	14.2x	13.9x
Education	13.5x	12.5x
MSCI AC World	15.2x	

Source: BofA Merrill Lynch Global Research. Forward P/E is based on consensus analyst earnings estimates for the next four quarters as compiled by Bloomberg. NA - Primer Picks includes stocks only with Buy and High/Medium exposure. Some sub-themes do not have Primer Picks companies within them.

Positioning of Education stocks

Chart 39: Positioning and ownership - Education



Source: BofAML Global Research

Positioning of Education stocks

Table 29: Top Overweight and Underweight stocks in Education

Top Overweight			Top Underweight		
	Weightings	% top holders overweight		Weightings	% top holders overweight
Apple Inc.	98	60%	Navitas Limited	10	2%
Cisco Systems, Inc.	90	56%	Lenovo Group Limited	16	2%
Intel Corporation	90	54%	Ser Educacional SA	4	4%
Microsoft Corporation	100	40%	G8 Education Limited	12	4%
Hewlett-Packard Company	103	38%	Chegg, Inc.	43	4%
International Business Machines Corporation	102	36%	Thomson Reuters Corporation	125	4%
Google Inc. Class C	109	34%	GAEC Educacao SA	13	6%
Amazon.com, Inc.	126	28%	Lagardere SCA	33	8%
LinkedIn Corporation Class A	86	26%	Bright Horizons Family Solutions, Inc.	44	8%
Adobe Systems Incorporated	95	24%	Grand Canyon Education, Inc.	52	8%

Source: BofAML Global Research. BofAML Thematic stock lists are 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.

Style Cycle

According to the Style Cycle model, stocks that should do relatively well within the Education theme are in post-secondary, colleges, & universities and publishing & content. Stocks that that should fare less well are within sub-themes relating to EdTech.

Table 30: Education - Style Cycle Top/Bottom 10 stocks

Top				Bottom			
Sedol	Name	Sub-theme	Recovery rank (100 = Top)	Sedol	Name	Sub-theme	Recovery rank (1 = Bottom)
454721	Lagardere	Publishing & content	100	204625	Apple Inc	EdTech	3
BG6N6K	Chegg Inc	EdTech	97	BKM4JZ	Google Inc	EdTech	6
285341	Strayer Education Inc	Post-secondary, Colleges & Universities	94	B2B0DG	RELX	Publishing & content	8
204369	Apollo Education Group Inc	Post-secondary, Colleges & Universities	89	200815	Adobe Systems Inc	EdTech	11
226760	Devry Education Group Inc	Post-secondary, Colleges & Universities	89	B3F1XM	Grand Canyon Education Inc	Post-secondary, Colleges & Universities	14
BJ2SGK	Care.Com Inc	K-12 & childcare/Miscellaneous/Post-secondary, Colleges & Universities/Publishing & content	86	258817	Microsoft Corp	EdTech	14
B23PBF	Estacio Participac	Post-secondary, Colleges & Universities	83	200597	Intl Business Machines Corp	EdTech	19
BFMXX8	Gaec Educacao S.A	Post-secondary, Colleges & Universities	81	229381	Ebay Inc	Publishing & content	22
BMJ6DW	Informa	Publishing & content	72	B0498J	Navitas Ltd	Miscellaneous	22
B3ZVCQ	Linkedin Corp	EdTech	72	67760	Pearson	Publishing & content	28

Source: BofA Merrill Lynch Global Research. Top and bottom 15 stocks are based on a relative ranking within our Education theme. BofAML Thematic stock lists are 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.

Energy efficiency – Efficient frontier

[Thematic Investing: The Efficient Frontier - Energy Efficiency Primer 04](#)
[September 2014](#)

Global energy crisis: the current path is unsustainable - Primary energy demand accounts for more than 7% of global GDP, and with demand set to grow by up to 40% by 2035E, the world needs US\$48-53tn in energy investments over the period (source: IEA). Today's share of fossil fuels in the global energy mix is the same as it was 25Y ago, leaving much of the world dependent on energy imports and associated geopolitical risks. The current energy path is also putting us on a CO2 emissions trajectory consistent with long-term global temperature increases of 2.0°C -4.5°C, making irreversible climate change a reality.

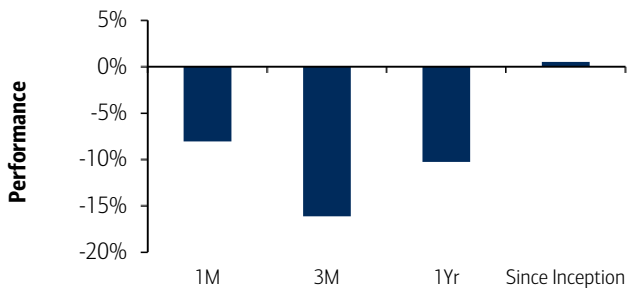
Doing more with less: from hidden fuel to world's #1 fuel - An energy-secure future for all will require a balanced energy mix, encompassing clean coal, gas, nuclear and renewables – as well as energy efficiency. Historical energy savings from efficiency have exceeded the output from any other single fuel source, and efficiency could halve the energy needed to power the world by 2035E (source: IEA). We believe that efficiency is the cheapest and easiest way to reduce energy demand and CO2 emissions, and that the combination of increasingly effective policies and high energy prices means that it will transition from hiding in plain sight to become the world's "first fuel."

Invest for the future: up to US\$14tn in investments (2035E) - Global investments in energy efficiency have ranged from US\$130bn-300bn/pa in recent years. By 2035E, we are anticipating US\$8-14tn in investments – or US\$550bn+ in annual spending – both to meet growth in demand and make the transition to a lower-carbon economy (source: IEA). We believe that there is significant "low hanging fruit" potential given that 80% of energy is lost along the value chain, every dollar spent means US\$2-4 in lifetime cost savings, and two-thirds of the economic potential to improve energy efficiency remains untapped (source: ABB, IEA). Investing in efficiency will also reduce mid- to long-term exposure to the risk of stranded assets vis-à-vis fossil fuels.

Eight major entry points for investors - We have mapped energy efficiency exposure across a number of sectors' value chains to highlight a diverse range of entry points for investors wishing to play the energy efficiency theme: (1) Autos; (2) Buildings; (3) Industrials; (4) Internet of Things (IoT); (5) ICT (incl. cloud, data centres, semis); (6) Lighting & LEDs; (7) Smart Grid & Energy Storage; and (8) Transport (incl. bus, plane, rail, shipping).

Primer Picks performance

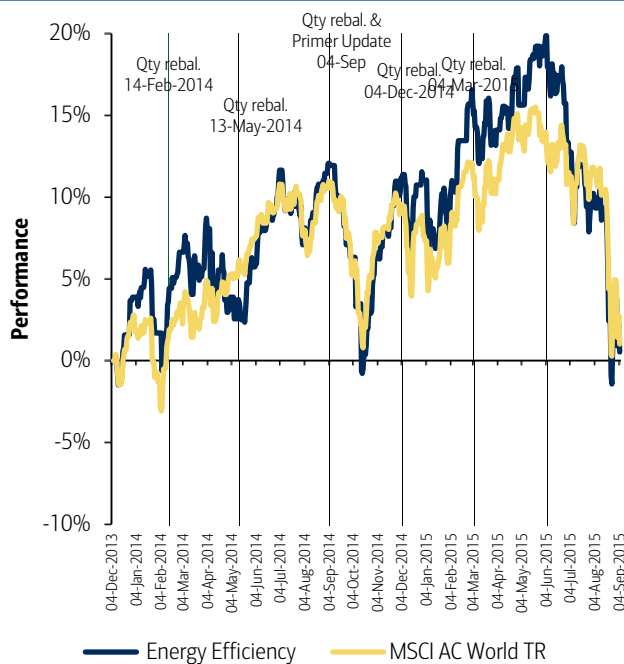
Chart 40: Energy Efficiency Primer Picks performance (through September 4 2015)



BofA Merrill Lynch Global Research. Inception is Dec 6 2013.

Energy Efficiency Primer Picks is flat at +0.52% since Dec 6, 2013. The theme was down -16.14% during the last 3 month period. During the past month, Energy Efficiency Primer Picks sold off by -8.06%, outperforming benchmark MSCI AC World (-9.27%) amidst the global sell-off.

Chart 41: Energy Efficiency Primer Picks performance (through September 4 2015)



Source: BofA Merrill Lynch Global Research. See Appendix on Page 65 for list of Primer Picks rebalances. Qty rebal = Quarterly Primer Picks update.

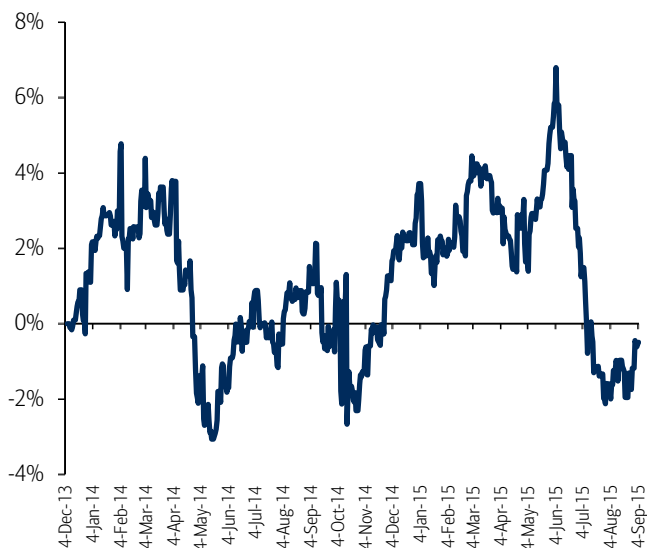
Past performance should not and cannot be viewed as an indicator of future performance. A complete performance record is available upon request.

Table 31: Energy Efficiency Primer Picks beta relative to the market

Raw Beta	1.08
Adjusted Beta	1.05
Alpha	0.00
R^2 (Correlation^2)	0.82
Correlation	0.91

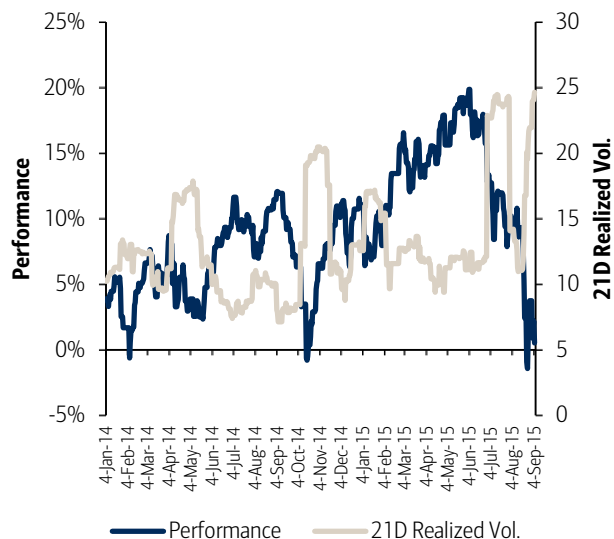
Source: BofA Merrill Lynch Global Research. Relative index=MSCI AC World TR (GDUEACWF Index). Weekly observations since inception, through September 4 2015

Chart 42: Relative performance of Energy Efficiency Primer Picks vs. MSCI AC World (through September 4 2015)



Source: BofA Merrill Lynch Global Research. Benchmark = MSCI AC World TR Gross (GDUEACWF). Past performance should not and cannot be viewed as an indicator of future performance

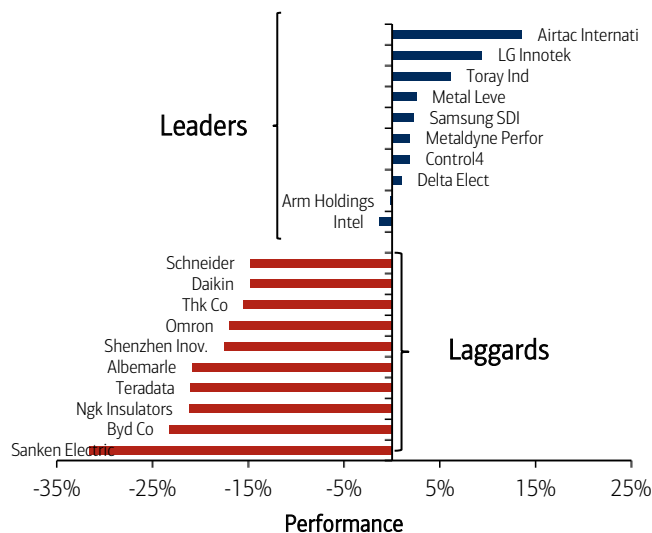
Chart 43: Energy Efficiency - Primer Picks performance and 21-day realized volatility



Source: BofA Merrill Lynch Global Research. 21D Realized Vol is the rolling 21-day (business day) realized volatility of the Primer Picks performance. Past performance should not and cannot be viewed as an indicator of future performance.

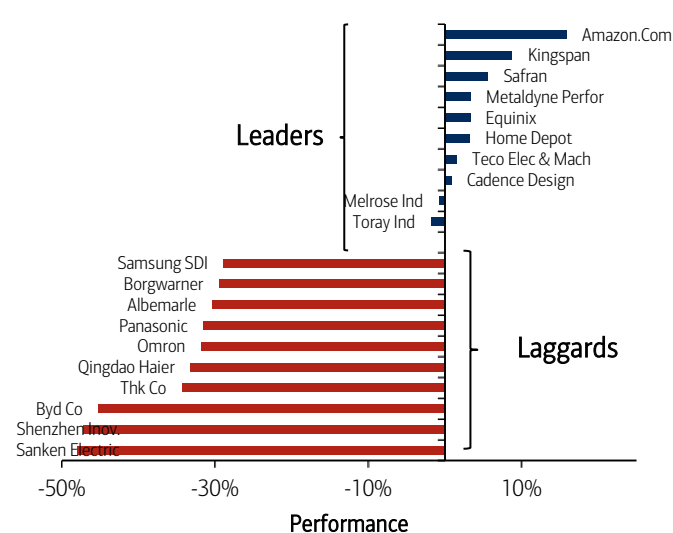
Leaders and laggards

Chart 44: 1M top/bottom total return performance of Energy Efficiency Primer Picks



Source: BofA Merrill Lynch Global Research; Bloomberg

Chart 45: 3M top/bottom total return performance of Energy Efficiency Primer Picks

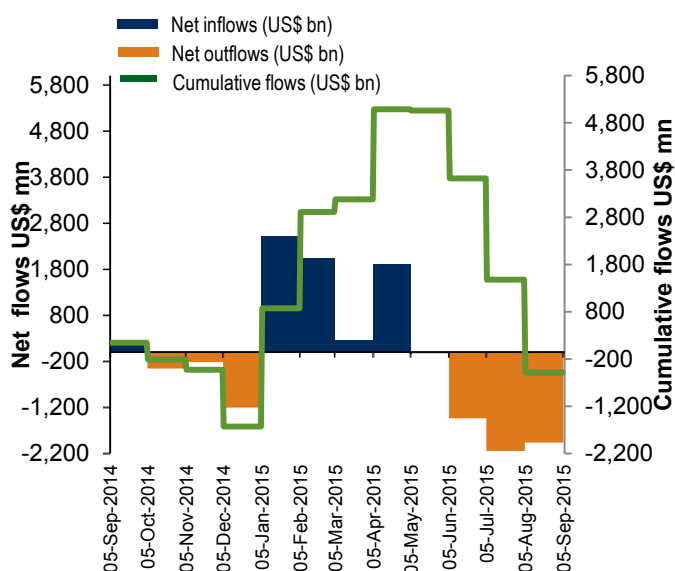


Source: BofA Merrill Lynch Global Research; Bloomberg

Flows

In our wider Energy Efficiency thematic stock list, BofAML global equity trading showed outflows of -US\$1,966mn for the August period. This brings cumulative net flow down into the red at -US\$1,849mn in the past 12 month period.

Chart 46: Energy efficiency – BofAML client monthly net flows and cumulative flows



Source: Source: BofA Merrill Lynch, cumulative net flows with Sept 5 2014 as starting point

Table 32: Energy Efficiency BofAML client net trading flows (US\$ mn)

Last month ending Sep 4 2015	-1,966
Aug 4 2015	-2,145
Jul 4 2015	-1,436
Jun 4 2015	-26
May 4 2015	1,907
Apr 4 2015	266
Mar 4 2015	2,040
Feb 4 2015	2,502
Jan 4 2015	-1,203
Dec 4 2014	-217
Nov 4 2014	-356
Oct 4 2014	147
Cumulative Net flows	-487
3 month avg.	-1,849

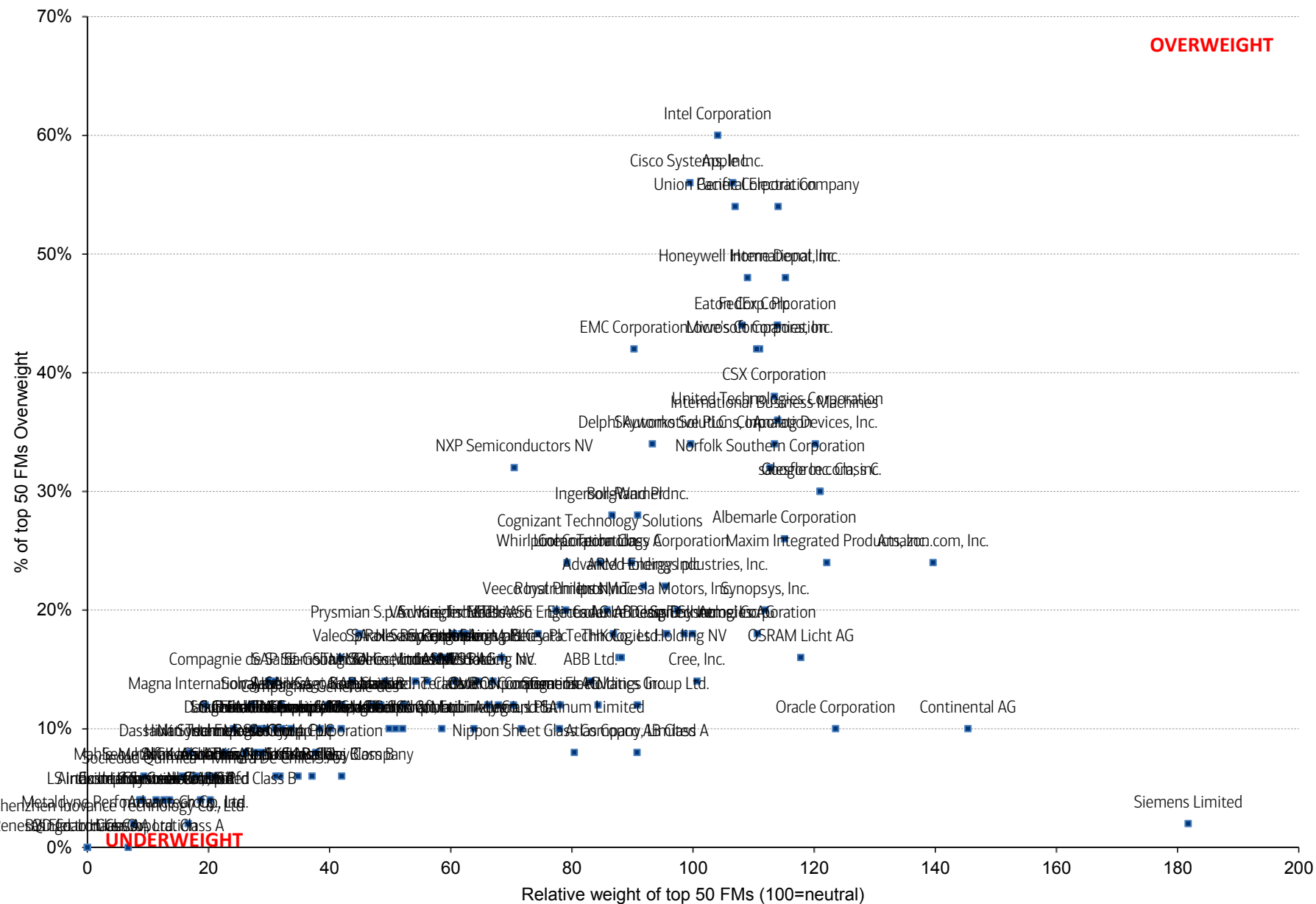
Source: BofA Merrill Lynch Cumulative net flows with Sep 5 2014 as starting point. Average flows=average net flow between specified period

Table 33: Energy Efficiency Theme and Sub-theme P/E valuation

Sub-Theme	Forward PE	
	Universe	Primer Picks
Aircraft Engines	16.3x	15.7x
Auto	11.9x	12.7x
Buildings	14.5x	14.2x
Bus	11.2x	11.1x
Industrials & Integrated	14.5x	15.1x
IoT	15.1x	14.9x
IT	17.1x	17.6x
LEDs & Lighting	15.7x	14.1x
Lightweighting	13.5x	15.5x
Rail & Rail Equipment	12.6x	12.1x
Smart Grid & Storage	13.2x	12.0x
Energy Efficiency	14.3x	14.1x
MSCI AC World	15.2x	

Source: BofA Merrill Lynch Global Research. Forward P/E is based on consensus analyst earnings estimates for the next four quarters as compiled by Bloomberg. NA - Primer Picks includes stocks only with Buy and High/Medium exposure. Some sub-themes do not have Primer Picks companies within them.

Source: BofAML Global Research



Positioning of energy efficiency stocks

Table 34: Top Overweight and Underweight stocks in Energy Efficiency

Top Overweight			Top Underweight		
	Weightings	% top holders overweight		Weightings	% top holders overweight
Intel Corporation	104	60%	Shenzhen Inovance Technology Co., Ltd Class A	0	0%
Apple Inc.	107	56%	Renesas Electronics Corporation	0	0%
Cisco Systems, Inc.	99	56%	BYD Co. Ltd. Class A	0	0%
General Electric Company	114	54%	Qingdao Haier Co., Ltd. Class A	7	0%
Union Pacific Corporation	107	54%	Metaldyne Performance Group, Inc.	8	2%
Home Depot, Inc.	115	48%	Advantech Co., Ltd.	17	2%
Honeywell International Inc.	109	48%	Siemens Limited	182	2%
FedEx Corporation	114	44%	Airtac International Group	9	4%
Eaton Corp. Plc	108	44%	LS Industrial Systems Co., Ltd.	9	4%
Lowe's Companies, Inc.	111	42%	Exide Industries Limited	11	4%
Microsoft Corporation	111	42%	Crompton Greaves Limited	13	4%
EMC Corporation	90	42%	LG Innotek Co., Ltd	14	4%
CSX Corporation	113	38%	Nexans SA	19	4%
United Technologies Corporation	114	36%	Sociedad Quimica Y Minera De Chile S.A	20	4%
Analog Devices, Inc.	120	34%	Alfa Laval AB	16	6%

Source: BofAML Global Research. BofAML Thematic stock lists are 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.

Style Cycle

According to the Style Cycle model, stocks that are highest ranked within the Energy Efficiency theme are mix including smart grid & storage, industrials, transportation and LEDs & lighting. Stocks that are lowest ranked are within sub-themes relating to IT and IoT.

Table 35: Energy Efficiency - Style Cycle Top/Bottom 15 stocks

Top				Bottom			
Sedol	Name	Sub-theme	Recovery rank (100 = Top)	Sedol	Name	Sub-theme	Recovery rank (1 = Bottom)
210972	Bombardier Inc -CI B	Rail & Rail Equipment	100	620267	Advantech Co Ltd	Industrials & Integrated/IoT/Smart Grid & Storage	1
B297KM	China Railway Grou	Rail & Rail Equipment	99	5958	ARM Holdings	IoT/IT	1
B2PFVH	China Railway Cons	Rail & Rail Equipment	98	253676	Lowe's Companies Inc	Buildings	2
B19NKB	Home Retail Group	Buildings	98	BKM4JZ	Google Inc	IoT/IT	3
B05M8B	Lanxess	Auto	97	243420	Home Depot Inc	Buildings	3
713083	Nexans	Industrials & Integrated	96	B929F4	Asml Holding NV	IT	4
677478	Sanken Electric Co	IT	95	291473	Union Pacific Corp	Rail & Rail Equipment	5
482110	Solvay	Auto/Lightweighting	95	204625	Apple Inc	IoT/IT	6
686913	Thk Co Ltd	Industrials & Integrated	94	225701	Cognizant Tech Solutions	IT	6
B1W4V6	Prysmian	Industrials & Integrated	93	BXC8BS	Atlas Copco (A)	Industrials & Integrated	7
685856	Sumitomo Chem Co	Smart Grid & Storage	93	B09M9D	Kone	Buildings	8
277112	Soc Quimica Y Minera De Chi	Smart Grid & Storage	92	251683	Linear Technology Corp	IT	8
664144	Nippon Sheet Glass	Buildings	90	258817	Microsoft Corp	IoT	8
B1VP0K	Rexel	Industrials & Integrated	90	BWFGQN	Spirax-Sarco Eng	Industrials & Integrated	8
687985	Teco Elec&Machine	Industrials & Integrated	90	202045	Honeywell International Inc	Auto/Buildings/Industrials & Integrated	11

Source: BofA Merrill Lynch Global Research. Top and bottom 15 stocks are based on a relative ranking within our Energy Efficiency theme. BofAML Thematic stock lists are 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.

