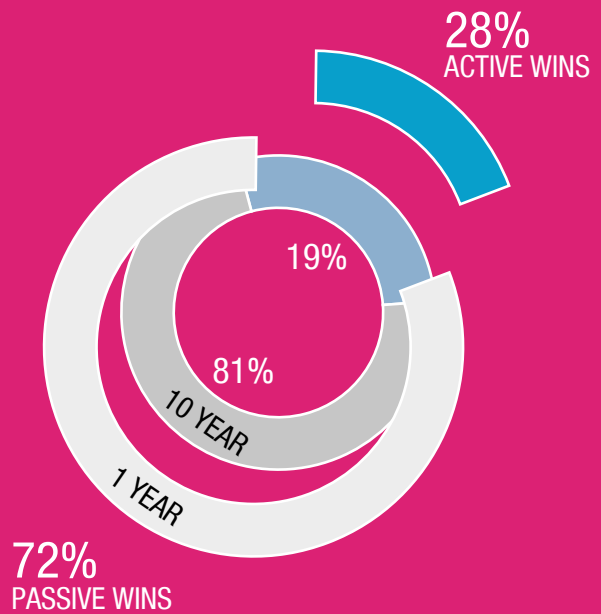


Blending active and passive funds: Comparing 2016 performances and 2017 outlook

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COMPARING PERFORMANCE



Special Acknowledgement to Lyxor Quantitative Research, Fund Selection & Solutions and Cross-Asset Research teams.

Executive summary

Few active managers outperformed their benchmarks last year, in markets driven more by politics than economics and company fundamentals. 2017 promises more of the same as QE unwinds, populism rises and globalisation gives way to protectionism. Choosing when and where to go passive or active, and identifying the right manager, could be more important than ever.

Our annual study which looks at the performance of European domiciled active funds vs. their benchmark in 15 key investment universes could help.

Key findings

1. 2016 Active fund results were below those of 2015, but in line with long-term averages

28% of active funds outperformed last year, which is in line with long-term results but well down on the 47% that did so in 2015. Over 10 years, only 19% have outperformed. The best performers were found in less efficient markets like small-cap equities or credit.

2. Success depended on choosing the right factors

Once again, the best performers were overweight the best-performing factors. The worst simply got their factor allocations wrong.

3. Factor timing and stock picking were often detrimental

Average alpha generation deteriorated and was negative overall as the fast-moving, unpredictable environment confounded many active managers.

4. Smart beta benchmarks won out again

Last year's success for Smart Beta was no fluke. Smart Beta benchmarks outperformed 89% of active managers in our US, Europe and Japan universes in 2016. That number increases to 98% over 10 years.

5. Active added real value in less efficient markets

In 2016, 54% of active managers beat their benchmark in Europe and France small-cap equities and credit, significantly better than the average results. Last year, best performing funds were in France mid-cap, Europe large-cap and China universes. Over 10 years, alpha generators have been at their best in European small-caps, China and UK equities, as well as global value and credit.



Lyxor ETF

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Understanding the active and passive management debate to build better portfolios

It took a long time for investors to accept the ideas of Markowitz, Sharpe, Jensen and the others, but passive management now represents a large part of the asset management industry. According to a BCG study, passive investments represent more than 14% of global Assets Under Management, or EUR 11,000 billion in 2015.

Modern Portfolio Theory sparked the debate regarding the benefits of active versus passive management. The early works of Markowitz, Tobin and Sharpe laid the foundations for the development of passive fund management. Using the works of Markowitz on the efficient frontier and Tobin on the tangency portfolio, Sharpe first defined the concepts of market risk premium and market portfolio. For Sharpe, under the hypothesis of rational investors and the efficient market, only systemic risk is rewarded, which goes against the idea of stock picking. The risk premium of a stock is therefore equal to the beta of the stock times the market risk premium. Sharpe went even further as he demonstrated that the tangent Markowitz portfolio is the market capitalisation portfolio. He writes that investors should hold this portfolio as it is the most efficient.

For Jensen, if Sharpe is right and what is really important is market beta, then the real performance of a mutual fund can be defined using this notion. He stated that a good measure of active management performance should be the beta-adjusted performance of a fund. In 1968, he introduced the notion of alpha, defined as the excess return of the fund over the market performance adjusted by the beta of the fund times the market risk premium. Analysing the beta-adjusted performances of a universe of 115 US equity active funds, he found a remarkable result: on average the performance of active funds is equal to the performance of the benchmark minus management

fees. On average, the alpha of active funds is equal to minus management fees. This was an important step in the development of passive management and allowed Jensen to conclude that: *“The evidence on mutual fund performance indicates not only that these 115 mutual funds were on average not able to predict security prices well enough to outperform a buy-the-market-and-hold policy, but also that there is very little evidence that any individual fund was able to do significantly better than what we expected from mere random chance”*.

The seminal work of Michael Jensen was indeed the starting point of the development of passive management. Following these studies and after more than six years of hard work, in 1971, John McQuown had the idea to launch the first index fund while working at Wells Fargo. He started by launching a private fund for the Samsonite luggage company (Bernstein, 1992). The index industry was still in its infancy and there was a lot of work to do on indices before being able to use benchmarks as underlyings for index funds. The first real open-ended fund on the S&P 500 was launched two years later in 1973.

Based on Brinson & Al’s famous 1986 work, studying asset allocations of US pension funds for the period 1990-2008, Michel Aglietta, Marie Briere, Sandra Rigot and Ombretta Signiri (2012) found that the market accounts for 90% of pension fund global allocation net returns. The result even increased to 96% when considering only equities.

BREAKDOWN (%) OF PENSION FUNDS' ACTUAL NET RETURNS 1990-2008 (NET OF FEES)
FACTORGLOBAL

FACTOR	GLOBAL ALLOCATION	STOCKS	FIXED INCOME	CASH
Market	90	96	70	26
Asset allocation	4	2	3	13
Active management	2	0	20	36
Interaction effect	4	2	7	25

Source: Michel Aglietta, Marie Briere, Sandra Rigot and Ombretta Signori, *Rehabilitating the Role of Active Management for Pension Funds* 2012

In their influential 1992 paper, “Common Risk Factors in the Returns on Stocks and Bonds”, Eugene Fama and Kenneth French showed that, in addition to the market risk premium, two other factors relating to firms’ size and to value help to explain stock returns.

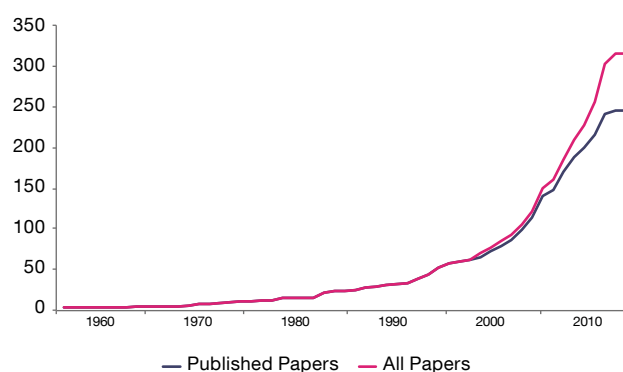
In 1993, in an article entitled “Hot Hands in Mutual Funds: Short-Run Persistence of Relative Performance, 1974-1988”, Hendricks, Patel & Zeckhauser showed that even though average alpha is negative, alphas are correlated with past periods, meaning that, over the short term, the best performing funds remained the best performing funds. This is the origin of the notion of the performance persistency of active funds.

In 1995, when trying to understand the typology of active funds in the US (contrarian, value, etc.), Grinblatt, Titman & Wermers (“Momentum Investment Strategies, Portfolio Performance, and Herding: A Study of Mutual Fund Behavior”) found that 77% of active fund managers were momentum managers. This gave Carhart the idea to introduce a fourth factor in the Fama French 3 factor model: the momentum factor. Using this four-factor model, he then found that, contrary to what Hendricks & AI had said and based on this new definition of alpha (i.e. calculated vs market beta and factor betas including momentum), alphas are no longer auto-correlated. This means that the short-term persistency of the performance of active funds comes from the persistency of the performance of the risk factors. He therefore stated that alpha can be generated by having the right exposure to the right risk factors.

Factor investing means the attempt to capture particular factor risk premia in a systematic way, for example by building a factor index and replicating it, or by constructing a portfolio that gives you exposure to a range of risk factors. The objective is to combine factors to enhance the long-term performance of portfolio. Size and Value has been shown by Fama and French since 1992 to help explain returns. Since then, researchers have provided evidence for the existence of other factors, including Momentum, low volatility and quality. Momentum is a

well-documented tendency for persistence in stocks ‘price returns. The low volatility factor is a return stream associated with less risky stocks and the quality factor represents the performance of a subset of more defensive stocks.

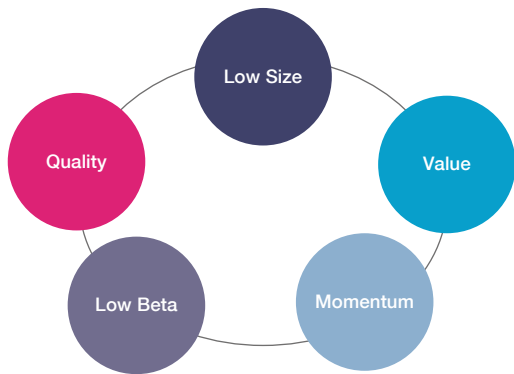
But statistical analysis can be and has been used to claim the existence of more and more factors. In fact John Cochrane, president of the American Finance Association, has recently referred to a “zoo” of factors. We recently counted around 250 in published academic papers, and their number has been increasing exponentially.

CUMULATIVE NUMBER OF FACTORS


Source: Harvey C.R., Liu Y. and Zhu H. (2014),...and the Cross-Section of Expected Returns, SSRN.

In their study “Facts and Fantasies About Factor Investing”, Roncally and Cazalet (2015) take a holistic view of risk factors, aiming to demonstrate certain factors’ persistence and suggesting how to allocate between them in portfolios. To avoid getting lost in the factor zoo—so as not to be misled by spurious correlations—they think that there should be solid empirical evidence for the existence of a factor and that there should also be some theoretical justification for its existence. They set up an equity market factor framework focusing on five alternative risk premia: in addition to the Fama- French factors of value and size we include momentum, low volatility and quality.

RISK FACTOR SOLUTIONS



Source: Lyxor Asset Management

Lyxor Quantitative Research found that more than 90% of the variability of returns of an appropriately diversified portfolio of randomly selected stocks from the S&P 500

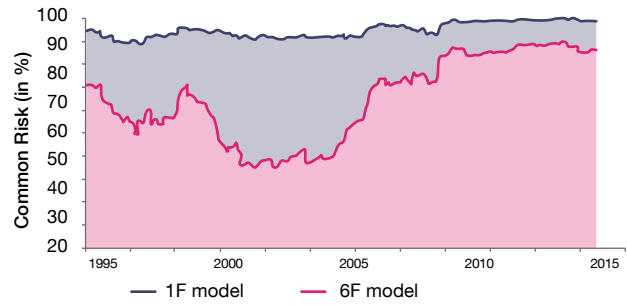
Main reasons behind passive management growth:

It took a long time for investors to accept the ideas of Markowitz, Sharpe, Jensen et al., but passive management now represents a large part of the asset management industry. There are many reasons for this growth.

1. The development of financial theory stating that most of the performance can be explained by markets and later by factors stated the basis for this exponential growth of passive management. It has changed the asset allocation framework and put value in asset allocation more than in stock picking. In a major

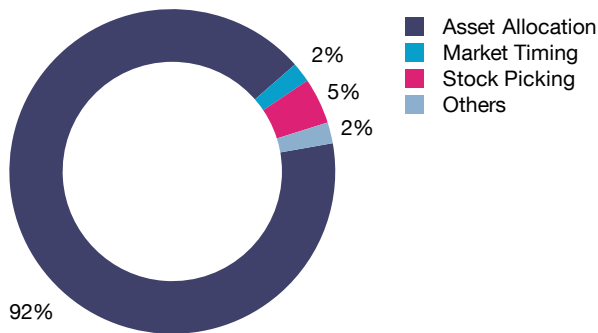
(at least 50) can be explained by market returns. He also found that this figure has significantly increased since 2005, allowing him to state that beta is back, as shown in the graph below. The 6F i.e. six factor model includes the market beta plus the 5 factors described above.

MARKET AND RISK FACTORS CONTRIBUTION TO VARIABILITY OF RETURNS

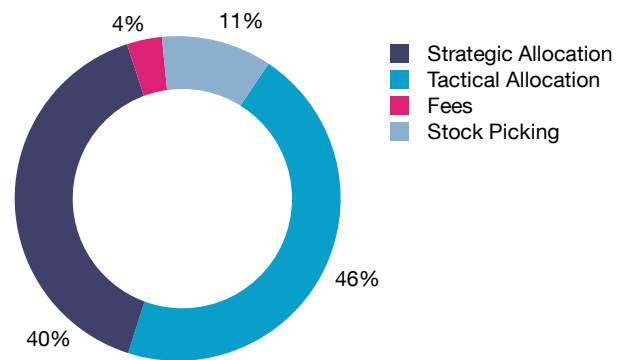


Source: Thierry Roncalli 2015

LONG TERM PORTFOLIO SOURCES OF VARIABILITY OF RETURNS



Sources: Brinson, Singer, Beebower (1991)



Sources: Ibbotson et Kaplan (2000)

2. Second, active managers continue to underperform their benchmarks on average. In this study, we show that only 20% of active funds on average outperformed

their benchmark over the last 10 years. And the evidence also shows that there is little persistency of performance over time. Managers that beat their

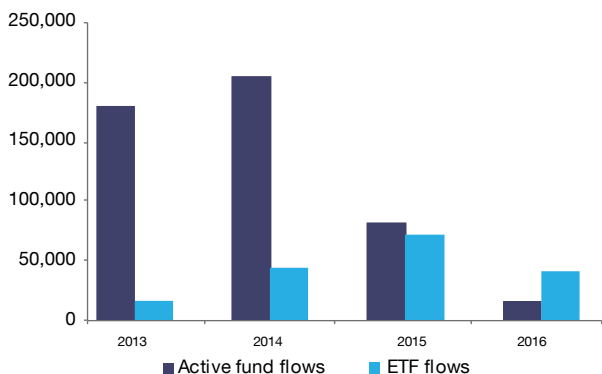
benchmark in one year therefore have a poor chance of doing the same the following year.

- Third, passive funds, including ETFs, have a clear cost advantage in comparison to active funds, leading many investors to decide that they would prefer to track an index rather than try to beat it. Of course, it's fair to point out that passive funds don't replicate their indices exactly. All other things being equal, they will trail it by their annual management costs. However, passive funds' costs are relatively low and have been steadily decreasing.
- Passive funds now provide access to a broad range of asset classes with a great degree of granularity, offering investors significant choice. Passive funds are typically highly diversified, giving wide access to individual market segments. In Europe for the first year in 2016, ETFs gathered more flows than active funds among equity, bonds and commodities. Active funds of those 3 asset classes gathered EUR2bn whereas ETF flows amounted to EUR36bn. This can mainly be explained by outflows from active equity

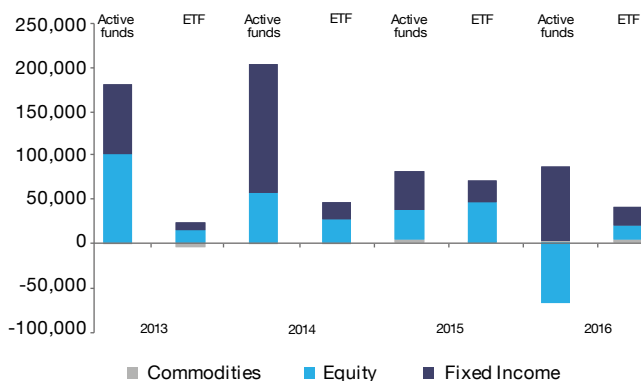
funds amounting to a massive EUR78bn. In contrast, equity ETFs recorded inflows of EUR12bn (as of end of December 2016).

In fact, ETFs are now more firmly established as investment tools than ever before, opening new frontiers for active asset allocation. In Europe, AUM has crossed the EUR500Bn threshold for the first time (up 14% vs. 2015), driven by their attractive relative performance versus traditional active managers and the growing recognition of the liquidity, transparency and cost benefits they bring to portfolios. Many of the securities now readily available through ETFs would once have been inaccessible or extremely expensive to get hold of. Little wonder commentators believe they are "revolutionising the business of long-term saving". And the growth isn't just in traditional areas. ETF providers are more able to adapt to challenging markets as the growth of Smart Beta has shown. Meanwhile fixed income ETFs gathered more assets than equity ETFs for the first time given their greater flexibility in the hunt for yield and the industry's ability to reinvent itself to deliver solutions for rising inflation, rising rates and so on.

EUROPEAN-DOMICILED ACTIVE FUNDS VS. ETF FLOWS (EURM)



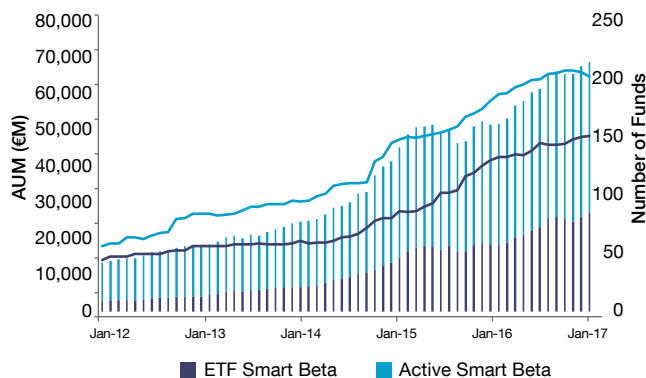
EUROPEAN-DOMICILED ACTIVE FUNDS VS. ETF FLOWS BREAKDOWN BY ASSET CLASS (EURM)



Source: Lyxor ETF, Morningstar data as of 30/12/2016 based on Fixed income, Equity & commodities data. Past performance is not a reliable indicator of future results.

- Smart Beta is now a key component of portfolios. Having grown significantly over the last few years, and while most of the smart beta assets under management are within mandates, which make mapping them somewhat difficult, the public figures still speak for themselves: in December 2016, smart beta ETF AuM reached EUR27.4bn in Europe, twice as much as two years before. As for active smart beta funds, these totaled EUR41bn at the end of December 2016, also multiplying by 1.5 in 2 years.

AUM – SMART BETA ETF/ACTIVE SMART BETA

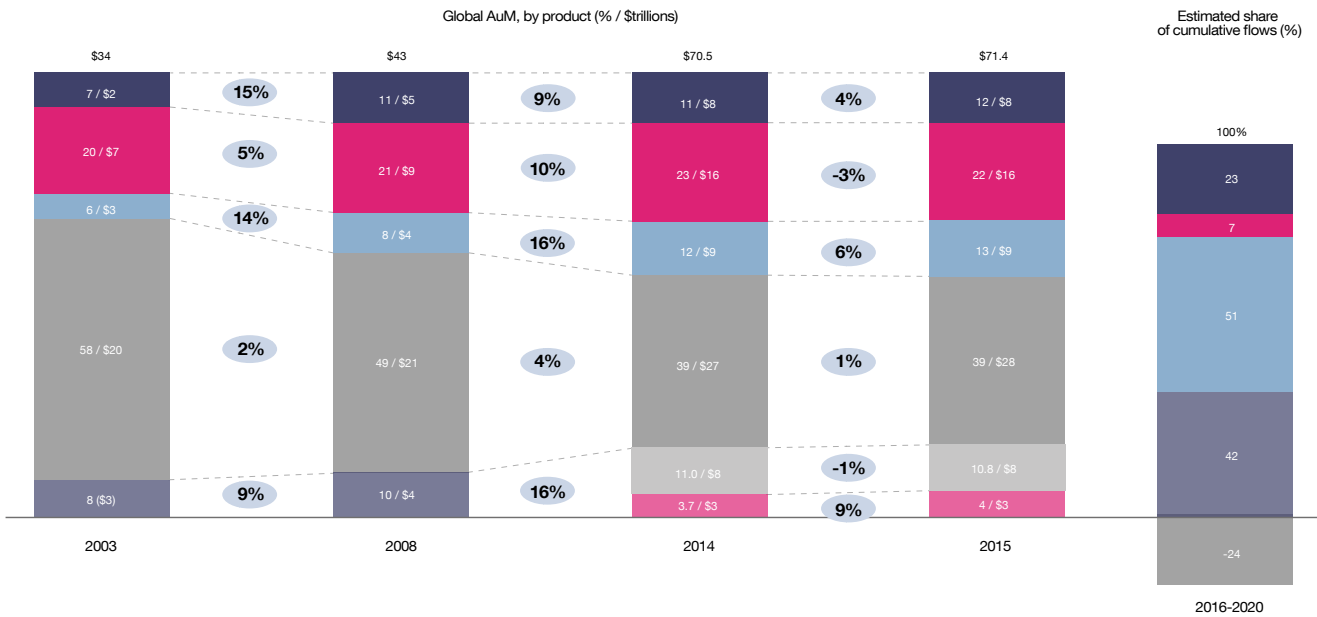


Sources: Lyxor ETF, Morningstar, Bloomberg from 01/01/12 to 31/12/16

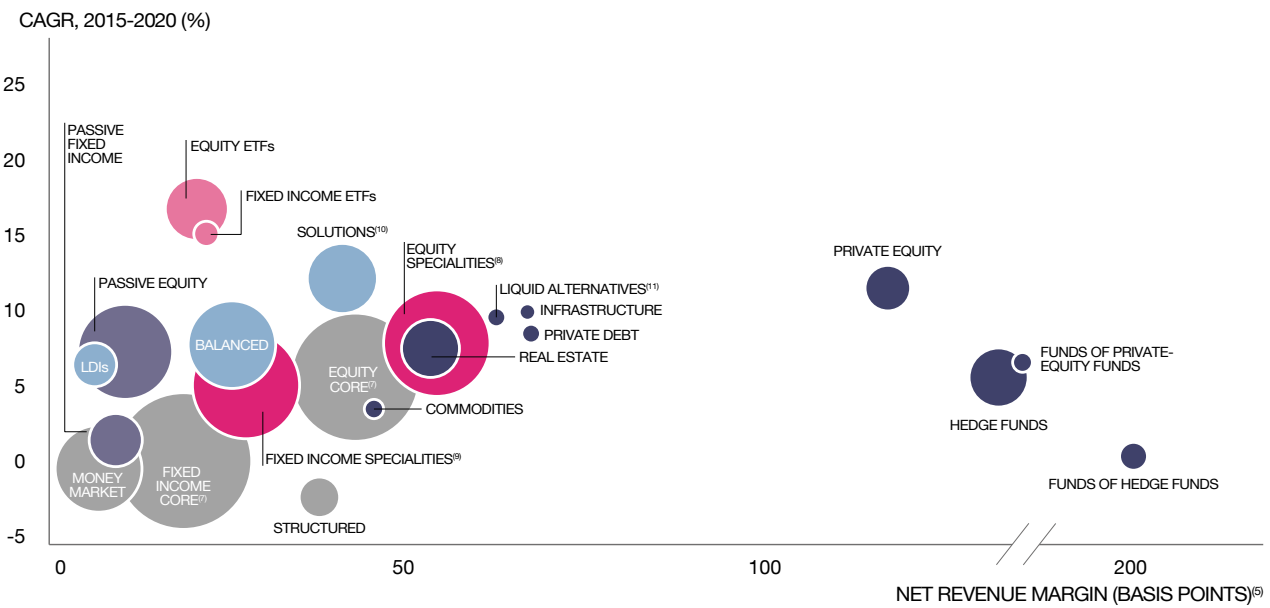
According to a BCG study, passive investments represent more than 14% of global Assets Under Management, or EUR 11,000 billion in 2015. This figure has already more than tripled in 10 years, and should continue to increase significantly in the future. The structural shift from active core products to alternatives and passive products will continue. In particular, passives are likely to get a disproportionate share of the net flows relative to their

current size. They therefore will remain the fastest-growing categories, squeezing the share of active core products and managers as those products suffer net outflows. Active core asset funds are expected to lose 24% of their AUM between 2016 and 2020, and passives and ETFs are expected to represent 42% of cumulative net flows of the Asset Management industry.

GLOBAL AUM BY PRODUCT (% AND USD TRILLIONS)



2015-2020 ESTIMATED GROWTH BY PRODUCT



Legend: Alternatives⁽¹⁾, Active specialties⁽²⁾, Solutions/LDI/balanced⁽³⁾, Active core⁽⁴⁾, Passive, Passive, excluding ETFs, ETFs

Sources: BCG Global Asset Management Market Sizing Database 2015; BCG Global Asset Management Benchmarking Database 2015; ICI; Prequin; HFR; Strategic Insight; BlackRock ETP Report; IMA; OECD; Towers Watson; P&I; Lipper; BCG analysis. See note page 7.

Building better portfolios: how the results of our research could improve your portfolio construction?

When it comes to portfolio construction, several studies (Brinson, Aglietta) have shown that the most important driver of long term portfolio return is asset allocation. The challenge for any investor is to find the right combination between return objectives and risk tolerance in today's ever-changing markets.

Developments in financial markets, and theory, have given investors a wider range of investment solutions to help them achieve their goals. The continuum runs from pure beta to pure alpha, converging in the middle with smart beta - and all of them now have an integral role to play in portfolios:

- ▶ ETF or passive funds allow low cost access to more asset classes than ever before
- ▶ Smart beta tools target specific outcomes like reducing risk, increasing diversification or enhancing returns

- ▶ Traditional active and alternative funds add value in some niche areas by capturing risk premia that are inaccessible to ETFs
- ▶ Real assets or their listed substitutes can reduce correlations and create greater portfolio diversification

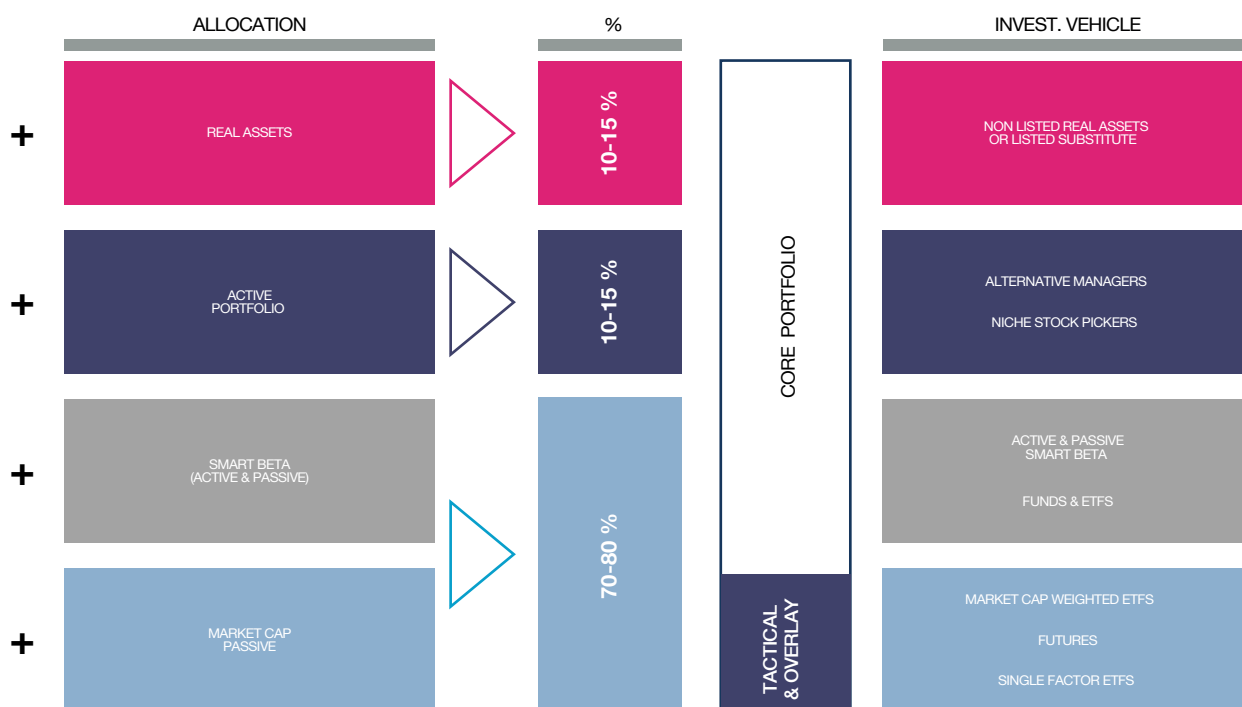
Due to the various and distinct benefits of these tools, finding the right combination between them is now a crucial part of portfolio construction.

Based on the empirical results we get from our study, and the feedback we've sourced directly from our investors, we have come up with our proposal for what we believe is an optimal portfolio today.

As you can see, we believe 70% should be invested in market-cap, and smart beta. The rest is allocated to real assets and to those active managers with a genuine ability to generate alpha.

ASSET ALLOCATION FRAMEWORK

THE FOUR PILLARS : COMBINING REAL ASSETS, ACTIVE, PASSIVE & SMART BETA



Source: Lyxor

Page 6 note: ETF =exchange-traded fund; LDI = liability-driven investment. Any apparent discrepancies in totals are due to rounding.

(1) Includes hedge funds, private equity, real estate, infrastructure, and commodity funds.

(2) Includes equity specialties (foreign, global, emerging market, small and mid cap, and sector) and fixed-income specialties (credit, emerging market, global, high yield, and convertible).

(3) Includes absolute-return, target date, global asset-allocation, flexible, income, and volatility funds; LDIs; and multiasset and traditional balanced products.

(4) Includes active domestic large-cap equity, active government fixed-income, money market, and structured products.

(5) Includes passive equity, passive fixed-income, equity ETFs, and fixed income ETFs.

(6) Management fees net of distribution costs.

(7) Includes actively managed domestic large-cap equity.

(8) Includes actively managed domestic government debt.

(9) Includes foreign, global, and emerging-market equities; small and mid caps; and sectors.

(10) Includes credit, emerging-market and global debt; high-yield bonds; and convertibles.

(11) Includes absolute-return, target date, global asset-allocation, flexible, income, and volatility funds.

How we compared Active Funds vs their Benchmark

This 10-year statistical study aims to identify the best performers between active funds and their respective benchmark, using 15 universes across fixed income and equities. These universes represent the areas with the highest AuM for ETFs. It is based on Morningstar data for open ended funds domiciled in Europe, and cover a 10-year period. The analysis is updated on a yearly basis.

► **NEW ! Survivorship Bias Correction:** the calculations are adjusted for the survivorship bias i.e. merged or liquidated funds are taken into account in this study. This allows us to cover all the opportunities available to investors at the beginning of each period of this study. We also disclosed the survivor rate for each category i.e. the percentage of funds existing at the beginning of the period that still exist at the end of the period.