Food security – Feed the world

[Thematic Investing: Feed the World: global food security primer 30 March 2015](#)

Food security: 805mn going hungry & GDP hit by 3%. Food security exists when all people have access to sufficient, safe and nutritious food. While global per capita calorie supply has improved to reach 2,868kcal per day - 805mn people are chronically undernourished, and hunger and under-nutrition reduces global GDP by c2-3% (cUS\$2tn). The global population is expected to grow from 7.2bn today to 9.6bn by 2050E and 11-12bn by 2100E. The combination of rising incomes and changing diets mean that by 2050, the world needs to produce 70% more food globally.

9.6bn to feed by 2050E: 70% more food production needed. In our view, all potential food security solutions should be considered given that we may have already arrived at peak production for many food categories. Global challenges include: declining yields (1.4% pa today vs. 3.2% in 1960), limited land remaining to be cultivated (1.4bn ha), the protein challenge (+2% meat demand to 2030E), food waste (30% of edible food), peak water (Ag is 70% of water use), and extreme weather and climate change (25% of wheat yields at risk), among others.

\$2.3tn food & Ag market: \$220bn in annual investments. The food & Ag sector accounts for 3% of global GDP, making the sector worth US\$2.3tn. Annual investments in food security & Ag are estimated at US\$220bn with 75% coming from the private sector. Every dollar invested in Ag R&D creates US\$20 in economic activity, with Ag-related growth 2-4x more effective at reducing poverty than other sectors. That said, annual investments from 2015-30E would need to reach US\$480bn to realise “zero hunger”.

We cannot currently show performance for our Food Security Primer Picks list because it was launched in March 2015, and has been in existence for less than one year.

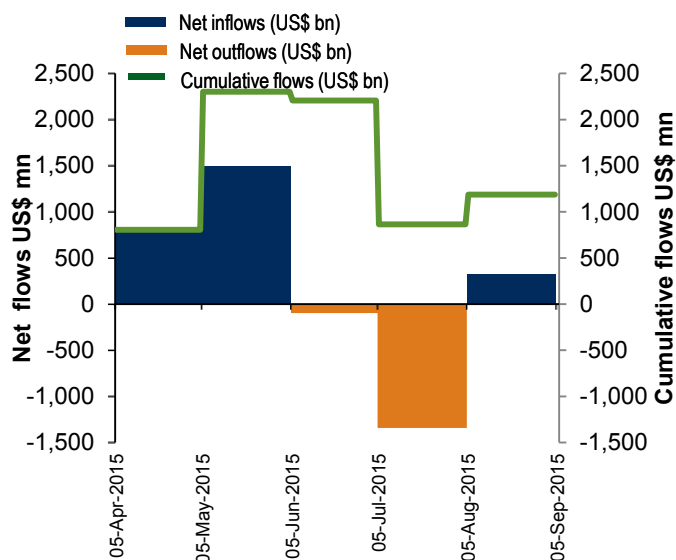
Fast growth areas: protein, inputs, BioAg, tech, EMs, H&W. We believe that positive industry fundamentals support long-term growth beyond the current down-cycle. Short-term, we anticipate fast growth for areas like: inputs, protein plays, BioAg, precision Ag and the Internet of Things (IoT), EMs including Brazil and China, and healthy eating/wellness.

Eight major entry points for investors. We highlight eight entry points for investors wishing to play the food security theme: (1) Agricultural Equipment; (2) Agricultural Inputs; (3) Agribusiness, Protein & Dairy; (4) Farming; (5) Food Safety & Animal Health; (6) Water; (7) Healthy Eating; and (8) Reducing Food Waste.

Flows

In our wider Food Security thematic stock list, BofAML global equity trading showed new inflows of +US\$323mn for the August period, only 1 of 3 themes in the green this month. Cumulative net flow is now the 2nd highest at +US\$1,186mn after 5 months of observations.

Chart 48: Food Security – BofAML client monthly net flows and cumulative flows



Source: Source: BofA Merrill Lynch, cumulative net flows with Apr 5 2015 as starting point

Table 36: Food Security BofAML client net trading flows (US\$ mn)

Last month ending Sep 4 2015	323
Aug 4 2015	-1,342
Jul 4 2015	-97
Jun 4 2015	1,497
May 4 2015	805
Cumulative Net flows	1,186
3 month avg.	-372

Source: BofA Merrill Lynch Cumulative net flows with April 5 2015 as starting point. Average flows=average net flow between specified period

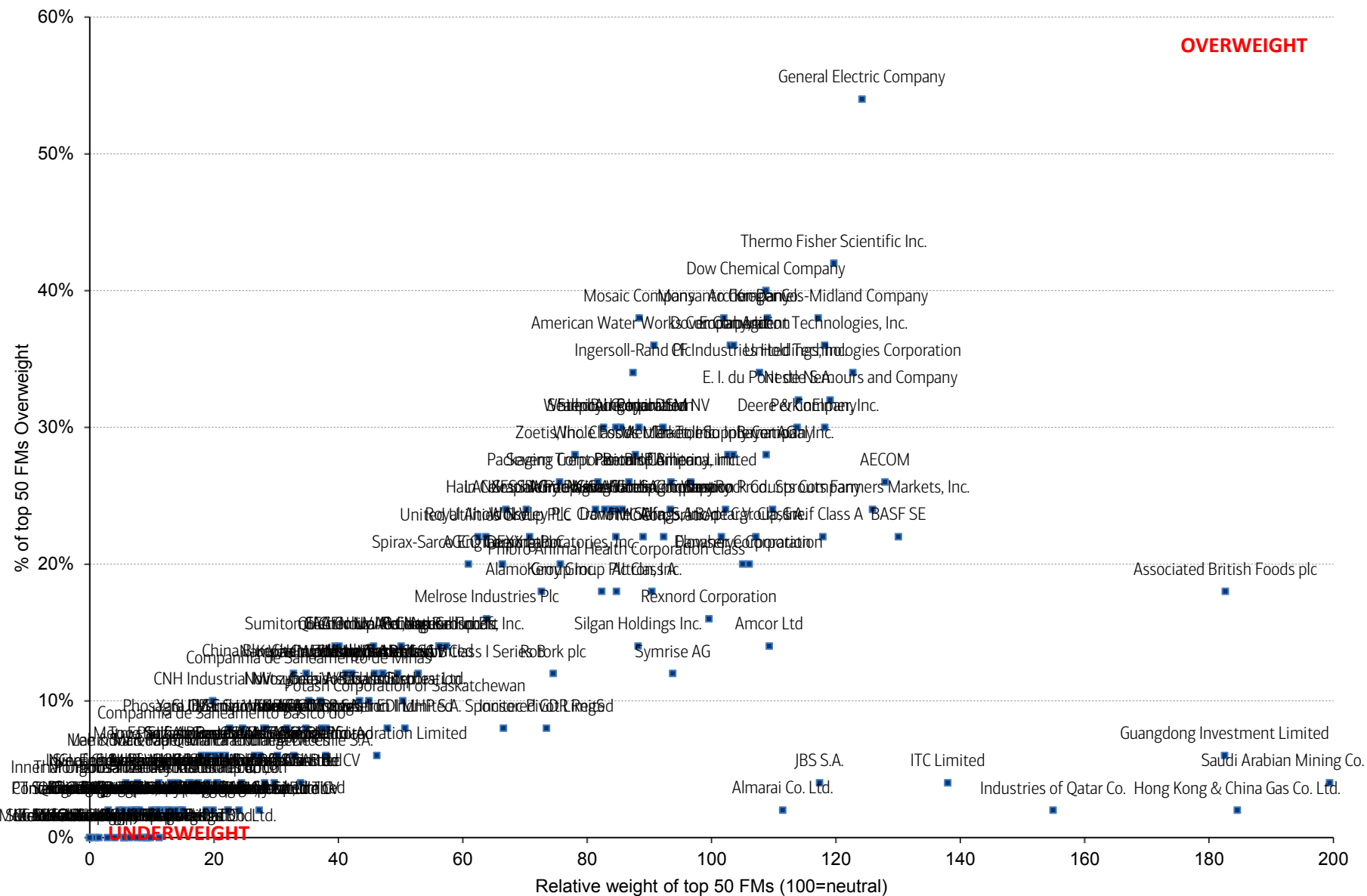
Table 37: Food Security Theme and Sub-theme P/E valuation

Sub-Theme	Forward PE	
	Universe	Primer Picks
Farming	9.7x	NA
Agribusiness, Protein & Dairy	12.8x	12.4x
Agriculture & Food Equipment	13.7x	13.3x
Agriculture Inputs	12.5x	10.9x
Food Safety & Animal Health	20.1x	21.9x
Healthy Eating	19.3x	19.3x
Reducing Food Waste	14.5x	14.5x
Water	14.4x	15.3x
Food Security	14.2x	14.9x
MSCI AC World	15.2x	

Source: BofA Merrill Lynch Global Research. Forward P/E is based on consensus analyst earnings estimates for the next four quarters as compiled by Bloomberg. NA - Primer Picks includes stocks only with Buy and High/Medium exposure. Some sub-themes do not have Primer Picks companies within them.

Positioning of food security stocks

Chart 49: Positioning and ownership - Food Security



Positioning of food security stocks

Table 38: Top Overweight and Underweight stocks in Food Security

Top Overweight			Top Underweight		
	Weightings	% top holders overweight		Weightings	% top holders overweight
General Electric Company	124	54%	Metalfrio Solutions S.A.	0	0%
Thermo Fisher Scientific Inc.	120	42%	Bumitama Agri Ltd.	1	0%
Dow Chemical Company	109	40%	Roka Bioscience Inc	1	0%
Archer-Daniels-Midland Company	117	38%	SIIC Environment Holdings Ltd.	3	0%
Kroger Co.	109	38%	Uralkali PJSC	4	0%
Monsanto Company	102	38%	PT Astra Agro Lestari Tbk	5	0%
Mosaic Company	88	38%	CIMIC Group Limited	6	0%
Agilent Technologies, Inc.	118	36%	Wilmar International Limited	6	0%
Ecolab Inc.	104	36%	Felda Global Ventures Holdings Bhd.	8	0%
Dover Corporation	103	36%	Kuala Lumpur Kepong Bhd.	8	0%
American Water Works Company, Inc.	91	36%	Charoen Pokphand Foods Public Co. Ltd.	9	0%
United Technologies Corporation	123	34%	Golden Agri-Resources LTD	9	0%
CF Industries Holdings, Inc.	108	34%	IOI Corp. Bhd.	10	0%
Ingersoll-Rand Plc	87	34%	Kinden Corporation	11	0%
E. I. du Pont de Nemours and Company	119	32%	Aguas Andinas S.A. Series A	15	2%

Source: BofAML Global Research. BofAML Thematic stock lists are 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.

Style Cycle

According to the Style Cycle model, stocks that are highest ranked within the Food Security theme are in Water. Stocks that are lowest ranked are within sub-themes relating to agricultural inputs and healthy eating.

Table 39: Food Security - Style Cycle Top/Bottom 15 stocks

Top				Bottom			
Sedol	Name	Sub-theme	Recovery rank (100 = Top)	Sedol	Name	Sub-theme	Recovery rank (1 = Bottom)
B0YBZJ	Cia Saneamento Min	Water	100	B0JGGP	ITC	Agribusiness, Protein & Dairy	1
630270	Ebara Corp	Reducing Food Waste/Water	99	B798FW	Novozymes	Agriculture Inputs	1
B1FN8X	Outotec	Water	98	230422	Ecolab Inc	Food Safety & Animal Health/Water	2
B3PZ2V	China Modern Dairy	Agribusiness, Protein & Dairy	97	B137VV	Almarai Co	Agribusiness, Protein & Dairy	3
B27WY8	Duratex Sa	Water	97	290033	Tractor Supply Co	Agriculture Inputs	3
201027	Agco Corp	Agriculture & Food Equipment	96	712387	Nestle	Water	4
B05M8B	Lanxess	Water	96	67312	Associated British Foods	Agriculture Inputs	5
646557	Downer Edi Ltd	Water	95	212624	Mettler-Toledo Intl Inc	Food Safety & Animal Health	5
B1DN3X	China Bluechemical	Agriculture Inputs	94	296389	Whole Foods Market Inc	Healthy Eating	6
B1YCHL	Sabesp Cia Saneame	Water	94	286082	Stericycle Inc	Water	7
B0MT4R	Empresas Ica Sab	Water	93	B95WG1	Zoetis Inc	Food Safety & Animal Health	7
BX17Q1	Leighton Holdings	Water	92	245920	Idexx Labs Inc	Food Safety & Animal Health/Water	8
691487	Ugl Limited	Water	92	645884	I/Mongolia Yili In	Agribusiness, Protein & Dairy	9
629467	Doosan Heavy Ind	Water	91	BWFGQN	Spirax-Sarco Eng	Water	9
B2QYBH	Mhp S.A.	Agribusiness, Protein & Dairy	90	BCGCR7	Sprouts Farmers Market	Healthy Eating	9

Source: BofA Merrill Lynch Global Research. Top and bottom 15 stocks are based on a relative ranking within our Food Security theme. BofAML Thematic stock lists are 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.

Millennials – Generation Next

[Thematic Investing: Generation Next - Millennials Primer 22 May 2015](#)

Millennials: #1 global and US demographic. We define Millennials (aka “Generation Y”) as the demographic cohort born post-1980 (aged 18-34Y). Globally, there are c.2bn Millennials, with 86% living in EMs. In the US, Millennials (c.75mn) are set to overtake the Baby Boomers in 2015 as the largest living generation. While the US Boomer demographic is ageing and shrinking in size (cf. our [Silver Dollar](#) report), the Millennials generation continues to grow, driven by immigration, peaking in the US only in 2036E at 81.1mn.

#1 income & wealth: \$8.3tn by 2025E in the US alone. While the Boomers have accumulated wealth and currently lead consumer spending, Millennials are emerging as the new dominant source of both. They are the #1 workforce demographic in the US and account for \$1.3tn in direct annual consumer spending, which will grow as their annual income reaches \$8.3tn by 2025E in the US alone. They are also set to benefit from the “Great Transfer”, the c\$40tn+ of assets that will shift from US Boomers to Millennials over the next generation. Globally, Millennials will account for 75% of the workforce by 2025E, with women Millennials becoming an increasingly important economic force.

Disruption: autos, dining, finance, media, tech and travel. Like every generation, Millennials display generalised and unique traits, clichés, and contradictions that are key to understanding their role as a force for [creative disruption](#). In our view, these include ‘adventure’, ‘collaboration’, ‘connected’, ‘digital’, ‘diverse’, ‘educated’, ‘international’, ‘liberal’, ‘me’, ‘now’, ‘sharing’, ‘sceptical’, ‘social’, ‘special’, and ‘values’. Areas poised for disruption in the next three to five years include accommodation, autos, eating out, finance, media, technology, and travel.

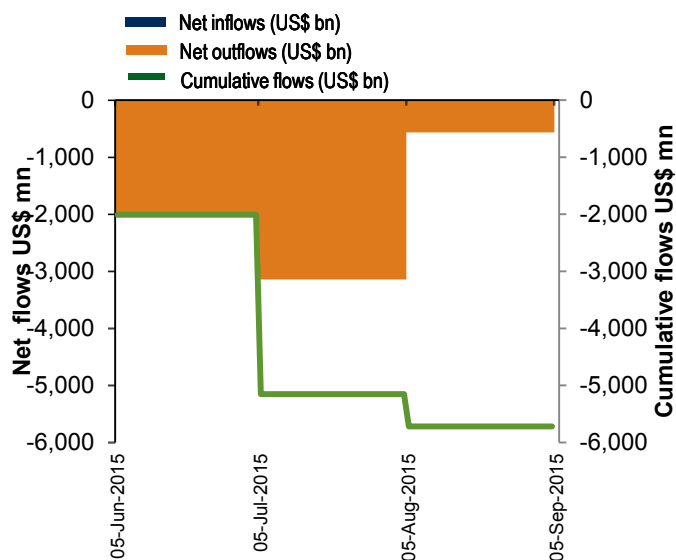
Eight major entry points for investors. We highlight eight entry points for investors wishing to play the Millennials theme: (1) Technology; (2) Consumers; (3) Drinking, Dining and Health & Wellness; (4) Households; (5) Financials; (6) Education; (7) Women; and (8) Sharing Economy.

BofAML Global Millennials Stock List & Primer Picks. We present a list of over 250 global stocks covered by BofAML that have exposure to the Millennials-related theme. Our Buy-rated stocks with material exposure to the theme are detailed in an accompanying Primer Picks document, as is our full stock list.

Flows

In our wider Millennials thematic stock list, BofAML global equity trading showed outflows of -US\$566mn for the August period. Millennials has experienced outflows every month since the inception period of June, which brings cumulative net flows to -US\$1,906mn.

Chart 50: Millennials – BofAML client monthly net flows and cumulative flows



Source: Source: BofA Merrill Lynch, cumulative net flows with June 5 2015 as starting point

Table 40: Millennials BofAML client net trading flows (US\$ mn)

Last month ending Sep 4 2015	-566
Aug 4 2015	-3,142
Jul 4 2015	-2,010
Cumulative Net flows	-5,718
3 month avg.	-1,906

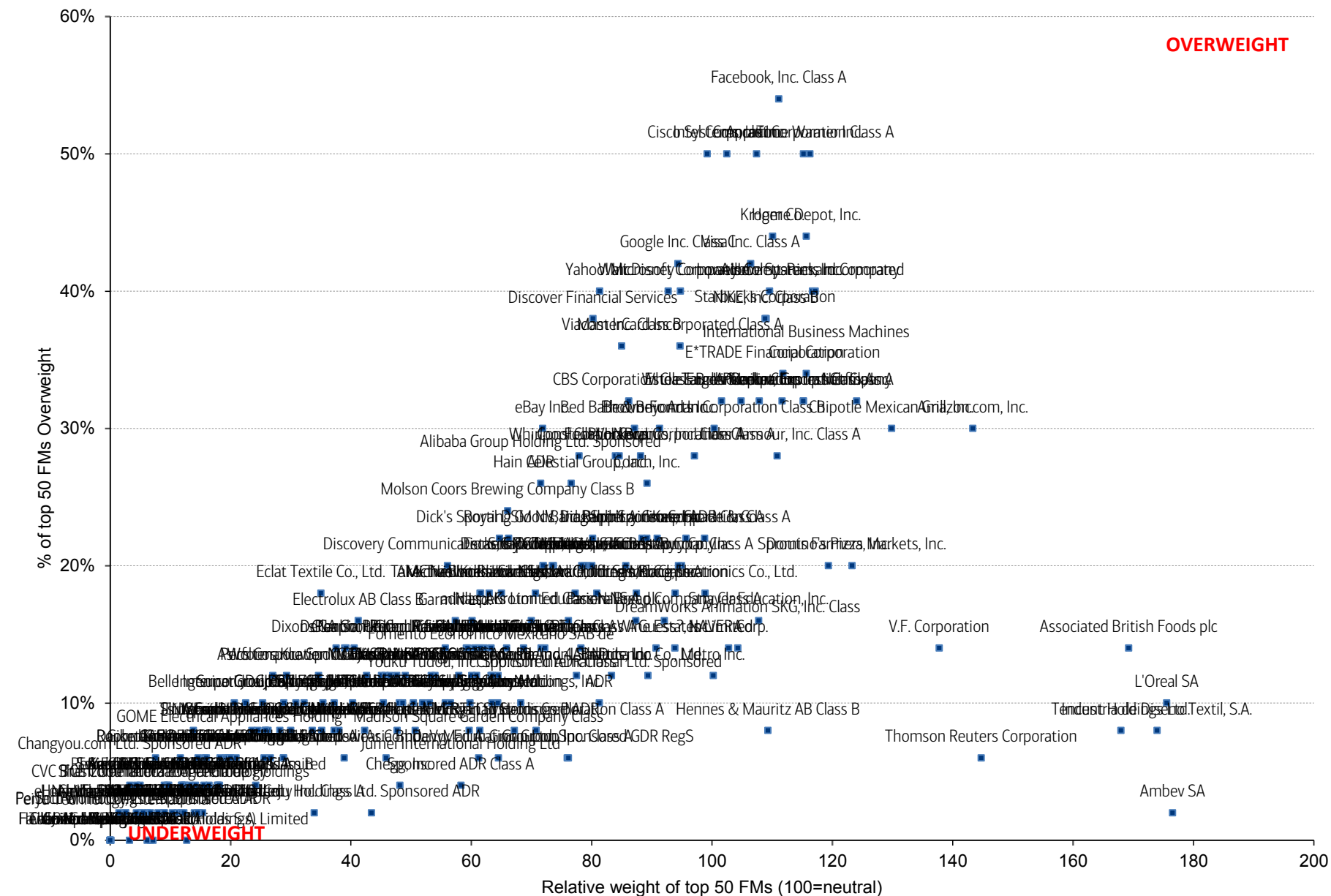
Source: BofA Merrill Lynch Cumulative net flows with June 5 2015 as starting point. Average flows=average net flow between specified period

Table 41: Millennials Theme and Sub-theme P/E valuation

Sub-Theme	Forward PE	
	Universe	Primer Picks
Tech	17.8x	16.1x
Education	13.5x	12.5x
Consumer	15.5x	15.9x
Women	16.0x	15.6x
Drinking, Dining & Health & Wellness	18.7x	20.8x
Household	17.9x	18.8x
Financials	17.4x	21.6x
Millennials	16.4x	17.1x
MSCI AC World	15.2x	

Source: BofA Merrill Lynch Global Research. Forward P/E is based on consensus analyst earnings estimates for the next four quarters as compiled by Bloomberg. NA - Primer Picks includes stocks only with Buy and High/Medium exposure. Some sub-themes do not have Primer Picks companies within them.

Source: BofAML Global Research



Positioning of millennials stocks

Table 42: Top Overweight and Underweight stocks in Millennials

Top Overweight			Top Underweight		
	Weightings	% top holders overweight		Weightings	% top holders overweight
Facebook, Inc. Class A	111	54%	Fawaz Abdulaziz AlHokair Co.	0	0%
Time Warner Inc.	116	50%	Cabbeen Fashion Limited	0	0%
Comcast Corporation Class A	115	50%	United Electronics Co.	0	0%
Apple Inc.	107	50%	Guinness Nigeria PLC	0	0%
Intel Corporation	102	50%	Heilan Home Co., Ltd. Class A	0	0%
Cisco Systems, Inc.	99	50%	Jarir Marketing Co.	0	0%
Home Depot, Inc.	116	44%	The9 Ltd. Sponsored ADR	0	0%
Kroger Co.	110	44%	Feiyu Technology International Company Ltd.	0	0%
Visa Inc. Class A	106	42%	Worldline SA	3	0%
Google Inc. Class C	94	42%	REA Group Ltd	6	0%
Hewlett-Packard Company	117	40%	Compania Cervecerias Unidas S.A.	7	0%
Adobe Systems Incorporated	117	40%	SouFun Holdings Ltd Sponsored ADR Class A	7	0%
Lowe's Companies, Inc.	110	40%	Yue Yuen Industrial (Holdings) Limited	13	0%
Microsoft Corporation	95	40%	ANTA Sports Products Ltd.	15	2%
Walt Disney Company	93	40%	Ambev SA	177	2%

Source: BofAML Global Research. BofAML Thematic stock lists are 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.

Style Cycle

According to the Style Cycle model, stocks that are highest ranked within the Food Security theme are in Water. Stocks that are lowest ranked are within sub-themes relating to agricultural inputs and healthy eating.