SURVIVORSHIP

Universe	1Y	3Y	5Y	10Y
France large caps	95.7%	85.7%	76.3%	61.0%
France smid caps	98.2%	95.8%	80.0%	54.0%
UK equity	94.6%	86.2%	75.3%	51.5%
Europe large & mid caps	95.2%	82.9%	70.3%	46.4%
Europe small caps	97.2%	88.2%	73.2%	48.0%
US large & mid caps	95.6%	85.3%	73.8%	49.3%
Japan equity	96.4%	82.9%	64.5%	42.9%
World equity	94.4%	83.0%	64.9%	47.5%
Value equity	94.3%	86.0%	71.4%	48.5%
Global EM equity	98.2%	81.7%	72.6%	72.6%
China equity	96.7%	81.4%	72.7%	70.7%
Euro govies	97.4%	86.0%	71.9%	51.7%
Euro corporate	97.2%	89.9%	81.7%	74.7%
Euro high yield	94.6%	88.3%	85.0%	54.2%
Emerging debt	95.0%	79.6%	73.3%	74.4%
Average	95.0%	79.6%	73.3%	74.4%

Source: Bloomberg/Morningstar data from 31/12/2006 to 31/12/2016.

► All data is calculated in Euros. In order to us to cover all the significant **currency bias**, we calculate the percentage of funds denominated in Euros vs US dollars vs GBP vs JPY. We found that for a majority of the funds, the base currency of our universes is the Euro. For all the universes

where there are more than 40% of the funds denominated in another currency than the Euro, we recalculated the performance of the funds using the base currency (see p51 for results). For the UK Equity, the majority of the funds are denominated in GBP. For the China Equity, the majority of the funds are denominated in USD.

FUNDS' MAIN CURRENCY

UK EQUITY	EUROPE LARGE+MID CAPS	EUROPE SMALL CAPS	US LARGE+MID CAPS	JAPAN EQUITY	WORLD EQUITY	VALUE EQUITY
100% GBP	90% EUR	77% EUR	53% USD	60% JPY	51% EUR	49% EUR
GLOBAL EM EQUITY	CHINA EQUITY	EUR CORPO	EUR HY	EM DEBT	OTHER UNIVERSES	
69% EUR	87% USD	97% EUR	96% EUR	60% USD	100% EUR	

Source: Bloomberg/Morningstar data from 31/12/2006 to 31/12/2016.

► For each class of assets, we define an active fund universe as a composition of funds replicating the same benchmark or included in the same Morningstar category as defined in the glossary and which are available to European investors.

► **Performances and volatilities** are calculated on average weighted by the Assets under Management of each fund or on a simple average of all funds (see statistical analysis for details p47-48).

► **All the data** is collected as of December, 31st of 2016 and refers to the oldest asset class of the funds.

► **Alpha and beta** are estimated based on 1 year rolling simple regressions of the market factor. As a reminder, beta represents market sensitivity of the fund or systematic risk. Alpha is the absolute performance generated by the active fund that cannot be explained by the market factor. Alpha results are the statistics of a distribution weighted by Assets under Management. Beta results are the weighted average beta of the corresponding alpha universe. For example, the weighted average beta of the 25% quantile is the weighted average beta corresponding to the 25% quantile of alpha.

Key results

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FOCUS BY UNIVERSE

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Our seven main questions

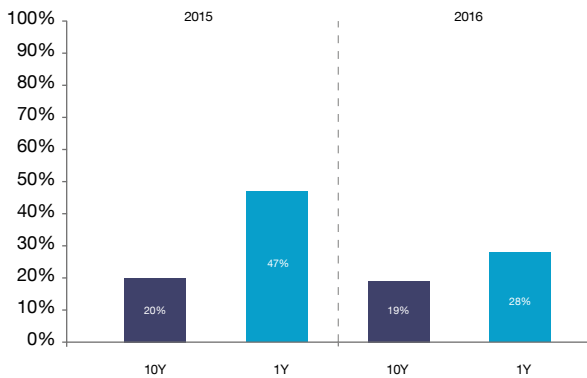
1. Were 2016 results in line with those of 2015?

In 2016, 28% of active funds outperformed their benchmarks, which is in line with our longer-term results, but well down on 2015's 47%. Over 10 years, only 19% outperformed which is consistent with what we have seen over the last three years. The best-performing funds were found in less efficient markets like small-cap equities or credit.

Over 10 years, which includes the 2007 Global Financial Crisis, on average 19% of active funds outperformed. Very few managers outperformed their benchmark over a whole market cycle.

Over 5 years, the numbers were slightly improved with, on average, 24% of active funds outperforming. These figures were boosted by the strong results in 2015.

AVERAGE % OF ACTIVE FUNDS OUTPERFORMING THEIR BENCHMARK



Source: Morningstar and Bloomberg data from 31/12/2006 to 31/12/2016. THE FIGURES RELATING TO PAST PERFORMANCES REFER TO PAST PERIODS AND ARE NOT A RELIABLE INDICATOR FOR FUTURE RESULTS. THIS ALSO APPLIES TO HISTORICAL MARKET DATA

How did that break down?

On average, 27% of equity active funds and 31% of fixed income active funds outperformed their benchmark. These figures are down slightly on 2015 results for fixed income and just half of what we saw for equity active funds.

Alpha generation

The alpha generation of active funds is limited over 1 year. On average, there was no 1-year alpha generation for our 15 universes.

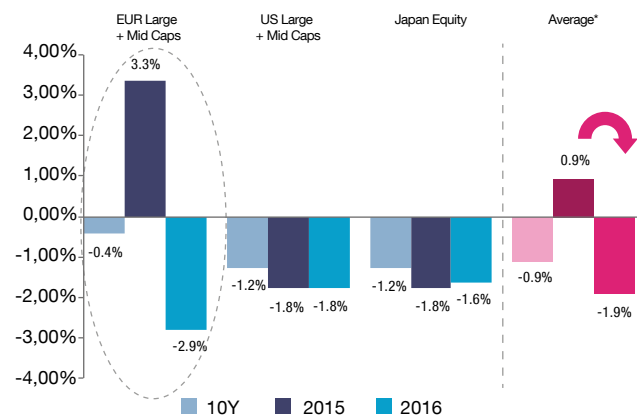
Top performing universes: over 1 year, the CAC Mid & Small, the Europe Small Cap and the Euro Corporate universes saw the best results for alpha generation and percentage of active funds outperforming their benchmark. Alpha generation does indeed appear to be simpler in less efficient markets.

Worst performing universes: Alpha generation was at its lowest in the EUR High Yield, World Value and Euro Large & Mid universes. France Large Caps, Emerging Markets and World Value had the lowest percentage of funds outperforming their benchmark.

The performance spread of active funds vs their benchmark in 2016 has deteriorated significantly, from +0.9% in 2015 to -1.9% on average for all 15 universes. For example, active funds on European large cap equities saw a significant trend reversal from an outperformance of 3.3% vs. their benchmark to an underperformance of 2.9% in 2016.

This highlights the case for passive investing in more mainstream investment opportunities.

ACTIVE FUNDS OUT/UNDER PERFORMANCE VS. BENCHMARK



Source: Morningstar and Bloomberg data from 31/12/2006 to 30/12/2016. THE FIGURES RELATING TO PAST PERFORMANCES REFER TO PAST PERIODS AND ARE NOT A RELIABLE INDICATOR FOR FUTURE RESULTS. THIS ALSO APPLIES TO HISTORICAL MARKET DATA *Average of the 15 active fund universes if the study compared to the average of their respective benchmark.

2. How did the environment change in 2016?

The big shift in focus from economics to politics, and the heightened speculation, weighed on the ability of active managers to generate alpha – i.e. many failed to capture the improvement of economic trends.

The typical (since the Global Financial Crisis) balancing act between the need for growth & controlling inflation dominated the first half of the year. Meanwhile in the second half of the year the heavy political agenda, and its potential economic effects became the major factor. Politics drove markets in a way we have rarely seen. Three main dates framed market developments: the market trough on February 11, the UK's Brexit referendum on June 23 and Donald Trump's US election victory on November 8.

Each of these events clouded normal market conditions

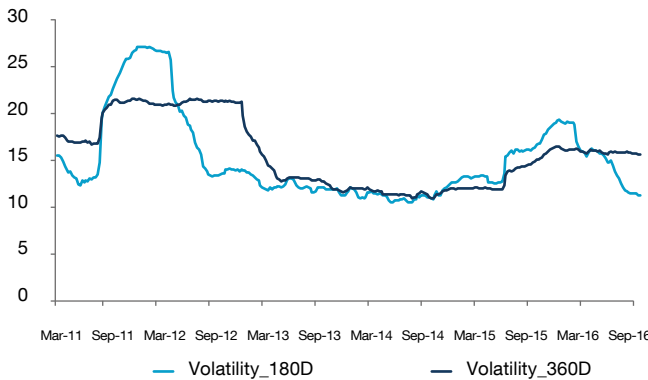
and made it harder for active fund managers to steer their way to better performance.

Equity volatility eased, but interest rates rose in 2016

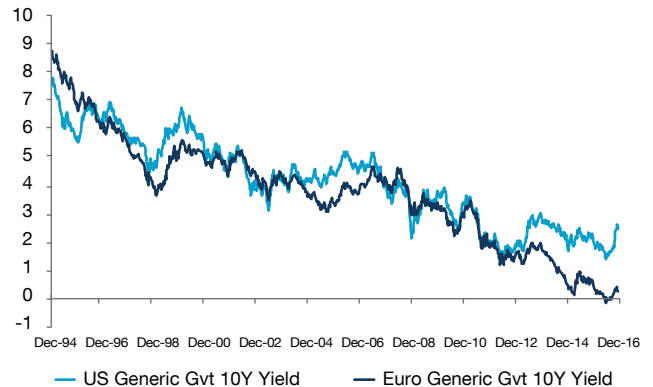
Despite those three acute periods of stress, equity volatility actually eased in 2016 (average VIX at 15.8% versus 16.7% in 2015). We're yet to find out whether that's calmness, or complacency.

Core DM bond yields touched historical lows a few days after the Brexit vote, but a year-end sell off meant they ended the year higher. This reflected a reactivation of the great monetary divergence: 10-year UST wider by 17bps while Gilts, Bunds and JGBs were tighter by 72bps, 42bps and 23bps respectively.

S&P 500 VOLATILITY EASED



INTEREST RATES ROSE



Source: Lyxor and Bloomberg data from 31/12/1994 to 31/12/2016. THE FIGURES RELATING TO PAST PERFORMANCES REFER TO PAST PERIODS AND ARE NOT A RELIABLE INDICATOR FOR FUTURE RESULTS. THIS ALSO APPLIES TO HISTORICAL MARKET DATA

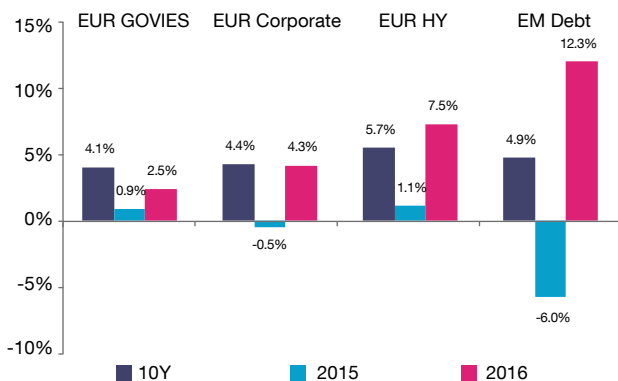
Equity returns were positive, but limited, while all fixed income segments performed strongly

Despite the late bear market, most regional equity indices closed the year in positive territory. Returns were however very different: +9.5% in the US (S&P 500), +7.1% in EM globally (MSCI EM local), +1.5% in the EMU (Stoxx 300,

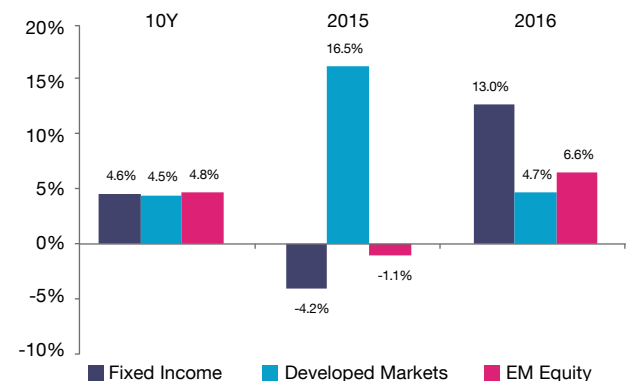
accounting for -8% on EMU banks), +0.4% in Japan (Nikkei 225), and -11.3% in mainland China (CSI 300).

In the fixed income markets, European investment-grade corporate and high yield papers benefited from the onset of ECB corporate bond purchases, which led to a significant tightening of spreads.

STRONG FIXED INCOME PERFORMANCE IN 2016

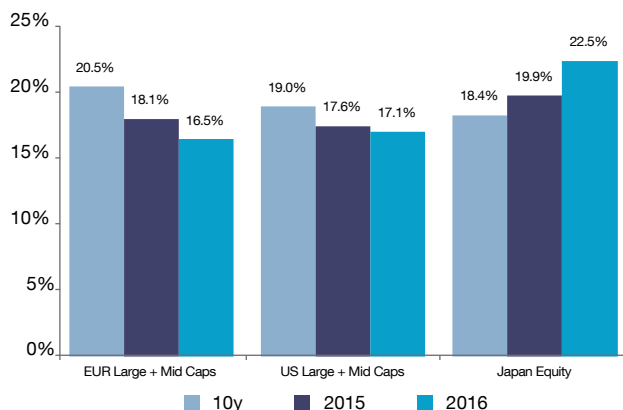


MORE LIMITED RETURNS AMONG EQUITIES

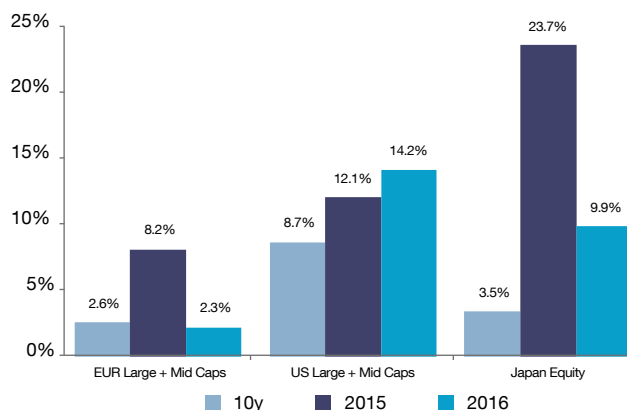


Source: Lyxor and Bloomberg data from 31/12/2006 to 31/12/2016. THE FIGURES RELATING TO PAST PERFORMANCES REFER TO PAST PERIODS AND ARE NOT A RELIABLE INDICATOR FOR FUTURE RESULTS. THIS ALSO APPLIES TO HISTORICAL MARKET DATA

ONLY US EQUITIES CLOSED HIGHER IN 2016 THAN IN 2015



INDEX VOLATILITIES WERE LOWER, EXCEPT IN JAPAN



Source: Morningstar and Bloomberg data from 31/12/2006 to 31/12/2016. THE FIGURES RELATING TO PAST PERFORMANCES REFER TO PAST PERIODS AND ARE NOT A RELIABLE INDICATOR FOR FUTURE RESULTS. THIS ALSO APPLIES TO HISTORICAL MARKET DATA

3. What conclusions can be drawn from the factor analysis?

Once again, the best-performing funds were those which were overweight the best-performing factors. The worst performers got their factor allocations wrong. A higher dispersion of returns between factors and among regions also caused real difficulty for active funds.

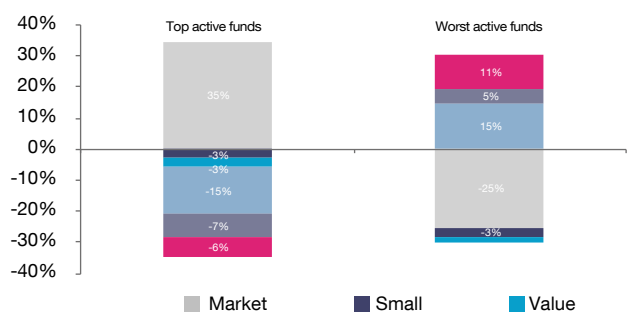
The performance of factors was more diverse across regions and between factors in 2016, seemingly making things much more difficult for active managers to time and weight their exposures well. This could partly explain why only the best outperformed their benchmark this time around.

As our 2015 report and other studies show, the performance of risks factors explains a significant part of active funds' outperformance. This year, we have taken our analysis a step further. In addition to the average performance of our various active fund universes, we also studied the performance of the best- and worst-performing funds. The best performers in all of our universes were those that were overweight the best-performing factors.

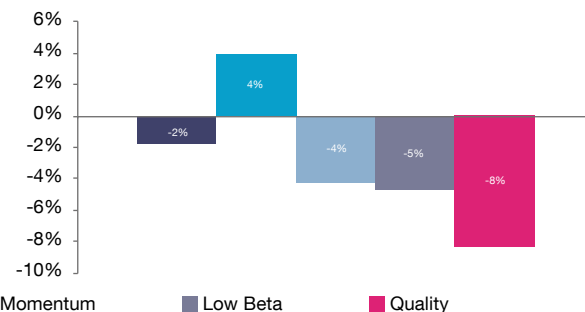
Regional results: European equity

In 2016, in **Europe**, active fund managers struggled. Only 19% outperformed, as opposed to the 72% we saw in 2015. Most managers were overexposed to the Momentum, Low Beta and Quality factors which performed badly. The top performers were underweight those factors. The worst performers had the heaviest weighting to these factors compared to the average of the universe.

EUROPE EQUITY ACTIVE FUNDS OVER/UNDER RISK FACTOR WEIGHTS VS AVERAGE OF ACTIVE FUNDS



EUROPE EQUITY RISK FACTOR OUT/UNDER PERFORMANCE VS BENCHMARK



✓ Momentum, Low Beta, Quality --

⚠ Momentum, Low Beta, Quality ++

⚠ Momentum, Low Beta, Quality --

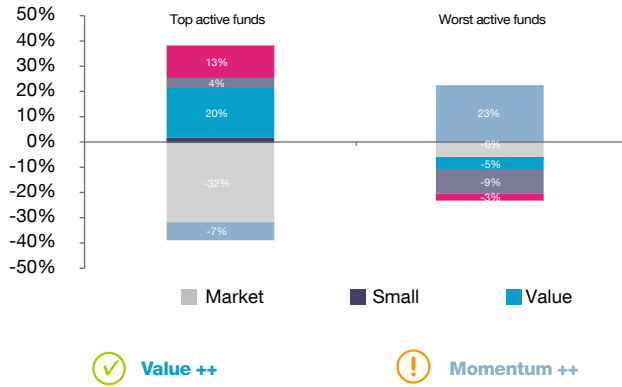
Source: Morningstar and Bloomberg data from 01/01/2013 to 31/12/2016. Weighted average of the results of the regression of the performance of the top and worst active funds of the universe (first and last decile in terms of performance by the following five JP Morgan Risk Factors: J.P. Morgan Equity Risk Premia – Europe MOMENTUM FACTOR Long Only Index, J.P. Morgan Equity Risk Premia – Europe LOW BETA FACTOR Long Only Index, J.P. Morgan Equity Risk Premia – Europe LOW SIZE FACTOR Long Only Index, J.P. Morgan Equity Risk Premia – Europe VALUE FACTOR Long Only Index, J.P. Morgan Equity Risk Premia – Europe QUALITY FACTOR Long Only Index. The results of the regression gives very statistically significant results with most of the R2 being above 85%. THE FIGURES RELATING TO PAST PERFORMANCES REFER TO PAST PERIODS AND ARE NOT A RELIABLE INDICATOR FOR FUTURE RESULTS. THIS ALSO APPLIES TO HISTORICAL MARKET DATA

US Equity

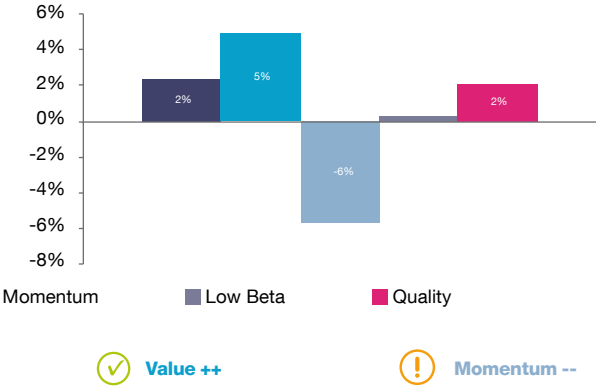
In 2016, in the **US**, the percentage of active funds outperforming increased slightly from 25% in 2015 to 31%. Excluding the underperforming momentum factor the

performance of factors was slightly better in 2016, most notably for value (which outperformed the benchmark by 5%). The top-performing funds were those overweighting value and quality, and underweighting momentum. The worst performers held the opposite positions.

US EQUITY ACTIVE FUNDS OVER/UNDER RISK FACTOR WEIGHTS VS AVERAGE OF ACTIVE FUNDS



US EQUITY RISK FACTOR OUT/UNDER PERFORMANCE VS BENCHMARK



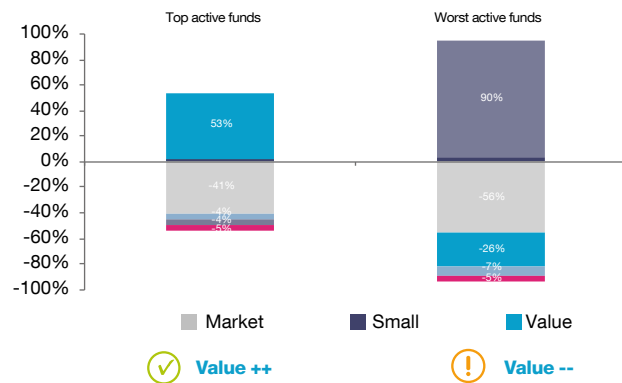
Source: Morningstar and Bloomberg data from 01/01/2013 to 31/12/2016. Weighted average of the results of the regression of the performance of the top and worst active funds of the universe (first and last decile in terms of performance by the following five JP Morgan Risk Factors: J.P. Morgan Equity Risk Premia – US MOMENTUM FACTOR Long Only Index, J.P. Morgan Equity Risk Premia – US LOW BETA FACTOR Long Only Index, J.P. Morgan Equity Risk Premia – US LOW SIZE FACTOR Long Only Index, J.P. Morgan Equity Risk Premia – US VALUE FACTOR Long Only Index, J.P. Morgan Equity Risk Premia – US QUALITY FACTOR Long Only Index. The results of the regression gives very statistically significant results with most of the R2 being above 85%. THE FIGURES RELATING TO PAST PERFORMANCES REFER TO PAST PERIODS AND ARE NOT A RELIABLE INDICATOR FOR FUTURE RESULTS. THIS ALSO APPLIES TO HISTORICAL MARKET DATA

Japanese equity

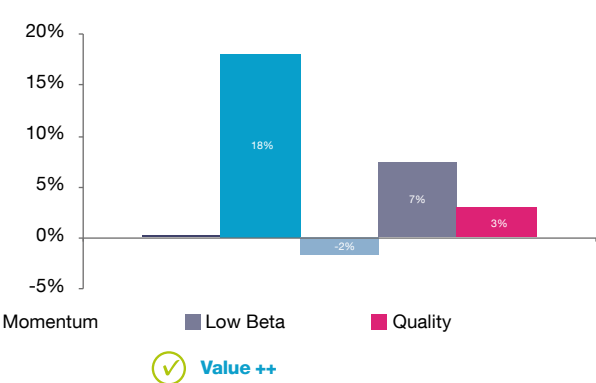
In 2016, in **Japan**, 26% of active funds outperformed, which is similar to the 2015 result. Yet the performance of factors was very different. Value outperformed the

benchmark by 18%, having underperformed by 1% in our 2015 report. It's no surprise then that the top performers were overweight value and the worst performers were those with an underweight.

JAPAN EQUITY ACTIVE FUNDS OVER/UNDER RISK FACTOR WEIGHTS VS AVERAGE OF ACTIVE FUNDS



JAPAN EQUITY RISK FACTOR OUT/UNDER PERFORMANCE VS BENCHMARK



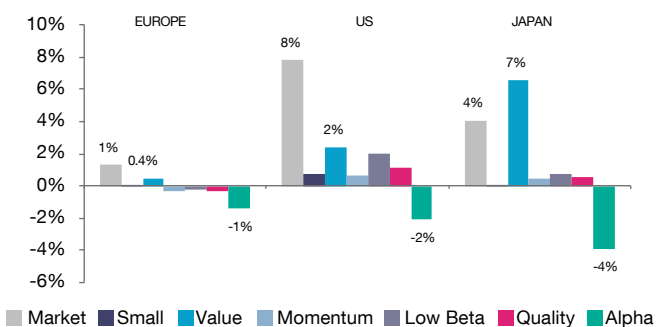
Source: Morningstar and Bloomberg data from 01/01/2013 to 31/12/2016. Weighted average of the results of the regression of the performance of the top and worst active funds of the universe (first and last decile in terms of performance by the following five JP Morgan Risk Factors: J.P. Morgan Equity Risk Premia – Japan MOMENTUM FACTOR Long Only Index, J.P. Morgan Equity Risk Premia – Japan LOW BETA FACTOR Long Only Index, J.P. Morgan Equity Risk Premia – Japan LOW SIZE FACTOR Long Only Index, J.P. Morgan Equity Risk Premia – Japan VALUE FACTOR Long Only Index, J.P. Morgan Equity Risk Premia – Japan QUALITY FACTOR Long Only Index. The results of the regression gives very statistically significant results with most of the R2 being above 85%. THE FIGURES RELATING TO PAST PERFORMANCES REFER TO PAST PERIODS AND ARE NOT A RELIABLE INDICATOR FOR FUTURE RESULTS. THIS ALSO APPLIES TO HISTORICAL MARKET DATA

4. Were traditional active managers able to generate alpha in 2016?

Alpha generation is the part of active fund performance that can't be explained by risk factors. In 2016, it deteriorated and turned negative.

Our tools help us isolate the contribution each factor makes to the performance of active funds, what's left is alpha. In 2016, for all three of our universes (Europe, US & Japan), the alpha number was negative: -1.4% in Europe, -2.1% in the US and -3.9% in Japan, which means that on average, the active fund manager's stock picking skills actually reduced the performance of the fund.

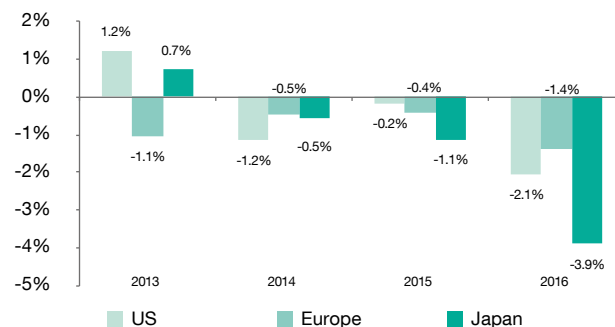
RISK FACTOR & ALPHA GENERATION CONTRIBUTION TO AVERAGE ACTIVE FUND AVERAGE PERFORMANCES



Source: Morningstar and Bloomberg data from 01/01/2013 to 31/12/2016

Negative alpha generation has increased significantly over the last four years as shown in the graph below. This has weighed heavily on the performance of active fund managers, especially in Japan in 2016. Over the past four years, we see no consistent alpha generation in those areas.

ALPHA GENERATION HAS ERODED ACTIVE FUNDS' PERFORMANCE



Source: Lyxor ETF, Morningstar and Bloomberg data from 01/01/2013 to 31/12/2016. Alpha generation is the part of the average active fund performance that is not explained by risk factors including market factor calculated on the US, Europe and Japan universes.

5. Did active funds outperform Smart Beta benchmarks in 2016?

While 1 in 4 managers outperformed their traditional benchmarks, the results were far weaker vs. Smart Beta. Last year's success was no fluke. Smart Beta benchmarks such as the FTSE Minimum Variance Indices:

- ▶ Offer more attractive risk/return profiles over the short and long term
- ▶ Have a Sharpe ratio 1.7 higher than that of active funds average over 1 year and 2.5 higher over 10 years
- ▶ Outperformed 89% of active managers in our US, Europe and Japan universes in 2016

- ▶ Outperformed 98% of active managers in the same universes over the last decade

Smart Beta indices are increasingly used by investors for specific outcomes like reducing risk, enhancing returns, increasing diversification, better representing the economic footprint of a given universe or generating income. They are also a good comparator for active fund performance. In each of our three key developed equity universes (Japan, Europe and US large-caps), only the very best active managers outperformed FTSE Minimum Variance indices.

In 2016, the FTSE Minimum Variance benchmarks kept their promises by capturing most of the market upside and less of the down. They continue to offer attractive performance as well as reducing volatility by 20-30% compared to traditional benchmarks.

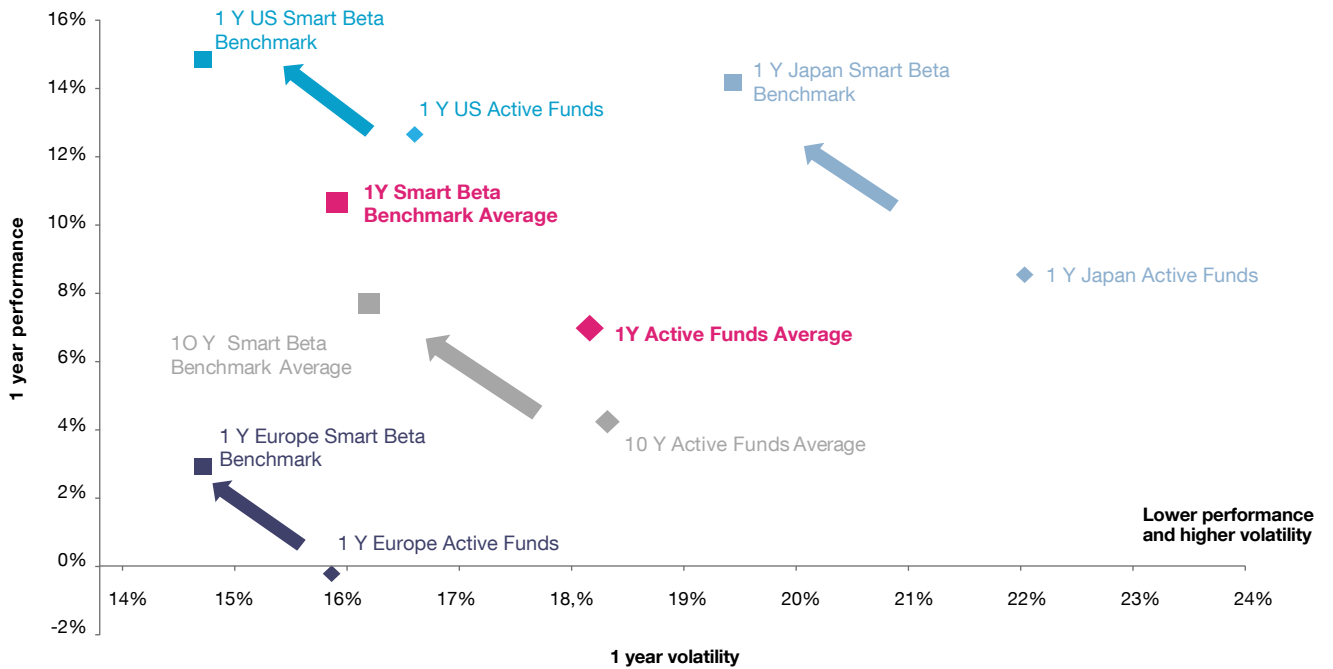
The graphs below show average active fund returns on a risk adjusted basis vs. traditional and Minimum Variance benchmarks. As you can see, most active fund managers have found it difficult to outperform Minimum Variance, not only on a performance basis but also on a risk-adjusted performance basis.

Overall, the risk return profile of the FTSE Minimum Variance indices was more attractive than those of our three key universes in 2016. The same holds true over the last decade.

To measure risk-adjusted return, we calculate Sharpe ratios. The average Sharpe ratio of the Smart Beta benchmark is 1.7x higher than that of the average of active funds over 1 year and 2.4x over 10 years, making it very difficult for active funds to outperform Smart Beta over the short, and long term.

SHARPE RATIO OF SMART BETA BENCHMARK IS 1.7 HIGHER THAN THAT OF ACTIVE FUNDS AVERAGE

Higher performance and lower volatility



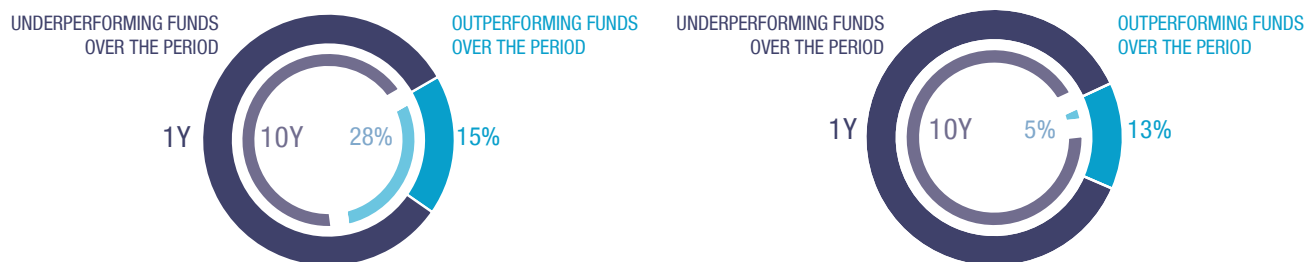
Source: Morningstar and Bloomberg Europe US & Japan Active Funds vs Benchmark 1Y & 10Y Risk/Return profile, data from 31/12/2006 to 30/12/2016. *Average sharpe ratio of the 3 universes as defined by the average return earned in excess of the risk-free rate per unit of volatility. THE FIGURES RELATING TO PAST PERFORMANCES REFER TO PAST PERIODS AND ARE NOT A RELIABLE INDICATOR FOR FUTURE RESULTS. THIS ALSO APPLIES TO HISTORICAL MARKET DATA

Based on this risk adjusted data, we found there were still very few active managers outperforming Smart Beta benchmarks in 2016: across our three universes, on average, less than 11% outperformed as opposed to 25% for the traditional benchmark. Over 10 years, the numbers drop to less than 2% and 18% respectively.

Regional results: European equity

In Europe, in 2016, only 13% of active funds outperformed the Smart Beta benchmark. Overall, active managers underperformed the Smart Beta benchmark by 3.1% while adding 1.3% of volatility in 2016. Over 10 years, the percentage of outperformers drops to 5% vs. the Smart Beta benchmark and 28% vs. the traditional benchmark.

EUROPE LARGE AND MID CAPS: ACTIVE FUND RISK ADJUSTED PERFORMANCES VS. BENCHMARKS
MSCI EUROPE FTSE EUROPE MIN VAR



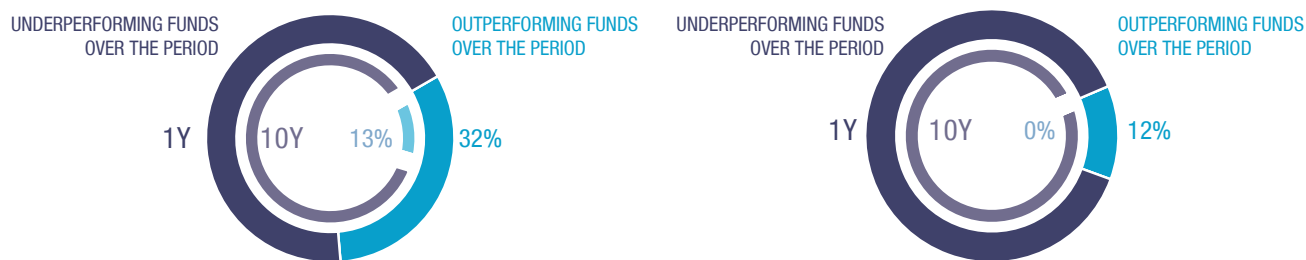
Sources: Morningstar & Bloomberg data from 01/01/2007 to 31/12/2016. THE FIGURES RELATING TO PAST PERFORMANCES REFER TO PAST PERIODS AND ARE NOT A RELIABLE INDICATOR FOR FUTURE RESULTS. THIS ALSO APPLIES TO HISTORICAL MARKET DATA

US equity

In the US, only 13% of active funds outperformed the Smart Beta benchmark. Overall, active managers

underperformed the Smart Beta benchmark by 2.2% while adding 1.8% of volatility in 2016. Over a decade, the percentage of outperformers vs. Smart Beta drops to zero, while 13% outperformed the traditional benchmark.

US LARGE AND MID CAPS: ACTIVE FUND RISK ADJUSTED PERFORMANCES VS. BENCHMARKS
MSCI USA FTSE USA MIN VAR



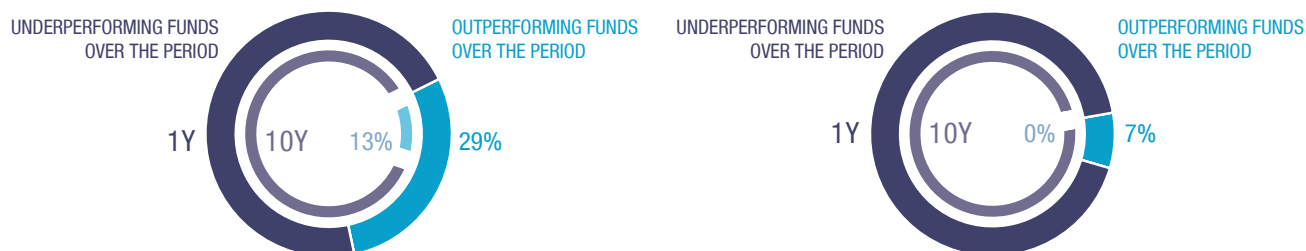
Sources: Morningstar & Bloomberg data from 01/01/2007 to 31/12/2016. THE FIGURES RELATING TO PAST PERFORMANCES REFER TO PAST PERIODS AND ARE NOT A RELIABLE INDICATOR FOR FUTURE RESULTS. THIS ALSO APPLIES TO HISTORICAL MARKET DATA

Japanese equity

In Japan, only 12% of active funds outperformed the Smart Beta benchmark vs. 29% for a traditional benchmark. Overall, active managers underperformed the Smart

Beta benchmark by 5.7% while adding 2.5% of volatility in 2016. Over a decade, the percentage of active funds outperforming the Smart Beta benchmark drops to 0%. Only 13% outperformed the traditional benchmark.

JAPAN LARGE AND MID CAPS: ACTIVE FUND RISK ADJUSTED PERFORMANCES VS. BENCHMARKS
TOPIX FTSE JAPAN MIN VAR



Sources: Morningstar & Bloomberg data from 01/01/2007 to 31/12/2016. THE FIGURES RELATING TO PAST PERFORMANCES REFER TO PAST PERIODS AND ARE NOT A RELIABLE INDICATOR FOR FUTURE RESULTS. THIS ALSO APPLIES TO HISTORICAL MARKET DATA

- CONTENT
- EXECUTIVE SUMMARY
- ACTIVE & PASSIVE DEBATE
- METHODOLOGY
- KEY RESULTS
- OUTLOOK 2017
- FOCUS BY UNIVERSE
- APPENDIX

6. Is there any consistency to active fund manager performance over time?

Our results show it's difficult for asset managers to generate consistent alpha over time. To get these results, we calculated the average percentage of funds outperforming their respective benchmarks during the first year and then the percentage of them still outperforming in the following years, up to 10 years out.

We found that, on average, 36% of active funds outperformed their benchmark the first year but only 15% were still outperforming their benchmark in year 2. The figure drops to 6% in year 3 and so on. This illustrates just how difficult it is for active funds to outperform consistently.

PERSISTENCY OF PERFORMANCE TABLE

UNIVERSE	YEAR 1	YEAR 2	YEAR 3
Average	35.8%	14.7%	6.1%
Average Equity	36.7%	15.2%	6.5%
Average Fixed Income	33.4%	13.2%	4.9%

Source: Bloomberg and Morningstar data from 31/12/2006 to 31/12/2016. See p. 22 for details by universe.

7. What are the areas where active funds really outperform their benchmark?

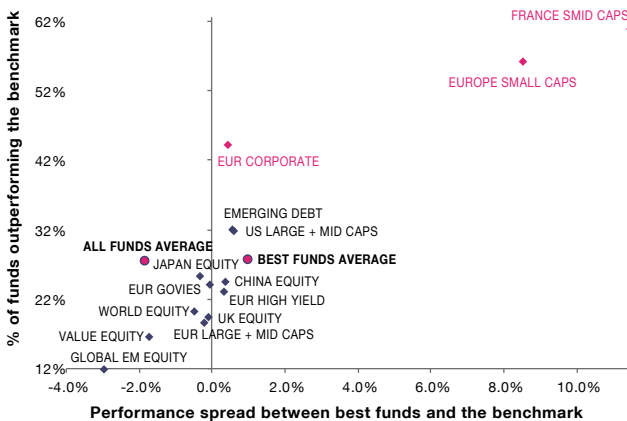
In 2016, the highest number of funds outperforming their benchmark was found in the France Smid Cap, Europe Small cap and in Euro Corporate Bond areas. Here an average of 54% of active funds outperformed their benchmark, significantly more than the 28% that outperformed across all 15 universes. The degree to which they outperformed was much better too. On average active fund managers in these three areas outperformed by 0.8% vs. -1.9% across the 15 universes. In 2015, the top 3 performing universes were France Small Caps, China Equity and Europe Large Caps.

The best 25% of active managers outperformed their benchmark by 11.5% whereas on average active managers in this area underperformed their benchmark by 2.9%. So the bad were still very bad.

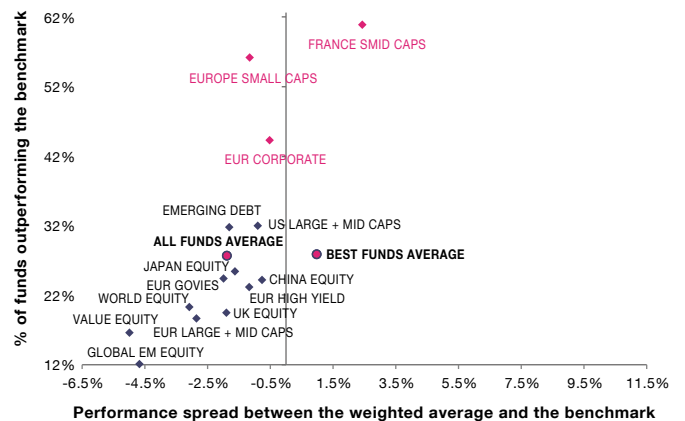
In the European Small Cap area, 56% of active managers succeeded in outperforming their benchmark in 2016. The best 25% active managers outperformed their benchmark by 8.6% whereas on average active managers in this area underperformed their benchmark by 1.2%. Again highlighting the importance of selecting your manager carefully.

In the France Smid Cap area, 65% of active managers succeeded in outperforming their benchmark in 2016.

PERFORMANCE SPREAD BETWEEN ACTIVE FUNDS AND THE BENCHMARK IN 2016 FOR THE BEST ACTIVE MANAGERS



PERFORMANCE SPREAD BETWEEN ACTIVE FUNDS AND THE BENCHMARK IN 2016 FOR THE ASSET WEIGHTED AVERAGE OF ACTIVE FUNDS



Sources: Morningstar & Bloomberg data from 31/12/2015 and 31/12/2016. *Top 25% of funds in terms of performance. THE FIGURES RELATING TO PAST PERFORMANCES REFER TO PAST PERIODS AND ARE NOT A RELIABLE INDICATOR FOR FUTURE RESULTS. THIS ALSO APPLIES TO HISTORICAL MARKET DATA

Over 10 years, the highest number of funds outperforming their benchmark was found in the Small cap area of Europe, the UK and Chinese equities but also in the Global value area.

For those 4 universes, on average 31% of active funds outperformed their benchmark, significantly higher than the 19% that outperformed across all 15 universes. The underperformance vs. the benchmark of those 4 universes is also smaller: 0.4% vs. 0.9% of underperformance for the 15 universes.

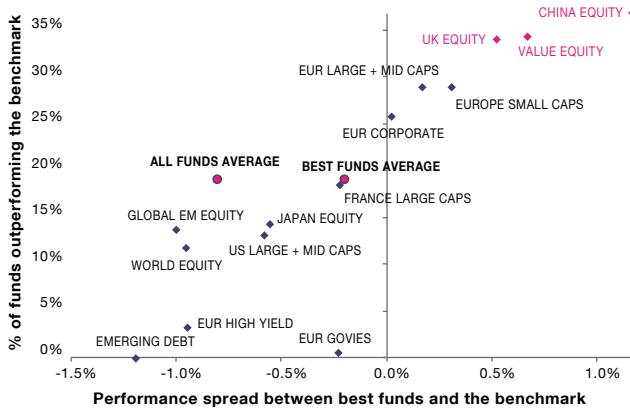
In the European Small cap area, 29% of active managers succeeded in outperforming their benchmark. The best 25% of active managers outperformed by 0.3% on average each year over 10 years.

In the UK equity area, 34% of active managers succeeded in outperforming their benchmark. The best 25% of active managers outperformed by 0.5% on average each year over 10 years.

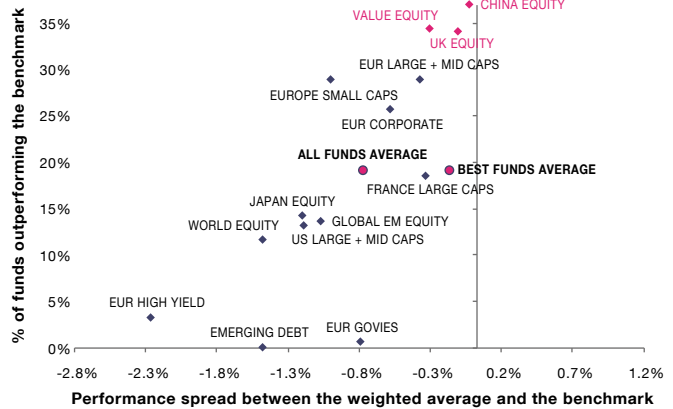
In the China equity area, 37% of active managers succeeded in outperforming their benchmark. The best 25% of active managers outperformed by 1.2% on average each year over 10 years.

In the Global Value equity area, 34% of active managers succeeded in outperforming their benchmark. The best 25% active managers outperformed by 0.7% on average each year over 10 years.

PERFORMANCE SPREAD BETWEEN ACTIVE FUNDS AND THE BENCHMARK OVER 10 YEARS FOR THE BEST ACTIVE MANAGERS



FOR THE ASSET WEIGHTED AVERAGE OF ACTIVE FUNDS



Sources: Morningstar & Bloomberg data from 31/12/2015 and 31/12/2016. *Top 25% of funds in terms of performance. THE FIGURES RELATING TO PAST PERFORMANCES REFER TO PAST PERIODS AND ARE NOT A RELIABLE INDICATOR FOR FUTURE RESULTS. THIS ALSO APPLIES TO HISTORICAL MARKET DATA

Why active fund managers performed well in these specific segments

The European Small cap segment is one area where company fundamentals continue to drive performance, rather than style or sector rotation as we have seen in the large cap space. As financials and commodities, which led the value rebound, are underrepresented in the small cap area, Small cap active managers were less impacted by the shift towards value that hurt large cap managers. Large cap managers held their ground on the quality and growth factors that have driven the European equity market performance since 2010, and therefore missed this shift to value.

In the UK equity segment, active managers are usually overweight Small & Mid Cap stocks that tend to outperform over the long run (FTSE UK Small cap NTR 3.7% vs. FTSE All Shares NTR 3.1%). However, in 2016 this Small Cap boost failed to materialize (FTSE UK Small cap NTR -1.6%, vs. FTSE All Shares NTR 0.8%), which is why many active managers failed to outperform their

benchmark in 2016.

In the Euro Corporate space, active managers tend to take more risk than their benchmark in order to outperform. When credit spreads are tightening as they have been in recent years, this strategy is rewarded with better performance. This was particularly true in 2016 where spreads tightened by more than 53 bps, from 11/02/2016 to 31/12/2016.

In China equities, active managers have tended to overweight new information technology and consumer staple companies that have outperformed their benchmark over the long term. Yet in 2016, they were underweight information technology just when it really performed well.

Overall, these results are consistent with the idea that more opportunities can be found in less efficient markets. Small cap, Emerging market countries and Euro corporate bond markets are the best example where best active managers can generate alpha.

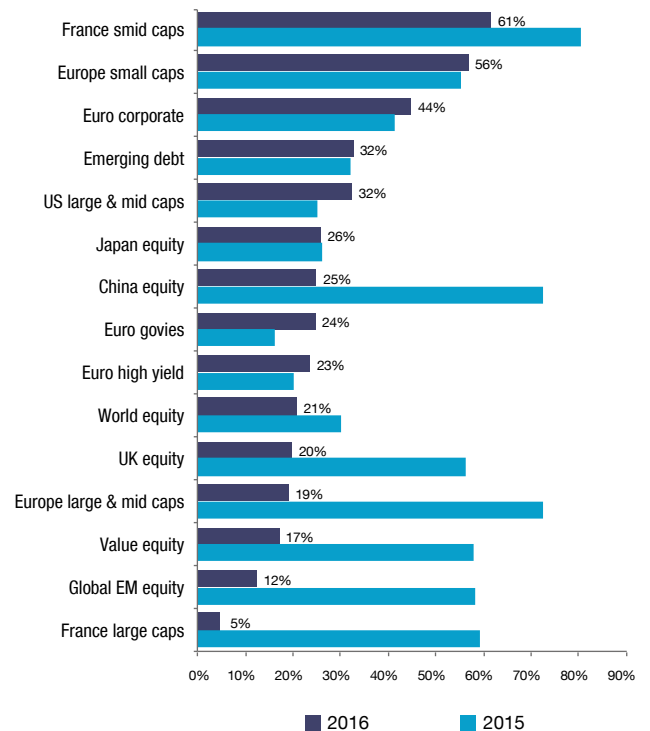
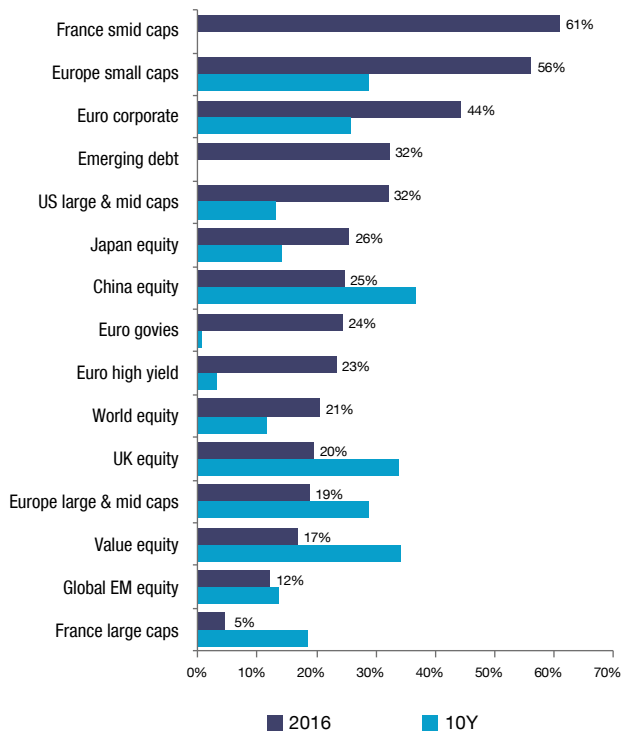
Key traditional benchmark results

PERCENTAGE OF ACTIVE FUNDS OUTPERFORMING THE BENCHMARK OVER 1Y, 3Y, 5Y AND 10Y

Universe	Benchmark	1Y	3Y	5Y	10Y
France large caps	CAC 40 (CACR)	5%	8%	17%	19%
France smid caps	CAC Mid & Small (CMSN)	61%	56%	31%	NA
UK equity	FTSE All Shares (FTPPTALL)	20%	29%	50%	34%
Europe large & mid caps	MSCI Europe (M7EU)	19%	33%	36%	29%
Europe small caps	MSCI Europe Small Cap (NCEDE15)	56%	47%	25%	29%
US large & mid caps	MSCI USA (NDDUUS)	32%	14%	12%	13%
Japan equity	TOPIX Japan (TPXDDVD)	26%	16%	11%	14%
World equity	MSCI World (NDDUWI)	21%	11%	12%	12%
Value equity	MSCI World Value (NDUVWI)	17%	23%	23%	34%
Global EM equity	MSCI Emerging Markets (NDUEEGF)	12%	3%	19%	14%
China equity	MSCI China (NDEUCHF)	25%	35%	49%	37%
Euro govies	EuroMTS Global Investment Grade (EMIEG5)	24%	14%	14%	1%
Euro corporate	Barclays Capital Euro Corporate Bond (LECPREU)	44%	33%	36%	26%
Euro high yield	BofA Merrill Lynch Euro High Yield (HE00)	23%	23%	8%	3%
Emerging debt	Emerging Markets Local Currency Bond (JGENVUEG)	32%	29%	25%	0%
Average Equity 2016		27%	25%	26%	23%
Average Fixed Income 2016		30%	25%	22%	11%
Average 2016		28%	25%	24%	19%
Average 2015		47%	34%	23%	20%

Source: Bloomberg and Morningstar data from 31/12/2006 to 31/12/2016.

% OF ACTIVE FUNDS OUTPERFORMING THE BENCHMARK



Source: Morningstar data in EUR from 31/12/2006 to 31/12/2016. THE FIGURES RELATING TO PAST PERFORMANCES REFER TO PAST PERIODS AND ARE NOT A RELIABLE INDICATOR FOR FUTURE RESULTS. THIS ALSO APPLIES TO HISTORICAL MARKET DATA

Key traditional benchmark results

ALPHA & BETA ACTIVE FUND PERFORMANCE BREAKDOWN OVER 1 YEAR (AS OF 31/12/2016)

Universe	Benchmark	ALPHA			BETA		
		25% QUANTILE	WEIGHTED AVERAGE	75% QUANTILE	25% QUANTILE	WEIGHTED AVERAGE	75% QUANTILE
France large caps	CAC 40 (CACR)	-0.04%	-0.02%	0.01%	92%	90%	84%
France smid caps	CAC Mid & Small (CMSN)	0.02%	0.10%	0.17%	96%	81%	58%
UK equity	FTSE All Shares (FTPSTALL)	-0.05%	-0.03%	0.00%	93%	94%	94%
Europe large & mid caps	MSCI Europe (M7EU)	-0.03%	0.01%	0.05%	91%	89%	84%
Europe small caps	MSCI Europe Small Cap (NCEDE15)	-0.04%	0.02%	0.08%	93%	85%	72%
US large & mid caps	MSCI USA (NDDUUS)	-0.06%	-0.03%	0.01%	96%	93%	90%
Japan equity	TOPIX Japan (TPXDDVD)	-0.06%	-0.03%	-0.01%	99%	97%	96%
World equity	MSCI World (NDDUWI)	-0.06%	-0.02%	0.02%	85%	87%	83%
Value equity	MSCI World Value (NDUVWI)	-0.09%	-0.02%	0.03%	94%	89%	81%
Global EM equity	MSCI Emerging Markets (NDUEEGF)	-0.04%	-0.01%	0.02%	85%	88%	84%
China equity	MSCI China (NDEUCHF)	0.00%	0.06%	0.12%	93%	95%	96%
Euro govies	EuroMTS Global Investment Grade (EMIEG5)	-0.01%	0.00%	0.01%	79%	76%	67%
Euro corporate	Barclays Capital Euro Corporate Bond (LECPREU)*	-0.03%	-0.01%	0.01%	100%	92%	79%
Euro high yield	BofA Merrill Lynch Euro High Yield (HE00)	-0.02%	0.01%	0.03%	94%	87%	74%
Emerging debt	Emerging Markets Local Currency Bond (JGENVUEG)	-0.04%	-0.02%	-0.01%	98%	98%	96%
Average		-0.04%	0.00%	0.04%	92%	89%	82%

Source: Bloomberg and Morningstar data in EUR from 31/12/2015 to 31/12/2016. See methodology for Alpha and Beta detailed definition. THE FIGURES RELATING TO PAST PERFORMANCES REFER TO PAST PERIODS AND ARE NOT A RELIABLE INDICATOR FOR FUTURE RESULTS. THIS ALSO APPLIES TO HISTORICAL MARKET DATA.

OUTPERFORMANCE CONSISTENCY

Universe	AVERAGE CONSISTENCY		
	YEAR 1	YEAR 2	YEAR 3
France large caps	35.2%	15.1%	6.6%
France smid caps	37.0%	15.5%	8.5%
UK equity	42.4%	23.1%	13.0%
Europe large & mid caps	38.6%	17.6%	8.4%
Europe small caps	37.0%	13.1%	4.1%
US large & mid caps	31.6%	11.2%	3.6%
Japan equity	33.4%	12.7%	5.4%
World equity	32.7%	11.9%	3.6%
Value equity	43.5%	18.0%	6.3%
Global EM equity	29.0%	9.2%	3.8%
China equity	43.0%	19.4%	8.4%
Euro govies	32.9%	13.5%	5.5%
Euro corporate	42.5%	21.9%	9.6%
Euro high yield	29.1%	9.0%	1.4%
Emerging debt	29.1%	8.5%	3.2%

Source: Bloomberg and Morningstar data from 31/12/2006 to 31/12/2016. Avg year 1: average percentage of funds outperforming the benchmark the first year from 2007 to 2016. Avg year 2: average percentage of those funds that have outperformed the year one and are still outperforming the benchmark the year 2. Avg year 3: average percentage of those funds that have outperformed the year one and two and are still outperforming the benchmark the year 3. THE FIGURES RELATING TO PAST PERFORMANCES REFER TO PAST PERIODS AND ARE NOT A RELIABLE INDICATOR FOR FUTURE RESULTS. THIS ALSO APPLIES TO HISTORICAL MARKET DATA.

Performance/volatility

1Y PERFORMANCE/VOLATILITY COMPARISON BETWEEN ACTIVE FUNDS AND THE BENCHMARK

1Y PERFORMANCE	PERFORMANCE		VOLATILITY		SHARPE RATIO		% OF ACTIVE FUNDS OUTPERFORMING THE BENCHMARK
	INDEX	ACTIVE FUNDS*	INDEX	ACTIVE FUNDS*	INDEX	ACTIVE FUNDS*	
Universe							
France large caps	8.1%	4.7%	19.4%	17.7%	0.4	0.3	5%
France smid caps	10.0%	14.3%	16.6%	13.5%	0.6	1.1	61%
UK equity	0.1%	-2.5%	17.7%	17.7%	0.0	-0.1	20%
Europe large & mid caps	2.3%	-0.2%	17.2%	15.6%	0.2	0.0	19%
Europe small caps	1.5%	4.9%	16.5%	14.0%	0.1	0.4	56%
US large & mid caps	14.2%	11.7%	17.1%	16.1%	0.8	0.7	32%
Japan equity	9.9%	8.0%	22.5%	20.6%	0.5	0.4	26%
World equity	11.0%	7.4%	16.4%	14.1%	0.7	0.5	21%
Value equity	15.7%	10.6%	16.9%	15.0%	0.9	0.7	17%
Global EM equity	16.8%	11.5%	20.4%	17.4%	0.8	0.7	12%
China equity	3.3%	0.5%	23.5%	19.9%	0.2	0.0	25%
Euro govies	3.3%	2.2%	4.2%	2.8%	0.8	0.9	24%
Euro corporate	4.7%	4.4%	2.4%	2.4%	2.0	2.0	44%
Euro high yield	8.5%	7.5%	5.0%	4.6%	1.8	1.7	23%
Emerging debt	13.1%	11.9%	10.4%	9.9%	1.3	1.2	32%

Source: Bloomberg and Morningstar data in EUR from 31/12/2015 to 31/12/2016. * Average performance/volatility of the funds weighted by the AUM, as defined in the methodology, is the average return earned in excess of the risk-free rate per unit of volatility. THE FIGURES RELATING TO PAST PERFORMANCES REFER TO PAST PERIODS AND ARE NOT A RELIABLE INDICATOR FOR FUTURE RESULTS. THIS ALSO APPLIES TO HISTORICAL MARKET DATA.

3Y PERFORMANCE/VOLATILITY COMPARISON BETWEEN ACTIVE FUNDS AND THE BENCHMARK

3Y PERFORMANCE	PERFORMANCE		VOLATILITY		SHARPE RATIO		% OF ACTIVE FUNDS OUTPERFORMING THE BENCHMARK
	INDEX	ACTIVE FUNDS*	INDEX	ACTIVE FUNDS*	INDEX	ACTIVE FUNDS*	
Universe							
France large caps	7.9%	6.4%	18.3%	16.4%	0.4	0.4	8%
France smid caps	13.3%	15.3%	15.5%	12.6%	0.9	1.2	56%
UK equity	5.2%	4.6%	17.3%	16.6%	0.3	0.3	29%
Europe large & mid caps	5.9%	5.2%	16.5%	14.8%	0.4	0.4	33%
Europe small caps	10.0%	10.6%	15.7%	12.7%	0.6	0.8	47%
US large & mid caps	18.1%	15.5%	16.8%	15.5%	1.1	1.0	14%
Japan equity	13.7%	12.2%	19.6%	18.3%	0.7	0.7	16%
World equity	13.5%	9.6%	16.0%	13.2%	0.9	0.7	11%
Value equity	13.2%	10.8%	16.1%	13.9%	0.8	0.8	23%
Global EM equity	8.6%	5.4%	19.8%	16.9%	0.4	0.3	3%
China equity	9.5%	8.6%	23.0%	20.5%	0.4	0.4	35%
Euro govies	5.9%	4.3%	4.1%	2.9%	1.5	1.5	14%
Euro corporate	4.2%	3.7%	2.2%	2.1%	1.9	1.8	33%
Euro high yield	5.1%	4.4%	4.0%	4.0%	1.3	1.1	23%
Emerging debt	4.8%	4.1%	11.5%	10.6%	0.4	0.4	29%

Source: Bloomberg and Morningstar data in EUR from 31/12/2015 to 31/12/2016. * Average performance/volatility of the funds weighted by the AUM, as defined in the methodology, is the average return earned in excess of the risk-free rate per unit of volatility. THE FIGURES RELATING TO PAST PERFORMANCES REFER TO PAST PERIODS AND ARE NOT A RELIABLE INDICATOR FOR FUTURE RESULTS. THIS ALSO APPLIES TO HISTORICAL MARKET DATA.