Table 43: Millennials - Style Cycle Top/Bottom 15 stocks

Top				Bottom			
Sedol	Name	Sub-theme	Recovery rank (100 = Top)	Sedol	Name	Sub-theme	Recovery rank (1 = Bottom)
454721	Lagardere	Education	100	B0X7DZ	Chipotle Mexican Grill Inc	Drinking, Dining & Health & Wellness	1
BNGCT2	Performance Sports Group Ltd	Drinking, Dining & Health & Wellness	100	B12155	Mastercard Inc	Financials	1
B65R7B	Changyou.Com Ltd	Tech	99	284225	Starbucks Corp	Drinking, Dining & Health & Wellness	1
B19NKB	Home Retail Group	Consumer	99	BP9DL9	Inditex	Consumer	2
B03J9L	Airasia Bhd	Consumer	98	BMMV2K	Tencent Hldgs Ltd	Tech	2
216224	Cablevision Sys Corp -Cl A	Tech	98	568743	Hennes & Mauritz	Consumer	3
BLLJ4F	Leju Holdings Ltd -Adr	Household	98	682036	Mr Price Group	Consumer	3
B2NRDY	Cebu Air Inc	Consumer	97	656039	Naver Corp	Tech	3
651053	Htc Corporation	Tech	97	631458	Heilan Home	Consumer	4
B01Z8S	Gome Electrical Ap	Consumer	96	B2PZN0	Visa Inc	Financials	4
238710	Guess Inc	Consumer	96	BG7ZWY	Ambev Sa	Drinking, Dining & Health & Wellness	5
B0HZL9	DSM NV	Drinking, Dining & Health & Wellness	96	B9M2WX	L Brands Inc	Consumer/Women	5
B03BLR	Dreamworks Animation Inc	Tech	95	662269	Naspers	Tech	5
774212	Norwegian Air Shut	Consumer	95	264014	Nike Inc	Drinking, Dining & Health & Wellness	5
212211	Take-Two Interactive Sftwr	Tech	94	619857	Rea Group Limited	Household	5

Source: BofA Merrill Lynch Global Research. Top and bottom 15 stocks are based on a relative ranking within our Millennials theme. BofAML Thematic stock lists are 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.

Longevity – Aging demographic

[Thematic Investing: The Silver Dollar – longevity revolution primer 06 June 2014](#)

Global ageing: the greatest transformation of our time - Ageing populations are becoming a virtually universal phenomenon, and the number of older persons (60+) is expected to more than double from 841mn in 2013 to 2bn+ by 2050 (Source: UN). People aged 65+ will outnumber children under 5 for the first time in human history in 2047 (Source: UN), and falling birth rates mean that some countries are heading towards a potentially catastrophic decline in population. We believe that all aspects of society and the economy need to be viewed through the lens of this demographic transformation.

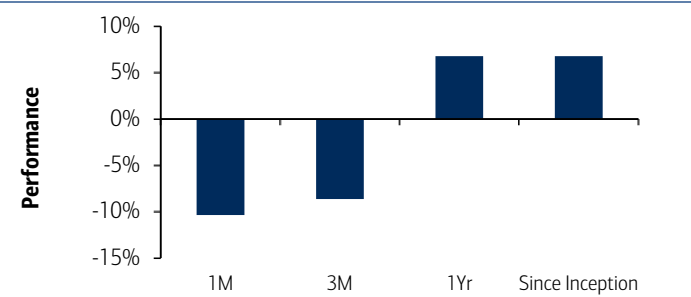
Longevity risk: highly underestimated - Longevity risk will be one of the most significant challenges facing retirement systems over the next 50Y, with global annuity and pension-related exposure estimated to be as high as US\$15-25tn. Many countries could be facing additional costs of up to 50% of 2010 GDP by 2050E (Source: IMF).

Look for the silver lining: US\$15tn+ opportunity (2020E) - The longevity economy is becoming an increasingly powerful force, and the spending power of 60+ consumers is expected to reach US\$15tn by 2020E (Source: Euromonitor). The US longevity sector alone is currently estimated at US\$7.1tn, making it the world's #3 economy. This section of the economy is expected to account for over 50% of US and Japanese GDP by the 2030s (Source: Oxford Economics, NLIRI). However, there are pressing challenges concerning wealth inequality, those on low incomes, women and the EM elderly.

Cradle to grave: three main entry points for investors - We have mapped efforts to tackle the global dynamics of longevity to highlight three entry points for investors wishing to play the "silver dollar" theme: 1) Pharma & Healthcare (incl. tackling age-related diseases and conditions such as cancer, cardiovascular disease, Alzheimer's, diabetes, osteoporosis, as well as medical devices, hearing aids, dental and vision care, and incontinence); 2) Financials (incl. insurance, asset & wealth management); and 3) Consumer (incl. senior living, care, managed care, healthcare REITs, aging in place, death care, pharmacies & drug stores, anti-ageing, travel & leisure, retail, VMS, and technology).

Primer Picks performance

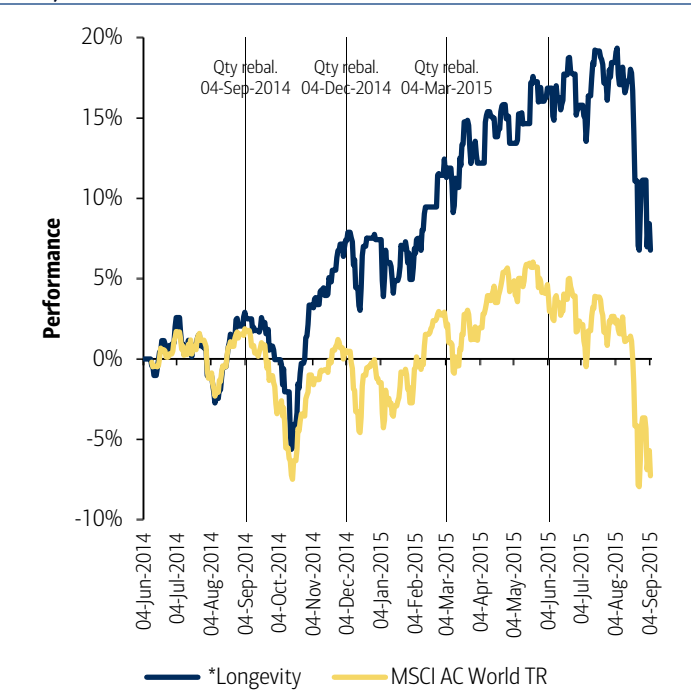
Chart 52: Longevity Primer Picks performance (through September 4 2015)



BofA Merrill Lynch Global Research. Inception is Jun 10 2014.

Longevity Primer Picks is up +6.77% since June 6, 2014. The theme declined by -8.63% in the last 3 months, still outperforming benchmark MSCI (-10.66%) amidst the global sell-off. During the last month, Longevity Primer Picks sold off by -10.35%.

Chart 53: Longevity Primer Picks performance (through September 4 2015)



Source: BofA Merrill Lynch Global Research. See Appendix on Page 65 for list of Primer Picks rebalances. Qty rebal = Quarterly Primer Picks update.

Past performance should not and cannot be viewed as an indicator of future performance. A complete performance record is available upon request.

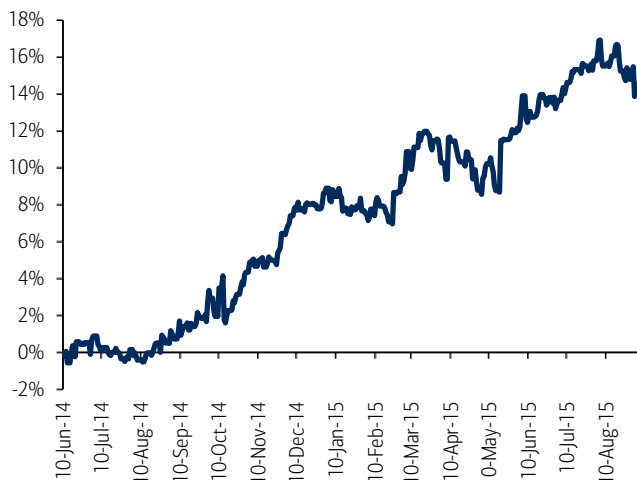
*Longevity inception date = 06-June-2014

Table 44: Longevity Primer Picks beta relative to the market

Raw Beta	1.01
Adjusted Beta	1.00
Alpha	0.15
R^2 (Correlation^2)	0.80
Correlation	0.89

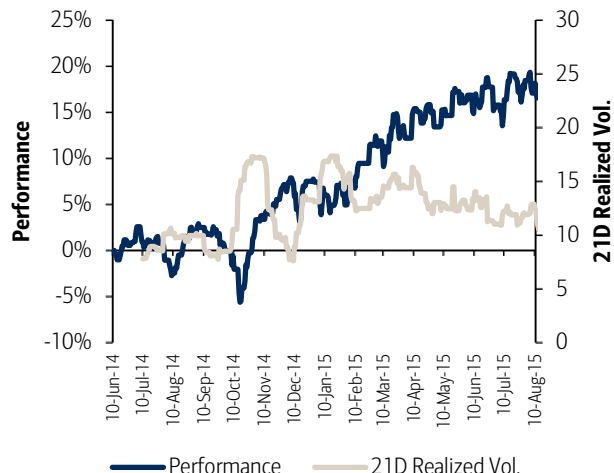
Source: BofA Merrill Lynch Global Research. Relative index=MSCI AC World TR (GDUEACWF Index). Weekly observations since inception, through September 4 2015

Chart 54: Relative performance of Longevity Primer Picks vs. MSCI AC World (through September 4 2015)



Source: BofA Merrill Lynch Global Research. Benchmark = MSCI AC World TR Gross (GDUEACWF). Past performance should not and cannot be viewed as an indicator of future performance

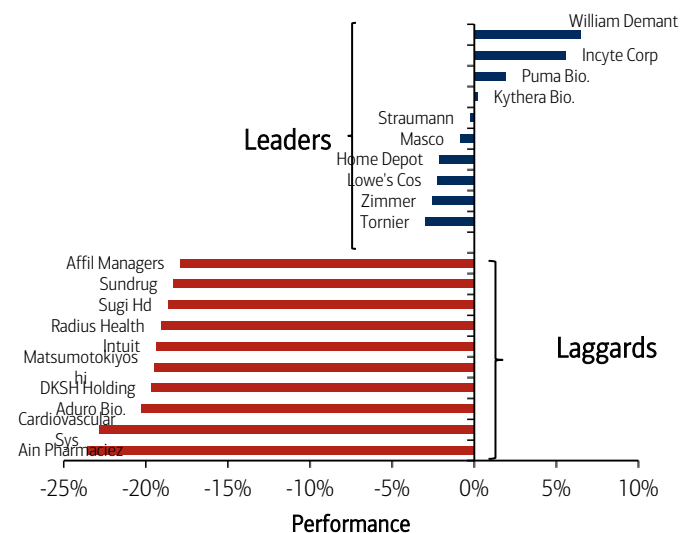
Chart 55: Longevity - Primer Picks performance and 21-day realized volatility



Source: BofA Merrill Lynch Global Research. 21D Realized Vol is the rolling 21-day (business day) realized volatility of the Primer Picks performance. Past performance should not and cannot be viewed as an indicator of future performance.

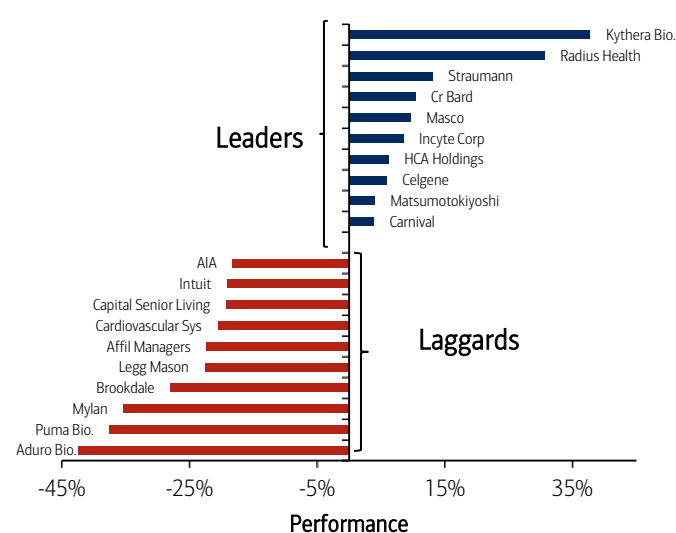
Leaders and laggards

Chart 56: 1M top/bottom total return performance of Longevity Primer Picks



Source: BofA Merrill Lynch Global Research; Bloomberg

Chart 57: 3M top/bottom total return performance of Longevity Primer Picks

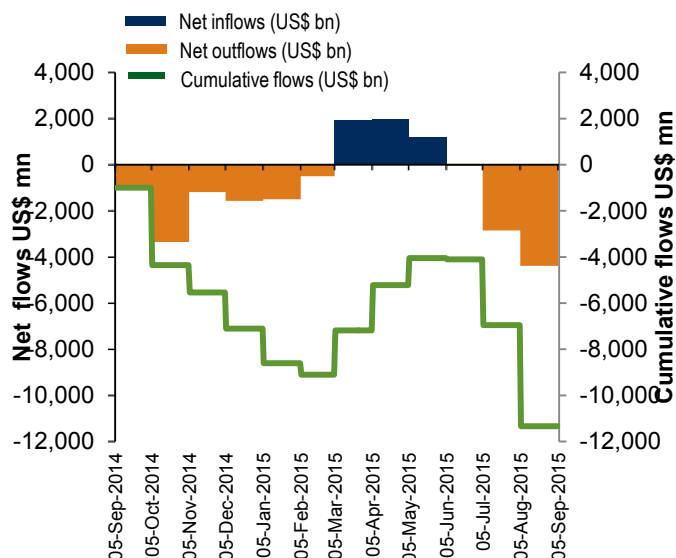


Source: BofA Merrill Lynch Global Research; Bloomberg

Flows

In our wider Longevity thematic stock list, BofAML global equity trading showed an outflow of -US\$4,386mn for the August period, the highest outflows out of any theme, and the highest for Longevity since we began observing in September 2014. Longevity cumulative net flows are also the most negative, at -US\$11,339mn in the past 12 month period.

Chart 58: Longevity – BofAML client monthly net flows and cumulative flows



Source: Source: BofA Merrill Lynch, cumulative net flows with Sept 5 2014 as starting point

Table 45: Longevity BofAML client net trading flows (US\$ mn)

Last month ending Sep 4 2015	-4,386
Aug 4 2015	-2,848
Jul 4 2015	-59
Jun 4 2015	1,172
May 4 2015	1,966
Apr 4 2015	1,919
Mar 4 2015	-498
Feb 4 2015	-1,499
Jan 4 2015	-1,569
Dec 4 2014	-1,188
Nov 4 2014	-3,351
Oct 4 2014	-998
Cumulative Net flows	-11,339
3 month avg.	-2,431

Source: BofA Merrill Lynch Cumulative net flows with Sep 5 2014 as starting point. Average flows=average net flow between specified period

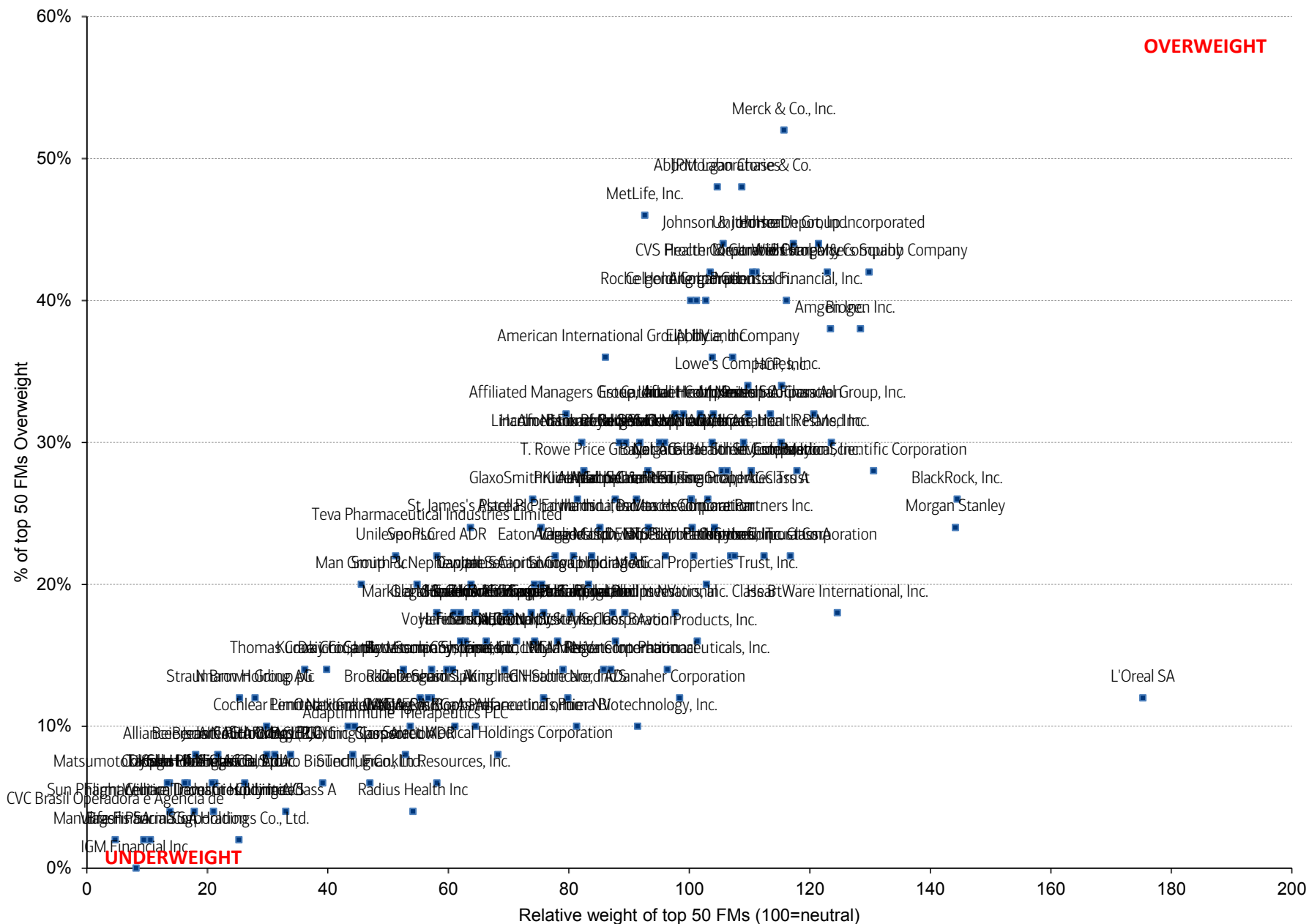
Table 46: Longevity Theme and Sub-theme P/E valuation

Sub-Theme	Forward PE	
	Universe	Primer Picks
Asset & Wealth Management	12.0x	11.9x
Consumer - Beauty	17.9x	21.3x
Consumer - Death Care	21.3x	21.3x
Consumer - Drug Stores	17.3x	16.9x
Consumer - Retail	12.0x	NA
Consumer - Travel	15.1x	15.1x
Consumer - Vitamins	17.5x	15.5x
Dental Care	17.6x	17.4x
Hearing Aids	18.8x	17.7x
Incontinence & Ostomy	18.7x	18.7x
Insurance	10.6x	10.6x
Long-term living & care - Ageing in place	18.3x	18.3x
Long-term living & care - Healthcare	13.3x	14.7x
Long-term living & care - Managed Care	17.7x	16.5x
Long-term living & care - Senior Living	105.8x	105.8x
Long-term living & care - Healthcare REITs	18.7x	30.6x
Medical Technology	15.8x	15.8x
Other financial	13.9x	NA
Pharmaceuticals & Healthcare	17.0x	17.0x
Genetics & Genome	40.0x	40.0x
Longevity	15.6x	15.4x
MSCI AC World	15.2x	

Source: BofA Merrill Lynch Global Research. Forward P/E is based on consensus analyst earnings estimates for the next four quarters as compiled by Bloomberg. NA - Primer Picks includes stocks only with Buy and High/Medium exposure. Some sub-themes do not have Primer Picks companies within them.

Positioning of longevity stocks

Chart 59: Positioning and ownership - Longevity



Source: BofAML Global Research

Positioning of longevity stocks

Table 47: Top Overweight and Underweight stocks in Longevity

Top Overweight			Top Underweight		
	Weightings	% top holders overweight		Weightings	% top holders overweight
Merck & Co., Inc.	116	52%	IGM Financial Inc.	8	0%
JPMorgan Chase & Co.	109	48%	CVC Brasil Operadora e Agencia de Viagens	5	2%
Abbott Laboratories	105	48%	Brasil Pharma S.A.	9	2%
MetLife, Inc.	93	46%	Manulife Financial Corporation	11	2%
UnitedHealth Group Incorporated	121	44%	Sugi Holdings Co., Ltd.	25	2%
Home Depot, Inc.	117	44%	Sun Pharmaceutical Industries Limited	14	4%
Johnson & Johnson	106	44%	Flight Centre Travel Group Limited	18	4%
Bristol-Myers Squibb Company	130	42%	William Demant Holding A/S	21	4%
Wells Fargo & Company	123	42%	Coty Inc. Class A	33	4%
Medtronic Plc	111	42%	Radius Health Inc	54	4%
Procter & Gamble Company	110	42%	DKSH Holding AG	16	6%
CVS Health Corporation	103	42%	Coloplast A/S Class B	17	6%
Prudential Financial, Inc.	116	40%	Amplifon S.p.A.	26	6%
Allergan plc	103	40%	Aduro BioTech, Inc.	39	6%
Celgene Corporation	100	40%	Franklin Resources, Inc.	58	6%

Source: BofAML Global Research. BofAML Thematic stock lists are 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.

Style Cycle

According to the Style Cycle model, stocks that rank highest within the Longevity theme are in long-term living & care, and consumer-related sub-themes such as retail, travel, and beauty. Stocks that rank lowest are within incontinence & ostomy, and pharmaceuticals & healthcare.

Table 48: Longevity - Style Cycle Top/Bottom 15 stocks

Top				Bottom			
Sedol	Name	Sub-theme	Recovery rank (100 = Top)	Sedol	Name	Sub-theme	Recovery rank (1 = Bottom)
206672	Avon Products	Consumer - Beauty	100	245596	Biogen Idec Inc	Pharmaceuticals & Healthcare	1
592737	Aegon	Insurance	99	B8FMRX	Coloplast	Incontinence & Ostomy	1
B4MF0Q	Select Medical Holdings	Long-term living & care - Healthcare	99	220910	Colgate-Palmolive Co	Consumer - Beauty	2
268210	Penn National Gaming Inc	Consumer - Travel	98	658248	Sun Pharmaceutical	Pharmaceuticals & Healthcare	2
B0HZL9	DSM NV	Consumer - Vitamins	98	628845	Jiangsu Hengrui Me	Pharmaceuticals & Healthcare	3
717158	Credit Suisse Group	Asset & Wealth Management	97	BHC8X9	Novo-Nordisk	Pharmaceuticals & Healthcare	3
B0N64J	Safilo Group	Vision Care	96	405780	L'Oreal	Consumer - Beauty	4
B1VYCH	Thomas Cook Group	Consumer - Travel	96	218234	Celgene Corp	Pharmaceuticals & Healthcare	5
B0J7D9	Daiichi Sankyo Com	Pharmaceuticals & Healthcare	95	243420	Home Depot Inc	Long-term living & care - Ageing in place	5
B126KH	Debenhams	Consumer - Retail	95	711038	Roche Holding	Pharmaceuticals & Healthcare	5
275267	Kindred Healthcare Inc	Long-term living & care - Healthcare	94	253676	Lowe's Companies Inc	Long-term living & care - Ageing in place	6
212177	Capital Senior Living Corp	Long-term living & care - Senior Living	93	232052	Lauder (Estee) Cos Inc -CI A	Consumer - Beauty	7
281911	Prudential Financial Inc	Insurance	93	261399	Illumina Inc	Genetics & Genome	7
247619	Hartford Financial Services	Insurance	92	BNQ4GF	Luye Pharma Gp Ltd	Pharmaceuticals & Healthcare	8
226231	Morgan Stanley	Asset & Wealth Management	92	712387	Nestle	Consumer - Vitamins	8

Source: BofA Merrill Lynch Global Research. Top and bottom 15 stocks are based on a relative ranking within our Longevity theme. BofAML Thematic stock lists are 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.