Performance/volatility

5Y PERFORMANCE/VOLATILITY COMPARISON BETWEEN ACTIVE FUNDS AND THE BENCHMARK

5Y PERFORMANCE	PERFORMANCE		VOLATILITY		SHARPE RATIO		% OF ACTIVE FUNDS OUTPERFORMING THE BENCHMARK
	INDEX	ACTIVE FUNDS*	INDEX	ACTIVE FUNDS*	INDEX	ACTIVE FUNDS*	
Universe							
France large caps	13.0%	11.6%	17.2%	15.3%	0.8	0.8	17%
France smid caps	18.1%	18.0%	14.4%	11.6%	1.3	1.6	31%
UK equity	9.6%	9.7%	15.6%	14.8%	0.6	0.7	50%
Europe large & mid caps	10.7%	10.1%	15.1%	13.4%	0.7	0.8	36%
Europe small caps	17.6%	16.0%	14.7%	11.7%	1.2	1.4	25%
US large & mid caps	18.6%	16.3%	15.0%	13.8%	1.2	1.2	12%
Japan equity	13.4%	12.1%	18.0%	16.8%	0.7	0.7	11%
World equity	15.0%	11.0%	14.1%	11.6%	1.1	0.9	12%
Value equity	14.8%	12.7%	14.3%	12.3%	1.0	1.0	23%
Global EM equity	6.4%	4.5%	17.7%	15.3%	0.4	0.3	19%
China equity	9.4%	9.1%	21.2%	18.5%	0.4	0.5	49%
Euro govies	6.2%	4.5%	4.0%	2.8%	1.5	1.6	14%
Euro corporate	5.6%	5.3%	2.5%	2.2%	2.3	2.3	36%
Euro high yield	10.2%	8.3%	4.4%	4.1%	2.3	2.0	8%
Emerging debt	2.9%	2.2%	10.7%	9.8%	0.3	0.2	25%

Source: Bloomberg and Morningstar data in EUR from 31/12/2015 to 31/12/2016. * Average performance/volatility of the funds weighted by the AUM, as defined in the methodology, is the average return earned in excess of the risk-free rate per unit of volatility. THE FIGURES RELATING TO PAST PERFORMANCES REFER TO PAST PERIODS AND ARE NOT A RELIABLE INDICATOR FOR FUTURE RESULTS. THIS ALSO APPLIES TO HISTORICAL MARKET DATA.

10Y PERFORMANCE/VOLATILITY COMPARISON BETWEEN ACTIVE FUNDS AND THE BENCHMARK

10Y PERFORMANCE	PERFORMANCE		VOLATILITY		SHARPE RATIO		% OF ACTIVE FUNDS OUTPERFORMING THE BENCHMARK
	INDEX	ACTIVE FUNDS*	INDEX	ACTIVE FUNDS*	INDEX	ACTIVE FUNDS*	
Universe							
France large caps	2.4%	1.7%	23.0%	19.9%	0.1	0.0	19%
France smid caps							NA
UK equity	3.1%	2.7%	21.2%	19.4%	0.1	0.1	34%
Europe large & mid caps	2.6%	1.9%	20.5%	17.5%	0.1	0.1	29%
Europe small caps	5.5%	4.6%	20.2%	16.3%	0.2	0.2	29%
US large & mid caps	8.7%	7.0%	19.0%	17.2%	0.4	0.4	13%
Japan equity	3.5%	2.1%	18.4%	17.2%	0.1	0.1	14%
World equity	6.2%	3.7%	17.9%	14.0%	0.3	0.2	12%
Value equity	5.0%	4.4%	18.8%	15.4%	0.2	0.2	34%
Global EM equity	5.0%	2.6%	22.5%	19.2%	0.2	0.1	14%
China equity	6.1%	5.7%	27.3%	22.6%	0.2	0.2	37%
Euro govies	5.0%	3.8%	14.4%	3.1%	0.3	1.0	1%
Euro corporate	4.5%	3.9%	3.3%	2.9%	1.1	1.1	26%
Euro high yield	7.3%	4.8%	9.6%	6.7%	0.7	0.6	3%
Emerging debt	6.2%	4.2%	10.5%	9.2%	0.5	0.4	0%

Source: Bloomberg and Morningstar data in EUR from 31/12/2015 to 31/12/2016. * Average performance/volatility of the funds weighted by the AUM, as defined in the methodology, is the average return earned in excess of the risk-free rate per unit of volatility. THE FIGURES RELATING TO PAST PERFORMANCES REFER TO PAST PERIODS AND ARE NOT A RELIABLE INDICATOR FOR FUTURE RESULTS. THIS ALSO APPLIES TO HISTORICAL MARKET DATA.

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Outlook 2017

How to find the right blend between active and passive in 2017?

Will current economic and political changes favour active managers?

In the easy monetary policy environment of the last few years, active managers have struggled with a break down in typical asset relationships, limited room for fundamentals-based pricing and a lack of diversified catalysts. Many have lagged their benchmark but now argue that the backdrop could be improving for alpha generation.

Are conditions really improving?

The succession of election results that defied the polls and the increasingly significant side effects of low interest rates are bringing about two major market shifts:

1. The gradual unwind of QEs is likely to be followed by more fiscal support
2. A growing defiance of globalisation is feeding calls for policy ruptures and more protectionism

Both trends are likely to support a sustainable inflection in rates and inflation, and ease market distortions. The influence of monetary catalysts on asset trends would weaken. The gap between countries enjoying productivity gains and reasonable leverage could widen vs. weaker economies, leading to tensions (including trade wars). Bolder policy ruptures could foster economic growth and help markets.

What will it mean for asset classes?

Such a regime shift, if it endures, will have profound macro and micro implications:

Pricing

- ▶ Fundamentals-based pricing should return as the QE wealth effect on risk assets recedes
- ▶ Growth, inflation, productivity, and leverage become stronger market drivers
- ▶ Assets trade closer to their traditional drivers

Differentiation

- ▶ There should be more differentiation in prices
- ▶ We'd expect more economic volatility as central banks are gradually sidelined
- ▶ Rising rates should spur greater discounted cash flows and prompt greater asset valuation differentiation

- ▶ Policy changes in tax, spending, regulation and other areas will contribute to multiple sector trends at different times, in different countries
- ▶ Rotations become more frequent as volatility rises given higher risks of policy failure or disappointment

So does that make it a better environment for active management?

We think the backdrop has improved. Yet, there is no immediate panacea, rather a gradual easing of conditions as the regime shifts. Central bank balance sheets are not expected to peak before 2018. The effects of several major policy decisions in the US and the UK won't be felt before then either.

Should the shift be impeded by too many uncertainties, it will be difficult to capture its benefits. Political and policy uncertainties are becoming more important than monetary decisions as market drivers. Many opportunities, therefore, remain speculative - creating an environment in which it's easy to make mistakes, whether by taking unwanted risk or ending an exposure too early. Tactical positioning favours more liquid vehicles such as ETFs.

Finally, if attempts of policy rupture finally disappoint, the mean reversion in the economy and markets would be acute.

Conclusion: Several winners in 2017

The backdrop in 2017 could create better conditions for asset managers, but also more risks. The deflation trade has to endure. Moreover at least in terms of potential seismic events, 2017 promises to look like 2016. It could therefore be hard again for active managers to turn thing around in 2017.

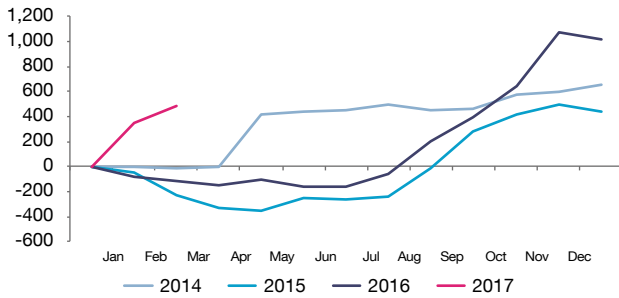
The changing environment should lead to more opportunities arising at sector, thematic and smart beta risk factor allocation levels. It should favour active managers able to exploit those opportunities and the more granular and thematic approach ETFs can offer.

Thematic approaches in particular seem the best fit for the current environment. Smart Beta strategies able to capture trends or factors like low volatility, value, momentum, quality and size could be in demand.

The backdrop in the US seems particularly supportive, benefiting from greater sector stability than in the EU and UK, where sector relationships are less stable. We therefore anticipate more opportunities arising at the sector, thematic and factor levels in the US compared to Europe or UK. 2017 flows indicate we're not alone

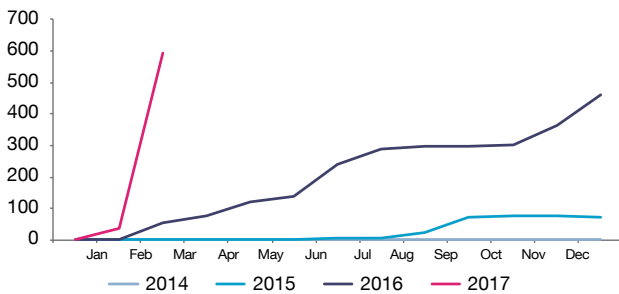
in thinking this. We also expect a better year for active managers in terms of alpha generation.

US SECTOR CUMULATED FLOWS (EURM)



Source Bloomberg, Lyxor ETF data from 01/01/14 to 28/02/17

US SMART BETA FACTOR ALLOCATION FLOWS (EURM)



Source Bloomberg, Lyxor ETF data from 01/01/14 to 28/02/17

Alpha improvements in Europe have been halted by the French elections. Policy uncertainty in the region should ease by the summer - if nothing unexpected comes out on the political front. It should clear the way for a valuation catch-up and more opportunities for active managers in H2.

The environment seems more mixed in Japan. The environment is supportive for sector arbitrage but lacks market pulse. The year should still be difficult for active managers.

While a rally endures in a number of emerging markets, the environment of alpha is constrained by a lack of dispersion as correlations remain high. We favour directional and country instruments to play these regions as it could be difficult for active funds to generate alpha.

BLENDED ACTIVE AND PASSIVE FUNDS IN 2017

	US	EUROPE	JAPAN	EMERGING MARKETS
Beta			+++	+++
β Sectors	++	++	++	
Themes	++	++		
Smart Beta	++	++		
α Alpha	+++	++		

Source: Lyxor IAM

*Jean Baptiste Berthon,
Senior Cross-Asset Strategist
and Marlène Hassine Konqui,
Head of ETF Research,
April 2017.*

Focus by universe

France large caps	32
France smid caps	34
UK equity	36
Europe large & mid caps	38
Europe small caps	40
US large & mid caps	42
Japan equity	44
World equity	46
Value equity	48
Global EM equity	50
China equity	52
Euro govies	54
Euro high yield	56
Euro corporate	58
Emerging debt	60

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France large caps

PERCENTAGE OF ACTIVE FUNDS OUTPERFORMING THE BENCHMARK OVER 1Y, 3Y, 5Y, 10Y

FRANCE LARGE CAPS	1Y	3Y	5Y	10Y
% of Active Funds outperforming the Benchmark	5%	8%	17%	19%

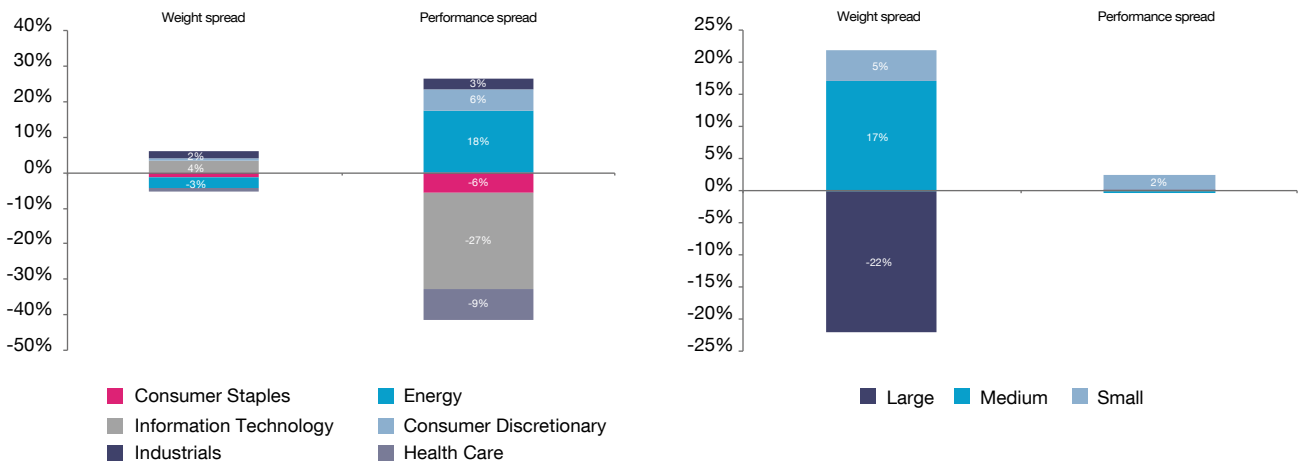
Over a one year period, 5% of active funds outperformed their benchmark vs. 59% in 2015, with on average -0.02% of alpha being generated as of 31/12/2016. This was the lowest number of active funds that outperformed their benchmark in our study.

This underperformance was mainly due to active funds' under-exposure to the energy sector (-3.0%) which outperformed by 17.5% and their over-exposure

to technology sector (+3.5%) which underperformed the benchmark by 27.0%. As a result, the spread of performances between active managers and their benchmark was -2.9% in 2016 vs. 1.1% in 2015.

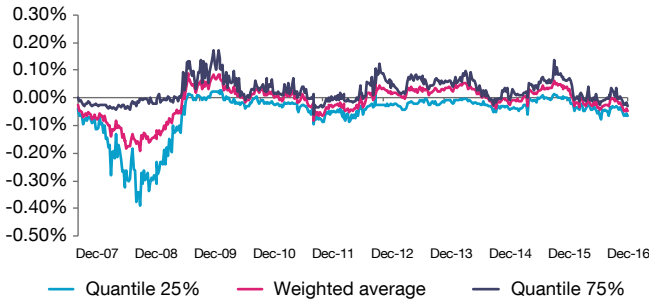
Over 10 years, 19% of active funds outperformed their index. On average, active funds underperformed their benchmark by 0.4% every year over a 10 year period.

BREAKDOWN BY SECTOR AND SIZE OF THE ACTIVE FUND UNIVERSE VS. THE BENCHMARK

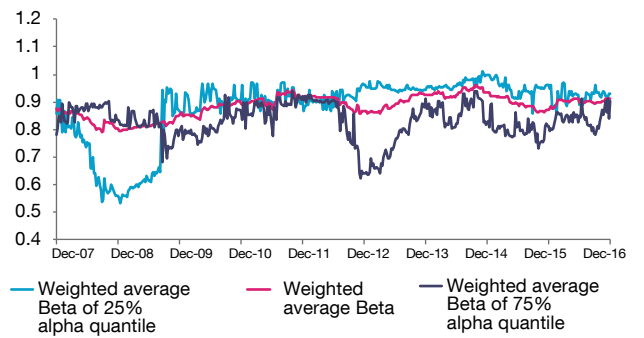


Source: Bloomberg and Morningstar data as of 31/12/16. Weight spread: sector/size exposure difference between the active funds average of the universe and the benchmark. Performance spread: sector/size performance difference between the active funds average of the universe and the benchmark.

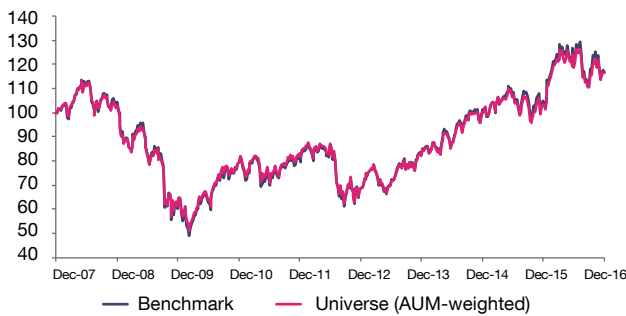
1Y ROLLING ESTIMATED ALPHA GENERATION



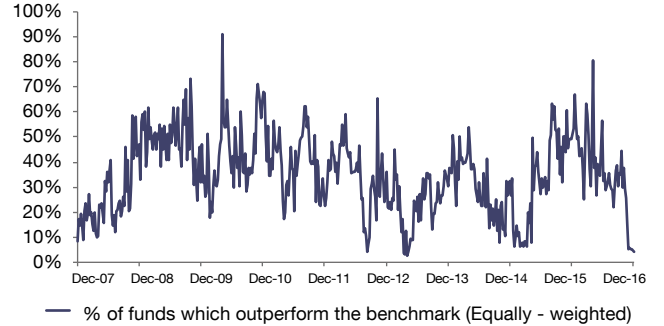
1Y ROLLING ESTIMATED BETA



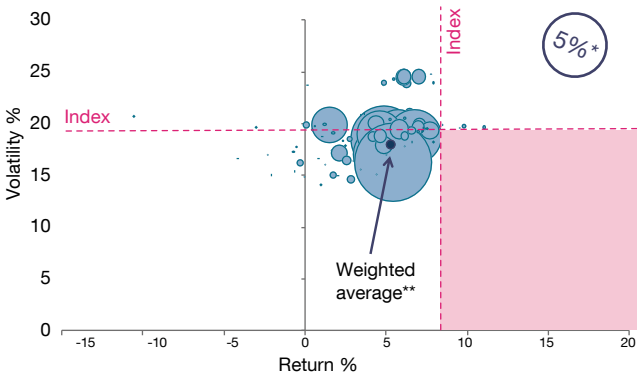
10Y CUMULATED PERFORMANCE



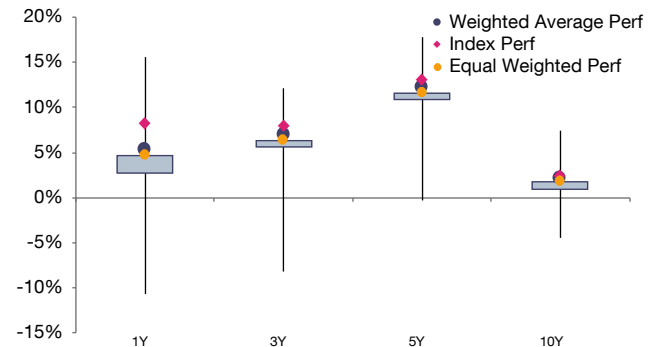
OUTPERFORMANCE INDICATOR



1Y PERFORMANCE, RISK PROFILE



1Y, 3Y, 5Y, 10Y PERFORMANCE DISTRIBUTION



Source : Lyxor and Morningstar data from 31/12/2006 to 31/12/2016. See methodology of active funds outperforming the benchmark. *Percentage of funds outperforming the benchmark. ** Average performance of the funds weighted by the AUM. Outperformance indicators: Funds outperforming the benchmark over 10Y in percentage of AUM. THE FIGURES RELATING TO PAST PERFORMANCES REFER TO PAST PERIODS AND ARE NOT A RELIABLE INDICATOR FOR FUTURE RESULTS. THIS ALSO APPLIES TO HISTORICAL MARKET DATA.

France smid caps

PERCENTAGE OF ACTIVE FUNDS OUTPERFORMING THE BENCHMARK OVER 1Y, 3Y, 5Y, 10Y

FRANCE SMID CAPS	1Y	3Y	5Y	10Y
% of Active Funds outperforming the Benchmark	61%	56%	31%	NA

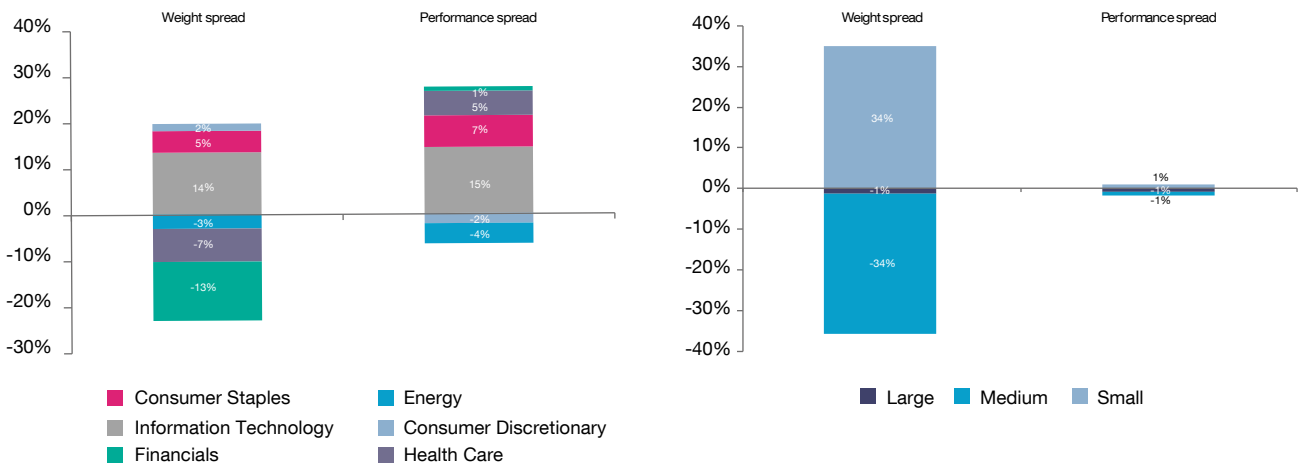
Over a one year period, 61% of active funds outperformed their benchmark vs. 80% in 2015, with on average 0.1% of alpha being generated as of 31/12/2016. The number of funds outperforming their benchmark decreased in 2016 but represents the highest figure of our study.

The performance spread between active funds and their benchmark was 2.5%. In 2016, the average performance

of active funds was 2.5% above the index. This may be explained by active fund managers' massive overweight of the technology sector (+13.6%) which outperformed the benchmark by 14.6%.

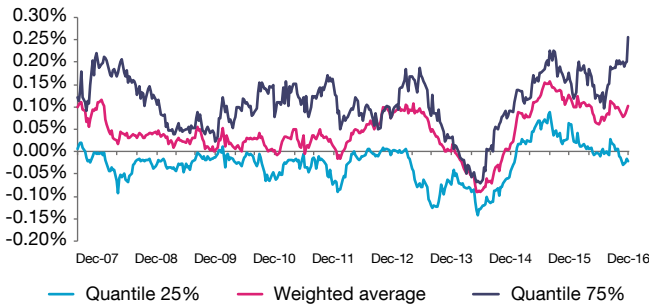
This is consistent with the fact that more opportunities can be found by active managers in less efficient markets.

BREAKDOWN BY SECTOR AND SIZE OF THE ACTIVE FUND UNIVERSE VS. THE BENCHMARK

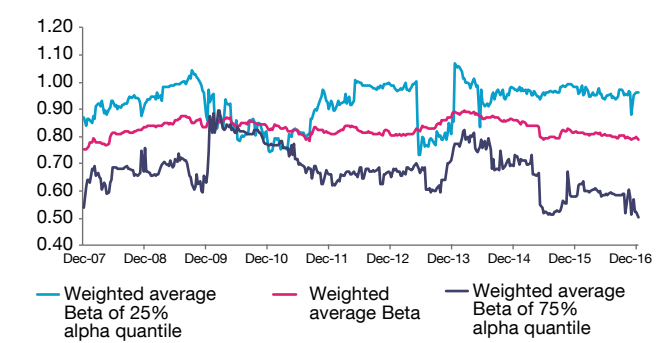


Source: Bloomberg and Morningstar data as of 31/12/16. Weight spread: sector/size exposure difference between the active funds average of the universe and the benchmark. Performance spread: sector/size performance difference between the active funds average of the universe and the benchmark.

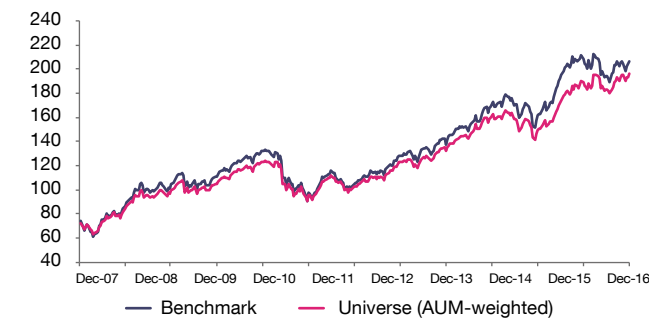
1Y ROLLING ESTIMATED ALPHA GENERATION



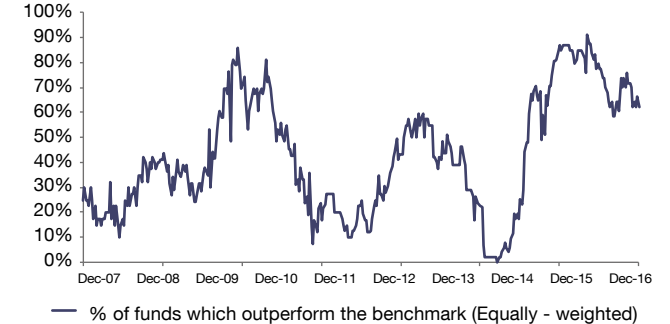
1Y ROLLING ESTIMATED BETA



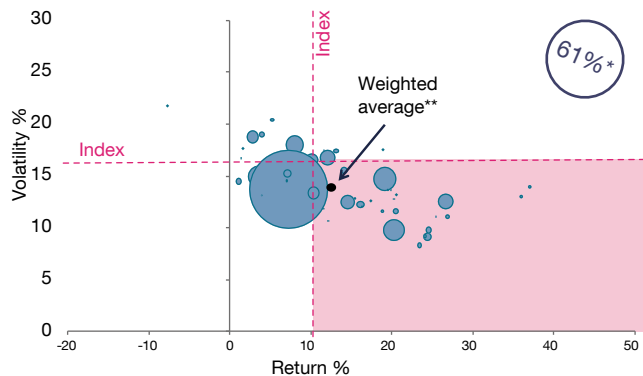
10Y CUMULATED PERFORMANCE



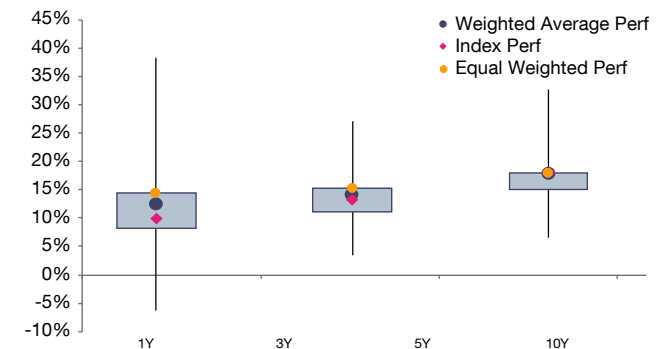
OUTPERFORMANCE INDICATOR



1Y PERFORMANCE, RISK PROFILE



1Y, 3Y, 5Y, 10Y PERFORMANCE DISTRIBUTION



Source : Lyxor and Morningstar data from 31/12/2006 to 31/12/2016. See methodology of active funds outperforming the benchmark. *Percentage of funds outperforming their benchmark. ** Average performance of the funds weighted by the AUM. Outperformance indicators: Funds outperforming the benchmark over 10Y in percentage of AUM. THE FIGURES RELATING TO PAST PERFORMANCES REFER TO PAST PERIODS AND ARE NOT A RELIABLE INDICATOR FOR FUTURE RESULTS. THIS ALSO APPLIES TO HISTORICAL MARKET DATA.

UK equity

PERCENTAGE OF ACTIVE FUNDS OUTPERFORMING THE BENCHMARK OVER 1Y, 3Y, 5Y, 10Y

UK EQUITY	1Y	3Y	5Y	10Y
% of Active Funds outperforming the Benchmark	20%	29%	50%	34%

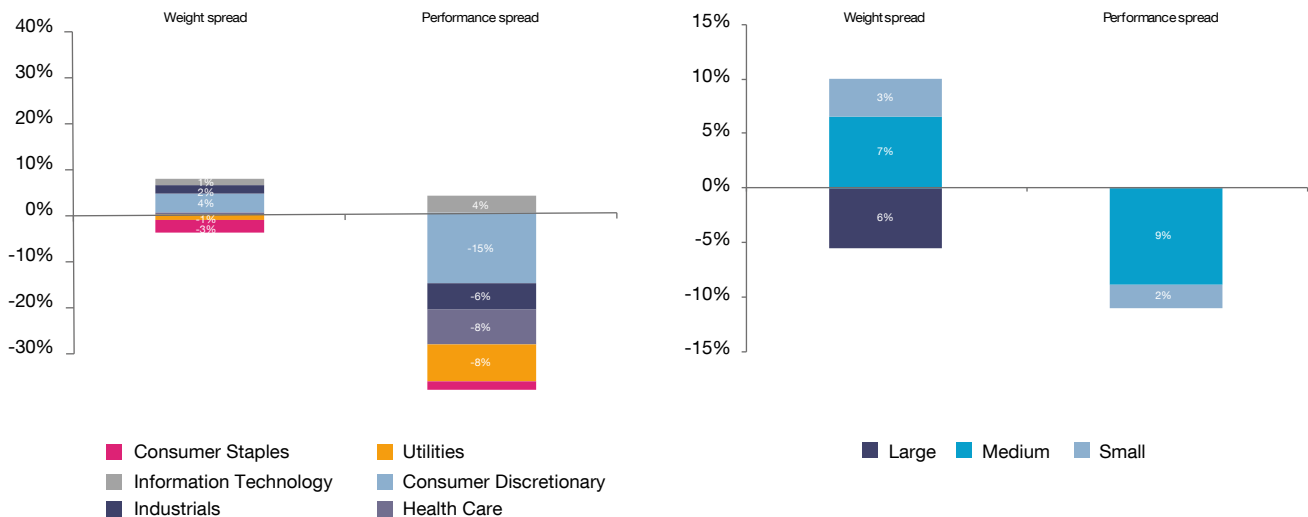
Over a one year period, 20% of active funds outperformed their benchmark, with on average 0.01% of alpha being generated as of 31/12/2016. This was a significant decline vs. 2015 where 56% of funds underperformed their benchmark. Over 10 years, 34% of active funds beat the benchmark.

The performance spread between active funds and the benchmark in 2016 was -1.9%. This can be explained by an overweight of Mid & Small

Caps (+6.6% and +3.4%) in active funds which significantly underperformed their benchmark by 8.9% and 2.2% respectively.

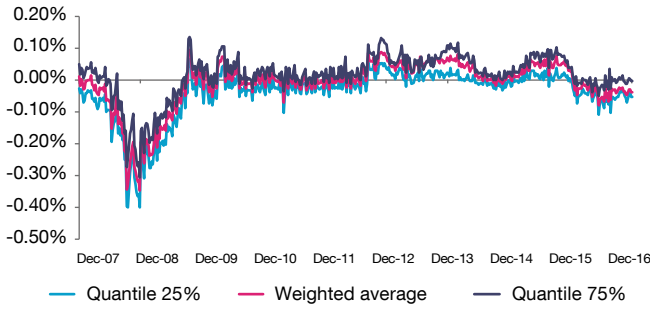
Unlike the drop in volatility of their benchmark from 18.2% in 2015 to 17.7% in 2016, the volatility of actively managed funds increased from 17.6% in 2015 to 18.3% in 2016. Active fund managers not only took more risk than in 2015, but they also underperformed the benchmark by a higher margin.

BREAKDOWN BY SECTOR AND SIZE OF THE ACTIVE FUND UNIVERSE VS. THE BENCHMARK

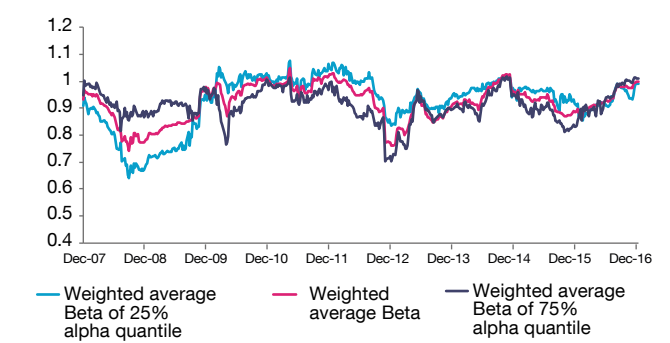


Source: Bloomberg and Morningstar data as of 31/12/16. Weight spread: sector/size exposure difference between the active funds average of the universe and the benchmark. Performance spread: sector/size performance difference between the active funds average of the universe and the benchmark.

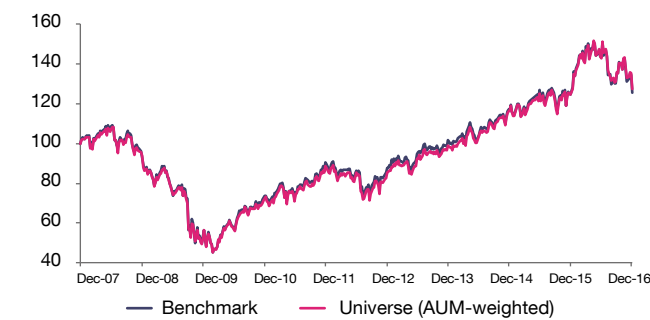
1Y ROLLING ESTIMATED ALPHA GENERATION



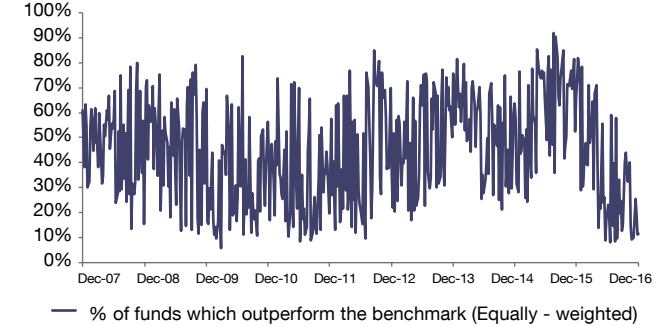
1Y ROLLING ESTIMATED BETA



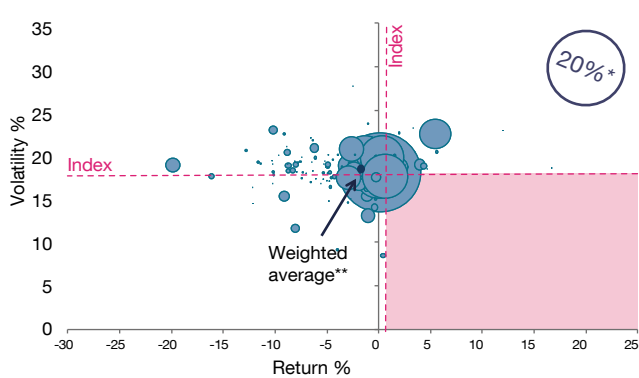
10Y CUMULATED PERFORMANCE



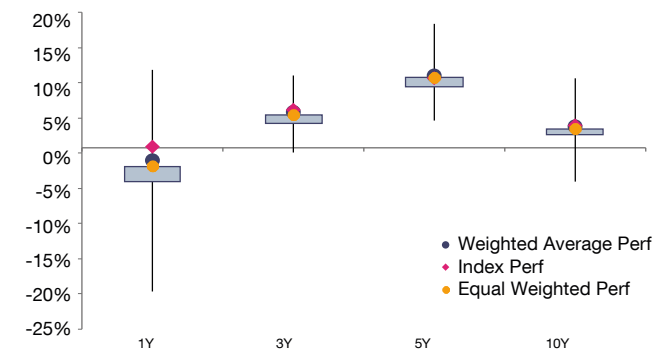
OUTPERFORMANCE INDICATOR



1Y PERFORMANCE, RISK PROFILE



1Y, 3Y, 5Y, 10Y PERFORMANCE DISTRIBUTION



Source : Lyxor and Morningstar data from 31/12/2006 to 31/12/2016. See methodology of active funds outperforming the benchmark. *Percentage of funds outperforming the benchmark. ** Average performance of the funds weighted by the AUM. Outperformance indicators: Funds outperforming the benchmark over 10Y in percentage of AUM. THE FIGURES RELATING TO PAST PERFORMANCES REFER TO PAST PERIODS AND ARE NOT A RELIABLE INDICATOR FOR FUTURE RESULTS. THIS ALSO APPLIES TO HISTORICAL MARKET DATA.

Europe large & mid caps

PERCENTAGE OF ACTIVE FUNDS OUTPERFORMING THE BENCHMARK OVER 1Y, 3Y, 5Y, 10Y

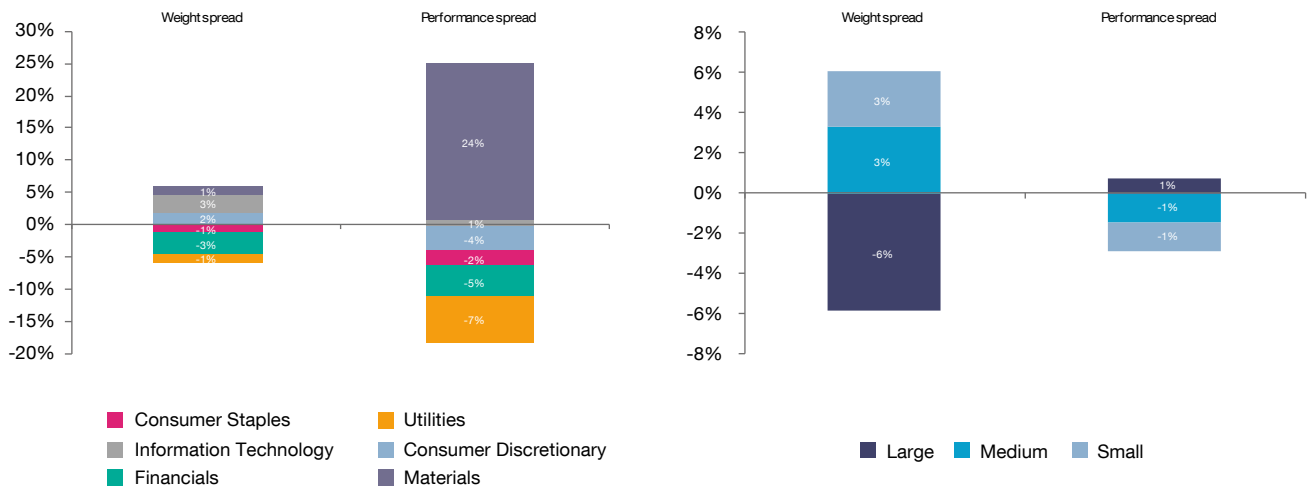
EUR LARGE + MID CAPS	1Y	3Y	5Y	10Y
% of Active Funds outperforming the Benchmark	19%	33%	36%	29%

Over a one year period, 19% of active funds outperformed their benchmark vs. 72% in 2015. Over 10 years, 29% outperformed the index.

The performance spread of active funds vs. their benchmark decreased sharply to -2.9% in 2016 from +3.3% in 2015. This can be partly explained by active funds' over-exposure to Mid & Small Caps (+3.3% and +2.7%) which underperformed the benchmark by 1.5% and 1.4% respectively.

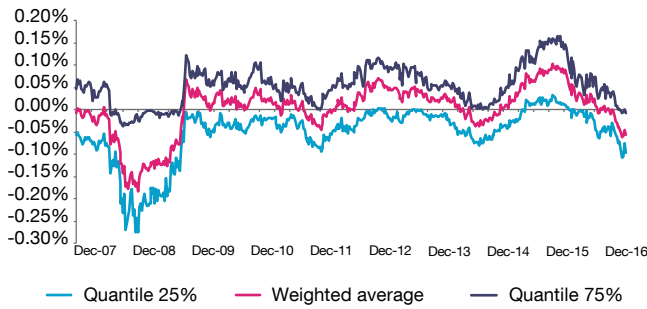
To face the increasing volatility in H1, active fund managers adopted a defensive strategy. They mainly focused their exposure on quality, growth and trend following factors. But as uncertainty decreased during H2, the low beta and quality factors underperformed the indices by 4% and 8% respectively.

BREAKDOWN BY SECTOR AND SIZE OF THE ACTIVE FUND UNIVERSE VS. THE BENCHMARK

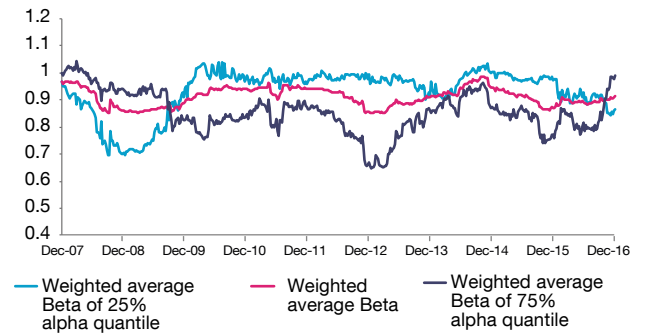


Source: Bloomberg and Morningstar data as of 31/12/16. Weight spread: sector/size exposure difference between the active funds average of the universe and the benchmark. Performance spread: sector/size performance difference between the active funds average of the universe and the benchmark.

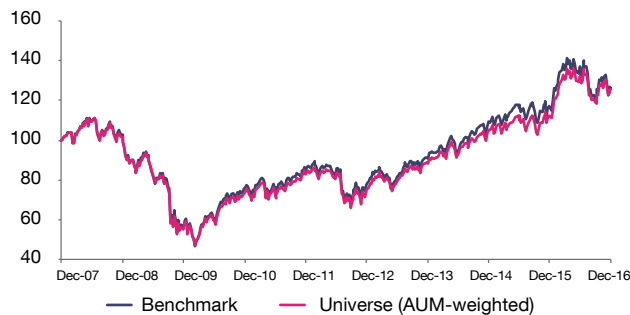
1Y ROLLING ESTIMATED ALPHA GENERATION



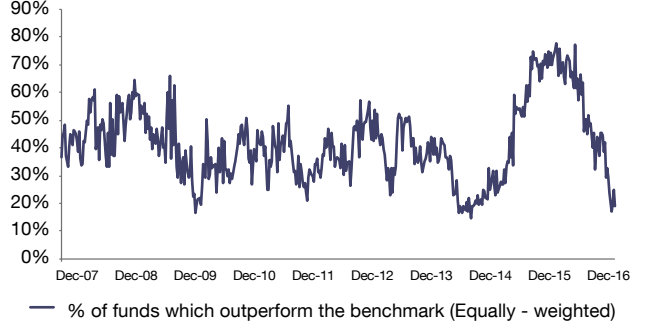
1Y ROLLING ESTIMATED BETA



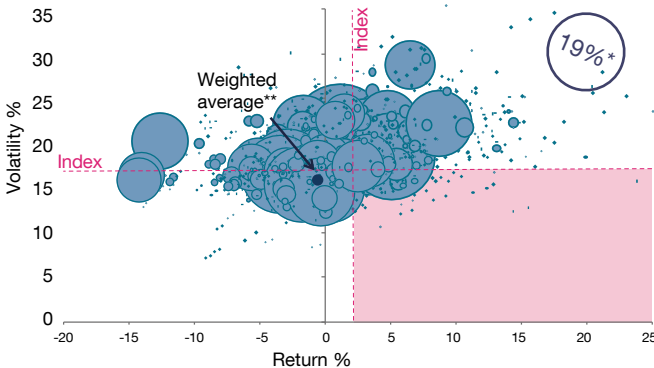
10Y CUMULATED PERFORMANCE



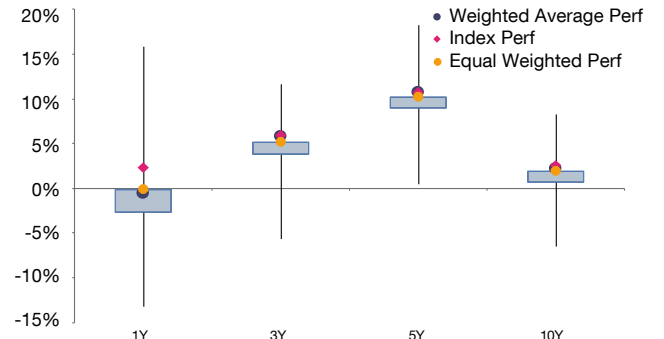
OUTPERFORMANCE INDICATOR



1Y PERFORMANCE, RISK PROFILE



1Y, 3Y, 5Y, 10Y PERFORMANCE DISTRIBUTION



Source : Lyxor and Morningstar data from 31/12/2006 to 31/12/2016. See methodology of active funds outperforming the benchmark. *Percentage of funds outperforming their benchmark. ** Average performance of the funds weighted by the AUM. Outperformance indicators: Funds outperforming the benchmark over 10Y in percentage of AUM. THE FIGURES RELATING TO PAST PERFORMANCES REFER TO PAST PERIODS AND ARE NOT A RELIABLE INDICATOR FOR FUTURE RESULTS. THIS ALSO APPLIES TO HISTORICAL MARKET DATA.

Europe small caps

PERCENTAGE OF ACTIVE FUNDS OUTPERFORMING THE BENCHMARK OVER 1Y, 3Y, 5Y, 10Y

EUROPE SMALL CAPS	1Y	3Y	5Y	10Y
% of Active Funds outperforming the Benchmark	56%	47%	25%	29%

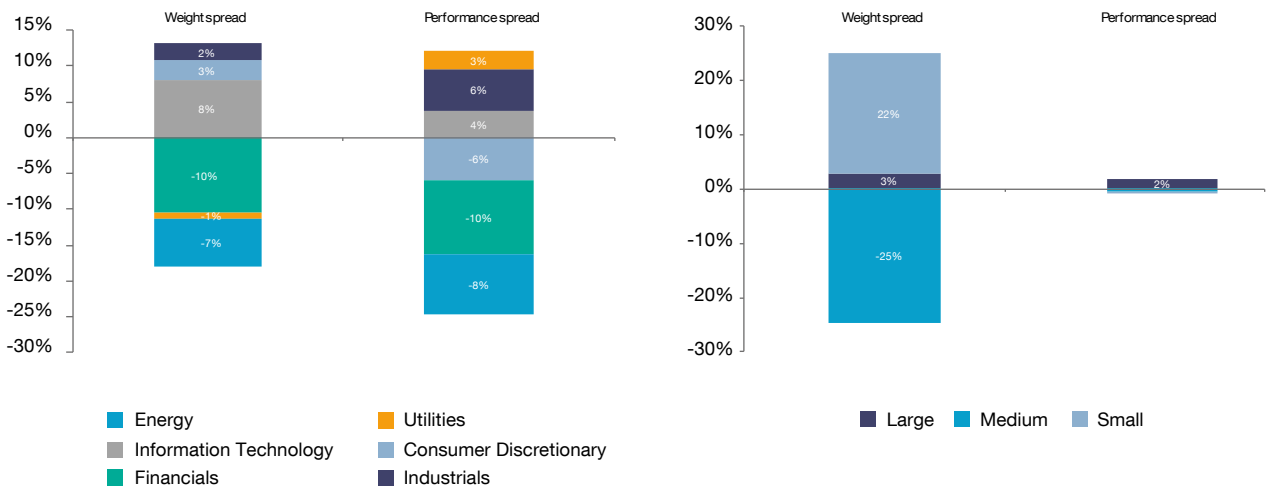
Over a one year period, 56% of active funds outperformed their benchmark vs. 55% in 2015, with on average 0.02% of alpha being generated as of 31/12/2016.

Smid Cap active managers were helped by their over-exposure to the technology sector (+8.1%) which outperformed the benchmark by 3.8%, but mostly by their under-exposure to financials (-10.5%) which underperformed by 10.4%.

Unlike 2015, the average performance of active funds was below the benchmark's performance in 2016 (-1.2% vs. +2.9% in 2015). This can be explained by the sharp underperformance of some big funds (in terms of AuM): the spread of the equally-weighted funds was over 3.3% vs. -1.2% for AuM-weighted funds.

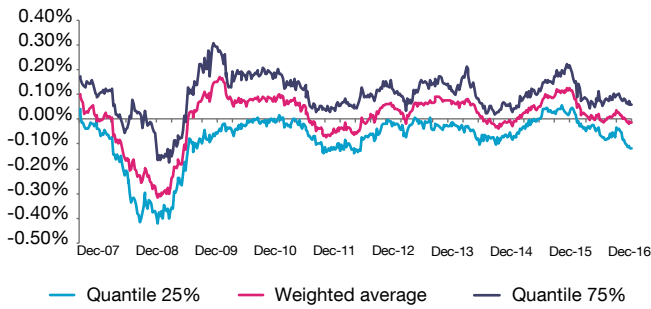
Over 10 years, 29% of active funds beat the benchmark. On average, active funds underperformed their benchmark by 1% every year over a 10 year period.

BREAKDOWN BY SECTOR AND SIZE OF THE ACTIVE FUND UNIVERSE VS. THE BENCHMARK

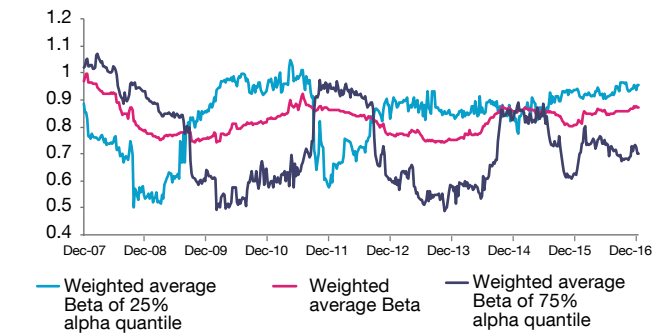


Source: Bloomberg and Morningstar data as of 31/12/16. Weight spread: sector/size exposure difference between the active funds average of the universe and the benchmark. Performance spread: sector/size performance difference between the active funds average of the universe and the benchmark.

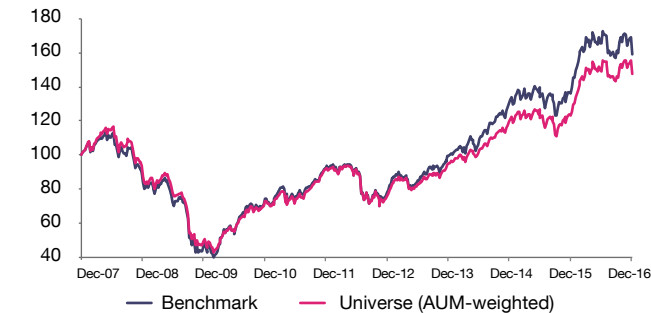
1Y ROLLING ESTIMATED ALPHA GENERATION



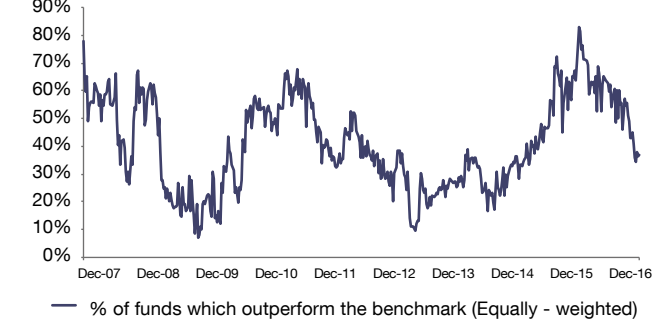
1Y ROLLING ESTIMATED BETA



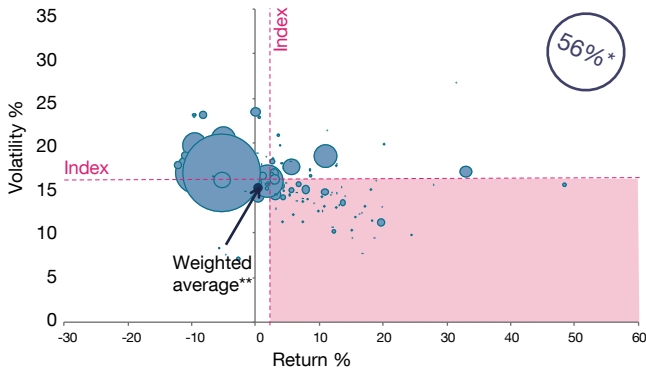
10Y CUMULATED PERFORMANCE



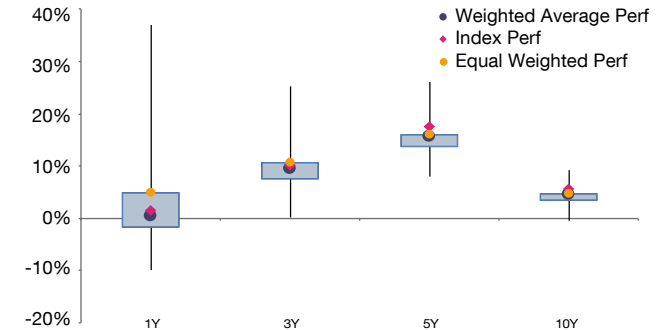
OUTPERFORMANCE INDICATOR



1Y PERFORMANCE, RISK PROFILE



1Y, 3Y, 5Y, 10Y PERFORMANCE DISTRIBUTION



Source : Lyxor and Morningstar data from 31/12/2006 to 31/12/2016. See methodology of active funds outperforming the benchmark. *Percentage of funds outperforming their benchmark. ** Average performance of the funds weighted by the AUM. Outperformance indicators: Funds outperforming the benchmark over 10Y in percentage of AUM. THE FIGURES RELATING TO PAST PERFORMANCES REFER TO PAST PERIODS AND ARE NOT A RELIABLE INDICATOR FOR FUTURE RESULTS. THIS ALSO APPLIES TO HISTORICAL MARKET DATA.

US large & mid caps

- CONTENT
- EXECUTIVE SUMMARY
- ACTIVE & PASSIVE DEBATE
- METHODOLOGY
- KEY RESULTS
- OUTLOOK 2017
- FOCUS BY UNIVERSE
- APPENDIX

PERCENTAGE OF ACTIVE FUNDS OUTPERFORMING THE BENCHMARK OVER 1Y, 3Y, 5Y, 10Y

US LARGE + MID CAPS	1Y	3Y	5Y	10Y
% of Active Funds outperforming the Benchmark	32%	14%	12%	13%

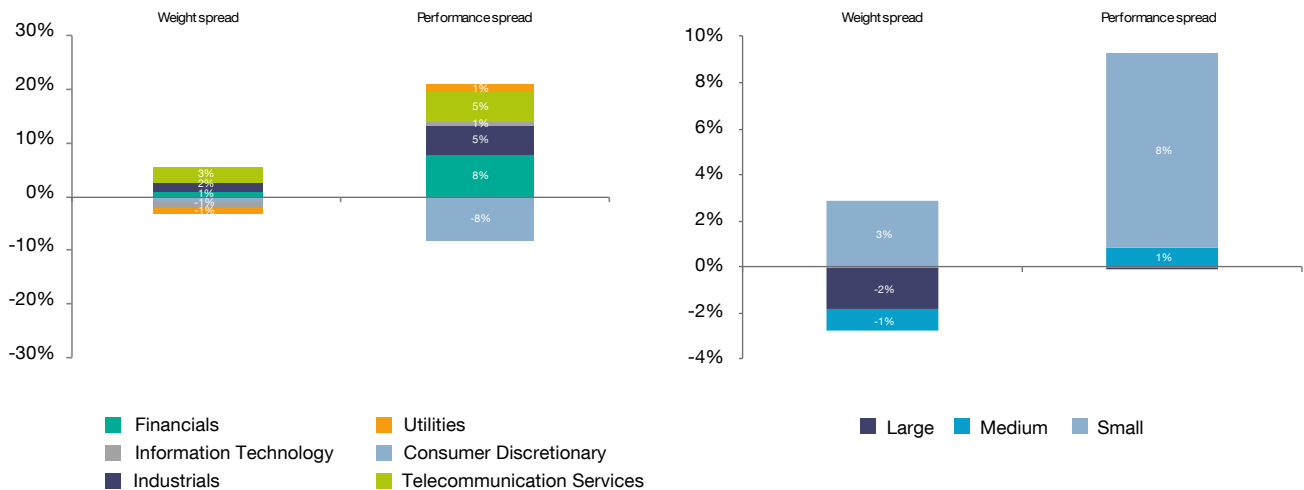
Over a one year period, 32% of active funds outperformed their benchmark which was better than in 2015 when only 25% outperformed.

This was one of the few equity universes that saw an increase in the percentage of funds outperforming their benchmark compared to 2015. Active fund performance was sustained by their over-exposure to financials (+2.9%) and Small caps (+2.9%) which outperformed the index by 5.4% and 8.5% respectively.

The performance spread between active funds and the benchmark was -1.8% in 2016.

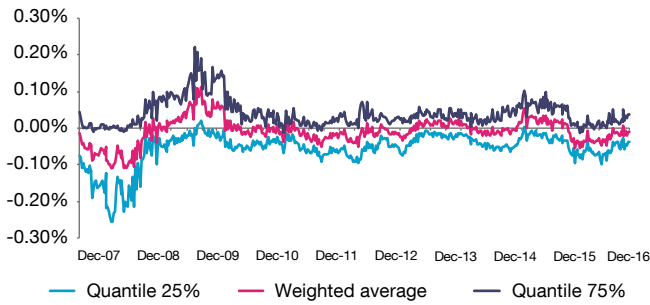
Over 10 years, only 13% of active funds outperformed their benchmark. The annualized spread performance of active funds vs. their benchmark is -1.2% over this period. This confirms the advantage of holding passive funds for such an efficient market as the US equities.

BREAKDOWN BY SECTOR AND SIZE OF THE ACTIVE FUND UNIVERSE VS. THE BENCHMARK

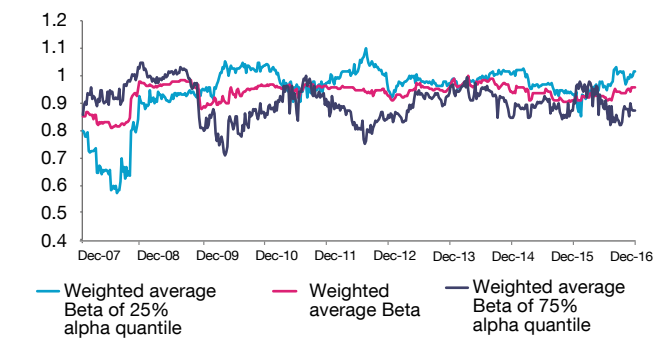


Source: Bloomberg and Morningstar data as of 31/12/16. Weight spread: sector/size exposure difference between the active funds average of the universe and the benchmark. Performance spread: sector/size performance difference between the active funds average of the universe and the benchmark.

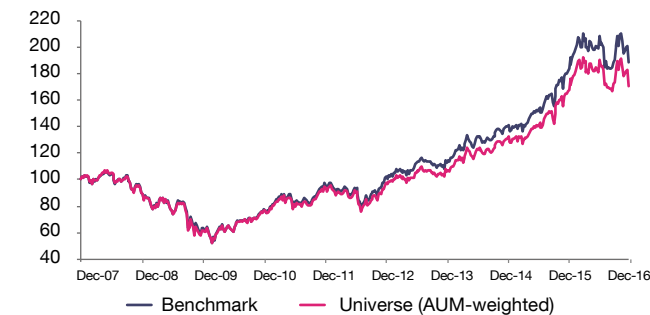
1Y ROLLING ESTIMATED ALPHA GENERATION



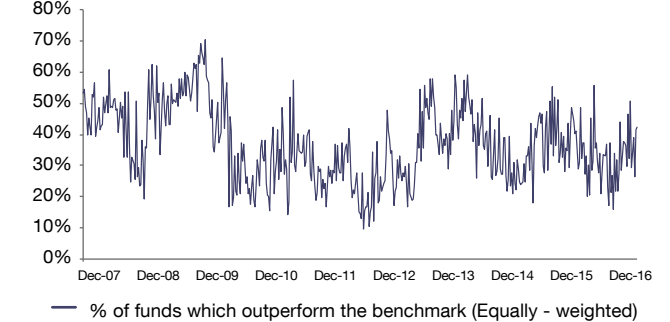
1Y ROLLING ESTIMATED BETA



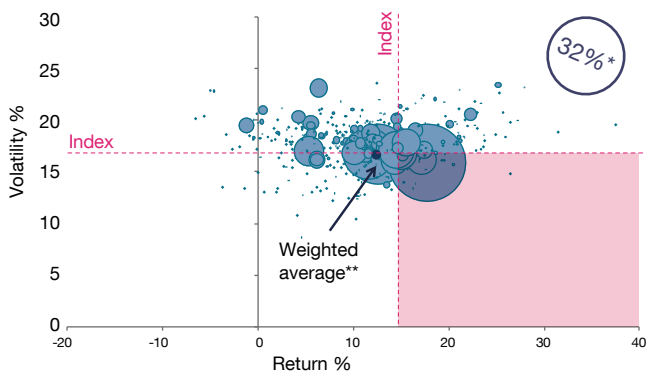
10Y CUMULATED PERFORMANCE



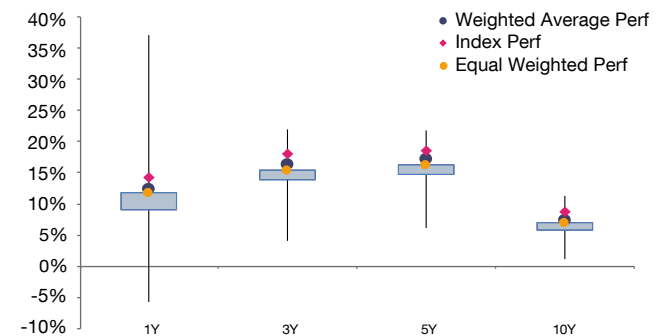
OUTPERFORMANCE INDICATOR



1Y PERFORMANCE, RISK PROFILE



1Y, 3Y, 5Y, 10Y PERFORMANCE DISTRIBUTION



Source : Lyxor and Morningstar data from 31/12/2006 to 31/12/2016. See methodology of active funds outperforming the benchmark. *Percentage of funds outperforming their benchmark. ** Average performance of the funds weighted by the AUM. Outperformance indicators: Funds outperforming the benchmark over 10Y in percentage of AUM. THE FIGURES RELATING TO PAST PERFORMANCES REFER TO PAST PERIODS AND ARE NOT A RELIABLE INDICATOR FOR FUTURE RESULTS. THIS ALSO APPLIES TO HISTORICAL MARKET DATA.