Obesity and health & wellness - Globesity

[Thematic Investing: Globesity and Health & Wellness primer 03 December 2014](#)

Pressing global health challenge - We believe that the obesity epidemic may be the most pressing health challenge facing the world today. The number of overweight or obese people has tripled since 1980 with not a single country making progress in reducing these rates. Today, almost one-third of the world's population or 2.1bn people are now overweight, including 671mn who are obese (source: The Lancet 2014). By 2030, close to 50% of the world's population is projected to be overweight or obese.

#5 cause of death & US\$2tn in annual costs – Obesity is the fifth-leading global risk for death, accounting for 3.4mn adult deaths a year. Obesity can raise the risk of cardiovascular disease, diabetes, osteoarthritis, and cancer, among many other health-threatening conditions. Total health care costs are more than 40% higher for obese patients than normal-weight patients. The global economic impacts of obesity are estimated at US\$2.0tn or 2.8% of global GDP, on par with the impacts of smoking or armed violence, war and terrorism (source: McKinsey). The future costs could be overwhelming, especially given high levels of global childhood obesity and growing obesity in EMs.

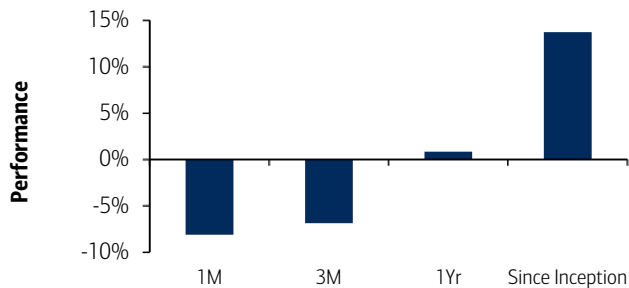
US\$932bn food & beverage health & wellness market – Over the past two years, 10+ countries have passed fat/sugar taxes with the two being increasingly heralded as the “new tobacco”. Developed market consumers have also shown a clear trend toward fresh and healthy foods in recent years. The global health and wellness (H&W) food market is estimated at US\$932bn in 2014. It is both high growth and high margin and is set to reach US\$1.1tn by 2019 (source: Euromonitor), while fresh produce is expected to reach US\$736bn by 2015 (source: Companiesandmarkets.com). We anticipate a shift in business model focus from product volumes alone to the quality of food & beverage portfolios from an H&W perspective.

US\$365bn global athletic market – along with the US\$78bn gym, fitness and health club market, we view both as long-term beneficiaries of the fight against Globesity. These factors are likely to result in growing numbers engaging in sports and demand for affordable equipment and apparel to engage in physical activity or sports. The industry continues to see strong growth in North America and EMs. Trends are also favourable, including: rise of the “athleisure” lifestyle, healthy athletic footwear and a continued shift to more active lifestyles.

Four major entry points for investors - We have mapped the global fight against obesity across a number of sector value chains to highlight the diverse range of entry points for investors wishing to play the global fight against obesity theme: 1) Pharmaceuticals, Health Care & Medtech; 2) Food, Food Retail, Quick Casual & Beverages; 3) Weight Loss, Diet, Nutrition & VMS; and 4) Sports Apparel & Equipment.

Primer Picks performance

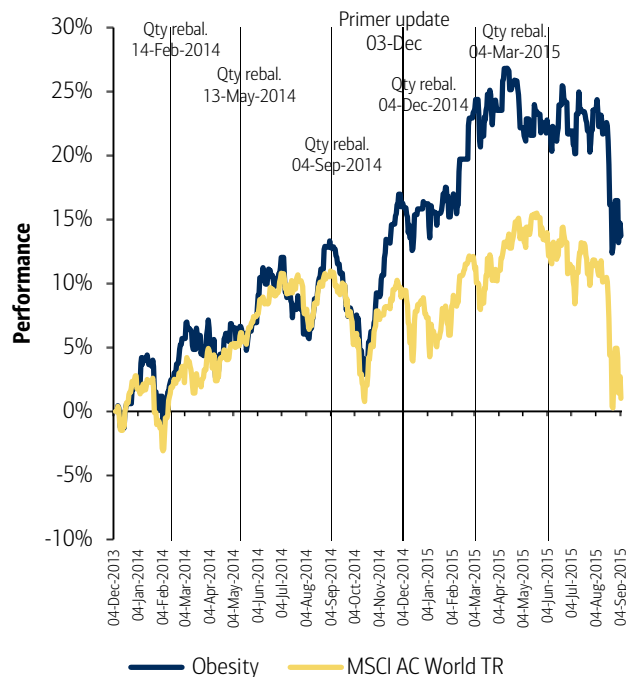
Chart 60: Obesity Primer Picks performance (through September 4 2015)



BofA Merrill Lynch Global Research. Inception is Dec 6 2013.

Obesity Primer Picks is up +13.72% since Dec 6, 2013, making it the best performing theme in our universe. The theme is down -6.88% during the last 3 month period, outperforming benchmark MSCI (-10.66%) amidst the global sell-off. During the last month, obesity Primer Picks declined by -8.11%.

Chart 61: Obesity Primer Picks performance (through September 4 2015)



Source: BofA Merrill Lynch Global Research. See Appendix on Page 65 for list of Primer Picks rebalances. Qty rebal = Quarterly Primer Picks update. Past performance should not and cannot be viewed as an indicator of future performance. A complete performance record is available upon request.

Table 49: Obesity Primer Picks beta relative to the market

Raw Beta	0.80
Adjusted Beta	0.86
Alpha	0.13
R^2 (Correlation^2)	0.65
Correlation	0.81

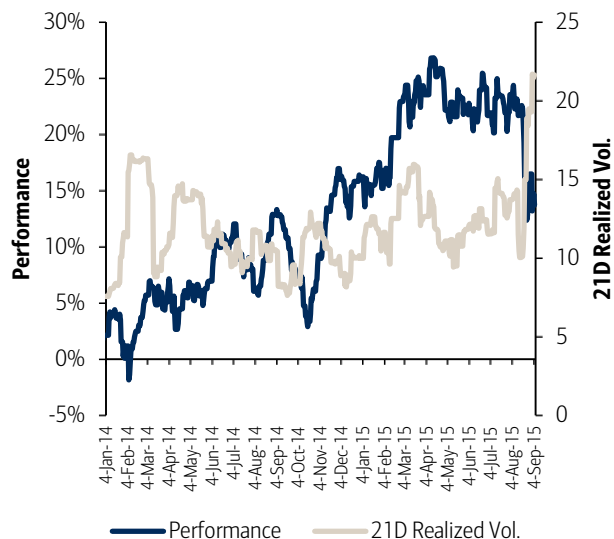
Source: BofA Merrill Lynch Global Research. Relative index=MSCI AC World TR (GDUEACWF Index). Weekly observations since inception, through September 4 2015

Chart 62: Relative performance of Obesity Primer Picks vs. MSCI AC World (through September 4 2015)



Source: BofA Merrill Lynch Global Research. Benchmark = MSCI AC World TR Gross (GDUEACWF). Past performance should not and cannot be viewed as an indicator of future performance

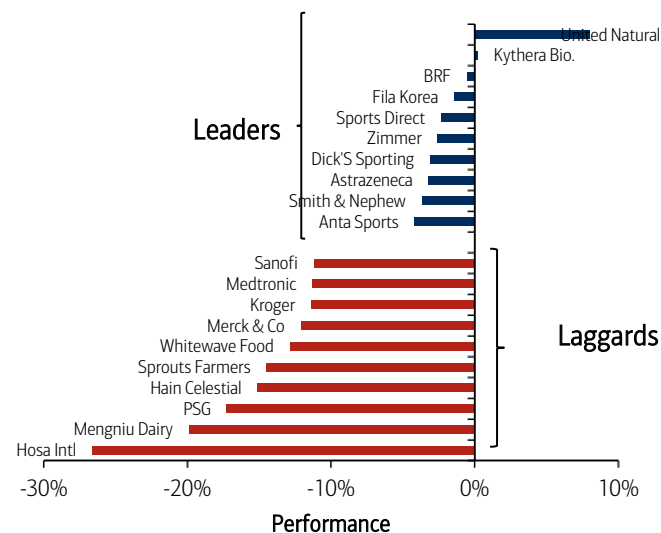
Chart 63: Obesity - Primer Picks performance and 21-day realized volatility



Source: BofA Merrill Lynch Global Research. 21D Realized Vol is the rolling 21-day (business day) realized volatility of the Primer Picks performance. Past performance should not and cannot be viewed as an indicator of future performance.

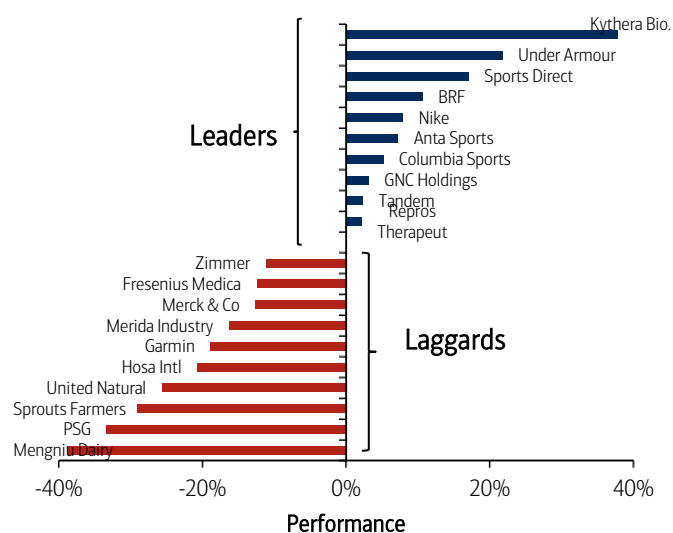
Leaders and laggards

Chart 64: 1M top/bottom total return performance of Obesity Primer Picks



Source: BofA Merrill Lynch Global Research; Bloomberg

Chart 65: 3M top/bottom total return performance of Obesity Primer Picks

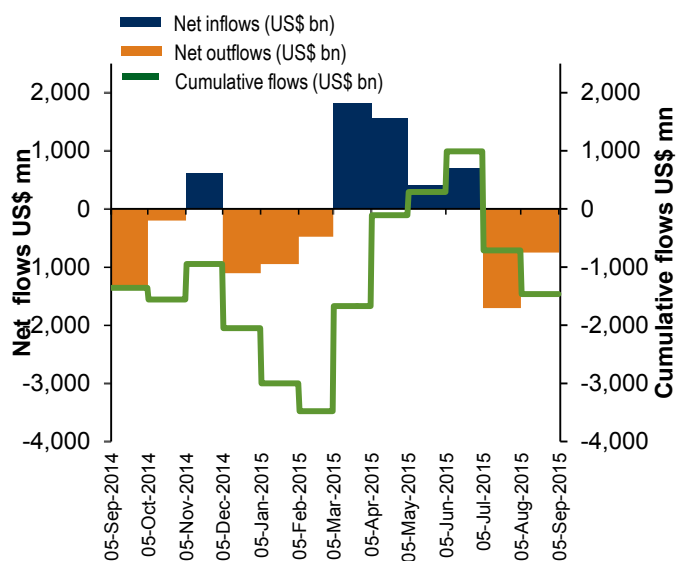


Source: BofA Merrill Lynch Global Research; Bloomberg

Flows

In our wider Obesity thematic stock list, BofAML global equity trading showed outflows of -US\$751mn for the August period. This brings cumulative net flows down to -US\$1,465mn in the past 12 month period.

Chart 66: Obesity – BofAML client monthly net flows and cumulative flows



Source: Source: BofA Merrill Lynch, cumulative net flows with Sept 5 2014 as starting point

Table 50: Obesity BofAML client net trading flows (US\$ mn)

Last month ending Sep 4 2015	-751
Aug 4 2015	-1,705
Jul 4 2015	699
Jun 4 2015	398
May 4 2015	1,563
Apr 4 2015	1,808
Mar 4 2015	-478
Feb 4 2015	-949
Jan 4 2015	-1,104
Dec 4 2014	610
Nov 4 2014	-200
Oct 4 2014	-1,356
Cumulative Net flows	-1,465
3 month avg.	-586

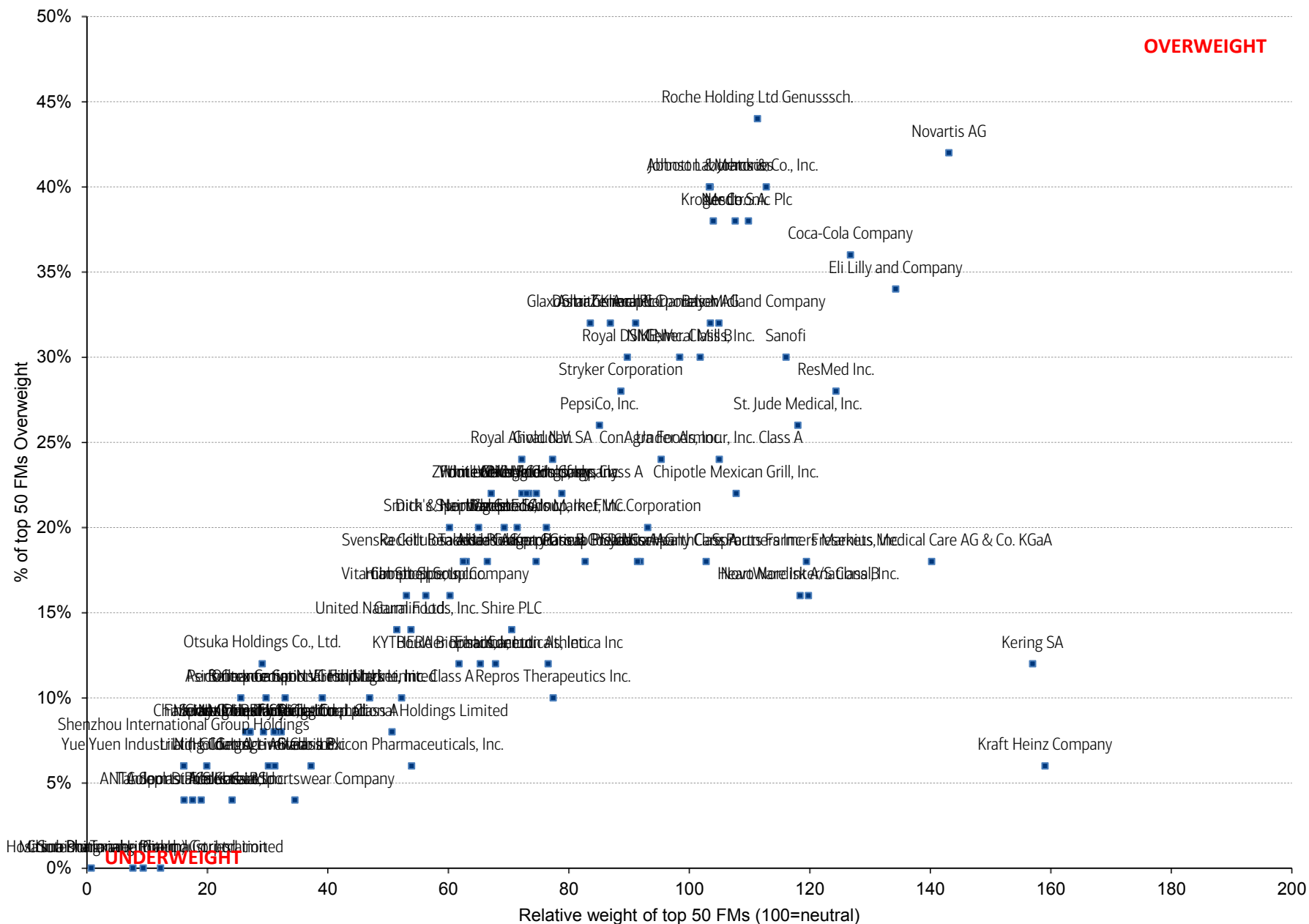
Source: BofA Merrill Lynch Cumulative net flows with Sep 5 2014 as starting point. Average flows=average net flow between specified period

Table 51: Obesity Theme and Sub-theme P/E valuation

Sub-Theme	Forward PE	
	Universe	Primer Picks
Cmcl weight mgmt, diet & nutrition	17.6x	17.1x
Food	18.6x	18.7x
Food Retail	15.9x	16.8x
Pharmaceuticals & Health Care	17.3x	17.0x
Sports apparel & equipment	15.4x	14.2x
Obesity	17.3x	17.0x
MSCI AC World	15.2x	

Source: BofA Merrill Lynch Global Research. Forward P/E is based on consensus analyst earnings estimates for the next four quarters as compiled by Bloomberg. NA - Primer Picks includes stocks only with Buy and High/Medium exposure. Some sub-themes do not have Primer Picks companies within them.

Source: BofAML Global Research



Positioning of obesity and health & wellness stocks

Table 52: Top Overweight and Underweight stocks in Obesity and Health & Wellness

Top Overweight			Top Underweight		
	Weightings	% top holders overweight		Weightings	% top holders overweight
Roche Holding Ltd Genusssch.	111	44%	Hosa International Limited	1	0%
Novartis AG	143	42%	China Dongxiang (Group) Co., Ltd.	8	0%
Merck & Co., Inc.	113	40%	Mitsubishi Tanabe Pharma Corporation	9	0%
Abbott Laboratories	103	40%	Sun Pharmaceutical Industries Limited	12	0%
Johnson & Johnson	103	40%	ANTA Sports Products Ltd.	16	4%
Medtronic Plc	110	38%	Coloplast A/S Class B	18	4%
Nestle S.A.	108	38%	Tandem Diabetes Care, Inc.	19	4%
Kroger Co.	104	38%	Fila Korea Ltd	24	4%
Coca-Cola Company	127	36%	Columbia Sportswear Company	35	4%
Eli Lilly and Company	134	34%	Li Ning Co. Ltd.	20	6%
Archer-Daniels-Midland Company	105	32%	Gildan Activewear Inc.	30	6%
Bayer AG	103	32%	Geringe AB Class B	31	6%
Dollar General Corporation	91	32%	Glanbia Plc	37	6%
AstraZeneca PLC	87	32%	Lexicon Pharmaceuticals, Inc.	54	6%
GlaxoSmithKline plc	84	32%	Kraft Heinz Company	159	6%

Source: BofAML Global Research. BofAML Thematic stock lists are 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.

Style Cycle

According to the Style Cycle model, stocks that are highest ranked within the Obesity theme are in biotech, commercial weight-loss & nutrition, and sports apparel & equipment. Stocks that are lowest ranked are large-cap pharmaceuticals and food producers.

Table 53: Obesity and Health & Wellness - Style Cycle Top/Bottom 15 stocks

Top				Bottom			
Sedol	Name	Sub-theme	Recovery rank (100 = Top)	Sedol	Name	Sub-theme	Recovery rank (1 = Bottom)
BNGCT2	Performance Sports Group Ltd	Sports apparel & equipment	100	B8FMRX	Coloplast	Pharmaceuticals & Health Care	1
B0HZL9	DSM NV	Coml weight mgmt, diet & nutrition	99	B0X7DZ	Chipotle Mexican Grill Inc	Food	2
B28214	China Dongxiang (G	Sports apparel & equipment	97	658248	Sun Pharmaceutical	Pharmaceuticals & Health Care	3
BWFZX5	Lexicon Pharmaceuticals Inc	Pharmaceuticals & Health Care	97	BHC8X9	Novo-Nordisk	Pharmaceuticals & Health Care	4
234981	Finish Line Inc -CI A	Sports apparel & equipment	96	225464	Gildan Activewear Inc	Sports apparel & equipment	6
403197	Adidas	Sports apparel & equipment	94	264014	Nike Inc	Sports apparel & equipment	7
B01JCK	Li Ning Co Ltd	Sports apparel & equipment	92	B2QKY0	Shire	Pharmaceuticals & Health Care	8
B5LTM9	Otsuka Hldgs Co	Pharmaceuticals & Health Care	92	711038	Roche Holding	Pharmaceuticals & Health Care	9
BGCC6K	Tandem Diabetes Care Inc	Pharmaceuticals & Health Care	91	BNQ4GF	Luye Pharma Gp Ltd	Pharmaceuticals & Health Care	10
769835	Geringe	Pharmaceuticals & Health Care	90	B24CGK	Reckitt Benckiser	Food/Coml weight mgmt, diet & nutrition	11
B1WJ4X	Belle Internationa	Sports apparel & equipment	89	251615	Lilly (Eli) & Co	Pharmaceuticals & Health Care	12
B7FC07	Nmc Health Plc	Pharmaceuticals & Health Care	88	712387	Nestle	Food	13
B3Z5T1	Garmin Ltd	Sports apparel & equipment	87	220665	Coca-Cola Co	Food	14
550507	Kering	Sports apparel & equipment	84	268151	Pepsico Inc	Food	16
214249	Rockwell Medical Inc	Pharmaceuticals & Health Care	84	B12T3J	Unilever NV	Food	17

Source: BofA Merrill Lynch Global Research. Top and bottom 15 stocks are based on a relative ranking within our Obesity and Health & Wellness theme. BofAML Thematic stock lists are 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.

Safety & Security - Safer world

[Thematic Investing: You've Been Hacked! – Global Cybersecurity Primer 03](#)
[September 2015](#)

It's not safe out there! It's an unsafe world for all of us – every year 2.3mn people are killed at work (Source: ILO), 1.3mn lose their lives in road accidents, and 15,000+ die in terrorist attacks (Source: NCTC). Globalisation is driving the need for safety and posing new challenges from EM growth to outsourcing, the food supply chain, a degrading environment, and new diseases. We believe some corporates may push the boundaries of safety in their efforts to exploit new resources.

Cybersecurity: one of the top global risks today: 90mn+ attacks per year - There are 80-90mn+ cybersecurity events per year, with close to 400 new threats every minute, and up to 70% of attacks going undetected. All companies are being hit: finance & insurance is the most targeted sector, followed by ICT, manufacturing and retail. Cybersecurity has become a homeland security threat with rapid growth in attacks against critical infrastructure and manufacturing. Americans worry about falling victim to cyberattacks more than any other type of crime – with 1bn data records compromised in the US alone in 2014. We believe cybersecurity poses a key threat to the three pillars of [creative disruption](#): the Internet of Things (IoT), the Sharing Economy and Online Services.

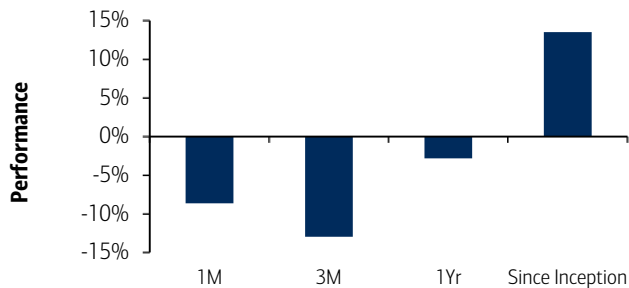
“Cybergeddon”: up to US\$3tn in economic impacts - The average cost of cybercrimes for US companies reached a record US\$12.7mn in 2014, with cybercrime costing the global economy up to US\$575bn annually. Cyberattacks are the #1 source of economic assaults against governments, and the #1 source of IP theft for corporates. The rise in disruptive technologies – including IoT with 50bn+ devices connected to the internet by 2020 – means that we are facing a potential worst-case “Cybergeddon” scenario where the ‘bad guy’ has the permanent advantage. Cybercrime extracts up to 20% of the value created by the internet, meaning that as much as US\$3tn of global economic value could be at risk by 2020E.

Investors need to play safe - Public opinion has become more sensitive to issues of quality, security, health & safety, environmental protection and social responsibility, which has led to the proliferation, strengthening and convergence of regulation and the development of non-regulatory standards. As a result, corporates are increasingly being forced to adapt to new best practices on safety & security. We believe that investors need to focus on this shift and look for long-term solutions to the ever-growing raft of threats against people, governments, infrastructure and society as a whole.

Eight entry points for investors, US\$1.5tn+ market (2020e) - We have mapped efforts to promote safety & security across a number of global sector value chains to highlight the diverse range of entry points for investors wishing to play the “Safer World” theme: 1) Auto; 2) Commercial & Residential; 3) Cybersecurity; 4) Homeland; 5) Life Sciences; 6) Oil & Gas; 7) Testing, Inspection & Certification (TIC); and 8) Workplace. We believe these entry points will represent a combined US\$1.5tn+ market by 2020.

Primer Picks performance

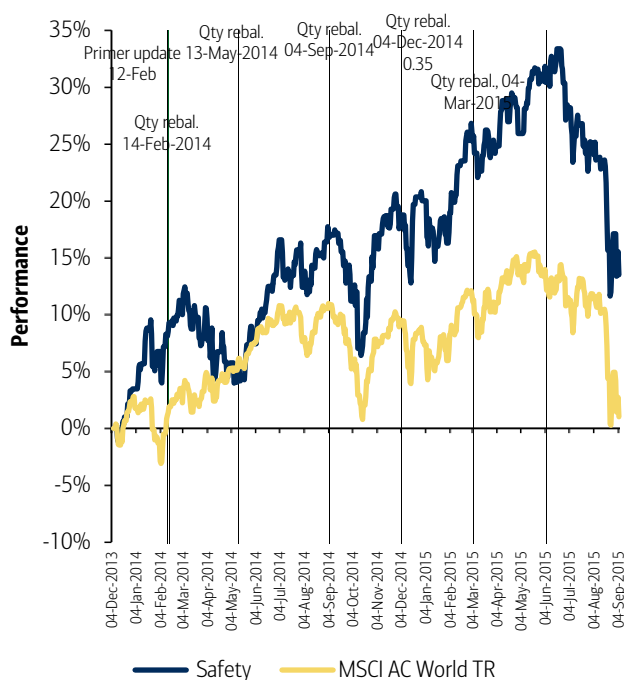
Chart 68: Safety Primer Picks performance (through September 4 2015)



BofA Merrill Lynch Global Research. Inception is Dec 6 2013.

Safety Primer Picks is up +13.72% since Dec 6, 2013, making it the 2nd best performing theme. The theme declined -12.96% during the last 3 month period. During the last month, safety Primer Picks declined by -8.64%, outperforming benchmark MSCI AC World (-9.27%).

Chart 69: Safety Primer Picks performance (through September 4 2015)



Source: BofA Merrill Lynch Global Research. See Appendix on Page 65 for list of Primer Picks rebalances. Qty rebal = Quarterly Primer Picks update.

Past performance should not and cannot be viewed as an indicator of future performance. A complete performance record is available upon request.

Table 54: Safety Primer Picks beta relative to the market

Raw Beta	1.07
Adjusted Beta	1.05
Alpha	0.13
R^2 (Correlation^2)	0.73
Correlation	0.85

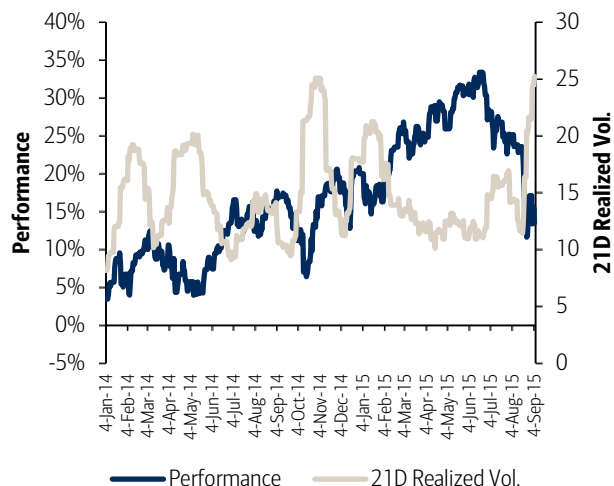
Source: BofA Merrill Lynch Global Research. Relative index=MSCI AC World TR (GDUEACWF Index). Weekly observations since inception, through September 4 2015

Chart 70: Relative performance of Safety Primer Picks vs. MSCI AC World (through September 4 2015)



Source: BofA Merrill Lynch Global Research. Benchmark = MSCI AC World TR Gross (GDUEACWF). Past performance should not and cannot be viewed as an indicator of future performance

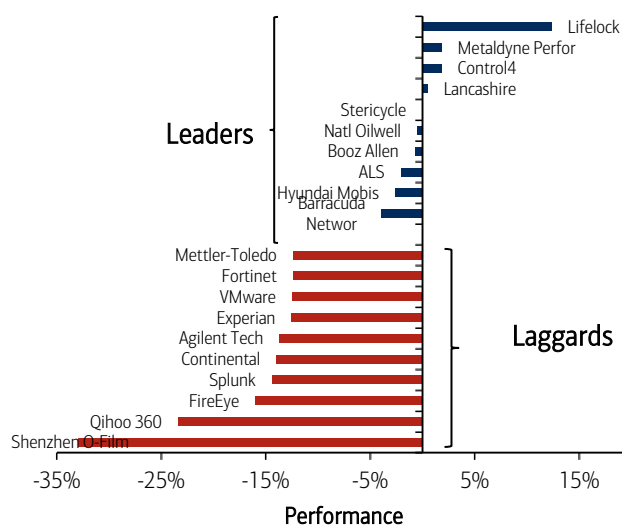
Chart 71: Safety - Primer Picks performance and 21-day realized volatility



Source: BofA Merrill Lynch Global Research. 21D Realized Vol is the rolling 21-day (business day) realized volatility of the Primer Picks performance. Past performance should not and cannot be viewed as an indicator of future performance.

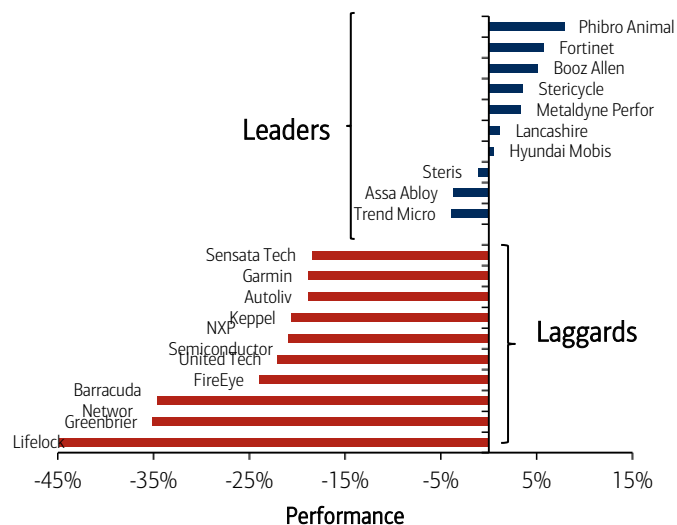
Leaders and laggards

Chart 72: 1M top/bottom total return performance of Safety Primer Picks



Source: BofA Merrill Lynch Global Research; Bloomberg

Chart 73: 3M top/bottom total return performance of Safety Primer Picks

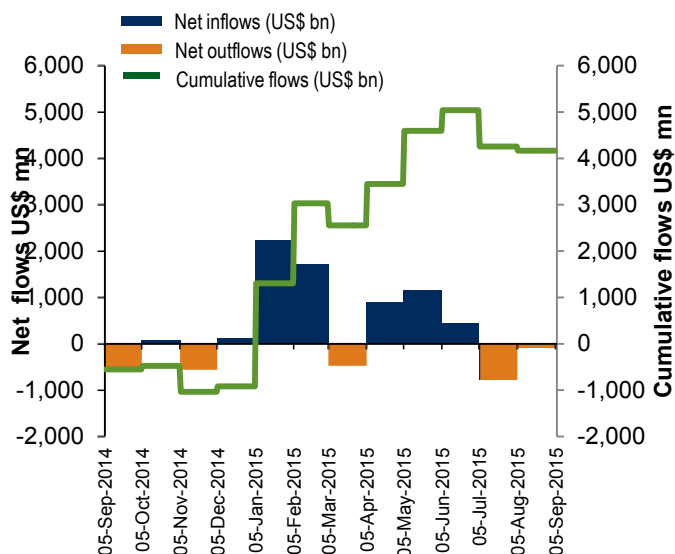


Source: BofA Merrill Lynch Global Research; Bloomberg

Flows

In our wider Safety & Security thematic stock list, BofAML global equity trading showed flat flows of -US\$92mn for the August period. Nonetheless, cumulative net flows for Safety remains on top at +US\$4,165mn in the past 12 month period, the highest of any theme.

Chart 74: Safety – BofAML client monthly net flows and cumulative flows



Source: BofA Merrill Lynch, cumulative net flows with Sep 5 2014 as starting point

Table 55: Safety BofAML client net trading flows (US\$ mn)

Last month ending Sep 4 2015	-92
Aug 4 2015	-781
Jul 4 2015	443
Jun 4 2015	1,147
May 4 2015	894
Apr 4 2015	-475
Mar 4 2015	1,726
Feb 4 2015	2,223
Jan 4 2015	117
Dec 4 2014	-560
Nov 4 2014	77
Oct 4 2014	-553
Cumulative Net flows	4,165
3 month avg.	-143

Source: BofA Merrill Lynch Cumulative net flows with Sep 5 2014 as starting point. Average flows=average net flow between specified period

Table 56: Safety Theme and Sub-theme P/E valuation

Sub-Theme	Forward PE	
	Universe	Primer Picks
Auto	12.0x	12.5x
Commercial & Residential	13.9x	14.3x
Cybersecurity	15.1x	16.4x
Homeland	13.6x	12.8x
Life Sciences	18.3x	17.1x
Oil & Gas	9.4x	9.9x
TIC	14.4x	14.4x
Workplace	15.3x	16.1x
Food Safety	20.0x	20.0x
Medical	22.0x	22.0x
Safety	13.7x	14.6x
MSCI AC World	15.2x	

Source: BofA Merrill Lynch Global Research. Forward P/E is based on consensus analyst earnings estimates for the next four quarters as compiled by Bloomberg. NA - Primer Picks includes stocks only with Buy and High/Medium exposure. Some sub-themes do not have Primer Picks companies within them.

Chart 75: Positioning and ownership - Safety



Positioning of safety & security stocks

Table 57: Top Overweight and Underweight stocks in Safety

Top Overweight			Top Underweight		
	Weightings	% top holders overweight		Weightings	% top holders overweight
Intel Corporation	114	66%	Roka Bioscience Inc	1	0%
Cisco Systems, Inc.	105	56%	Metaldyne Performance Group, Inc.	5	0%
Honeywell International Inc.	112	46%	Shenzhen O-Film Tech Co., Ltd. Class A	4	2%
3M Company	112	46%	Clarion Co., Ltd.	5	2%
E. I. du Pont de Nemours and Company	116	44%	Autoliv Inc Shs Swedish DR	6	2%
EMC Corporation	94	42%	Sembcorp Marine Ltd	9	2%
Hewlett-Packard Company	119	40%	Hanwha Techwin Co., Ltd.	14	4%
International Business Machines Corporation	124	38%	Gigamon Inc.	35	4%
United Technologies Corporation	119	38%	NTT DATA Corporation	170	4%
Spectra Energy Corp	117	38%	Sunny Optical Technology (Group) Co. Ltd.	19	6%
Thermo Fisher Scientific Inc.	115	34%	Finmeccanica S.p.A.	24	6%
L-3 Communications Holdings, Inc.	111	34%	ALS Ltd.	27	6%
National Oilwell Varco, Inc.	107	34%	A10 Networks, Inc.	33	6%
Agilent Technologies, Inc.	113	32%	Ansell Limited	55	8%
Delphi Automotive PLC	92	32%	FleetMatics Group Ltd.	89	8%

Source: BofAML Global Research. BofAML Thematic stock lists are 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.

Style Cycle

According to the Style Cycle model, stocks that are highest ranked within the Safety theme are in commercial & residential and homeland. Stocks that are lowest ranked are within cybersecurity and life sciences sub-theme.

Table 58: Safety - Style Cycle Top/Bottom 15 stocks

Top				Bottom			
Sedol	Name	Sub-theme	Recovery rank (100 = Top)	Sedol	Name	Sub-theme	Recovery rank (1 = Bottom)
B09RMQ	Seadrill	Oil & Gas	100	259570	3M Co	Commercial & Residential/Workplace	1
620116	Clarion Co Ltd	Auto	99	230422	Ecolab Inc	Workplace	2
620513	Sembcorp Marine	Oil & Gas	98	BYPC1T	Assa Abloy	Commercial & Residential	3
BT6T3P	Metaldyne Performance Group	Auto	97	212624	Mettler-Toledo Intl Inc	Life Sciences	4
243184	Juniper Networks Inc	Cybersecurity	96	258817	Microsoft Corp	Cybersecurity	5
247194	Itron Inc	Commercial & Residential/Cybersecurity	95	218133	Check Point Software Techn	Cybersecurity	6
B0DJNG	Finmeccanica	Homeland	93	202045	Honeywell International Inc	Commercial & Residential/Workplace	6
B1VQ5C	Keppel Corp	Oil & Gas	93	B783TY	Delphi Automotive Plc	Auto	8
BBCRDW	Gigamon Inc	Cybersecurity	92	252209	Lockheed Martin Corp	Cybersecurity	9
565478	ATOS	Homeland	89	236516	General Dynamics Corp	Homeland	10
262448	National Oilwell Varco Inc	Oil & Gas	89	200597	Intl Business Machines Corp	Cybersecurity	10
555404	Securitas	Commercial & Residential	89	286082	Stericycle Inc	Medical	13
B86SZR	Als Limited	TIC	88	B19NLV	Experian	Cybersecurity	14
B5B210	Fortinet Inc	Cybersecurity	85	293768	Waters Corp	Life Sciences	15
B0PYHC	Lancashire Hldgs	Oil & Gas	85	246324	Intel Corp	Cybersecurity	16

Source: BofA Merrill Lynch Global Research. Top and bottom 15 stocks are based on a relative ranking within our Safety theme. BofAML Thematic stock lists are 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.

Waste - No time to waste

[Thematic Investing: No time to waste - global waste primer 05 April 2013](#)

Global waste crisis - Poor waste management is a global reality, with only 25% of the 11bn tonnes collected annually recycled or recovered – and 3.5 bn people lacking access to basic waste management services. The situation will get worse with waste volumes growing faster than urbanisation rates and GDP growth – and waste volumes set to double to 2025 (vs. 2005), and double again from 2025-50.

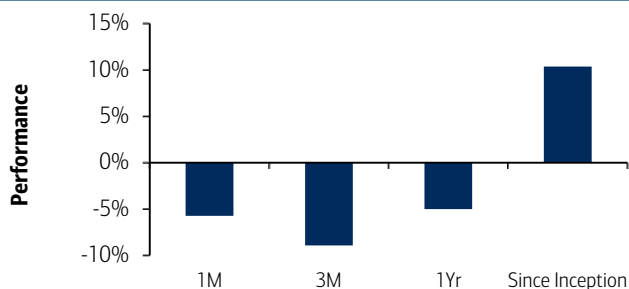
US\$1tn+ market today - Waste management is a US\$1tn market today that includes municipal solid waste (MSW), industrial waste, waste-to-energy (WtE), and sustainable packaging, among other areas. Growth drivers are increasing volumes, changing variety and complexity of waste streams, urbanisation, income growth (GDP-waste link), reducing environmental and social risks and costs, resource scarcity, commodity prices, growing private sector involvement, stakeholder pressure, and tightening regulation.

From “trash to cash” - We are seeing a shift away from waste as a mandatory public service to waste management as a sustainable business opportunity. We see the fastest growth in the next decade coming from diversion, recycling, recovery of valuable secondary raw materials, waste-to-energy, e-waste, and sustainable packaging – as well as from EMs. We see considerable low hanging fruit potential given that 70%+ of global waste is currently landfilled. “Greening” waste management will require increasing MSW recycling by a factor of 3.5x and doubling industrial waste recycling.

Multiple entry points for US\$2tn market (2020E) - We believe that the global dynamics of waste management mean that the sector offers numerous growth opportunities for those with exposure to the value chain. By 2020, we estimate that the waste industry could be worth up to US\$2tn, with Europe facing the toughest strategic challenges, and Asia and South America seeing the fastest growth. We see opportunities across waste management, industrial treatment, WtE, wastewater & sewage, E&C, recycling, and sustainable packaging among other areas.

Primer Picks performance

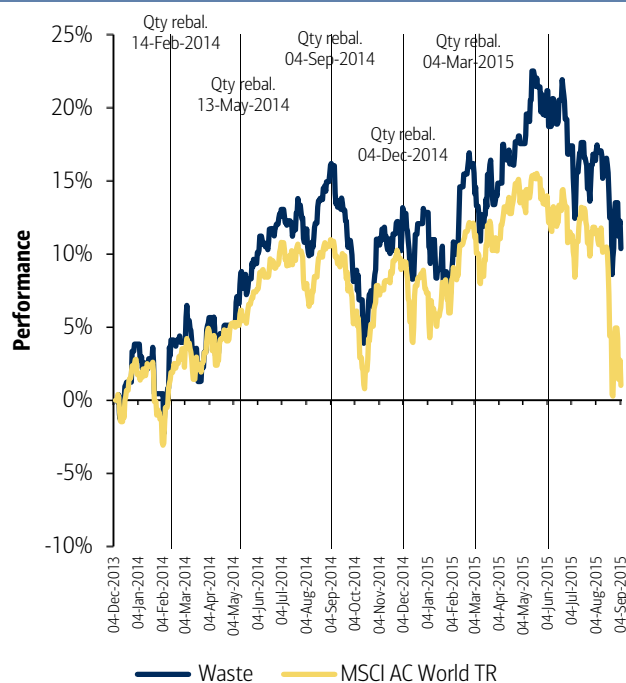
Chart 76: Waste Primer Picks performance (through September 4 2015)



BofA Merrill Lynch Global Research. Inception is Dec 6 2013.

Waste Primer Picks is up +10.36% since Dec 6, 2013. The theme declined -8.92% in the past 3 month period. During the last month Waste Primer Picks was down -5.73%, making it the best performing theme, and far outpacing benchmark MSCI AC World (-9.27%).

Chart 77: Waste Primer Picks performance (through September 4 2015)



Source: BofA Merrill Lynch Global Research. See Appendix on Page 65 for list of Primer Picks rebalances. Qty rebal = Quarterly Primer Picks update.

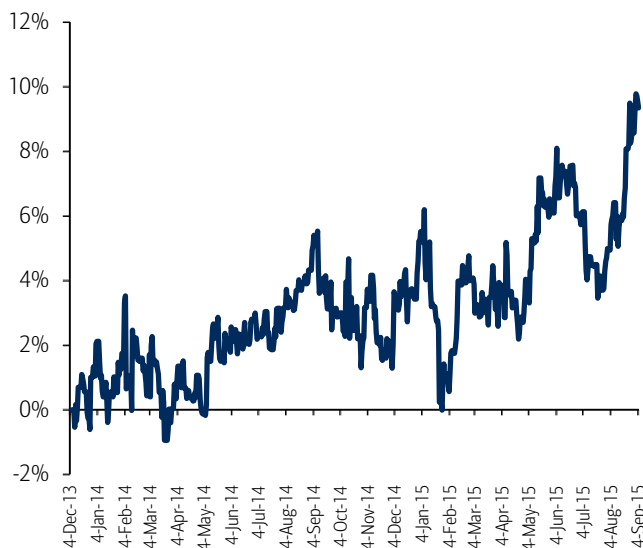
Past performance should not and cannot be viewed as an indicator of future performance. A complete performance record is available upon request.

Table 59: Waste Primer Picks beta relative to the market

Raw Beta	0.91
Adjusted Beta	0.94
Alpha	0.10
R ² (Correlation ²)	0.72
Correlation	0.85

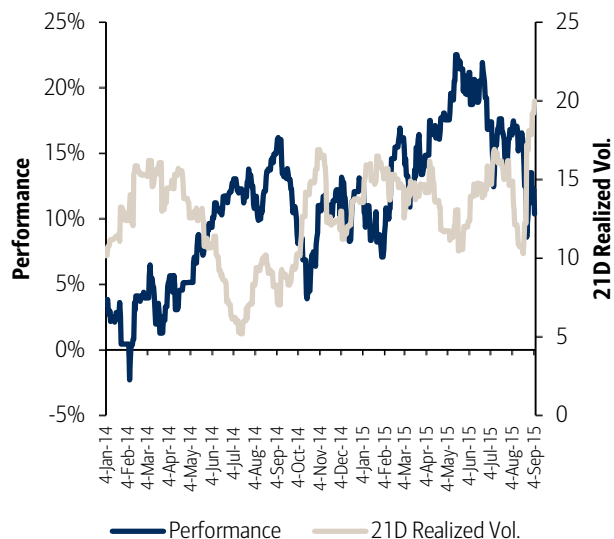
Source: BofA Merrill Lynch Global Research. Relative index=MSCI AC World TR (GDUEACWF Index). Weekly observations since inception, through September 4 2015

Chart 78: Relative performance of Waste Primer Picks vs. MSCI AC World (through September 4 2015)



Source: BofA Merrill Lynch Global Research. Benchmark = MSCI AC World TR Gross (GDUEACWF). Past performance should not and cannot be viewed as an indicator of future performance

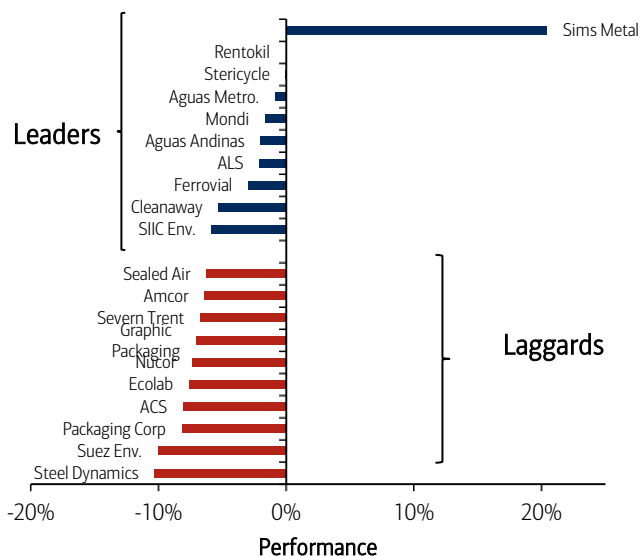
Chart 79: Waste - Primer Picks performance and 21-day realized volatility



Source: BofA Merrill Lynch Global Research. 21D Realized Vol is the rolling 21-day (business day) realized volatility of the Primer Picks performance. Past performance should not and cannot be viewed as an indicator of future performance.

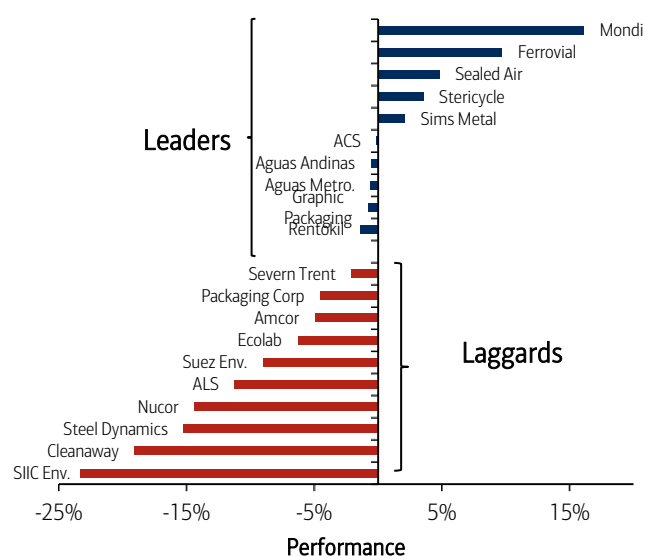
Leaders and laggards

Chart 80: 1M top/bottom total return performance of Waste Primer Picks



Source: BofA Merrill Lynch Global Research; Bloomberg

Chart 81: 3M top/bottom total return performance of Waste Primer Picks

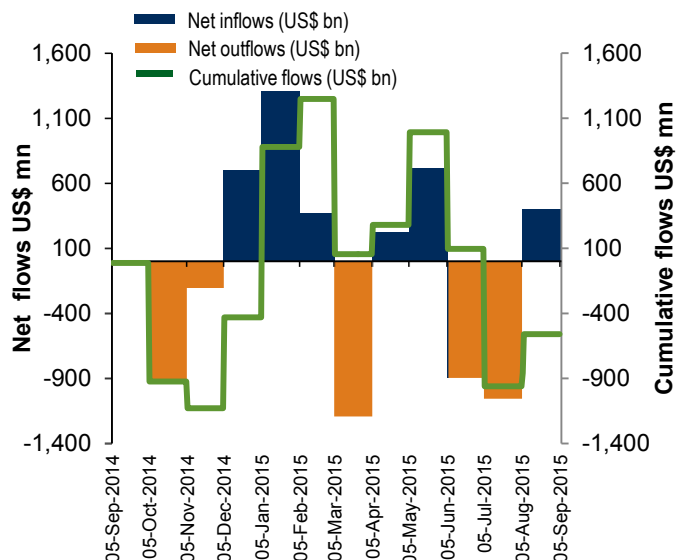


Source: BofA Merrill Lynch Global Research; Bloomberg

Flows

In our wider Waste thematic stock list, BofAML global equity trading showed inflows of +US\$401mn for the August period, the most inflows out of any theme, and only 1 of 3 to be in the green this month. This brings cumulative net flows to -US\$559mn in the past 11 month period.