Japan equity

PERCENTAGE OF ACTIVE FUNDS OUTPERFORMING THE BENCHMARK OVER 1Y, 3Y, 5Y, 10Y

JAPAN EQUITY	1Y	3Y	5Y	10Y
% of Active Funds outperforming the Benchmark	26%	16%	11%	14%

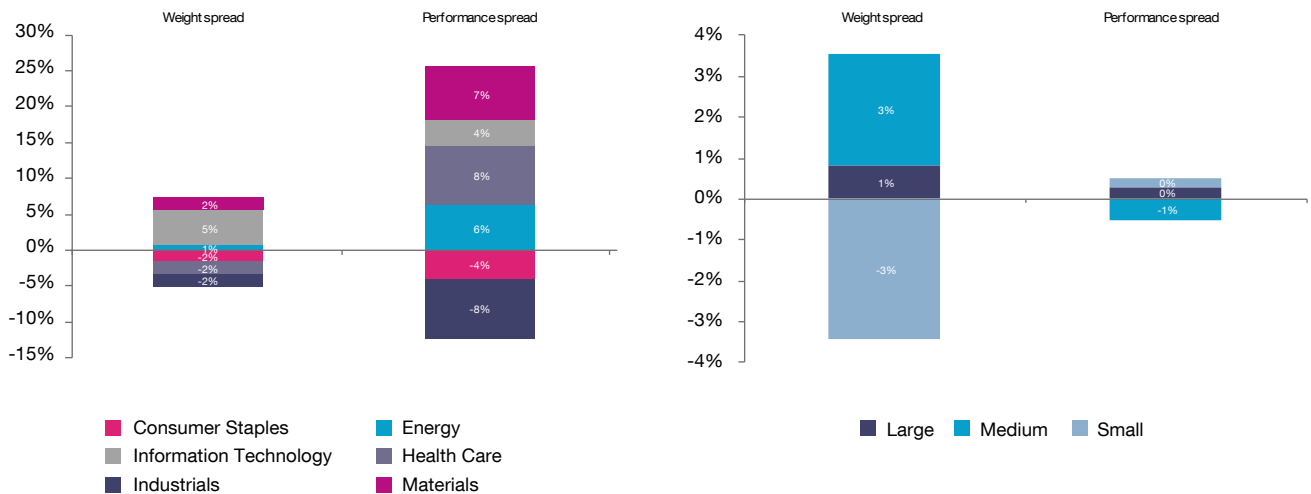
Over a one year period, 26% of Japan equity active funds outperformed their benchmark, a stable figure vs. 2015.

As a result, the performance spread observed was -1.63%. Furthermore, the beta observed was the highest of our equity universes (0.97), meaning that active managers took almost the same exposure as the market, but significantly underperformed their benchmark.

This is roughly confirmed by the graph below where the average sector exposure of the active funds universe was very close to that of the benchmark, except for the Information Technology sector.

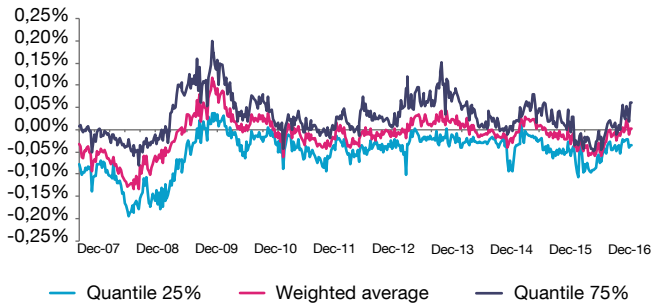
Over 10 years, only 14% of active funds outperformed their benchmark. On average, active funds underperformed their benchmark by 1.2% every year over a 10 year period.

BREAKDOWN BY SECTOR AND SIZE OF THE ACTIVE FUND UNIVERSE VS. THE BENCHMARK

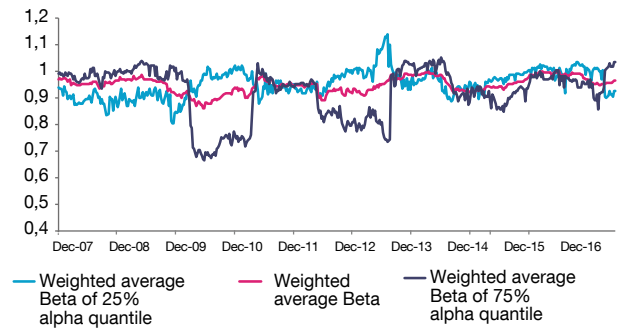


Source: Bloomberg and Morningstar data as of 31/12/16. Weight spread: sector/size exposure difference between the active funds average of the universe and the benchmark. Performance spread: sector/size performance difference between the active funds average of the universe and the benchmark.

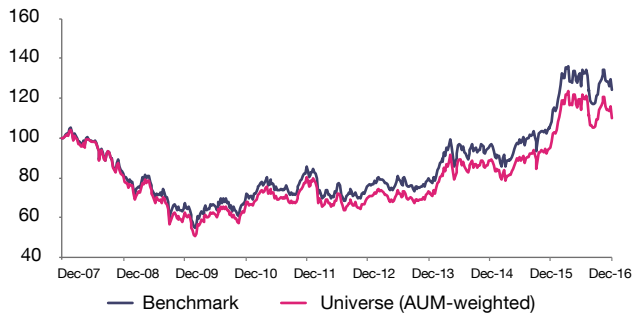
1Y ROLLING ESTIMATED ALPHA GENERATION



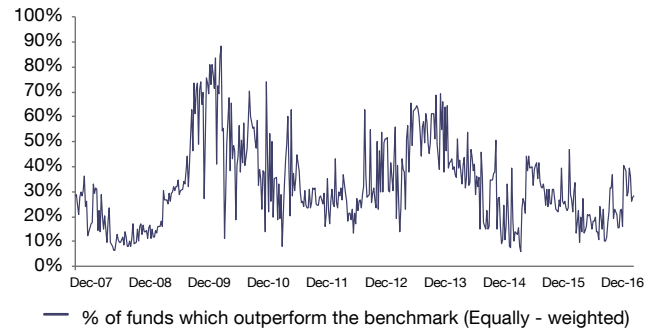
1Y ROLLING ESTIMATED BETA



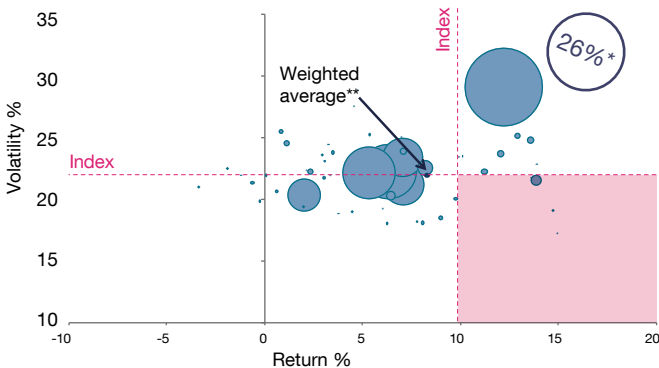
10Y CUMULATED PERFORMANCE



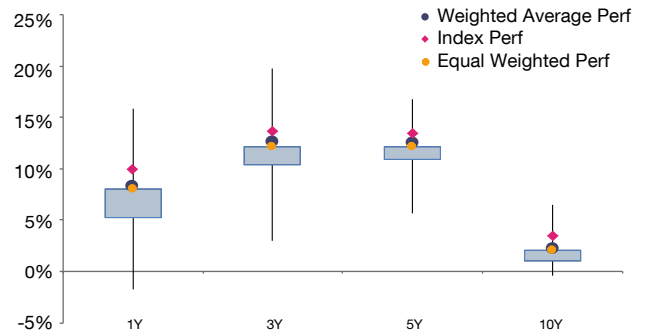
OUTPERFORMANCE INDICATOR



1Y PERFORMANCE, RISK PROFILE



1Y, 3Y, 5Y, 10Y PERFORMANCE DISTRIBUTION



Source : Lyxor and Morningstar data from 31/12/2006 to 31/12/2016. See methodology of active funds outperforming the benchmark. *Percentage of funds outperforming their benchmark. ** Average performance of the funds weighted by the AUM. Outperformance indicators: Funds outperforming the benchmark over 10Y in percentage of AUM. THE FIGURES RELATING TO PAST PERFORMANCES REFER TO PAST PERIODS AND ARE NOT A RELIABLE INDICATOR FOR FUTURE RESULTS. THIS ALSO APPLIES TO HISTORICAL MARKET DATA.

World equity

PERCENTAGE OF ACTIVE FUNDS OUTPERFORMING THE BENCHMARK OVER 1Y, 3Y, 5Y, 10Y

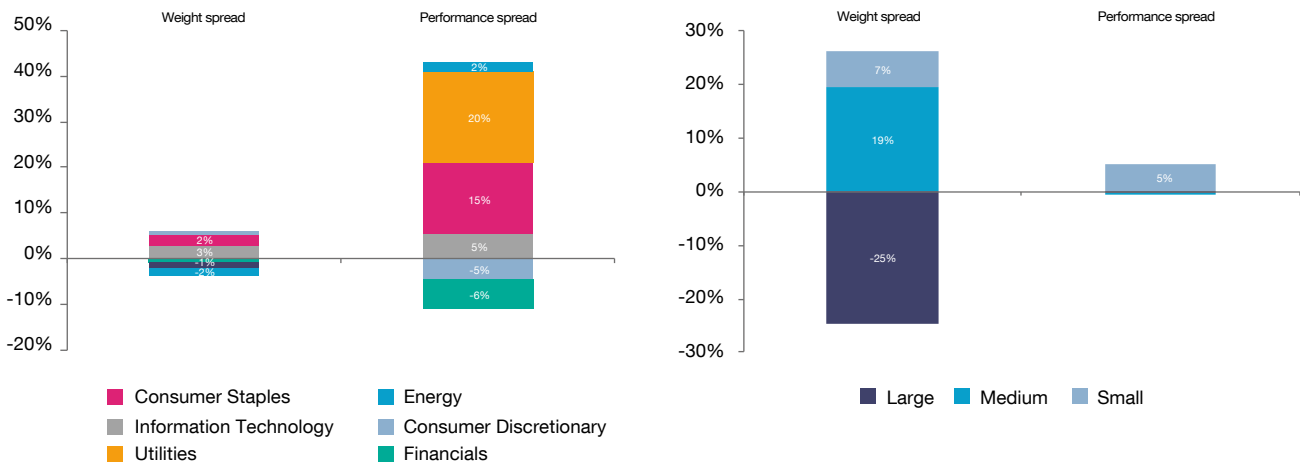
WORLD EQUITY	1Y	3Y	5Y	10Y
% of Active Funds outperforming the Benchmark	21%	11%	12%	12%

Over a one year period, 21% of active funds outperformed their benchmark vs. 30% in 2015, with on average -0.02% of alpha being generated as of 31/12/2016.

The performance spread between active funds and their benchmark in 2016 was negative at -3.1% vs. -0.8% in 2015. It came from a significant exposure of active funds to European equities (26.9%) compared to the MSCI World whose exposure is around 24.6% (Bloomberg as of 31/12/2016) which underperformed the MSCI World in 2016 (MSCI Europe +2.3%, MSCI World +10.7% in Euro in 2016).

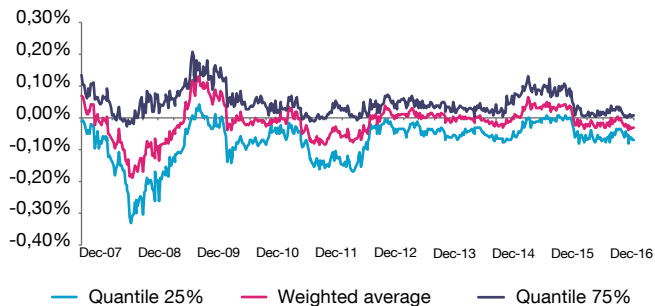
Over 10 years, only 12% of active funds outperformed their benchmark. On average, over the same period, active funds underperformed their benchmark by 1.5% every year as shown on the 10Y cumulated performance chart on the opposite page.

BREAKDOWN BY SECTOR AND SIZE OF THE ACTIVE FUND UNIVERSE VS. THE BENCHMARK

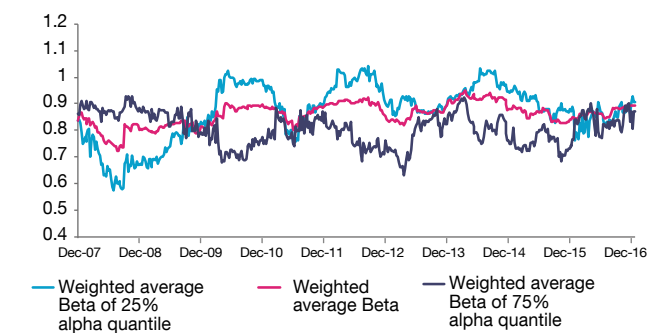


Source: Bloomberg and Morningstar data as of 31/12/16. Weight spread: sector/size exposure difference between the active funds average of the universe and the benchmark. Performance spread: sector/size performance difference between the active funds average of the universe and the benchmark.

1Y ROLLING ESTIMATED ALPHA GENERATION



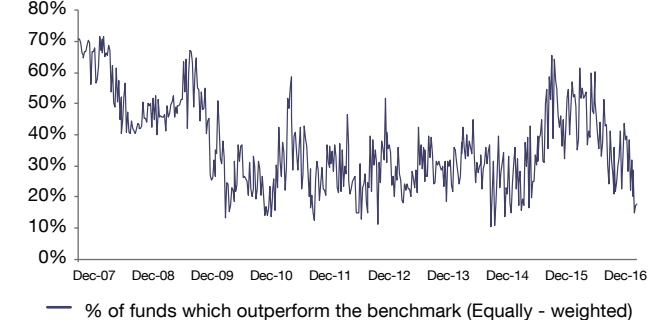
1Y ROLLING ESTIMATED BETA



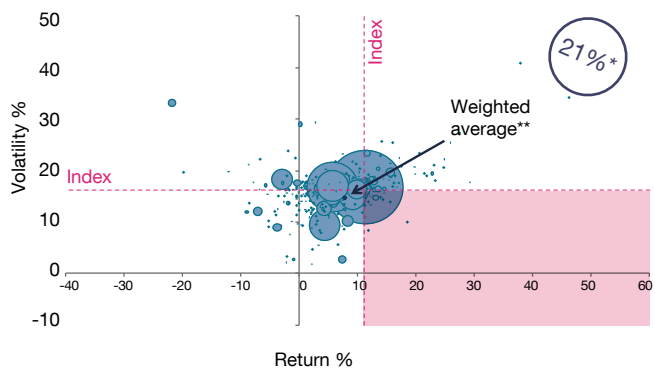
10Y CUMULATED PERFORMANCE



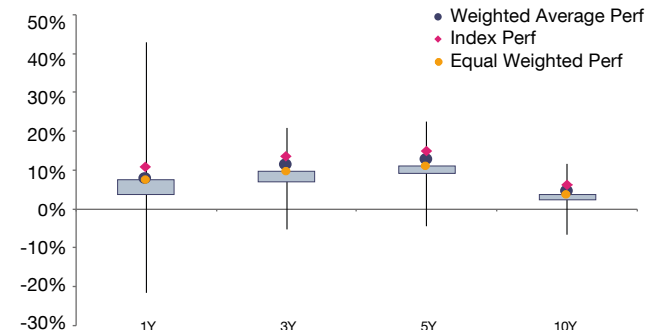
OUTPERFORMANCE INDICATOR



1Y PERFORMANCE, RISK PROFILE



1Y, 3Y, 5Y, 10Y PERFORMANCE DISTRIBUTION



Source : Lyxor and Morningstar data from 31/12/2006 to 31/12/2016. See methodology of active funds outperforming the benchmark. *Percentage of funds outperforming their benchmark. ** Average performance of the funds weighted by the AUM. Outperformance indicators: Funds outperforming the benchmark over 10Y in percentage of AUM. THE FIGURES RELATING TO PAST PERFORMANCES REFER TO PAST PERIODS AND ARE NOT A RELIABLE INDICATOR FOR FUTURE RESULTS. THIS ALSO APPLIES TO HISTORICAL MARKET DATA.

Value equity

PERCENTAGE OF ACTIVE FUNDS OUTPERFORMING THE BENCHMARK OVER 1Y, 3Y, 5Y, 10Y

VALUE EQUITY	1Y	3Y	5Y	10Y
% of Active Funds outperforming the Benchmark	17%	23%	23%	34%

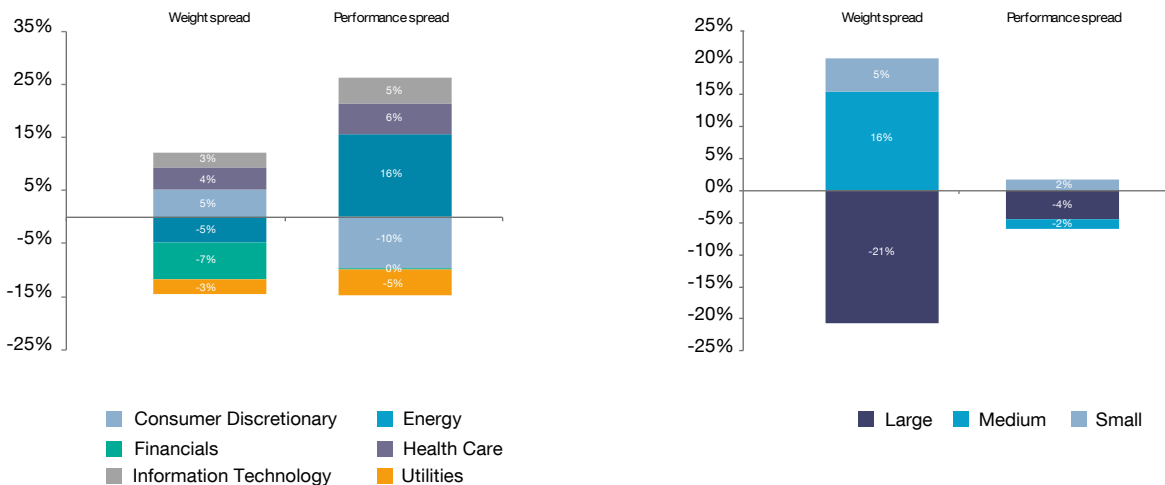
Over a one year period, 17% of active funds outperformed their benchmark vs. 58% in 2015, with on average -0.02% of alpha being generated as of 31/12/2016.

The performance spread between active funds and their benchmark was the lowest of our study and below the spread of 2015 at -5% in 2016 vs. -1.2% in 2015. In terms of volatility, the spread moved from -0.02% in 2015 to -1.4% in 2016.

This may be explained by the significant exposure of active funds to the consumer discretionary sector (+5.1%) which underperformed by 9.7% and the under-exposure to the energy sector (-4.9%) which outperformed the benchmark by 15.7%.

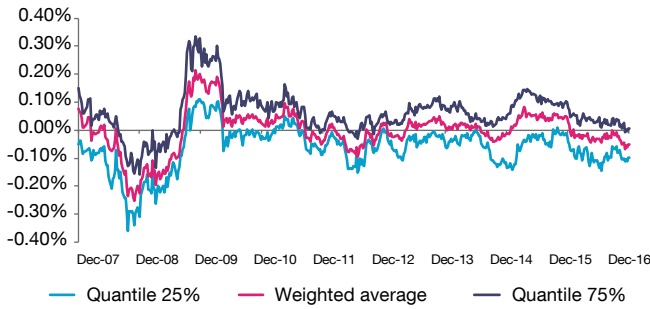
Over 10 years, 34% of active funds beat the benchmark. On average, active funds underperformed their benchmark by 0.3% each year over a 10 year period.

BREAKDOWN BY SECTOR AND SIZE OF THE ACTIVE FUND UNIVERSE VS. THE BENCHMARK

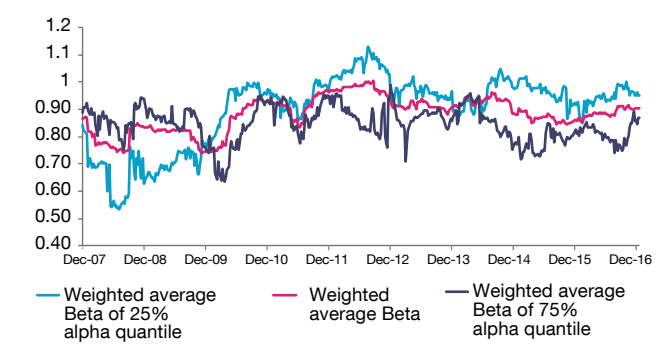


Source: Bloomberg and Morningstar data as of 31/12/16. Weight spread: sector/size exposure difference between the active funds average of the universe and the benchmark. Performance spread: sector/size performance difference between the active funds average of the universe and the benchmark.

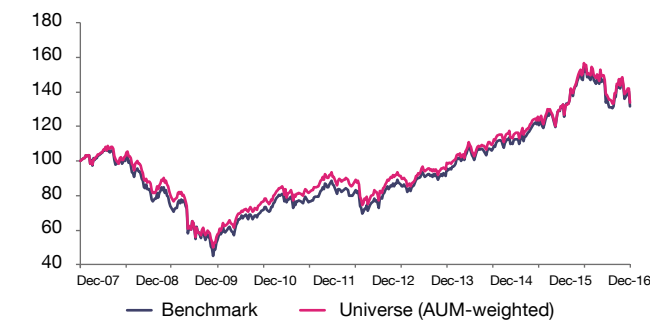
1Y ROLLING ESTIMATED ALPHA GENERATION



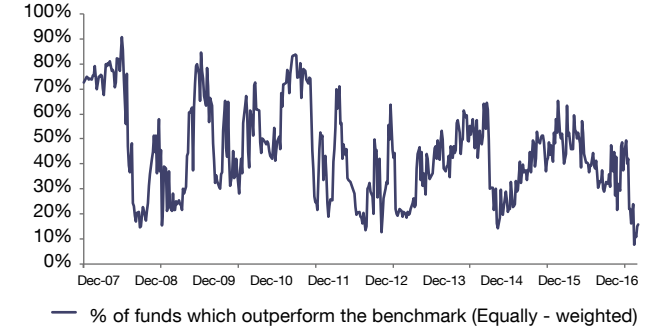
1Y ROLLING ESTIMATED BETA



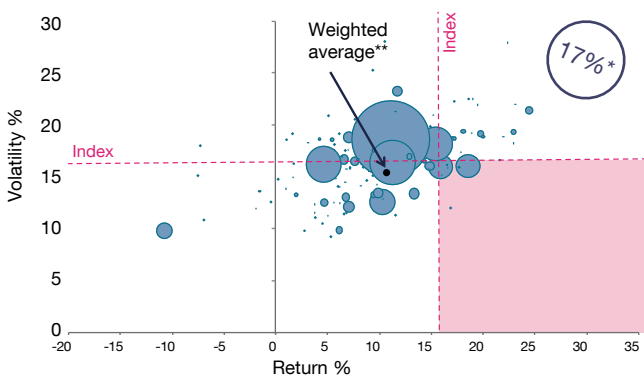
10Y CUMULATED PERFORMANCE



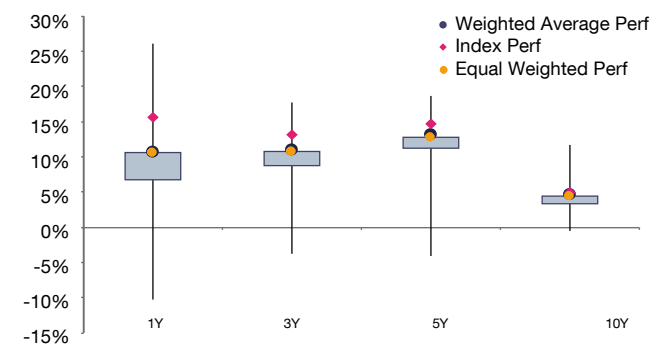
OUTPERFORMANCE INDICATOR



1Y PERFORMANCE, RISK PROFILE



1Y, 3Y, 5Y, 10Y PERFORMANCE DISTRIBUTION



Source : Lyxor and Morningstar data from 31/12/2006 to 31/12/2016. See methodology of active funds outperforming the benchmark. *Percentage of funds outperforming their benchmark. ** Average performance of the funds weighted by the AUM. Outperformance indicators: Funds outperforming the benchmark over 10Y in percentage of AUM. THE FIGURES RELATING TO PAST PERFORMANCES REFER TO PAST PERIODS AND ARE NOT A RELIABLE INDICATOR FOR FUTURE RESULTS. THIS ALSO APPLIES TO HISTORICAL MARKET DATA.

Global EM equity

PERCENTAGE OF ACTIVE FUNDS OUTPERFORMING THE BENCHMARK OVER 1Y, 3Y, 5Y, 10Y

GLOBAL EM EQUITY	1Y	3Y	5Y	10Y
% of Active Funds outperforming the Benchmark	12%	3%	19%	14%

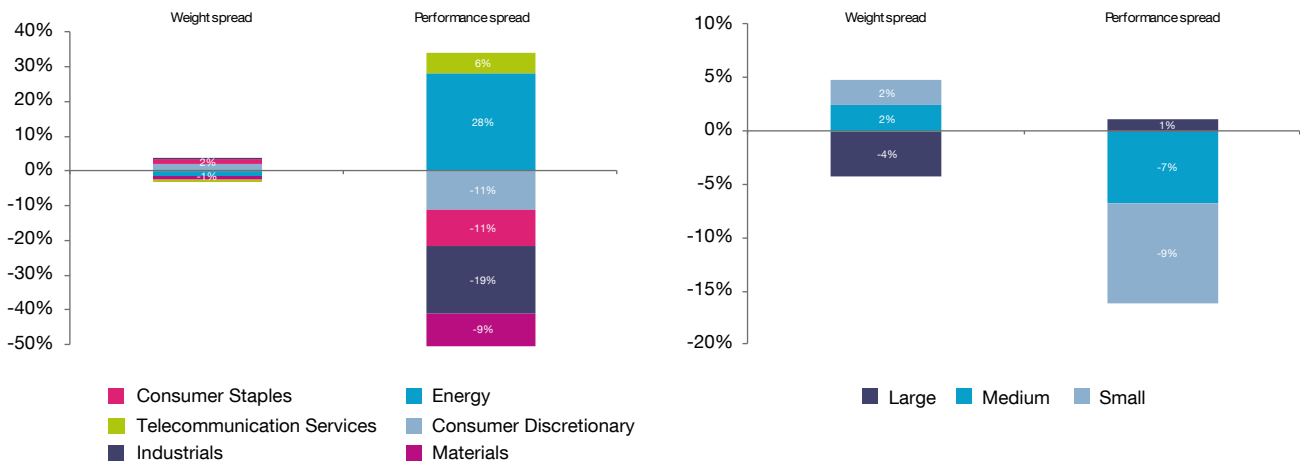
Over a one year period, 12% of active funds outperformed their benchmark vs. 58% in 2015.

The poor result for active EM was the second lowest in all of our universes: -4.7% in 2016 vs. 1.1% in 2015. One of the main reasons was that active fund managers chose to underweight the energy sector (-1.4%) which outperformed the benchmark by 28.1%. Additionally, active funds were

overexposed to Mid & Small Caps (+2.4% both) which underperformed the benchmark by 6.7% and 9.4% respectively.

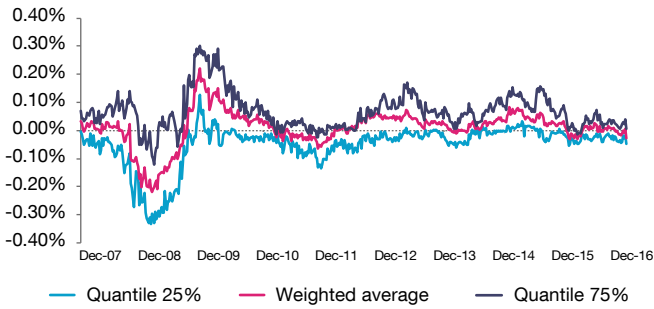
Over 10 years, only 14% of active funds outperformed their benchmark. On average, active funds underperformed their benchmark by 1.2% every year over a 10 year period.

BREAKDOWN BY SECTOR AND SIZE OF THE ACTIVE FUND UNIVERSE VS. THE BENCHMARK

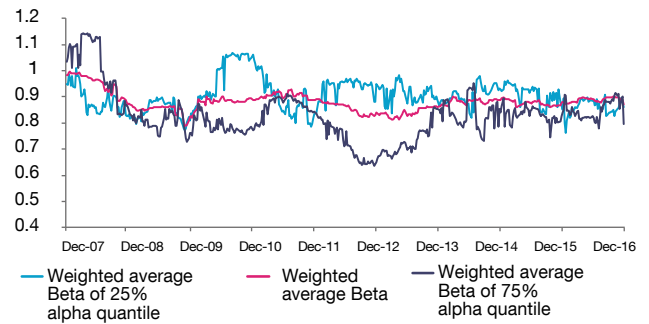


Source: Bloomberg and Morningstar data as of 31/12/16. Weight spread: sector/size exposure difference between the active funds average of the universe and the benchmark. Performance spread: sector/size performance difference between the active funds average of the universe and the benchmark.

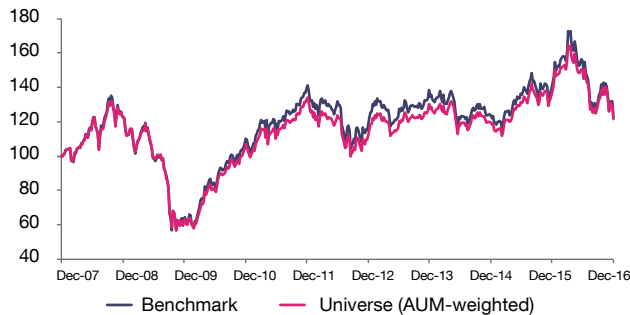
1Y ROLLING ESTIMATED ALPHA GENERATION



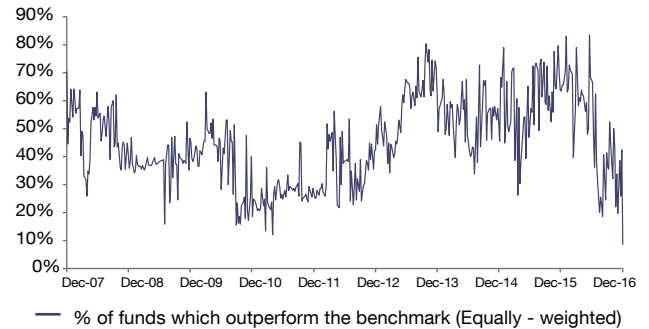
1Y ROLLING ESTIMATED BETA



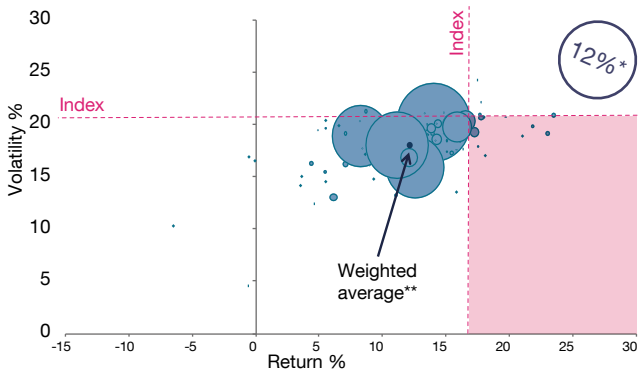
10Y CUMULATED PERFORMANCE



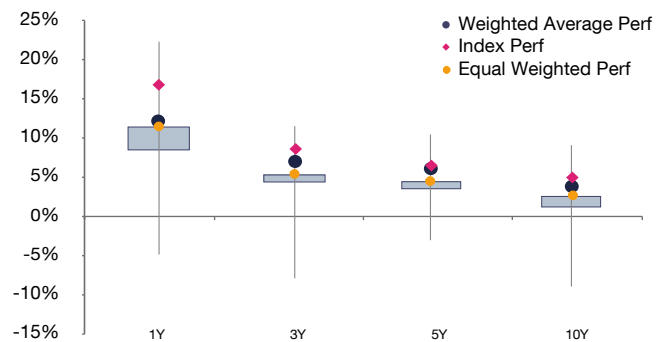
OUTPERFORMANCE INDICATOR



1Y PERFORMANCE, RISK PROFILE



1Y, 3Y, 5Y, 10Y PERFORMANCE DISTRIBUTION



Source : Lyxor and Morningstar data from 31/12/2006 to 31/12/2016. See methodology of active funds outperforming the benchmark. *Percentage of funds outperforming their benchmark. ** Average performance of the funds weighted by the AUM. Outperformance indicators: Funds outperforming the benchmark over 10Y in percentage of AUM. THE FIGURES RELATING TO PAST PERFORMANCES REFER TO PAST PERIODS AND ARE NOT A RELIABLE INDICATOR FOR FUTURE RESULTS. THIS ALSO APPLIES TO HISTORICAL MARKET DATA.

China equity

PERCENTAGE OF ACTIVE FUNDS OUTPERFORMING THE BENCHMARK OVER 1Y, 3Y, 5Y, 10Y

CHINA EQUITY	1Y	3Y	5Y	10Y
% of Active Funds outperforming the Benchmark	25%	35%	49%	37%

Over a one year period, 25% of active funds outperformed their benchmark vs. 72% in 2015 with on average 0.06% of alpha being generated as of 31/12/2016. The number of funds outperforming has almost been divided by three. Unlike 2015, the average performance of active funds was 2.0% below the index vs. +5.2% in 2015.

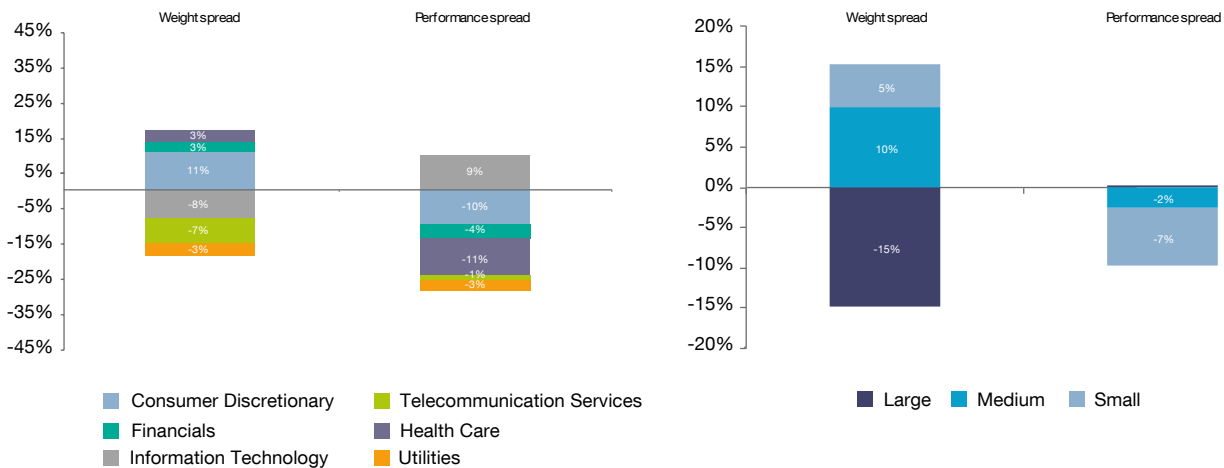
One of the main reasons was their over-exposure to Consumer Discretionary (+11%) and under-exposure to

technology sectors (-8%) which underperformed and outperformed by 10.0% and 9.4% respectively.

Additionally, they were massively overexposed to Mid & Small Caps (+9.9% and +5.3%) which underperformed the benchmarks by 2.5% and 7.3%, respectively.

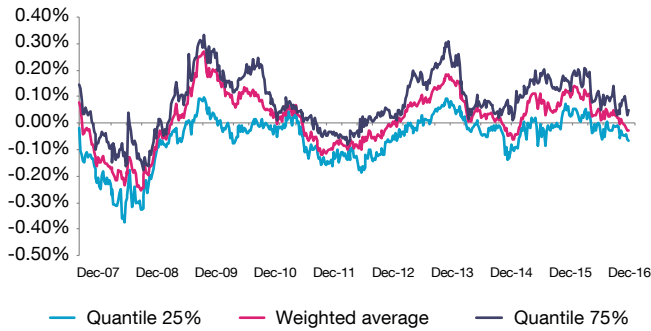
Over 10 years, only 12% of active funds outperformed their benchmark.

BREAKDOWN BY SECTOR AND SIZE OF THE ACTIVE FUND UNIVERSE VS. THE BENCHMARK

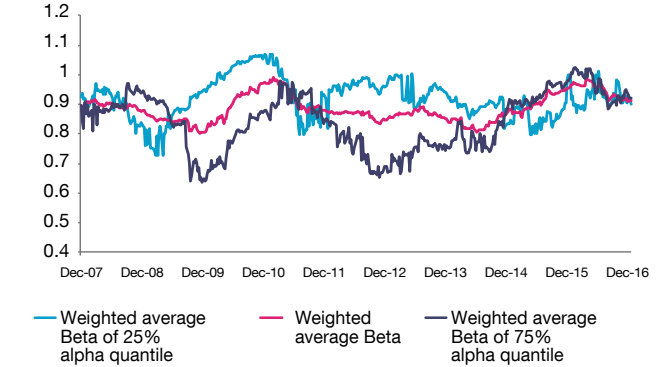


Source: Bloomberg and Morningstar data as of 31/12/16. Weight spread: sector/size exposure difference between the active funds average of the universe and the benchmark. Performance spread: sector/size performance difference between the active funds average of the universe and the benchmark.

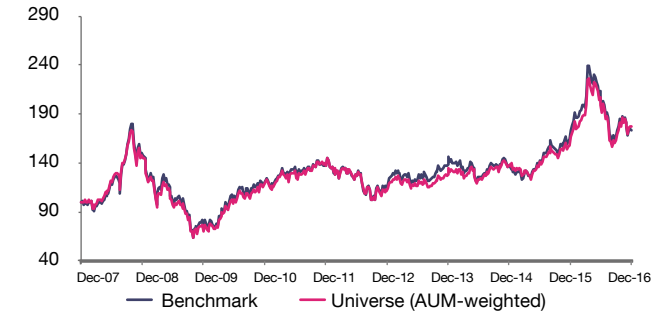
1Y ROLLING ESTIMATED ALPHA GENERATION



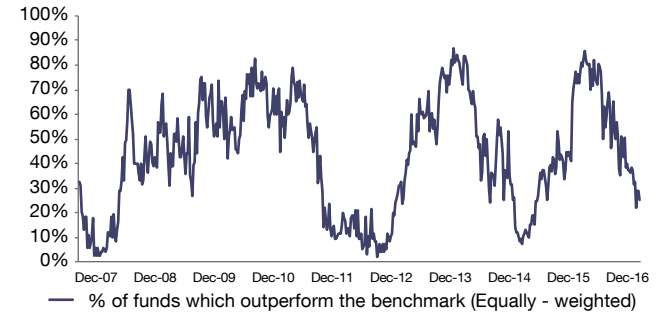
1Y ROLLING ESTIMATED BETA



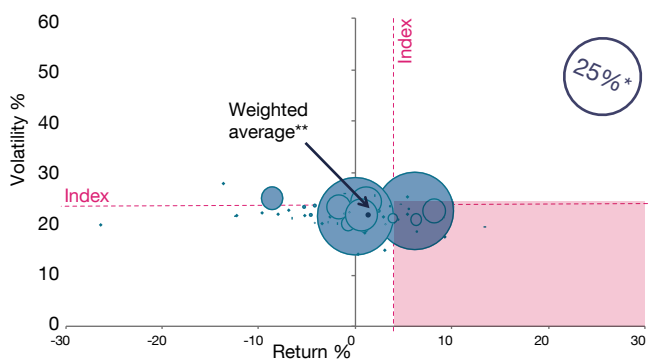
10Y CUMULATED PERFORMANCE



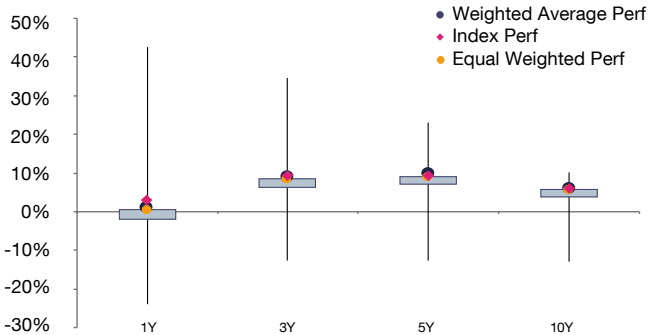
OUTPERFORMANCE INDICATOR



1Y PERFORMANCE, RISK PROFILE



1Y, 3Y, 5Y, 10Y PERFORMANCE DISTRIBUTION



Source : Lyxor and Morningstar data from 31/12/2006 to 31/12/2016. See methodology of active funds outperforming the benchmark. *Percentage of funds outperforming their benchmark. ** Average performance of the funds weighted by the AUM. Outperformance indicators: Funds outperforming the benchmark over 10Y in percentage of AUM. THE FIGURES RELATING TO PAST PERFORMANCES REFER TO PAST PERIODS AND ARE NOT A RELIABLE INDICATOR FOR FUTURE RESULTS. THIS ALSO APPLIES TO HISTORICAL MARKET DATA.

Euro govies

PERCENTAGE OF ACTIVE FUNDS OUTPERFORMING THE BENCHMARK OVER 1Y, 3Y, 5Y, 10Y

EURO GOVIES	1Y	3Y	5Y	10Y
% of Active Funds outperforming the Benchmark	24%	14%	14%	1%

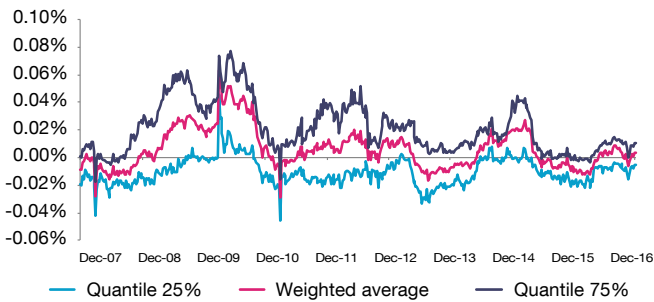
Over a one year period, 24% of active funds outperformed their benchmark vs. 16% in 2015, with on average no alpha being generated as of 31/12/2016. Over 10 years, the figure goes down to 1%.

The limited number of outperforming active funds combined with the null alpha generation and the negative performance spread (-0.75%) illustrates the advantage

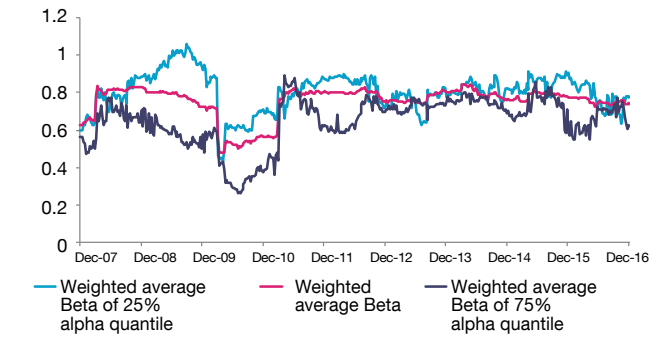
of holding passive funds for European government bond exposures.

Furthermore, the one year rolling beta of this universe was the lowest of our study (0.76), meaning that active managers took a relatively different exposure compared to the market, but still significantly underperformed their benchmark.

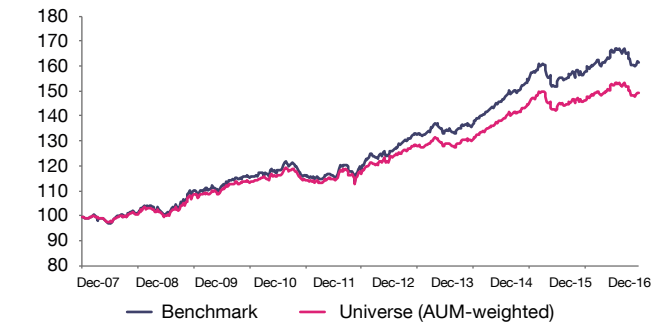
1Y ROLLING ESTIMATED ALPHA GENERATION



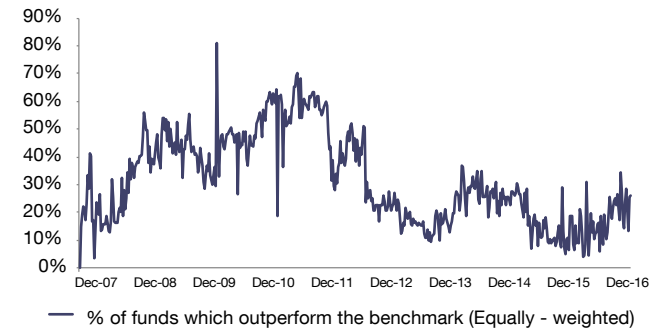
1Y ROLLING ESTIMATED BETA



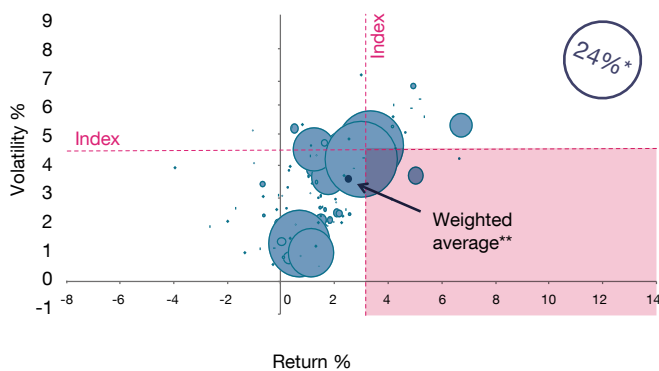
10Y CUMULATED PERFORMANCE



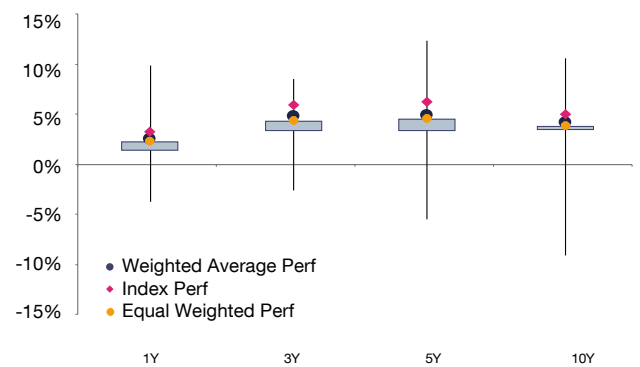
OUTPERFORMANCE INDICATOR



1Y PERFORMANCE, RISK PROFILE



1Y, 3Y, 5Y, 10Y PERFORMANCE DISTRIBUTION



Source : Lyxor and Morningstar data from 31/12/2006 to 31/12/2016. See methodology of active funds outperforming the benchmark. *Percentage of funds outperforming their benchmark. ** Average performance of the funds weighted by the AUM. Outperformance indicators: Funds outperforming the benchmark over 10Y in percentage of AUM. THE FIGURES RELATING TO PAST PERFORMANCES REFER TO PAST PERIODS AND ARE NOT A RELIABLE INDICATOR FOR FUTURE RESULTS. THIS ALSO APPLIES TO HISTORICAL MARKET DATA.

Euro high yield

PERCENTAGE OF ACTIVE FUNDS OUTPERFORMING THE BENCHMARK OVER 1Y, 3Y, 5Y, 10Y

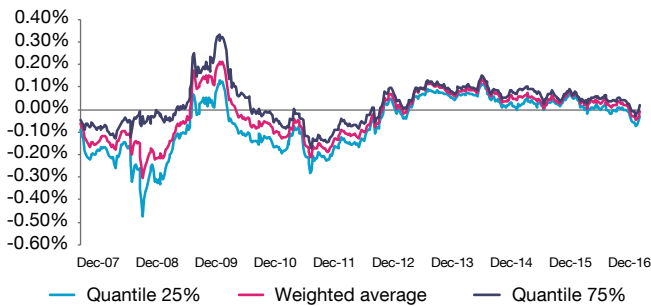
EURO HIGH YIELD	1Y	3Y	5Y	10Y
% of Active Funds outperforming the Benchmark	23%	23%	8%	3%

Over a one year period, 23% of active funds outperformed their benchmark vs. 20% in 2015, with on average 0.01% of alpha being generated as of 31/12/2016.

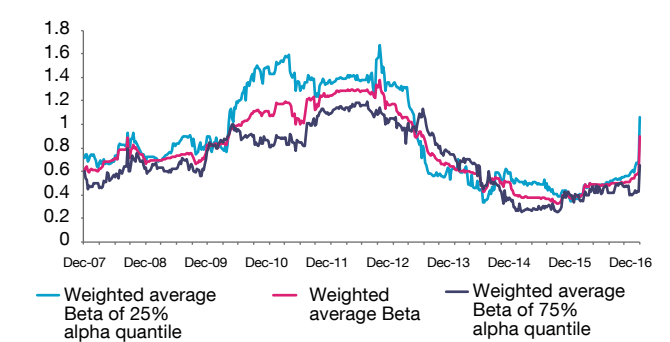
The limited performance of active funds was also confirmed by the negative performance spread (weighted average performance of active funds minus index performance): on average, active funds underperformed the benchmark by 1.2%.

Over 10 years, only 3% of active funds outperformed their benchmark with -2.3% of annualized performance spread. The conclusion is the same as for other fixed income universes: holding passive funds exposed to European high yield is attractive.

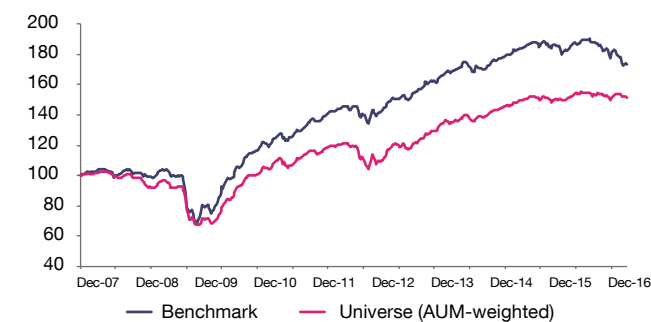
1Y ROLLING ESTIMATED ALPHA GENERATION



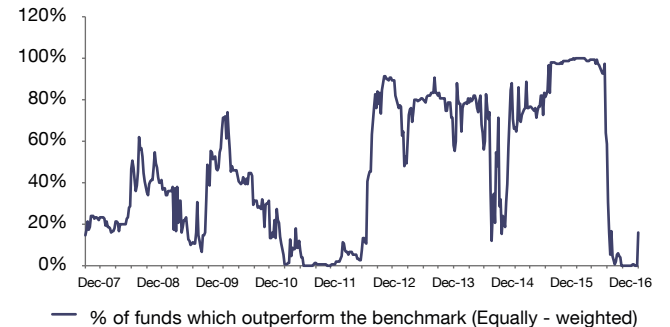
1Y ROLLING ESTIMATED BETA



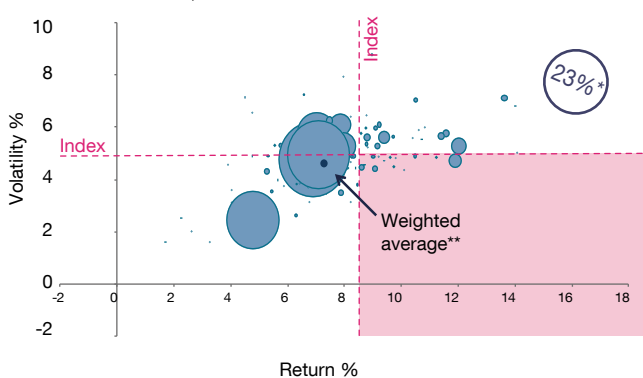
10Y CUMULATED PERFORMANCE



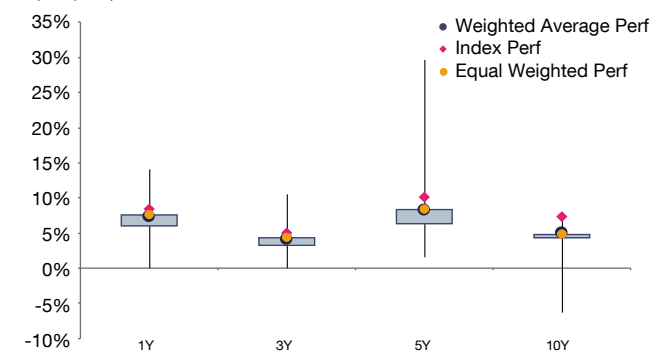
OUTPERFORMANCE INDICATOR



1Y PERFORMANCE, RISK PROFILE



1Y, 3Y, 5Y, 10Y PERFORMANCE DISTRIBUTION



Source : Lyxor and Morningstar data from 31/12/2006 to 31/12/2016. See methodology of active funds outperforming the benchmark. *Percentage of funds outperforming their benchmark. ** Average performance of the funds weighted by the AUM. Outperformance indicators: Funds outperforming the benchmark over 10Y in percentage of AUM. THE FIGURES RELATING TO PAST PERFORMANCES REFER TO PAST PERIODS AND ARE NOT A RELIABLE INDICATOR FOR FUTURE RESULTS. THIS ALSO APPLIES TO HISTORICAL MARKET DATA.

Euro corporate

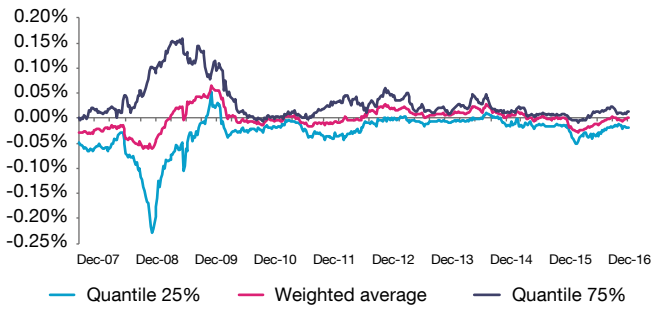
PERCENTAGE OF ACTIVE FUNDS OUTPERFORMING THE BENCHMARK OVER 1Y, 3Y, 5Y, 10Y

EURO CORPORATE	1Y	3Y	5Y	10Y
% of Active Funds outperforming the Benchmark	44%	33%	36%	26%

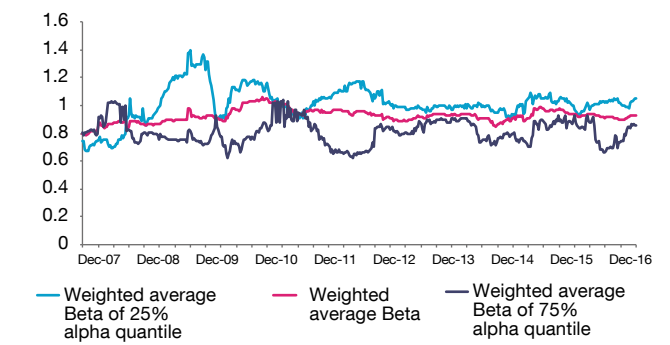
Over a one year period, 44% of active funds outperformed their benchmark vs. 41% in 2015, with on average -0.01% of alpha being generated as of 31/12/2016. Over 10 years, the figure goes down to 26%.

The performance spread between active funds and their benchmark observed was -0.5% in 2016. Over 10 years, this performance spread was equal to 0.6% on average each year. This illustrates the difficulty of active funds to beat their benchmark in the euro credit space.

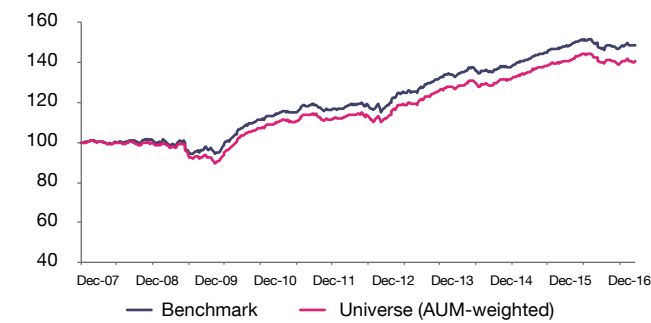
1Y ROLLING ESTIMATED ALPHA GENERATION



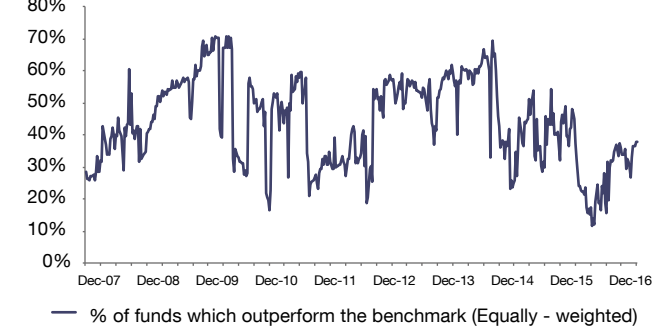
1Y ROLLING ESTIMATED BETA



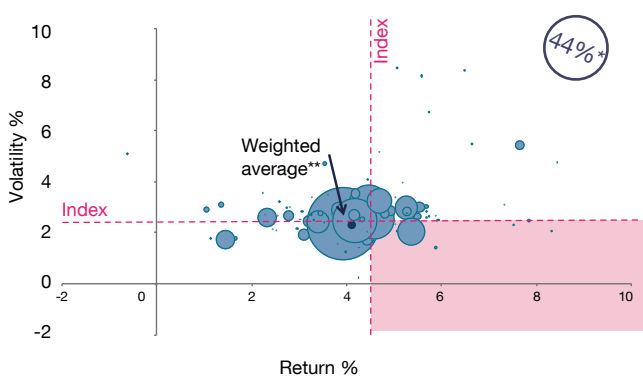
10Y CUMULATED PERFORMANCE



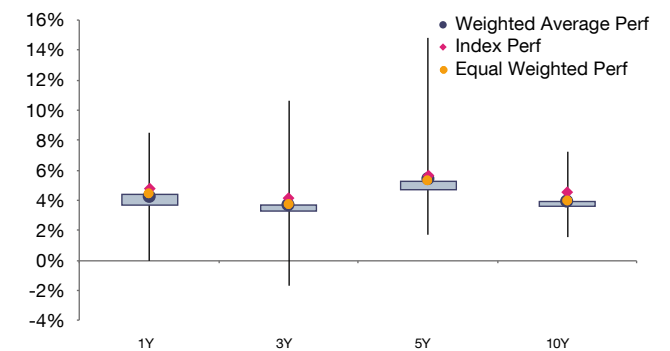
OUTPERFORMANCE INDICATOR



1Y PERFORMANCE, RISK PROFILE



1Y, 3Y, 5Y, 10Y PERFORMANCE DISTRIBUTION



Source : Lyxor and Morningstar data from 31/12/2006 to 31/12/2016. See methodology of active funds outperforming the benchmark. *Percentage of funds outperforming their benchmark. ** Average performance of the funds weighted by the AUM. Outperformance indicators: Funds outperforming the benchmark over 10Y in percentage of AUM. THE FIGURES RELATING TO PAST PERFORMANCES REFER TO PAST PERIODS AND ARE NOT A RELIABLE INDICATOR FOR FUTURE RESULTS. THIS ALSO APPLIES TO HISTORICAL MARKET DATA.

Emerging debt

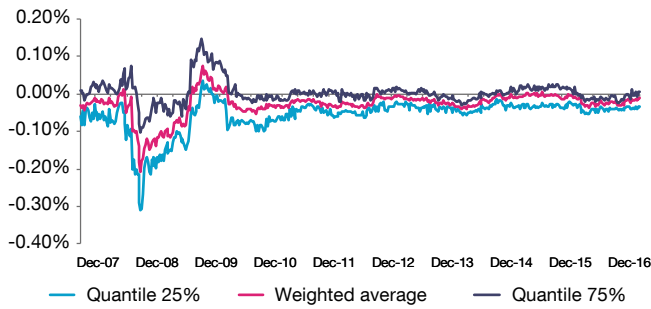
PERCENTAGE OF ACTIVE FUNDS OUTPERFORMING THE BENCHMARK OVER 1Y, 3Y, 5Y, 10Y

EMERGING DEBT	1Y	3Y	5Y	10Y
% of Active Funds outperforming the Benchmark	32%	29%	25%	0%

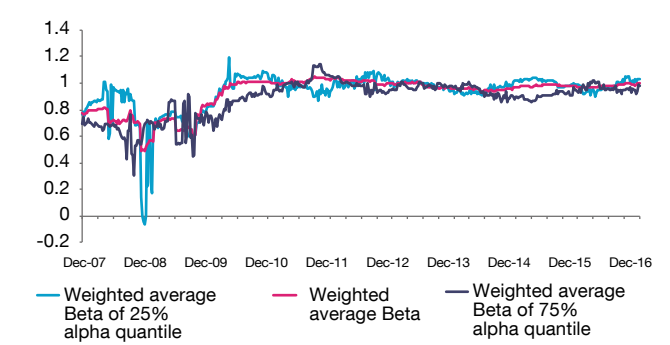
Over a one year period, 32% of active funds outperformed their benchmark, the same level as in 2015, with on average -0.02% of alpha being generated as of 31/12/2016. In 2016, on average, active funds underperformed the benchmark by 0.9%.