Chart 82: Waste – BofAML client monthly net flows and cumulative flows



Source: Source: BofA Merrill Lynch, cumulative net flows with Sept 5 2014 as starting point

Table 60: Waste BofAML client net trading flows (US\$ mn)

Last month ending Sep 4 2015	401
Aug 4 2015	-1,056
Jul 4 2015	-895
Jun 4 2015	712
May 4 2015	224
Apr 4 2015	-1,192
Mar 4 2015	369
Feb 4 2015	1,309
Jan 4 2015	698
Dec 4 2014	-205
Nov 4 2014	-911
Oct 4 2014	-12
Cumulative Net flows	-559
3 month avg.	-517

Source: BofA Merrill Lynch Cumulative net flows with Sep 5 2014 as starting point. Average flows=average net flow between specified period

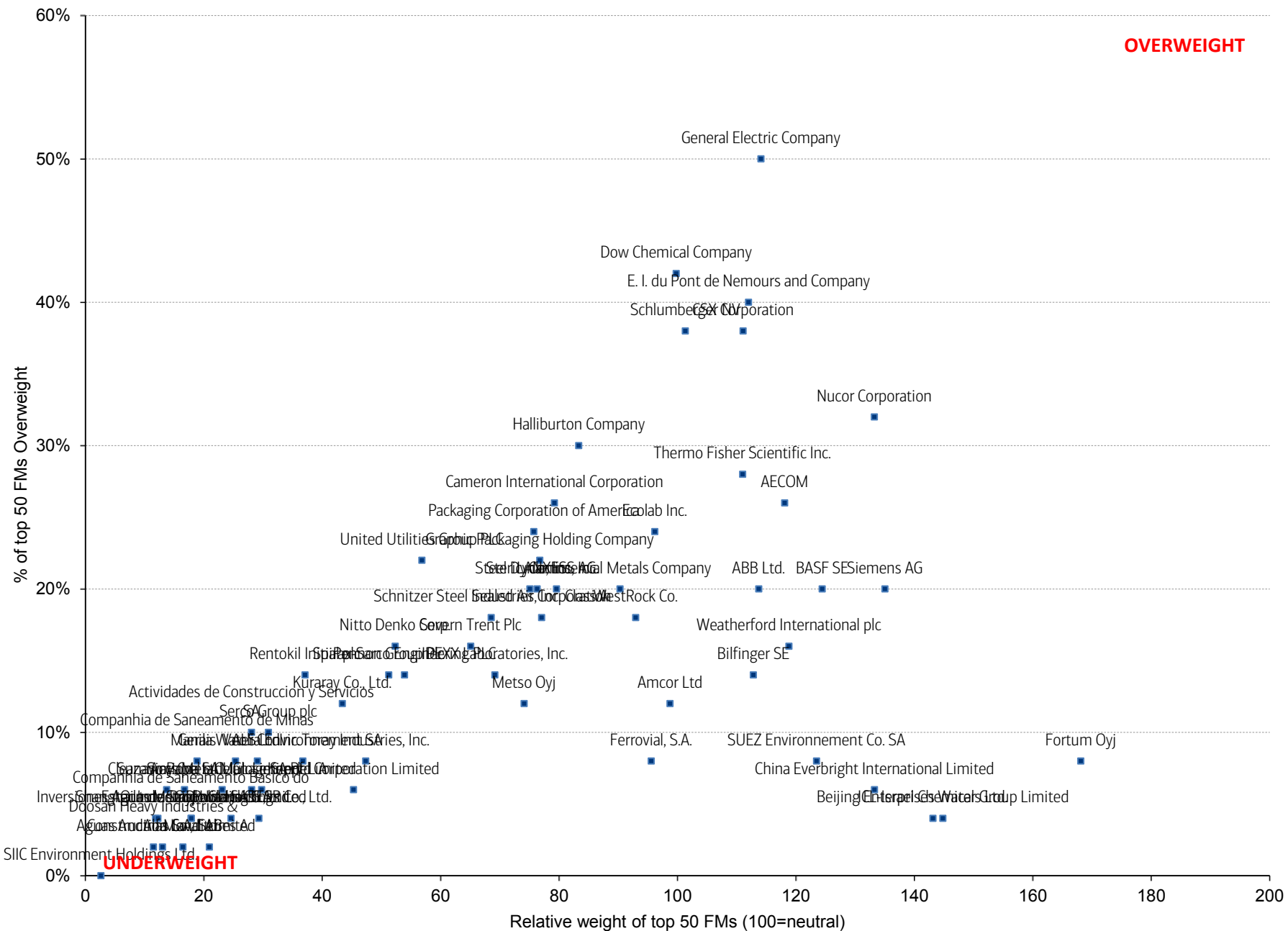
Table 61: Waste Theme and Sub-theme P/E valuation

Sub-Theme	Forward PE	
	Universe	Primer Picks
Engineering & Construction	8.6x	NA
Life Sciences	14.7x	NA
Management	19.1x	24.4x
Management (Medical)	26.2x	26.2x
Management (Transport)	12.1x	NA
Oil & Gas	20.6x	NA
Other	31.6x	NA
Recycling	12.7x	13.4x
Sustainable Packaging	14.0x	14.7x
TIC	14.4x	14.4x
Treatment	13.3x	13.8x
Waste-to-Energy	15.5x	NA
Wastewater & Sewage	16.2x	17.0x
Waste	14.4x	15.2x
MSCI AC World	15.2x	

Source: BofA Merrill Lynch Global Research. Forward P/E is based on consensus analyst earnings estimates for the next four quarters as compiled by Bloomberg. NA - Primer Picks includes stocks only with Buy and High/Medium exposure. Some sub-themes do not have Primer Picks companies within them.

Positioning of waste stocks

Chart 83: Positioning and ownership - Waste



Source: BofAML Global Research

Positioning of waste stocks

Table 62: Top Overweight and Underweight stocks in Waste

Top Overweight			Top Underweight		
	Weightings	% top holders overweight		Weightings	% top holders overweight
General Electric Company	114	50%	SIIC Environment Holdings Ltd.	3	0%
Dow Chemical Company	100	42%	Doosan Heavy Industries & Construction Co., Ltd.	11	2%
E. I. du Pont de Nemours and Company	112	40%	Aguas Andinas S.A. Series A	13	2%
CSX Corporation	111	38%	Alfa Laval AB	16	2%
Schlumberger NV	101	38%	Mondi Limited	21	2%
Nucor Corporation	133	32%	Inversiones Aguas Metropolitanas S.A.	12	4%
Halliburton Company	83	30%	Outotec Oyj	12	4%
Thermo Fisher Scientific Inc.	111	28%	SABESP	18	4%
AECOM	118	26%	Shanghai Industrial Holdings Limited	18	4%
Cameron International Corporation	79	26%	Daido Steel Co., Ltd.	25	4%
Ecolab Inc.	96	24%	Dowa Holdings Co., Ltd.	29	4%
Packaging Corporation of America	76	24%	ICL-Israel Chemicals Ltd.	143	4%
Graphic Packaging Holding Company	77	22%	Beijing Enterprises Water Group Limited	145	4%
United Utilities Group PLC	57	22%	Acciona SA	17	6%
ABB Ltd.	114	20%	China Everbright International Limited	133	6%

Source: BofAML Global Research. BofAML Thematic stock lists are 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.

Style Cycle

According to the Style Cycle model, stocks that are highest ranked within the Waste theme are in wastewater & sewage and sustainable packaging. Stocks that are lowest ranked are within life sciences and waste treatment sub-themes.

Table 63: Waste - Style Cycle Top/Bottom 15 stocks

Top				Bottom			
Sedol	Name	Sub-theme	Recovery rank (100 = Top)	Sedol	Name	Sub-theme	Recovery rank (1 = Bottom)
282129	Schnitzer Steel Inds -CI A	Recycling	100	230422	Ecolab Inc	Oil & Gas/Treatment	2
B0YBZJ	Cia Saneamento Min	Wastewater & Sewage	99	245920	Idexx Labs Inc	Other	3
B1FN8X	Outotec	Treatment	97	BWFGQN	Spirax-Sarco Eng	Treatment	5
511738	Bilfinger	Engineering & Construction	95	286082	Stericycle Inc	Management (Medical)	6
B05M8B	Lanxess	Treatment	94	B082RF	Rentokil Initial	Management	8
691487	Ugl Limited	Engineering & Construction	92	B28DTJ	Bureau Veritas	TIC	9
557910	Acciona	Wastewater & Sewage	91	482477	SGS	TIC	11
629467	Doosan Heavy Ind	Recycling/Treatment	89	710889	ABB	Waste-to-Energy	12
BJ0K6Z	Klabin Sa	Sustainable Packaging	88	216075	Csx Corp	Management (Transport)	14
B1YCHL	Sabesp Cia Saneame	Wastewater & Sewage	86	223279	Sealed Air Corp	Sustainable Packaging	15
625062	Daido Steel Co	Engineering & Construction	83	689714	Toray Inds Inc	Treatment	17
79737	Serco Group	Management	83	606660	Amcor Limited	Sustainable Packaging	19
221326	Commercial Metals	Recycling	82	663094	China Ever Intl	Waste-to-Energy/Wastewater & Sewage	20
B0684C	Manila Water Co	Wastewater & Sewage	79	645553	lcl-Israel Chem	Treatment	20
681001	Shanghai Ind Hldgs	Wastewater & Sewage	79	277920	Schlumberger Ltd	Oil & Gas	20

Source: BofA Merrill Lynch Global Research. Top and bottom 15 stocks are based on a relative ranking within our Waste theme. BofAML Thematic stock lists are 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.

Water - Blue revolution

[Thematic Investing: Global Water primer: California dreamin' \(of water\) 10 July 2015](#)

California drought: a sign of things to come globally. We view the unprecedented drought in California as a harbinger of the coming global water crisis. California is in its 4th straight year of drought, with the last 3Y being the driest in recorded history. Groundwater levels have plunged up to 15-30m (50-100ft) and the Sierra Nevada snowpack is at 5% of historical levels. The drought is expected to cost California agriculture alone US\$2.7bn in economic costs in 2015, with disruption extending to mandatory water restrictions, wildlife, land subsidence, seawater intrusion, wildfires, and human health. In a business as usual scenario, California water demand will outstrip supply by 50bn m³ (1tn gallons) by 2060E, with an 80% chance of multi-decade “mega-drought” this century.

Globally: water is the #1 risk facing the planet. Water is recognised as the #1 global risk for 2015 in terms of impacts to economies, environments and people. Globally, 750mn people lack access to safe drinking water source and 2.4bn have no access to proper sanitation facilities. Close to 50 countries are officially classified as being water stressed, and up to 70% of the world’s underground aquifers have reached peak water. Global water demand is set to overshoot supply by 40% by 2030E, and by 2050E, 3.9bn people will be living under “severe” water stress. Poor water supply and sanitation cost the global economy US\$260bn per year or c1.5% of global GDP. By 2050E, 45% of projected GDP is at risk, with as many as 50 countries at risk of conflict over water.

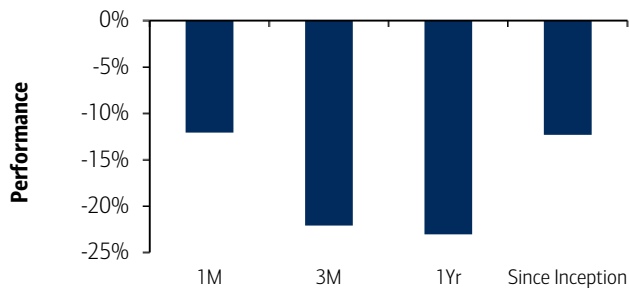
Four major entry points, US\$1tn market (2020E). We have mapped efforts to tackle the global dynamics of water supply and demand to highlight four entry points for investors wishing to invest in the global or California water theme: 1) Water Treatment; 2) Water Management; 3) Water Infrastructure & Supply; and 4) Water-friendly Energy. We believe these entry points will represent a US\$1tn+ market by 2020E

High growth: treatment, efficiency, tech, solar, EMs, desal. We see the fastest 3-5Y growth coming from the low hanging fruits of water treatment and recycling, more efficient water usage (smart meters, high efficiency irrigation, surface and groundwater storage), technology (precision Ag, IoT, drought resistant seeds and crops), EMs (China), water-friendly energy (solar and wind), and desalination.

BofAML Global & California stock lists & Primer Picks. We highlight 50+ global stocks covered by BofAML that have material exposure to California water solutions. We have also updated our Global Water stock list to include over 100+ covered stocks with exposure to the water theme. Our 40+ Global Water primer picks (Buy-rated stocks with material exposure) are detailed in an accompanying Primer Picks report.

Primer Picks performance

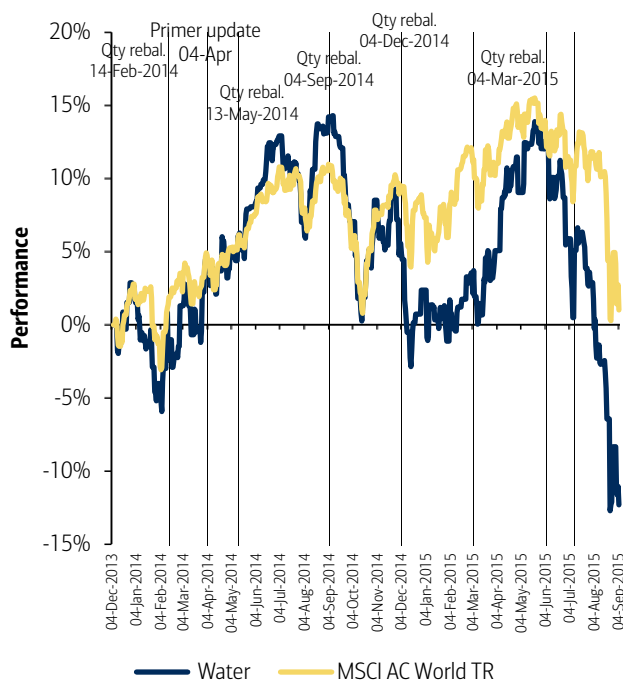
Chart 84: Water Primer Picks performance (through September 4 2015)



BofA Merrill Lynch Global Research. Inception is Dec 6 2013.

Water Primer Picks is -12.31% since Dec 6, 2013. The theme sold off -22.09% in the past 3 month period. Last month, Water Primer Picks sold off by -12.08%. It is the worst performing theme in the past 1M, 3M, and since inception. Most of the underperformance occurred in the past quarter, almost entirely due to the water-friendly energy names.

Chart 85: Water Primer Picks performance (through September 4 2015)



Source: BofA Merrill Lynch Global Research. See Appendix on Page 65 for list of Primer Picks rebalances. Qty rebal = Quarterly Primer Picks update.

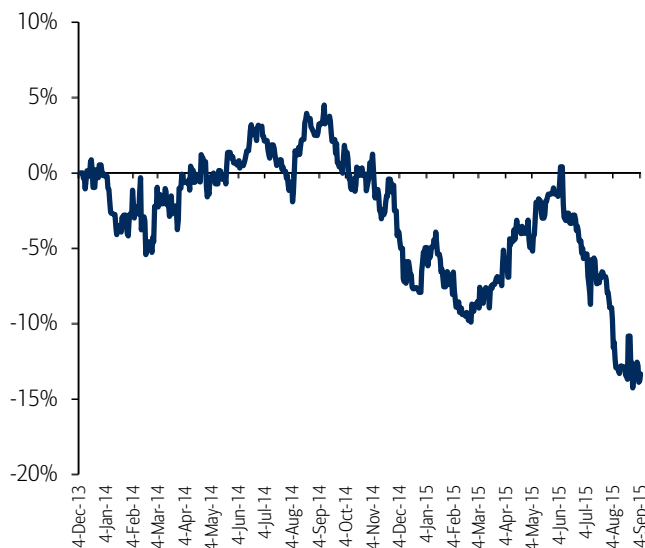
Past performance should not and cannot be viewed as an indicator of future performance. A complete performance record is available upon request.

Table 64: Water Primer Picks beta relative to the market

Raw Beta	0.96
Adjusted Beta	0.98
Alpha	-0.15
R^2 (Correlation^2)	0.58
Correlation	0.76

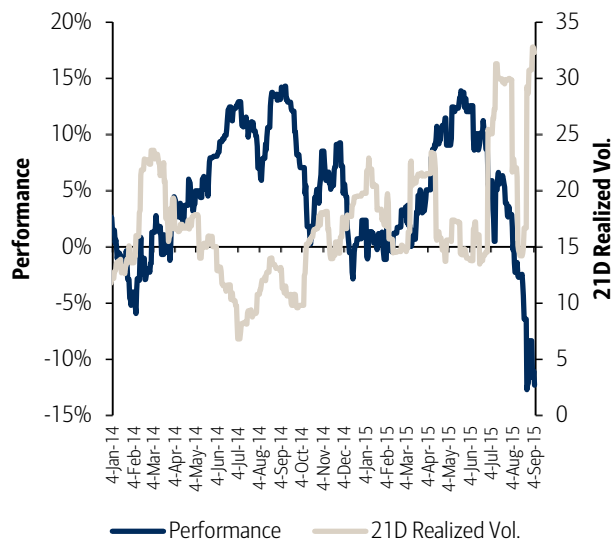
Source: BofA Merrill Lynch Global Research. Relative index=MSCI AC World TR (GDUEACWF Index). Weekly observations since inception, through September 4 2015

Chart 86: Relative performance of Water Primer Picks vs. MSCI AC World (through September 4 2015)



Source: BofA Merrill Lynch Global Research. Benchmark = MSCI AC World TR Gross (GDUEACWF). Past performance should not and cannot be viewed as an indicator of future performance

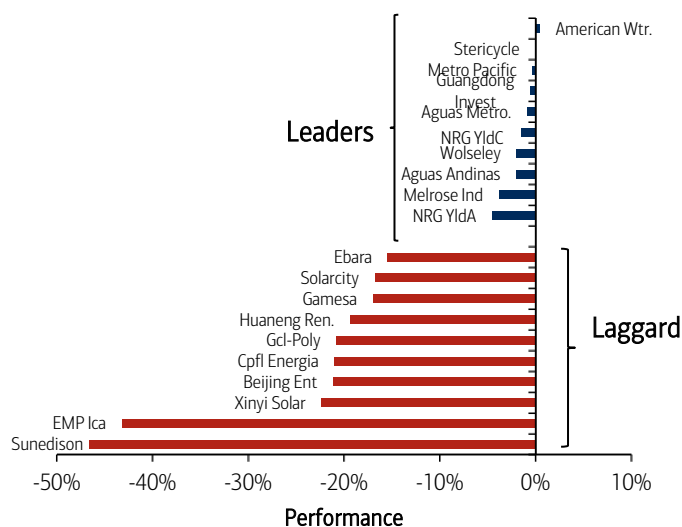
Chart 87: Water - Primer Picks performance and 21-day realized volatility



Source: BofA Merrill Lynch Global Research. 21D Realized Vol is the rolling 21-day (business day) realized volatility of the Primer Picks performance. Past performance should not and cannot be viewed as an indicator of future performance.

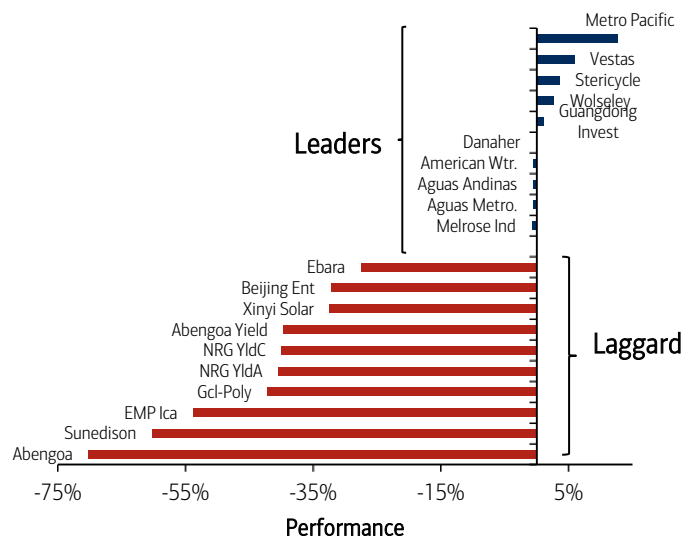
Leaders and laggards

Chart 88: 1M top/bottom total return performance of Water Primer Picks



Source: BofA Merrill Lynch Global Research; Bloomberg

Chart 89: 3M top/bottom total return performance of Water Primer Picks

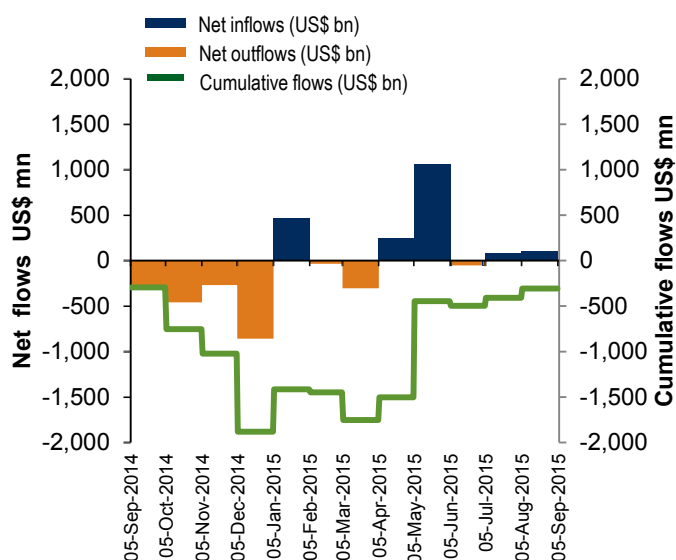


Source: BofA Merrill Lynch Global Research; Bloomberg

Flows

In our wider water thematic stock list, BofAML global equity trading showed net inflows of +US\$102mn for the August period, making it only 1 of 3 themes to experience positive flows. This brings cumulative net flows to -US\$307mn in the past 12 month period.