Over 10 years, no active funds beat their benchmark. On average, active funds underperformed their benchmark by -1.5% each year over 10 years. The result confirms the benefit of holding passive funds exposed to Emerging Debt.

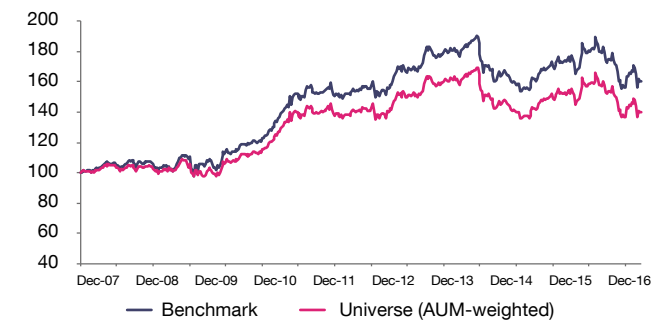
1Y ROLLING ESTIMATED ALPHA GENERATION



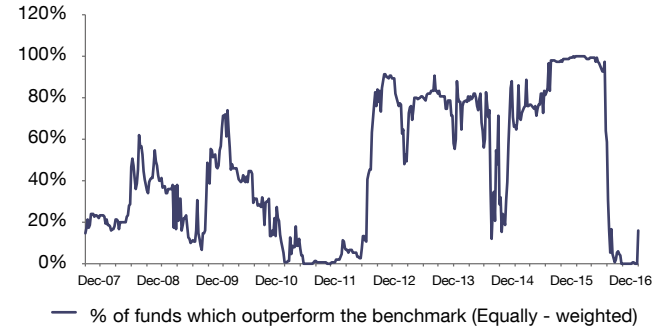
1Y ROLLING ESTIMATED BETA



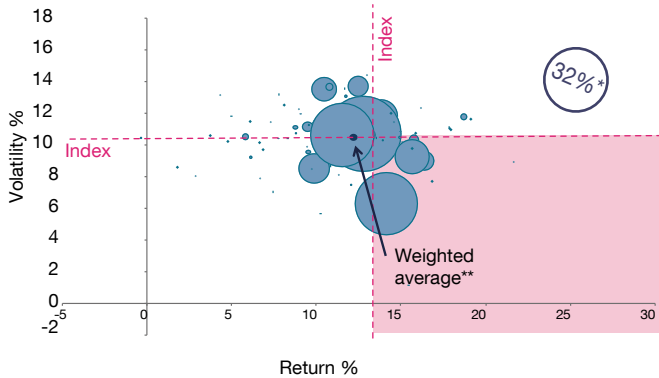
10Y CUMULATED PERFORMANCE



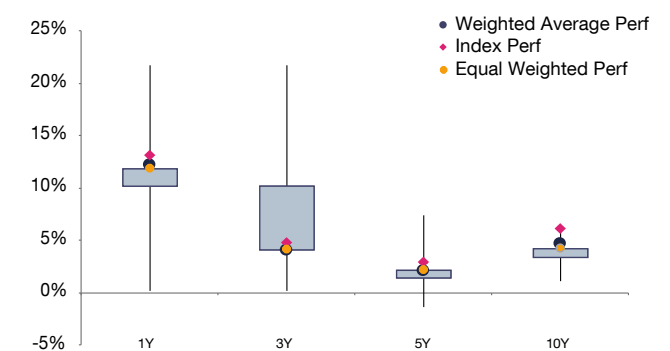
OUTPERFORMANCE INDICATOR



1Y PERFORMANCE, RISK PROFILE



1Y, 3Y, 5Y, 10Y PERFORMANCE DISTRIBUTION



Source : Lyxor and Morningstar data from 31/12/2006 to 31/12/2016. See methodology of active funds outperforming the benchmark. *Percentage of funds outperforming their benchmark. ** Average performance of the funds weighted by the AUM. Outperformance indicators: Funds outperforming the benchmark over 10Y in percentage of AUM. THE FIGURES RELATING TO PAST PERFORMANCES REFER TO PAST PERIODS AND ARE NOT A RELIABLE INDICATOR FOR FUTURE RESULTS. THIS ALSO APPLIES TO HISTORICAL MARKET DATA.

Appendix

CONTENT

EXECUTIVE SUMMARY

ACTIVE & PASSIVE
DEBATE

METHODOLOGY

KEY RESULTS

OUTLOOK 2017

FOCUS BY UNIVERSE

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Universe Description	68
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Statistical analysis

1Y PERFORMANCE COMPARISON BETWEEN ASSET WEIGHTED ACTIVE FUNDS EQUALLY WEIGHTED ACTIVE FUNDS AND THE BENCHMARK

1Y PERFORMANCE	PERFORMANCE				
	INDEX	AW FUNDS**	SPREAD	EW FUNDS**	SPREAD
Universe					
France large caps	8.1%	5.3%	-2.9%	4.7%	-3.4%
France smid caps	10.0%	12.5%	2.5%	14.3%	4.3%
UK equity	0.1%	-1.7%	-1.9%	-2.5%	-2.7%
Europe large & mid caps	2.3%	-0.5%	-2.9%	-0.2%	-2.5%
Europe small caps	1.5%	0.4%	-1.2%	4.9%	3.3%
US large & mid caps	14.2%	12.5%	-1.8%	11.7%	-2.5%
Japan equity	9.9%	8.3%	-1.6%	8.0%	-1.9%
World equity	11.0%	8.0%	-3.1%	7.4%	-3.6%
Value equity	15.7%	10.7%	-5.0%	10.6%	-5.1%
Global EM equity	16.8%	12.1%	-4.7%	11.5%	-5.3%
China equity	3.3%	1.3%	-2.0%	0.5%	-2.8%
Euro govies	3.3%	2.5%	-0.7%	2.2%	-1.0%
Euro gorporate	4.7%	4.2%	-0.5%	4.4%	-0.3%
Euro high yield	8.5%	7.3%	-1.2%	7.5%	-1.0%
Emerging debt	13.1%	12.2%	-0.9%	11.9%	-1.2%
Average	8.2%	6.3%	-1.9%	6.5%	-1.7%

Source: Bloomberg and Morningstar data in EUR from 31/12/2015 to 31/12/2016. * Average performance/volatility of the funds weighted by the AUM, as defined in the methodology, is the average return earned in excess of the risk-free rate per unit of volatility. THE FIGURES RELATING TO PAST PERFORMANCES REFER TO PAST PERIODS AND ARE NOT A RELIABLE INDICATOR FOR FUTURE RESULTS. THIS ALSO APPLIES TO HISTORICAL MARKET DATA

3Y PERFORMANCE COMPARISON BETWEEN ASSET WEIGHTED ACTIVE FUNDS EQUALLY WEIGHTED ACTIVE FUNDS AND THE BENCHMARK

3Y PERFORMANCE	PERFORMANCE				
	INDEX	AW FUNDS**	SPREAD	EW FUNDS**	SPREAD
Universe					
France large caps	7.9%	6.9%	-1.0%	6.4%	-1.5%
France smid caps	13.3%	14.0%	0.7%	15.3%	2.0%
UK equity	5.2%	4.9%	-0.3%	4.6%	-0.7%
Europe large & mid caps	5.9%	5.8%	-0.1%	5.2%	-0.7%
Europe small caps	10.0%	9.5%	-0.6%	10.6%	0.6%
US large & mid caps	18.1%	16.4%	-1.6%	15.5%	-2.6%
Japan equity	13.7%	12.6%	-1.1%	12.2%	-1.5%
World equity	13.5%	11.3%	-2.2%	9.6%	-3.9%
Value equity	13.2%	10.9%	-2.3%	10.8%	-2.4%
Global EM equity	8.6%	6.9%	-1.7%	5.4%	-3.2%
China equity	9.5%	9.2%	-0.2%	8.6%	-0.9%
Euro govies	5.9%	4.7%	-1.2%	4.3%	-1.7%
Euro gorporate	4.2%	3.7%	-0.5%	3.7%	-0.5%
Euro high yield	5.1%	4.0%	-1.0%	4.4%	-0.7%
Emerging debt	4.8%	4.0%	-0.8%	4.1%	-0.7%
Average	9.3%	8.3%	-0.9%	8.0%	-1.2%

Source: Bloomberg and Morningstar data in EUR from 31/12/2013 to 31/12/2016. * Average performance/volatility of the funds weighted by the AUM, as defined in the methodology, is the average return earned in excess of the risk-free rate per unit of volatility. THE FIGURES RELATING TO PAST PERFORMANCES REFER TO PAST PERIODS AND ARE NOT A RELIABLE INDICATOR FOR FUTURE RESULTS. THIS ALSO APPLIES TO HISTORICAL MARKET DATA

Statistical analysis

5Y PERFORMANCE COMPARISON BETWEEN ASSET WEIGHTED ACTIVE FUNDS EQUALLY WEIGHTED ACTIVE FUNDS AND THE BENCHMARK

5Y PERFORMANCE	PERFORMANCE				
	INDEX	AW FUNDS**	SPREAD	EW FUNDS**	SPREAD
Universe					
France large caps	13.0%	12.2%	-0.8%	11.6%	-1.4%
France smid caps	18.1%	17.9%	-0.2%	18.0%	-0.1%
UK equity	9.6%	10.0%	0.4%	9.7%	0.1%
Europe large & mid caps	10.7%	10.8%	0.0%	10.1%	-0.6%
Europe small caps	17.6%	15.7%	-1.9%	16.0%	-1.6%
US large & mid caps	18.6%	17.2%	-1.4%	16.3%	-2.3%
Japan equity	13.4%	12.5%	-0.9%	12.1%	-1.3%
World equity	15.0%	12.9%	-2.1%	11.0%	-4.0%
Value equity	14.8%	13.2%	-1.6%	12.7%	-2.0%
Global EM equity	6.4%	6.0%	-0.4%	4.5%	-1.9%
China equity	9.4%	10.0%	0.6%	9.1%	-0.3%
Euro govies	6.2%	4.8%	-1.3%	4.5%	-1.7%
Euro gorporate	5.6%	5.4%	-0.2%	5.3%	-0.3%
Euro high yield	10.2%	8.2%	-2.0%	8.3%	-1.8%
Emerging debt	2.9%	2.1%	-0.8%	2.2%	-0.7%
Average	11.4%	10.6%	-0.8%	10.1%	-1.3%

Source: Bloomberg and Morningstar data in EUR from 31/12/2011 to 31/12/2016. * Average performance/volatility of the funds weighted by the AUM, as defined in the methodology, is the average return earned in excess of the risk-free rate per unit of volatility. THE FIGURES RELATING TO PAST PERFORMANCES REFER TO PAST PERIODS AND ARE NOT A RELIABLE INDICATOR FOR FUTURE RESULTS. THIS ALSO APPLIES TO HISTORICAL MARKET DATA

10Y PERFORMANCE COMPARISON BETWEEN ASSET WEIGHTED ACTIVE FUNDS EQUALLY WEIGHTED ACTIVE FUNDS AND THE BENCHMARK

10Y PERFORMANCE	PERFORMANCE				
	INDEX	AW FUNDS**	SPREAD	EW FUNDS**	SPREAD
Universe					
France large caps	2.4%	2.1%	-0.4%	1.7%	-0.7%
France smid caps					NA
UK equity	3.1%	2.9%	-0.1%	2.7%	-0.4%
Europe large & mid caps	2.6%	2.2%	-0.4%	1.9%	-0.7%
Europe small caps	5.5%	4.5%	-1.0%	4.6%	-0.9%
US large & mid caps	8.7%	7.5%	-1.2%	7.0%	-1.7%
Japan equity	3.5%	2.2%	-1.2%	2.1%	-1.4%
World equity	6.2%	4.7%	-1.5%	3.7%	-2.4%
Value equity	5.0%	4.7%	-0.3%	4.4%	-0.6%
Global EM equity	5.0%	3.8%	-1.1%	2.6%	-2.4%
China equity	6.1%	6.0%	-0.1%	5.7%	-0.4%
Euro govies	5.0%	4.1%	-0.8%	3.8%	-1.2%
Euro gorporate	4.5%	3.9%	-0.6%	3.9%	-0.6%
Euro high yield	7.3%	5.0%	-2.3%	4.8%	-2.5%
Emerging debt	6.2%	4.6%	-1.5%	4.2%	-2.0%
Average	5.1%	4.2%	-0.9%	3.8%	-1.3%

Source: Bloomberg and Morningstar data in EUR from 31/12/2006 to 31/12/2016. * Average performance/volatility of the funds weighted by the AUM, as defined in the methodology, is the average return earned in excess of the risk-free rate per unit of volatility. THE FIGURES RELATING TO PAST PERFORMANCES REFER TO PAST PERIODS AND ARE NOT A RELIABLE INDICATOR FOR FUTURE RESULTS. THIS ALSO APPLIES TO HISTORICAL MARKET DATA

Statistical analysis

1Y PERFORMANCE QUANTILES

1Y PERFORMANCE	PERFORMANCE			
	25% QUANTILE	50% QUANTILE	75% QUANTILE	BENCHMARK
Universe				
France large caps	2.7%	5.1%	6.4%	8.1%
France smid caps	8.2%	13.4%	21.5%	10.0%
UK equity	-4.7%	-1.5%	0.0%	0.1%
Europe large & mid caps	-2.6%	0.0%	2.1%	2.3%
Europe small caps	-1.7%	3.5%	10.1%	1.5%
US large & mid caps	9.1%	12.3%	14.8%	14.2%
Japan equity	5.2%	7.4%	9.6%	9.9%
World equity	3.6%	7.1%	10.5%	11.0%
Value equity	6.7%	10.2%	13.9%	15.7%
Global EM equity	8.6%	12.0%	13.8%	16.8%
China equity	-1.9%	0.3%	3.7%	3.3%
Euro govies	1.4%	2.5%	3.2%	3.3%
Euro gorporate	3.7%	4.5%	5.2%	4.7%
Euro high yield	6.1%	7.8%	8.8%	8.5%
Emerging debt	10.2%	11.8%	13.6%	13.1%
Average	3.6%	6.4%	9.2%	8.2%

Source: Bloomberg and Morningstar data in EUR from 31/12/2015 to 31/12/2016. THE FIGURES RELATING TO PAST PERFORMANCES REFER TO PAST PERIODS AND ARE NOT A RELIABLE INDICATOR FOR FUTURE RESULTS. THIS ALSO APPLIES TO HISTORICAL MARKET DATA.

3Y PERFORMANCE QUANTILES

3Y PERFORMANCE	PERFORMANCE			
	25% QUANTILE	50% QUANTILE	75% QUANTILE	BENCHMARK
Universe				
France large caps	5.6%	6.6%	7.4%	7.9%
France smid caps	11.1%	14.4%	19.1%	13.3%
UK equity	3.5%	4.6%	5.5%	5.2%
Europe large & mid caps	3.8%	5.2%	6.4%	5.9%
Europe small caps	7.6%	9.6%	12.2%	10.0%
US large & mid caps	13.9%	15.9%	17.4%	18.1%
Japan equity	10.4%	12.1%	13.5%	13.7%
World equity	7.0%	10.2%	12.2%	13.5%
Value equity	8.7%	11.0%	13.0%	13.2%
Global EM equity	4.5%	5.9%	7.1%	8.6%
China equity	6.3%	8.4%	10.8%	9.5%
Euro govies	3.3%	4.8%	5.6%	5.9%
Euro gorporate	3.3%	3.8%	4.3%	4.2%
Euro high yield	3.2%	4.2%	5.0%	5.1%
Emerging debt	3.1%	4.0%	5.0%	4.8%
Average	6.4%	8.0%	9.6%	9.3%

Source: Bloomberg and Morningstar data in EUR from 31/12/2013 to 31/12/2016. THE FIGURES RELATING TO PAST PERFORMANCES REFER TO PAST PERIODS AND ARE NOT A RELIABLE INDICATOR FOR FUTURE RESULTS. THIS ALSO APPLIES TO HISTORICAL MARKET DATA.

Statistical analysis

5Y PERFORMANCE QUANTILES

5Y PERFORMANCE	PERFORMANCE			
	25% QUANTILE	50% QUANTILE	75% QUANTILE	BENCHMARK
Universe				
France Large Caps	10.9%	11.8%	12.6%	13.0%
France Smid Caps	15.0%	16.6%	19.7%	18.1%
UK Equity	8.5%	9.6%	11.1%	9.6%
Europe large & mid caps	9.0%	10.3%	11.3%	10.7%
Europe Small Caps	13.8%	15.6%	17.6%	17.6%
US large & mid caps	14.7%	16.6%	18.0%	18.6%
Japan Equity	10.9%	12.2%	12.9%	13.4%
World Equity	9.0%	12.0%	13.7%	15.0%
Value Equity	11.2%	13.2%	14.4%	14.8%
Global EM Equity	3.5%	4.9%	6.1%	6.4%
China Equity	7.2%	9.4%	11.5%	9.4%
Euro Govies	3.4%	4.9%	5.8%	6.2%
Euro Corporate	4.7%	5.2%	5.9%	5.6%
Europe High Yield	6.4%	8.3%	9.3%	10.2%
Emerging Debt	1.4%	2.1%	2.9%	2.9%
Average	8.6%	10.2%	11.5%	11.4%

Source: Bloomberg and Morningstar data in EUR from 31/12/2015 to 31/12/2016. THE FIGURES RELATING TO PAST PERFORMANCES REFER TO PAST PERIODS AND ARE NOT A RELIABLE INDICATOR FOR FUTURE RESULTS. THIS ALSO APPLIES TO HISTORICAL MARKET DATA.

10Y PERFORMANCE QUANTILES

10Y PERFORMANCE	PERFORMANCE			
	25% QUANTILE	50% QUANTILE	75% QUANTILE	BENCHMARK
Universe				
France large caps	0.9%	1.5%	2.2%	2.4%
France smid caps				NA
UK equity	1.9%	2.7%	3.6%	3.1%
Europe large & mid caps	0.7%	1.7%	2.8%	2.6%
Europe small caps	3.5%	4.9%	5.8%	5.5%
US large & mid caps	5.9%	7.1%	8.2%	8.7%
Japan equity	1.0%	2.2%	2.9%	3.5%
World equity	2.4%	3.8%	5.2%	6.2%
Value equity	3.3%	4.5%	5.7%	5.0%
Global EM equity	1.4%	2.7%	4.0%	5.0%
China equity	3.8%	5.2%	7.3%	6.1%
Euro govies	3.4%	4.2%	4.7%	5.0%
Euro gorporate	3.6%	4.1%	4.5%	4.5%
Euro high yield	4.3%	5.3%	6.4%	7.3%
Emerging debt	3.4%	4.2%	5.0%	6.2%
Average	2.8%	3.9%	4.9%	5.1%

Source: Bloomberg and Morningstar data in EUR from 31/12/2013 to 31/12/2016. THE FIGURES RELATING TO PAST PERFORMANCES REFER TO PAST PERIODS AND ARE NOT A RELIABLE INDICATOR FOR FUTURE RESULTS. THIS ALSO APPLIES TO HISTORICAL MARKET DATA.

Universe Description

Universe	BENCHMARK	SELECTION CRITERIA	START DATE INDEX	NB OF FUNDS	AUM AS OF 31.12.2014 (M€)	% AUM OF € FUNDS	% AUM OF £ FUNDS	% AUM OF \$ FUNDS	AVERAGE OF MANAGEMENT FEES
France large caps	CAC 40 (CACR)	Morningstar Category France Large Cap	1987	132	31,004,585,158	100%	0%	0%	1.5%
France smid caps	CAC Mid & Small (CMSN)	Benchmarked by the main France Small & Mid Caps indices: (MSCI France Small Cap, MSCI France Mid Cap, CAC Mid&Small, Cac Mid 60, CAC Small Cap)	2008	58	5,787,568,454	100%	0%	0%	1.9%
UK equity	FTSE All Shares (FTPTTALL)	Funds which Morningstar Category is UK Large Cap Blend Equity and which Primary Prospectus Benchmark is the FTSE All Shares	1985	219	108,671,058,223	0%	100%	0%	0.8%
Europe large & mid caps	MSCI Europe (M7EU)	Morningstar Category Europe Equity Large Cap	1998	784	204,957,611,945	90%	1%	0%	1.1%
Europe small caps	MSCI Europe Small Cap (NCEDE15)	Funds which Morningstar Category is Europe Small-Cap Equity or which Global Investor Fund Sector is Europe Small Equity or which Primary Prospectus Benchmark corresponds to one of the main Europe Small Caps indexes	2000	195	28,992,652,937	77%	13%	2%	1.2%
US large & mid caps	MSCI USA (NDDUUS)	Morningstar Category US Large Cap Equity (Blend+Value+Growth)	1969	763	295,038,858,048	16%	24%	51%	1.0%
Japan equity	TOPIX Japan (TPXDDVD)	Morningstar Category Japan Equity	1989	86	25,247,690,768	10%	18%	13%	1.0%
World equity	MSCI World (NDDUWI)	Benchmarked by the MSCI World	1969	543	173,305,649,278	51%	5%	38%	1.0%
Value equity	MSCI World Value (NDUWVI)	Morningstar Category Global Large Cap Value Equity	1974	207	70,745,267,234	51%	10%	16%	1.0%
Global EM equity	MSCI Emerging Markets (NDUEEGF)	Benchmarked by the MSCI Emerging Markets	1998	114	31,749,381,717	69%	13%	6%	1.2%
China equity	MSCI China (NDEUCHF)	Morningstar Category EUR China Equity	1998	90	22,403,043,474	7%	6%	87%	1.3%
Euro govies	EuroMTS Global Investment Grade (EMIEG5)	Morningstar Category EUR Governments Bonds	2004	274	76,859,207,114	99%	0%	0%	0.4%
Euro corporate	Barclays Capital Euro Corporate Bond (LECPTRU)*	Morningstar Category EUR Corporate Bonds	1998	135	119,655,136,785	49%	0%	0%	0.6%
Euro high yield	BofA Merrill Lynch Euro High Yield (HE00)	Morningstar Category EUR High Yield Bonds	2006	130	45,291,538,750	96%	0%	0%	0.8%
Emerging debt	Emerging Markets Local Currency Bond (JGENVUEG)	Morningstar Category Global Emerging Markets Bond - Local Currency	2002	141	57,059,278,088	27%	5%	60%	0.7%
Total				3871	1,296,768,527,974				

Source: Bloomberg and Morningstar data in EUR from 31/12/2006 to 31/12/2016. THE FIGURES RELATING TO PAST PERFORMANCES REFER TO PAST PERIODS AND ARE NOT A RELIABLE INDICATOR FOR FUTURE RESULTS. THIS ALSO APPLIES TO HISTORICAL MARKET DATA.

Glossary

Asset-Weighted Average Performance: It is defined as the average performance of all funds weighted by their AUM.

Equal-Weighted Average Performance: It is defined as the arithmetic average performance of the total number of funds composing the universe.

Estimated Alpha: Alpha is defined as the absolute performance generated by the active fund that cannot be explained by market factor. The estimation is based on 5 year rolling simple regressions on market factor.

Estimated Beta: Beta represents market sensitivity of the fund or systematic risk. The estimation is based on 5 year rolling simple regressions on market factor.

Fees: The fund returns are net of fees.

Percentage of Funds Outperforming the Index: In this study, it is the percentage of existing active funds that outperformed the benchmark over N years. The reader of this study should be aware that this percentage does not take into account the funds that were liquidated or merged over this period and understand that this figure is potentially overestimated.

Quantile Breakpoints: 75% of the funds outperform the 25% quantile (and 25% underperform the quantile), 50% of the funds outperform the Median (50% quantile), 25% of the funds outperform the 75% quantile. Box plots used in this study allow us to compare the index performance with the funds performance.

Survivorship (%): It is the percentage of funds that survived (neither merged nor liquidated) over a defined period.

Survivorship Bias: the calculations are adjusted for the survivorship bias i.e. merged or liquidated funds are taken into account in this study. This allows representing the entire opportunities available for investors at the beginning of each period under the scope of this study. We also disclosed the survivor rate for each category i.e. the percentage of funds existing at the beginning of the period that still exist at the end of the period.

BENCHMARK DESCRIPTIONS BY BLOOMBERG AND INDEX PROVIDERS

Barclays Capital Euro Corporate Bond: The Barclays Euro Corporate Bond Index is a broad-based benchmark that measures the investment grade, euro-denominated, fixed-rate corporate bond market. Inclusion is based on the currency denomination of a bond and not the country of risk of the issuer.

CAC Mid & Small: The CAC Mid and Small Index is a market capitalization weighted index adjusted for free float. The index is composed of mid and small cap equities listed on the Euronext Paris Bourse. Net return index history for 1, 3 & 5 year calculation, price return for 10y.

Emerging Markets Local Currency Bond: The Emerging Markets Local Currency Bond is designed to reflect the performance of debt securities denominated in emerging markets currencies (Local Currency Debt Securities) from countries whose economies or bond markets are less developed (emerging markets).

EuroMTS Global Investment Grade: The EuroMTS Investment Grade Index measures the total return of a portfolio of Euro-denominated sovereign bonds issued by Eurozone countries with at least two investment grade credit ratings from the main rating agencies and listed on the MTS platforms.

FTSE UK Series FTSE All Share: The FTSE All-Share Index is a capitalization-weighted index comprising of the FTSE 350 and the FTSE Small Cap Indices.

BofA Merrill Lynch Euro High Yield: The BofA Merrill Lynch Euro High Yield Index tracks the performance of EUR denominated below investment grade corporate debt publicly issued in the euro domestic or eurobond markets.

MSCI China: The MSCI China Index captures large and mid cap representation across China H shares, B shares, Red chips and P chips. With 141 constituents, the index covers about 85% of this China equity universe.

MSCI Emerging Markets: The MSCI Emerging Markets Index captures large and mid cap representation across 23 Emerging Markets (EM) countries. With 834 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.

MSCI Europe: The MSCI Europe Index captures large and mid cap representation across 15 Developed Markets (DM) countries in Europe. With 437 constituents, the index covers approximately 85% of the free float-adjusted market capitalization across the European Developed Markets equity universe.

MSCI Europe Small Cap: The MSCI Europe Small Cap Index captures small cap representation across the 15 Developed Markets (DM) countries in Europe. With 918 constituents, the index covers approximately 14% of the free float-adjusted market capitalization in the European equity universe.

MSCI USA: The MSCI USA Index is designed to measure the performance of the large and mid cap segments of the US market. With 617 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in the US.

MSCI World: The MSCI World Index captures large and mid cap representation across 23 Developed Markets (DM) countries. With 1,612 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.

MSCI World Value: The MSCI World Value Index captures large and mid cap securities exhibiting overall value style characteristics across 23 Developed Markets countries. The value investment style characteristics for index construction are defined using three variables: book value price, 12-month forward earnings to price and dividend yield. With 819 constituents, the index targets 50% coverage of the free float-adjusted market capitalization of the MSCI World Index.

TOPIX: The TOPIX, also known as the Tokyo Stock Price Index, is a capitalization weighted index of all companies listed on the First Section of the Tokyo Stock Exchange. The index is supplemented by the subindices of the 33 industry sectors. The index calculation excludes temporary issues and preferred stocks, and has a base value of 100 as of January 4, 1968. This Index represents the total return of the Topix Index.

Morningstar Categories (Morningstar definitions):

China Equity: China Equity funds invest principally in Chinese companies listed on the stock exchanges in China and Hong Kong, and companies that derive significant revenues from or have substantial business ties with the China market. These funds invest at least 75% of total assets in equities, and at least 75% of equity assets in Chinese or China-related companies defined as above. The funds usually invest less than 10% of total assets in Taiwanese equities.

EUR Corporate Bonds: EUR Corporate Bond funds invest principally in investment grade corporate issued securities denominated in or hedged into EUR.

EUR Governments Bonds: EUR Government Bond funds invest principally in government or explicitly government-backed agency securities denominated in or hedged into EUR.

EUR High Yield Bonds: EUR High Yield Bond funds invest principally in sub-investment grade securities with a credit quality equivalent to BB, or lower and denominated in or hedged into EUR.

Europe Equity Large Cap: Europe equity large cap portfolios invest predominantly in equity securities domiciled in Europe. These portfolios tend to focus on those stocks that are in the top 70% of the capitalization of the European equity market.

Europe Small Cap Equity: Europe Small-Cap Equity funds invest principally in the equities of small-cap European companies. Equities in the bottom 10% of the European equity market (including the UK) are defined as small-cap. At least 75% of total assets are invested in equities and at least 75% of equity assets are invested in European equities.

France Large-Cap Equity: France Large-Cap Equity funds invest principally in the equities of large-cap French companies. Equities in the top 70% of the European equity market (including the UK) are defined as large-cap. These funds invest at least 75% of total assets in equities, and invest at least 75% of equity assets in French equities.

Global Emerging Markets Bond – Local Currency: Global Emerging Market Bond funds are dedicated to fixed income securities of issuers in emerging market countries, denominated in local currencies. They should invest across the global emerging markets universe without a single country or regional focus and they do not hedge their currency exposure. Hedged classes of such funds are excluded from the category.

Global Emerging Markets Equity: Global Emerging Markets Equity funds tend to divide their assets among several emerging markets in Asia, Latin America, Europe, Middle East and/or Africa. These funds invest at least 75% of their total assets in equities, and invest at least 75% of equity assets in global emerging markets.

Global Large Cap Value Equity: Global Large-Cap Value Equity funds invest principally in the equities of large-cap value companies from around the globe. Most of these funds divide their assets among many developed markets and invest at least 20% of equity assets in North America and 15% in Greater Europe. Equities in the top 70% of the capitalisation of each of the seven regional Morningstar style zones are defined as large-cap (the style zones are Europe, US, Canada, Latin America, Japan, Asia ex-Japan, and Australia/New Zealand—please see the Morningstar Style Box Methodology for further information). Value is defined based on low valuations (low price ratios and high dividend yields) and slow growth (low growth rates for earnings, sales, book value, and cash flow). At least 75% of total assets are invested in equities.

Japan Large-Cap Equity: Japan Large-Cap Equity funds invest principally in the equities of large-cap Japanese companies. Equities in the top 70% of the capitalisation of the Japanese market are defined as large-cap. These funds invest at least 75% of total assets in equities, and invest at least 75% of equity assets in Japanese equities.

UK Large-Cap Blend Equity: UK Large-Cap Blend Equity funds are fairly representative of the overall UK equity market in size, growth rates and price. Equities in the top 70% of the European equity market (including the UK) are defined as large-cap. The blend style is assigned to funds where neither growth nor value characteristics predominate. These funds tend to invest across the spectrum of UK industries. At least 75% of total assets are invested in equities and at least 75% of equity assets are invested in UK equities.

US Large Cap Equity (Blend): US Large-Cap Blend Equity funds are fairly representative of the overall US equity market in size, growth rates, and price. Equities in the top 70% of the capitalisation of the US equity market are defined as large cap. The blend style is assigned to funds where neither growth nor value characteristics predominate. These funds invest at least 75% of their total assets in equities, and invest at least 75% of equity assets in US equities.

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