Chart 90: Water – BofAML client monthly net flows and cumulative flows



Source: Source: BofA Merrill Lynch, cumulative net flows with Sept 5 2014 as starting point

Table 65: Water BofAML client net trading flows (US\$ mn)

Last month ending Sep 4 2015	102
Aug 4 2015	88
Jul 4 2015	-52
Jun 4 2015	1,057
May 4 2015	250
Apr 4 2015	-304
Mar 4 2015	-34
Feb 4 2015	465
Jan 4 2015	-858
Dec 4 2014	-269
Nov 4 2014	-459
Oct 4 2014	-295
Cumulative Net flows	-307
3 month avg.	46

Source: BofA Merrill Lynch Cumulative net flows with Sep 5 2014 as starting point. Average flows=average net flow between specified period

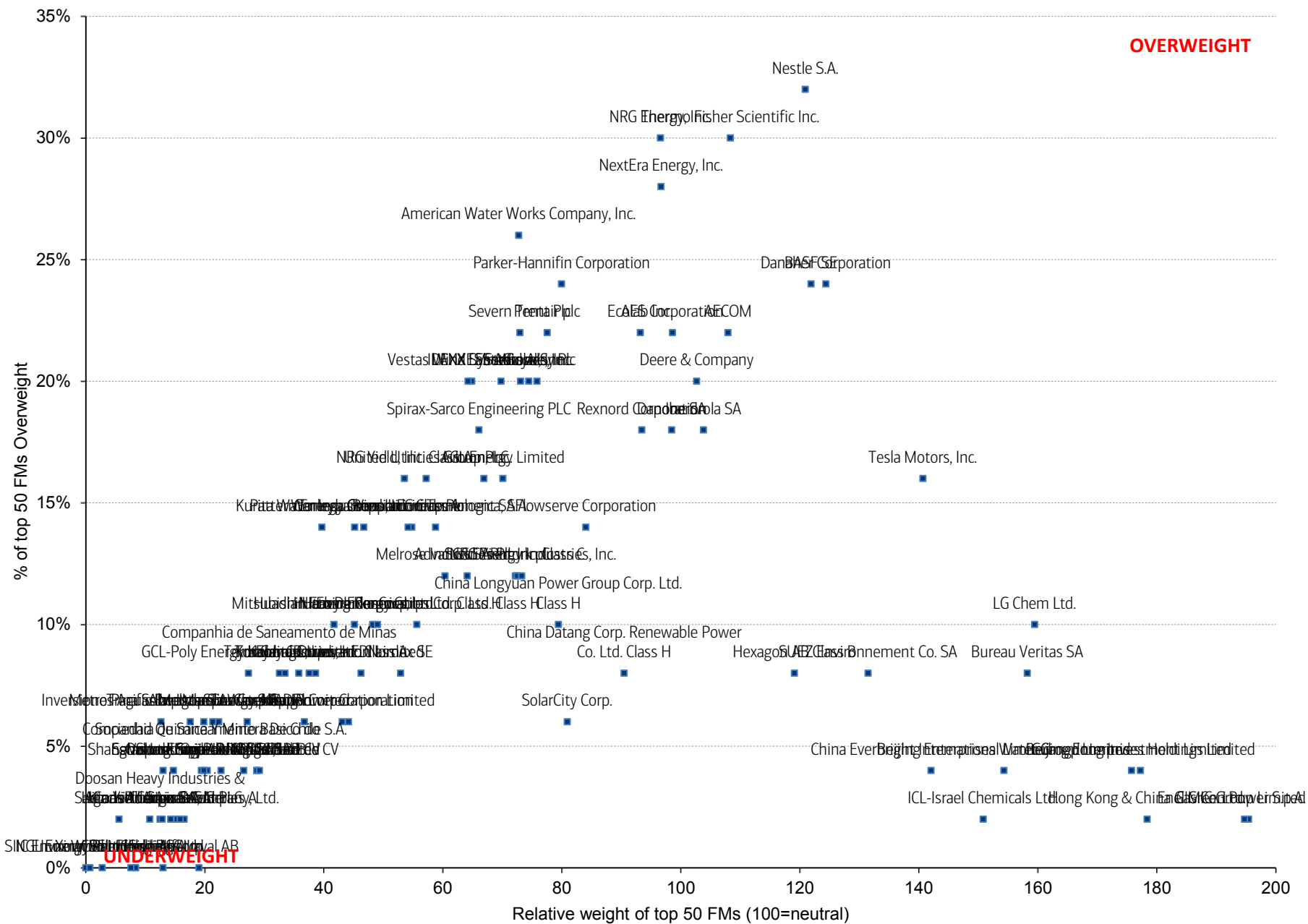
Table 66: Water Theme and Sub-theme P/E valuation

Sub-Theme	Forward PE	
	Universe	Primer Picks
Engineering & Construction	8.7x	8.1x
Management	15.8x	15.1x
Pipes, pumps & valves	13.3x	12.8x
Treatment	15.5x	16.2x
Utilities	16.2x	9.1x
Water-Friendly Energy	13.1x	13.1x
Water	13.7x	12.9x
MSCI AC World	15.2x	

Source: BofA Merrill Lynch Global Research. Forward P/E is based on consensus analyst earnings estimates for the next four quarters as compiled by Bloomberg, NA - Primer Picks includes stocks only with Buy and High/Medium exposure. Some sub-themes do not have Primer Picks companies within them.

Positioning of water stocks

Chart 91: Positioning and ownership - Water



Source: BofAML Global Research

Positioning of water stocks

Table 67: Top Overweight and Underweight stocks in Water

Top Overweight			Top Underweight		
	Weightings	% top holders overweight		Weightings	% top holders overweight
Nestle S.A.	121	32%	Inox Wind Ltd.	0	0%
Thermo Fisher Scientific Inc.	108	30%	NGL Energy Partners LP	1	0%
NRG Energy, Inc.	97	30%	SLC Environment Holdings Ltd.	3	0%
NextEra Energy, Inc.	97	28%	Xinyi Solar Holdings Ltd.	8	0%
American Water Works Company, Inc.	73	26%	CPFL Energia S.A.	8	0%
Danaher Corporation	124	24%	Vivint Solar Inc	8	0%
BASF SE	122	24%	Chiyoda Corp.	13	0%
Parker-Hannifin Corporation	80	24%	Alfa Laval AB	19	0%
AECOM	108	22%	Doosan Heavy Industries & Construction Co.,	12	2%
AES Corporation	99	22%	Duratex S.A.	13	2%
Ecolab Inc.	93	22%	Agua Andinas S.A. Series A	14	2%
Pentair plc	78	22%	Acciona SA	15	2%
Severn Trent Plc	73	22%	Abengoa Yield PLC	17	2%
Deere & Company	103	20%	Enel Green Power S.p.A.	195	2%
First Solar, Inc.	73	20%	CIMIC Group Limited	195	2%

Source: BofAML Global Research. BofAML Thematic stock lists are 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.

Style Cycle

According to the Style Cycle model, stocks that are highest ranked within the Water theme are within water-friendly energy, and engineering & construction sub-theme. Stocks that are lowest ranked are in water treatment and management, as well as equipment such as pipes, pumps & valves.

Table 68: Water - Style Cycle Top/Bottom 15 stocks

Top				Bottom			
Sedol	Name	Sub-theme	Recovery rank (100 = Top)	Sedol	Name	Sub-theme	Recovery rank (1 = Bottom)
B0YBZJ	Cia Saneamento Min	Utilities	100	230422	Ecolab Inc	Treatment	1
B1FN8X	Outotec	Treatment	99	712387	Nestle	Treatment	2
B83KH8	Abengoa (B)	Water-Friendly Energy	98	643655	Hongkong&China Gas	Utilities	3
B4YX1N	China Dting Co Rnwb	Water-Friendly Energy	96	BWFGQN	Spirax-Sarco Eng	Treatment	4
630270	Ebara Corp	Pipes, pumps & valves	96	B1XFTL	Hexagon	Management	5
B0MT4R	Empresas Ica Sab	Engineering & Construction/Treatment	95	245920	Idexx Labs Inc	Treatment	6
B27WY8	Duratex Sa	Management	94	286082	Stericycle Inc	Treatment	7
691487	Ugl Limited	Engineering & Construction	93	225087	Danaher Corp	Treatment	8
B05M8B	Lanxess	Treatment	92	267150	Parker-Hannifin Corp	Water-Friendly Energy	9
B1HMF2	First Solar Inc	Water-Friendly Energy	91	BFNVV4	Wolseley	Management	10
646557	Downer Edi Ltd	Engineering & Construction	90	BVFNZH	Rotork	Pipes, pumps & valves	11
629467	Doosan Heavy Ind	Treatment	89	B1Y9TB	Danone	Treatment	12
B1YCHL	Sabesp Cia Saneame	Utilities	88	B28DTJ	Bureau Veritas	Treatment	13
557910	Acciona	Treatment/Water-Friendly Energy	87	691316	Guangdong Invest	Utilities	14
BX17Q1	Leighton Holdings	Engineering & Construction	86	482477	SGS	Treatment	14

Source: BofA Merrill Lynch Global Research. Top and bottom 15 stocks are based on a relative ranking within our Water theme. BofAML Thematic stock lists are 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.

Methodology Appendix

Thematic Investing Stock Lists & Primer Picks

We have previously created a BofA Merrill Lynch Global Research list of stocks which have exposure to our equity themes – Climate Change & Extreme Weather, Education, Energy Efficiency, Longevity, Obesity and Health & Wellness, Safety & Security, Waste, and Water. They lists are part of BofAML Thematic Investing Stocks Lists.

For each Stock List, we have a subset called Primer Picks, which have “material” - either High or Medium -- exposure to the relevant theme, and have a Buy rating by the fundamental analyst. The Stock Lists and Primer Picks are in a document called theme Primer Picks. Thematic Investing Primers and their accompanying thematic Primer Picks are updated together. We update the full universe of all Thematic Investing Stock Lists and Primer Picks simultaneously on a quarterly basis and announced through a published research report – A Transforming World - Quarterly Primer Picks. We show a representation of performance based on the Primer Picks.

Performance representation methodology

Each Thematic Investing Primer Picks list is equal-weighted, with rebalancing each time we publish an update. Updates are made in both the A Transforming World - Quarterly Primer Picks as well as the Primer Picks that are published when each theme is updated. The performance of any individual security on the list is its percentage change in price, including dividends $[(\text{End Price} - \text{Begin Price}) / \text{Begin Price}]$. Dividends and corporate actions are credited when the stock goes ex-dividend. The performance does not reflect transaction costs. If such cost were reflected the performance would have been lower.

Price at which the rebalance occurs is the end-of-day price on the T + 1 date from publication. Stocks that are no longer covered, or are no longer Buy rated or become restricted are taken into account and removed at the next quarterly or theme update. In the same manner, stocks that are added for reasons such as change in restriction, new research initiation, etc. can only occur when the Primer Picks list is updated.

We assume 0% tax rate. The actual tax rate for investors will be dependent on several factors such as the country of domicile of the company, country in which the stock is listed, country of company operations, as well as country in which the investor is based. Investors should consult their own tax circumstances to gauge exact performance.

Seven themes - Education, Energy Efficiency, Climate Change & Extreme Weather, Obesity and Health & Wellness, Safety & Security, Waste, and Water – have a base value of 100 starting at December 6 2013, which is the T + 1 date from when the Quarterly Primer Picks product was introduced. Prior to that, each Primer Picks list was maintained and published separately. Longevity theme was introduced on June 6 2014. Food Security was introduced on March 30 2015, and Millennials was introduced on May 22 2015, which is less than 12 months, hence we cannot show performance at the moment.

The indicative performance of the BofAML themes is calculated by the BofA Merrill Lynch Research group.

For historical Primer Picks changes prior to March 4 2015, refer to [Theme Watch: Go with the thematic flow 12 March 2015](#)

Appendix of Primer Picks changes

BofAML Thematic Investing Primer Picks lists are rebalanced on a quarterly basis through A Transforming World - Quarterly Primer Picks, and when the themes are updated. Below is an appendix of latest rebalances:

Table 69: September 4 Primer Picks changes

Theme	BBG Ticker	Date	Action	Comment
Climate Change	CTRL UW	04-Jun-15	Addition	Theme exposure warranted for inclusion
Climate Change	3800 HK	04-Jun-15	Addition	Off review
Climate Change	958 HK	04-Jun-15	Addition	Theme exposure warranted for inclusion
Climate Change	INXW IS	04-Jun-15	Addition	Coverage Initiated
Climate Change	IAM CC	04-Jun-15	Addition	Rating upgrade
Climate Change	KSP ID	04-Jun-15	Addition	Coverage Initiated
Climate Change	NYLD/A UN	04-Jun-15	Addition	Split of class A stock
Climate Change	600690 CG	04-Jun-15	Addition	Theme exposure warranted for inclusion
Climate Change	SAY SQ	04-Jun-15	Addition	Coverage Initiated
Climate Change	300124 CS	04-Jun-15	Addition	Coverage Initiated
Climate Change	SEV FP	04-Jun-15	Addition	Rating upgrade
Climate Change	6481 JT	04-Jun-15	Addition	Theme exposure warranted for inclusion
Climate Change	968 HK	04-Jun-15	Addition	Coverage Initiated
Climate Change	SBSP3 BS	04-Jun-15	Removal	Rating downgrade
Climate Change	CSMG3 BS	04-Jun-15	Removal	Rating downgrade
Climate Change	DAN UN	04-Jun-15	Removal	Coverage Terminated
Climate Change	DD UN	04-Jun-15	Removal	Rating downgrade
Climate Change	2049 TT	04-Jun-15	Removal	Rating downgrade
Climate Change	6268 JT	04-Jun-15	Removal	Rating downgrade
Climate Change	NDX1 GY	04-Jun-15	Removal	Rating downgrade
Climate Change	STM FP	04-Jun-15	Removal	Rating downgrade
Climate Change	SYNN VX	04-Jun-15	Removal	No Rating due to Monsanto offer
Climate Change	TEN UN	04-Jun-15	Removal	Coverage Terminated
Climate Change	TERP UW	04-Jun-15	Removal	Under restriction
Climate Change	6502 JT	04-Jun-15	Removal	Under review
Climate Change	TSL UN	04-Jun-15	Removal	Rating downgrade
Education	REL LN	04-Jun-15	Removal	Rating downgrade
Energy Efficiency	CTRL UW	04-Jun-15	Addition	Theme exposure warranted for inclusion
Energy Efficiency	KSP ID	04-Jun-15	Addition	Coverage Initiated
Energy Efficiency	600690 CG	04-Jun-15	Addition	Theme exposure warranted for inclusion
Energy Efficiency	300124 CS	04-Jun-15	Addition	Coverage Initiated
Energy Efficiency	6481 JT	04-Jun-15	Addition	Theme exposure warranted for inclusion
Energy Efficiency	DAN UN	04-Jun-15	Removal	Coverage Terminated
Energy Efficiency	2049 TT	04-Jun-15	Removal	Rating downgrade
Energy Efficiency	6268 JT	04-Jun-15	Removal	Rating downgrade
Energy Efficiency	STM FP	04-Jun-15	Removal	Rating downgrade
Energy Efficiency	TEN UN	04-Jun-15	Removal	Coverage Terminated
Energy Efficiency	6502 JT	04-Jun-15	Removal	Under review
FTW	BRFS3 BS	04-Jun-15	Addition	Rating upgrade
FTW	TKFEN TI	04-Jun-15	Addition	Theme exposure warranted for inclusion
FTW	600887 CG	04-Jun-15	Addition	Coverage Initiated
FTW	BMS UN	04-Jun-15	Addition	Rating upgrade
FTW	CCK UN	04-Jun-15	Addition	Rating upgrade
FTW	IAM CC	04-Jun-15	Addition	Rating upgrade
FTW	SYNN VX	04-Jun-15	Removal	No Rating due to Monsanto offer
FTW	WFM UW	04-Jun-15	Removal	Rating downgrade
FTW	2314 HK	04-Jun-15	Removal	Under Extended Review
FTW	600690 CG	04-Jun-15	Removal	Theme exposure warranted for exclusion
FTW	SKG LN	04-Jun-15	Removal	Under Extended Review
FTW	CSMG3 BS	04-Jun-15	Removal	Rating downgrade
FTW	SBSP3 BS	04-Jun-15	Removal	Rating downgrade
Longevity	ADRO UW	04-Jun-15	Addition	Coverage Initiated
Longevity	AMP IM	04-Jun-15	Addition	Rating upgrade
Longevity	CELG UW	04-Jun-15	Addition	Theme exposure warranted for inclusion
Longevity	SCHW UN	04-Jun-15	Addition	Theme exposure warranted for inclusion
Longevity	BCR UN	04-Jun-15	Addition	Rating upgrade
Longevity	4523 JT	04-Jun-15	Addition	Rating upgrade
Longevity	INCY UW	04-Jun-15	Addition	Theme exposure warranted for inclusion
Longevity	KYTH UW	04-Jun-15	Addition	Coverage Reinstated
Longevity	LNC UN	04-Jun-15	Addition	Rating upgrade
Longevity	3088 JT	04-Jun-15	Addition	Rating upgrade
Longevity	ONTEX BB	04-Jun-15	Addition	Theme exposure warranted for inclusion
Longevity	PBYI UN	04-Jun-15	Addition	Theme exposure warranted for inclusion
Longevity	STMN SE	04-Jun-15	Addition	Rating upgrade
Longevity	TNDM UQ	04-Jun-15	Addition	Off restriction
Longevity	UBSG VX	04-Jun-15	Addition	Rating upgrade

Table 69: September 4 Primer Picks changes

Theme	BBG Ticker	Date	Action	Comment
Longevity	5530 TT	04-Jun-15	Removal	Coverage Terminated
Longevity	OCR UN	04-Jun-15	Removal	Under restriction
Longevity	RADL3 BS	04-Jun-15	Removal	Rating downgrade
Longevity	RMD UN	04-Jun-15	Removal	Rating downgrade
Longevity	SUNP IS	04-Jun-15	Removal	Rating downgrade
Millennials	VIV FP	04-Jun-15	Addition	Theme exposure warranted for inclusion
Millennials	MPC SJ	04-Jun-15	Addition	Theme exposure warranted for inclusion
Millennials	TRU SJ	04-Jun-15	Addition	Theme exposure warranted for inclusion
Millennials	CRI UN	04-Jun-15	Addition	Theme exposure warranted for inclusion
Millennials	PLCE UW	04-Jun-15	Addition	Theme exposure warranted for inclusion
Millennials	KORS UN	04-Jun-15	Removal	Rating downgrade
Millennials	SONC UW	04-Jun-15	Removal	Theme exposure warranted for exclusion
Millennials	520 HK	04-Jun-15	Removal	Theme exposure warranted for exclusion
Obesity And Health & Wellness	BRFS3 BS	04-Jun-15	Addition	Rating upgrade
Obesity And Health & Wellness	4523 JT	04-Jun-15	Addition	Rating upgrade
Obesity And Health & Wellness	081660 KP	04-Jun-15	Addition	Theme exposure warranted for inclusion
Obesity And Health & Wellness	KYTH UW	04-Jun-15	Addition	Coverage Reinstated
Obesity And Health & Wellness	2319 HK	04-Jun-15	Addition	Rating upgrade
Obesity And Health & Wellness	TNDM UQ	04-Jun-15	Addition	Theme exposure warranted for inclusion
Obesity And Health & Wellness	TFM UW	04-Jun-15	Removal	Rating downgrade
Obesity And Health & Wellness	AH NA	04-Jun-15	Removal	Theme exposure warranted for exclusion
Obesity And Health & Wellness	OREX UW	04-Jun-15	Removal	Under Extended Review
Obesity And Health & Wellness	RMD UN	04-Jun-15	Removal	Rating downgrade
Obesity And Health & Wellness	WFM UW	04-Jun-15	Removal	Rating downgrade
Obesity And Health & Wellness	551 HK	04-Jun-15	Removal	Rating downgrade
Obesity And Health & Wellness	RMTI UQ	04-Jun-15	Removal	Coverage Terminated
Obesity And Health & Wellness	SUNP IS	04-Jun-15	Removal	Rating downgrade
Safety	CTRL UW	04-Jun-15	Addition	Theme exposure warranted for inclusion
Safety	JNPR UN	04-Jun-15	Addition	Rating upgrade
Waste	IAM CC	04-Jun-15	Addition	Rating upgrade
Waste	SIIC SP	04-Jun-15	Addition	Theme exposure warranted for inclusion
Waste	SEV FP	04-Jun-15	Addition	Rating upgrade
Waste	SBSP3 BS	04-Jun-15	Removal	Rating downgrade
Waste	CSMG3 BS	04-Jun-15	Removal	Rating downgrade
Waste	5714 JT	04-Jun-15	Removal	Rating downgrade
Waste	2314 HK	04-Jun-15	Removal	Under Extended Review
Waste	LKQ UW	04-Jun-15	Removal	Coverage Terminated
Waste	SKG LN	04-Jun-15	Removal	Under Extended Review
Waste	UPM1V FH	04-Jun-15	Removal	Under Extended Review
Water	6361 JT	04-Jun-15	Addition	Rating upgrade
Water	3800 HK	04-Jun-15	Addition	Off review
Water	958 HK	04-Jun-15	Addition	Theme exposure warranted for inclusion
Water	INXW IS	04-Jun-15	Addition	Coverage Initiated
Water	IAM CC	04-Jun-15	Addition	Rating upgrade
Water	NYLD/A UN	04-Jun-15	Addition	Split of class A stock
Water	SAY SQ	04-Jun-15	Addition	Coverage Initiated
Water	SEV FP	04-Jun-15	Addition	Rating upgrade
Water	968 HK	04-Jun-15	Addition	Coverage Initiated
Water	816 HK	10-Jul-15	Addition	Theme exposure warranted for inclusion
Water	TERP UW	10-Jul-15	Addition	Off restriction
Water	SBSP3 BS	04-Jun-15	Removal	Rating downgrade
Water	CSMG3 BS	04-Jun-15	Removal	Rating downgrade
Water	AGUA* MM	04-Jun-15	Removal	Rating downgrade
Water	NDX1 GY	04-Jun-15	Removal	Rating downgrade
Water	SYNN VX	04-Jun-15	Removal	No Rating due to Monsanto offer
Water	TERP UW	04-Jun-15	Removal	Under restriction
Water	TSL UN	04-Jun-15	Removal	Rating downgrade
Water	MON UN	10-Jul-15	Removal	Under Extended Review
Water	SUNE UN	10-Jul-15	Removal	Under restriction

Source: BofA Merrill Lynch Global Research

Positioning methodology

Positioning between stocks within a Theme

We looked at the publicly disclosed holdings data of 13,000 institutions, 30,000 unique mutual fund portfolios, and 200,000 non-institutional 'insider/stake holders' spanning 110 countries. Within each theme, we looked at the 50 largest funds in terms of the total market value of their holdings within the theme. They would be considered the most influential investors within the theme.

First we calculate if a particular stock is overweight by the biggest holders. We take the market value of the stock held by the top 50 holders and calculate its proportion of total market value in disclosed in the stock. Then we consider the total Theme market value of the top 50 holders, and calculate its proportion of total Theme market value for all the funds. This tells us if the top holders of the Theme are overweight or underweight the particular stock relative to all holders within a Theme.

Next we look at the percentage of top 50 holders who are overweight stock. We look at the total market value of the stock, and calculate its proportion within the market value of the entire Theme. Then we look at the proportion the Theme comprises within the holder's entire portfolio. For example:

- The disclosed MV of Adobe is 28,019mm, and the MV of the Education theme is 1,537,972mm. Adobe then comprises 1.82% of the MV of the Education theme, let's consider this the "active benchmark".
- Let's say a fund has 6.6% of its portfolio within the Education theme, and 0.1% within the Adobe stock specifically. This means the fund has 1.518% of its Education theme in Adobe. This is lower than the active benchmark, the fund is underweight Adobe.

We plot the stock overweight level versus the percentage of top holders that are overweight. The higher the overweight level and the higher the proportion of holder overweight, the higher indication that the stock itself is overweight.

Positioning between sub-themes within a Theme

We looked at the publicly disclosed holdings data of 13,000 institutions, 30,000 unique mutual fund portfolios, and 200,000 non-institutional 'insider/stake holders' spanning 110 countries. Within each theme, we looked at the 50 largest funds in terms of the total market value of their holdings within the theme. They would be considered the most influential investors within the theme.

First we calculate the relative weight of the sub-theme by the biggest holders. We take the market value (MV) of the sub-theme held by the top 50 holders and calculate its proportion of total MV in disclosed in the sub-theme. Then we consider the total Theme MV of the top 50 holders, and calculate its proportion of total Theme market value for all the funds. This tells us if the top holders of the Theme are overweight or underweight the particular sub-theme relative to all holders within a Theme. For example:

- Education theme has 4 sub-themes: EdTech, K-12 & Childcare, Post-secondary, and Publishing
- The top 50 holders of the Education theme have 150,000mn in EdTech. The total MV of EdTech held by all holders is 450,000mn. Then the top 50 holders account for 33.33% MV in EdTech.
- The top 50 holders of the Education theme have an MV of 375,000mn in Education. The total MV of Education theme is 1,500,000mn. This means the top 50 holders account for 25% of Education. $33.33/25=1.33$. Using a 100 scale, 133 is above 100 and shows a relative overweight in the EdTech sub-theme.

Next we look at the percentage of top 50 holders who are overweight the sub-theme. We look at the total market value of the sub-theme, and calculate its proportion within the market value of the entire Theme. Then we look at the proportion the Theme comprises within the holder's entire portfolio. For example:

- The disclosed MV of EdTech sub-theme is 450,000mm, and the MV of the Education theme is 1,500,000mm. Edtech then comprises 30% of the MV of the Education theme, let's consider this the "active benchmark".
- Let's say a fund has 6.6% of its portfolio within the Education theme, and 3% within the Edtech sub-theme specifically. This means the fund has 45% of its Education theme in Edtech. This is higher than the active benchmark, the fund is overweight Edtech.

Positioning between Themes within Thematic Universe

We looked at the publicly disclosed holdings data of 13,000 institutions, 30,000 unique mutual fund portfolios, and 200,000 non-institutional 'insider/stake holders' spanning 110 countries. For the overall Thematic Universe, we looked at the 50 largest funds in terms of the total market value of their holdings within the entire thematic universe. They would be considered the most influential investors of themes.

First we calculate if a particular theme is overweight by the biggest thematic holders. We take the market value of the theme held by the top 50 holders and calculate its proportion of total market value in the theme. Then we consider the total Theme universe market value of the top 50 holders, and calculate its proportion of total Theme universe market value for all the funds. This tells us if the top thematic holders are overweight or underweight the particular theme relative to all holders of the thematic universe.

Next we look at the percentage of top 50 holders who are overweight the theme. We look at the total market value of the theme, and calculate its proportion within the market value of the entire Thematic universe. Then we look at the proportion the Thematic universe comprises within the holder's entire portfolio. For example:

- The disclosed MV of Education is 225,000mm, and the MV of the Thematic Universe is 1,500,000mm. Education then comprises 15% of the MV of the Thematic Universe. We consider this the "active benchmark".
- Let's say a fund has 25% of its portfolio within the Thematic Universe, and 3.2% within the Education theme specifically. This means the fund has 12.8% of its Thematic Universe in Education. This is lower than the active benchmark, the fund is underweight Education.

We plot the theme overweight level versus the percentage of top holders that are overweight. The higher the overweight level and the higher the proportion of holder overweight, the higher indication that the theme itself is overweight.

Holdings data

Sources for this information include 13F, 13G, 13D, Registration filings (S-1, S-2, S-3), Proxy, 10-K, Insider filings (Forms 3, 4, 5), N-30D, N-Q mutual fund holdings, annual reports, and country specific authorities as collated by Factset. We use the most recent data available for each fund, excluding data that is more than 12 months old. The most common "age" of the data is two-to-three months old. To provide a more recent snapshot of the value of the fund managers' equity holdings, we have marked-to-market the holdings as of the most recent month-end. The report does not reflect any changes, other than re-pricing, in portfolio holdings after the filing dates. The analysis includes both active and passive fund holdings information.

Equity client flow methodology

This portion of the research product provides an aggregated view of BofA Merrill Lynch client trading flows into global stocks executed by the cash equities business of the firm. By

aggregating flows across many execution platforms and trading desks, the goal of this product is to provide an overview of what Themes are being bought or sold. It is not meant to be predictive of the market, but aims to provide a holistic view of BofAML client trading flows by Theme.

The trading flow considers all stocks within the Thematic Universe, which spans all global regions. Stocks here are shown only as “net buys,” defined as the notional amount of buy orders less sell orders. Since this product is meant to provide client action context of recent market and Theme performance based on client trading flows, we capture the data as “net buys” rather than trading volume. The order flow comprises all single stock trades executed by the firm globally within the cash equities business including high touch, electronic trading, and portfolio trading. Order flow on derivatives such as options, futures, and swaps are not included.

Equity flows are represented in US dollar terms. Stocks that are not denominated in USD are converted using the spot foreign exchange rate on the day of trading.

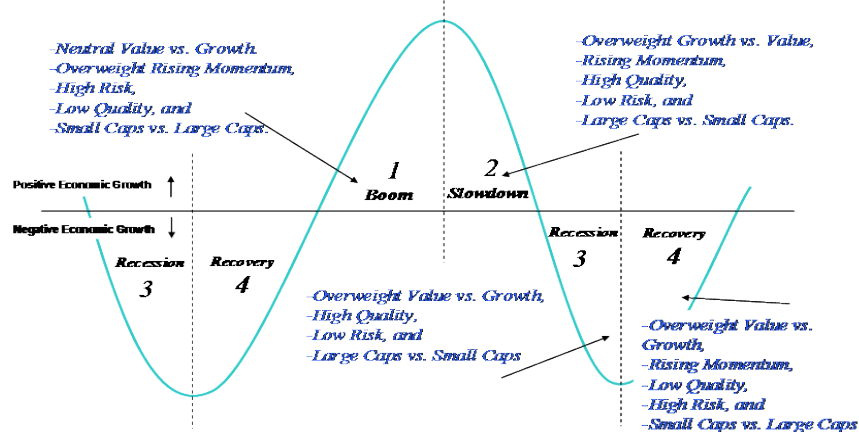
European style cycle methodology

- We have drawn upon the back-testing results first presented in February 2004, using data (since January 1992) of investment style price returns and the economic cycle to create the European ‘Style Cycle’.
- The European ‘Style Cycle’ aims to offer what we believe are two vital components for investing across the cycle. These components we believe are 1) Timing, and 2) Rotation.
- Investment styles with potential for success are based on the favourable positioning within the cycle at a particular point in time. Highlighted investment styles are expected to outperform the MSCI European equal weight price index.
- Similarly, we have identified the investment styles that we believe have the characteristics to under-perform the MSCI European equal weight price index based on the unfavourable positioning within the cycle at a particular point in time. The screens resulting from the investment styles are 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 decision.
- We first introduced the European Style Cycle in February 2004.

Background

In order to marry our ‘top down’ work with our ‘bottom up’ process, we have researched the relationship between the European economic cycle and price performance of various investment styles. The chart below shows European ‘Style Cycle’. In brief, the chart illustrates this relationship between the economic cycle and investment style performance. The 4 phases of the economic cycle are dictated by the change in the European Composite Macro Index (CMI). The style preferences in each phase of the cycle are based on the back-testing results of average monthly price returns - by individual investment styles during the changing conditions of the economic cycle.

Chart 92: Phases of the Economic Cycle* & Investment Style Preferences – ‘Style Cycle’



Phase 1: Rising & Accelerating; Phase 2: Rising & Decelerating; Phase 3: Falling & Decelerating; Phase 4: Falling & Accelerating.

*Economic Cycle based on the MLI Composite Micro Indicator

Source: BofA Merrill Lynch European Equity and Quant Strategy
Jan 2004.

Back testing period from Dec 1992 to Dec 2003. Actual Performance

1) Defining the ‘Cycle’

Step 1

We define the cycle by using the change in European composite macro index (CMI). The index is an equal weight composite indicator, measuring six key variables. We have selected these 6 indicators because we believe they represent a cross section of views, on the character of the economic/ business/ stock market cycle.

The inputs we use include in the European CMI are as follows:

- Direction of the long-end interest rate expectations,
- Direction of business survey data and economic optimism,
- Economists’ consensus GDP forecasts,
- Sell-side analysts’ global profit revisions,
- The OECD economic leading indicator, and
- Changes in European inflation expectations.

Of course, the cycle may be defined by using more or less inputs, or by using 6 completely different inputs, and this may or may not generate similar results. However, our analysis shows for the purpose of defining a macro tool that shows linkage to the cycle and ultimately expands our understanding of rotations within investment style price returns, then these inputs are sufficient.

Specifically, we have selected these six inputs because they fulfil three key criteria. These inputs in isolation but also as an equal weight composite index,

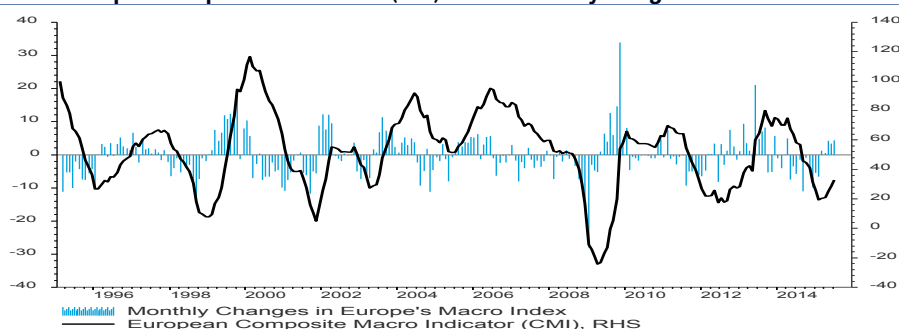
1) show a high correlation to the change in cyclical vs. defensive stock performance over the duration of our back testing period, 2) have a high correlation to the consensus 3-month EPS revisions ratio over the duration of our back testing period, and 3) show a high probability at predicting the direction of 6-month future price returns over the duration of our back testing period.

Simply put, we take each one of the six variables as they existed at month end and record the data, we then use z-scores to normalise the data. (Some are percentages, some levels and others ratios). Using a percentile rank methodology of each variable can achieve the

same outcome of normalising individual data. We then aggregate the individual data series by using an equal weight average. The sum of the individual data or aggregate macro series; we refer to as the European Composite Macro Index (CMI).

Phase 1 & 2

Chart 93: European Composite Macro Index (CMI) and the monthly changes in CMI



Source: BofAML European Quant Strategy –
Based on BY, GDP Forecasts, OECD, IFO Survey, PPI & EPS Revisions.

When the European Composite Macro Index is expanding (top half of chart 1) then at that point in time we can either be in Phase 1 – ‘boom’ or Phase 2 – ‘slow-down’. Phase 1 – ‘boom’ depicts expansion in economic activity and where the data continues to accelerate. Phase 2 – ‘slow-down’ highlights rising expectations of economic growth, but where the data are decelerating. Although, this phase highlights positive growth the data points would suggest that growth is slowing. Some refer to this as a phase when the 2nd derivative is falling (the change in the change). In brief the CMI shows we are either in a ‘boom’ or ‘slow-down’. The month on month change in the CMI determines the difference between a ‘boom’ phase and a ‘slow-down’ phase.

Phase 3 & 4

When the European Composite Macro Index is contracting (bottom half of chart 1) then at that point in time we can either be in Phase 3 – ‘recession’ or Phase 4 – ‘recovery’. Phase 3 – ‘recession’ shows contracting economic activity and where the data are decelerating. Phase 4 – ‘recovery’ highlights a point in the cycle where economic growth is perceived to be negative but the data point is no longer deteriorating (2nd derivate rising). This phase is most similar to the period between late 2002 and 2003 or 2009. During this period, financial markets ‘bottomed’, sentiment started to rise from depressed levels and business confidence picked-up substantially. In brief the CMI shows we are either in a ‘recession’ or ‘recovery’. The month on month change in the CMI determines the difference between a ‘recession’ phase and a ‘recovery’ phase.

2) Defining ‘Investment Style’

Step 2

We define the investment style by aggregating individual screens of stock with the overall BofAML thematic universe, or the specific theme that they are part of. We have taken the entire group of stocks that existed within the theme, or the overall thematic universe and ranked stocks based on screen definitions highlighted in the table below. Given a stock can be included in more than one theme, they will have a likely different relative ranking depending on whichever theme we are considering at the moment. The score will also likely be different depending on whether we are considering the theme, or looking at the overall universe

How to Read the Table:

- + Denotes that the long and short screens moved in the right direction over the past month. (i.e. - longs are going up and shorts are going down).
- Denotes screens are moving in the opposite direction (i.e. - longs are going down and shorts are going up).
- = Denotes a screen where only one of the long/short strategies is moving in the right direction. (i.e. either the long or short portfolio is going in the right direction whilst the other moves in the opposite direction to what is expected).

Volatility - is the annualized standard deviation of the returns of the long minus the short screen. (A low number suggest low volatility and high number implies high volatility). The Long Term (LT) measure is based on all returns since inception of the screens (Generally – 10Years), the Short Term (ST) on the last 2 years of data

Stock Screens

We select the top and bottom 10% of stocks under each screen heading and characterise these basket of stocks as either the top or bottom screens based on each factor. Stock screens are produced using month end data and are rebalanced monthly. All baskets of stocks within the screen are based on equal weight average to aggregate stock to screen level. Price return data is then created for each screen on the same equal weight average basis.

For a more in-depth understanding of each screen definition please refer to [Pan European Quantitative Profiles: Safety in beta? 9 June 2015](#) research note which highlights each of these 22 screens, their performance and the current stock make-up.

Table 70: Investment screens

Name	+/-/=	ST Vol	LT Vol	Comment
Forecast Earnings Yield	-	10	14	Has been more volatile in recent yrs relative to history
Trailing Earning Yield	+	10	13	Has been more volatile in recent yrs relative to history
Dividend Yield	+	9	11	One of the least volatile Value metrics
Cash/Price Yield	+	8	7	One of the least volatile Value metrics
Book/Price Yield	+	15	16	The most cyclical Value metric
Price/Sales	-	8	9	One of the least volatile Value metrics
Forecast PEG	-	9	9	One of the least volatile Value metrics
Forecast EPS Growth	-	7	9	The worst performing growth metric
Trailing EPS Growth	+	3	6	The best performing growth strategy in the long run
LT EPS Growth	-	7	8	Has not worked in recent years
3 month For. EPS change	-	6	8	One of the most favoured metrics by bottom up stock pickers
EPS Revision Ratio	-	4	9	One of the most favoured metrics by bottom up stock pickers
Sales Revision Ratio	-	6	8	One of the most favoured metrics by bottom up stock pickers
12m Price Momentum	-	7	10	Tends to perform poorly at cyclical turning points
Return on Assets	+	5	7	Low Quality metrics performed well in 2013
Return on Capital	+	6	7	Low Quality metrics performed well in 2013
Return on Equity	-	7	7	Low Quality metrics performed well in 2013
5yr Return on Equity	+	7	9	Low Quality metrics performed well in 2013
Leverage	-	5	7	Low Quality metrics performed well in 2013
EPS Estimate Dispersion.	-	11	13	A more fundamental metric of risk
Beta	-	11	15	The highest risk style metric
Small Size	-	4	5	Volatility is vey low in mid caps

Source: BofAML European Quant Strategy. ST = Short term price volatility which is measured over the past 2 years. LT= Long term price volatility which is measured over the past 10 years.

Investment Styles

Price returns; not total returns, dividends not re-invested. We use price data using month end data points for our stock selection inputs. We also include restricted stocks in our analysis.

Investment Style price returns are calculated as the simple average performance of the stocks within the screen. This way, we remove any size bias from the analysis, and thereby test whether the factors on which we are focused predict price performance.

We use the most commonly used investment style definitions which include Value, Growth, Momentum, Quality, Risk and Size. Investment Style price returns we use are aggregated on an equal weight basis for all screens that fulfil the investment style definition. For example, Value is defined as the 7 portfolios in the table above and including Forecast Earnings Yield and Forecast PEG. Growth is defined as the combination of LT EPS Growth, Forecast Earnings Growth and Trailing EPS Growth, and so on for the remainder of the investment style screens

Investment Style Returns and Phases of the Cycle

In step 1 – we defined the cycle. We have a monthly history of which phase of the cycle, the stock market was in, at each point in time. In step 2 – we defined the investment style price returns. We have time-series for price returns based on monthly stock screens. In brief, the ‘Style Cycle’ marries the phase of the cycle to good and bad price returns for different definitions of investment style.

3) Compiling ‘Style Cycle’ Stock Screens

Step 3

Our back tested price returns highlight the combinations of investments styles that are the top and bottom ranked for each phase of the ‘style cycle’. The European Composite Macro Index (CMI) informs investors of the timing of this rotation.

Using the ‘boom’ phase as an example

Compiling a stock screen from our analysis is dependent upon which phase of the cycle we are currently recommending. For example if the CMI is highlighting a preference for the ‘boom’ phase of the cycle, then past performance suggests the appropriate combination of investment styles to overweight/ underweight vs. the Thematic Universe, or Theme are as follows:

Top Stocks – Small Caps, High Risk, Low Quality and Rising EPS Momentum.

Bottom Stocks – Large Caps, Low Risk, High Quality and Falling EPS Momentum.

- The top and bottom screens for the ‘boom’ phase are based on an initial stock universe based on the 250 largest stocks ranked by market capitalisation. We use month end data as the latest data points.
- Each stock will have an aggregate percentile rank for Value, Growth, and Momentum. We use the 60-month beta as a measure of Risk and RoE (Return on Equity) as the measure of Quality. All definitions are based on the description provided in step 2.
- We then filter the list of 250 stocks by each factor - we do not exclude restricted stocks from this screening process. Small caps are defined as the bottom 200 stocks when ranked by market caps, and Large caps those in the top 100 stocks by market cap.
- Good Value stocks are perceived to be those stocks with a percentile rank greater than 50, those with a rank less than 50 are perceived to offer poor Value.
- High Growth stocks have a percentile rank greater than 50, and low Growth stocks have a percentile rank less than 50.
- Stocks with rising Momentum have a percentile rank greater than 50, and falling Momentum less than 50

- A beta greater than 1 highlights stocks with high Risk, and a beta less than 1 highlights stocks with low Risk.
- A high RoE is a measure of high quality - we use a threshold which is greater than the median of the universe of 250 stocks to determine which stocks are high Quality. A low RoE or low Risk is a stock with a RoE less than the median RoE of the 250 stock universe.
- The top and bottom stock screens based on the European 'Style Cycle' analysis are based on companies that fulfil the selection criteria within each phase of the cycle framework.

Back-testing the cycle with investment style

We enter the 'Recovery' phase of the cycle this month.

The table below includes the average excess price returns (monthly) for individual investment styles at each phase of the economic cycle. (Style performance is versus MSCI Europe equal weight Price Index, the region from which Style Cycle originates from).

Table 71: Monthly Excess Returns by Investment Style and Phases of the Economic Cycle

Economic Cycle	Value	Growth	Momentum	Quality Hi-Lo	Risk High	Size (Large-Small)
Phase 1 - 'Boom' Rising Accelerating	1.10	0.78	0.97	-1.34	0.65	-0.75
Phase 2 - 'Slow-down' Rising Decelerating	0.00	0.44	0.89	0.52	0.07	0.25
Phase 3 - 'Recession' Falling Decelerating	-0.70	-1.91	-0.81	6.37	-2.85	1.10
Phase 4 - 'Recovery' Falling Accelerating	2.47	1.31	0.10	-3.00	2.66	-2.05
5 Cycle Average	0.72	0.15	0.29	0.64	0.13	-0.36

Source: BofA Merrill Lynch European Equity and Quant Strategy/ DataStream/ OECD/ MSCI
Dec 2003

Back testing period Dec 1992 to

Performance based on equal weight portfolios, monthly rebalanced, no transaction costs are included, performance based on price returns and not total returns (dividends are not included).

The back-testing results illustrate how certain investment styles work well compared to others, depending on the economic conditions and ultimately where we are in the cycle. The data presented above looks at all periods since 1992, including 5 complete cycles.

- For the purpose of the historical back-testing, we calculate price returns in our analysis, not total returns. Dividends are not re-invested and performance does not include tax withholdings or any investment advisory fees. We do not include transaction costs, and we not do include implementation costs or borrowing costs in the absolute 'Style Cycle' price returns.
- Price returns are based on month end data, meaning we use closing stock prices for the last trading day of the calendar month. All screens are based on month end data and it is assumed on the 1st business day of the new month our screens would have been available to the market. We calculate the profit or loss for a particular month based on the month end data from one period to the month end data of the next period.
- Screens are determined at the end of each month using month-end data. Price performance is calculated as the simple average performance of the stocks within the screen. In order that we compare like with like, screen performance is compared to an

equal-weighted average performance of all stocks in the universe. In this way, we remove any size bias from the analysis, and thereby test whether the factors on which we are focused predict price performance. It is noteworthy that BofA Merrill Lynch restricted stocks have not been excluded from any part of the historical monthly screens as defined as the back-test period.

- Back-testing is hypothetical in nature and reflects application of the screen prior to its introduction. It is not actual performance and it is not intended to be indicative of future performance..

Summarising the results - we draw the following conclusions

Phase 1 'Boom' - investors have benefited most by being overweight Momentum (Rising Price & EPS), High Risk (High Beta & High Estimate Dispersion), Small Caps vs. Large Caps and being Neutral on Value vs. Growth.

Phase 2 'Slow-down' - investors have benefited most by overweighting Growth vs. Value, Momentum (Rising Price & EPS), High Quality (Strong Balance Sheet indicators), Low Risk (Low Beta & Low Estimate Dispersion) and Large Caps vs. Small Caps.

Phase 3 'Recession' – overweight Value vs. Growth, High Quality (Strong Balance Sheet indicators), Low Risk (Low Beta & Low Estimate Dispersion) and Large Caps vs. Small Caps.

Phase 4 'Recovery' – overweight Value vs. Growth, Momentum (Rising Price & EPS), Low Quality (Weak Balance Sheet indicators), High Risk & Small vs. Large Caps.

Value Factors

Forecast Earnings Yield: I/B/E/S next twelve month EPS divided by month end Price.

Trailing Earnings Yield: Trailing twelve month EPS divided by month end Price.

Dividend Yield: Trailing twelve month Dividend per share divided by month end Price.

Cash to Price: Trailing 12 month cash earnings per share divided by month end price. Cash Earnings are defined as earnings plus depreciation on fixed assets. (i.e. –not free cash flow)

Book to Price: Trailing twelve month Book Value per share divided by month end Price.

Price to Sales: Month End Price divided by last reported Sales per share figure.

Forecast PEG: I/B/E/S FY1 P/E divided by I/B/E/S Long Term Growth Estimate

Growth Factors

Forecast Earnings Growth: I/B/E/S FY2 Mean EPS Estimate less latest reported EPS divided by month end price.

Trailing Earnings Growth: Difference between Trailing Twelve Month EPS and Trailing Twelve Month EPS a year prior divided by absolute value of Trailing Twelve Month EPS a year prior.

Forecast EPS Change: Difference between I/B/E/S Forecast Twelve Month EPS and I/B/E/S Forecast Twelve Month EPS a year prior divided by I/B/E/S Forecast Twelve Month EPS a year prior.

Long Term Mean EPS Growth: I/B/E/S Mean Long Term Growth Estimate (+5years).

Momentum Factors

3 Month Change in Mean EPS: Difference between I/B/E/S FY1 mean EPS and I/B/E/S FY1 mean EPS 3 months prior, divided by absolute value of I/B/E/S FY1 mean EPS 3 months prior.

Earnings Revision Ratio: ((# of FY1 and FY2 upward EPS revisions over last 3 months)-(# of FY1 and FY2 downward EPS revisions over last 3 months))/ # of FY1 and FY2 estimates over last 3 months.

Sales Revision Ratio: ((# of FY1 and FY2 upward Sales revisions over last 3 months)-(# of FY1 and FY2 downward Sales revisions over last 3 months))/ # of FY1 and FY2 estimates over last 3 months.

1m Price Momentum: Latest month-end price / 1-month ago price.

12m Price Momentum: Latest month-end price / 12-months ago price.

Risk Factors

Beta: Calculated using regression analysis on 60 months of price performance versus the benchmark. High beta stocks have a high correlation to the market, whilst low beta stocks have a low correlation to market movements.

EPS Estimate Dispersion: Coefficient of variation of I/B/E/S FY2 EPS estimates. The coefficient of variation is defined as the Standard Deviation of Estimates divided by the absolute value of the Mean Estimate.

Quality Factors

Return on Assets: Annual Earnings divided by Total Assets

Return on Capital: Annual Earnings divided by Total Capital

Return on Equity – 1yr: Trailing Twelve Month EPS divided by Trailing Twelve Month Book value per Share

Return on Equity – 5yrs: Average RoE over the last 5 years

Leverage: Annual Long Term Debt/ (Annual Long Term Debt +Annual Book Value)

Investment Styles

Value: Equal weighted combination of factors - Forecast/Trailing EPS Yield, Dividend Yield, Cash to Price Yield, Book to Price Yield, Price to Sales and Forecast PEG.

Growth: Equal weighted combination of factors - Forecast/Trailing EPS Growth, Forecast EPS Change and Forecast Long Term Growth.

Momentum: Equal weighted combination of factors - 3m EPS Change, EPS Revision Ratio, Sales Revision Ratio, 1m Price Change and 12m Price Change.

Quality: Equal weighted combination of factors - Return on Assets, Return on Capital, Return on Equity, 5yr Return on Equity and Leverage.

Risk: Equal weighted combination of factors - .EPS Estimate Dispersion and Beta

Investment Styles

Value: Equal weighted combination of factors - Forecast/Trailing EPS Yield, Dividend Yield, Cash to Price Yield, Book to Price Yield, Price to Sales and Forecast PEG.

Growth: Equal weighted combination of factors - Forecast/Trailing EPS Growth, Forecast EPS Change and Forecast Long Term Growth.

Momentum: Equal weighted combination of factors - 3m EPS Change, EPS Revision Ratio, Sales Revision Ratio, 1m Price Change and 12m Price Change.

Quality: Equal weighted combination of factors - Return on Assets, Return on Capital, Return on Equity, 5yr Return on Equity and Leverage.

Risk: Equal weighted combination of factors - .EPS Estimate Dispersion and Beta

Multi Factor Models

STYLE CYCLE: The European 'Style Cycle' links phases of the economic cycle with the performance of investment style. Stocks are screened based on their equal weighted rank of Value, Growth, Momentum, Quality and Risk.

Absolute return

Absolute return is calculated based on monthly returns and reflects simple price appreciation (depreciation) over the stated period of the screened stocks. For purposes of this calculation, the stocks in the screen are assumed to be equally weighted. Returns do not reflect dividend or costs.

Relative return

Relative return is calculated based on monthly returns and reflects simple price appreciation (depreciation) over the stated period of the screened stocks minus the return for our Equal weighted European Universe. Returns do not reflect dividend or costs

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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.

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