

# AHL DIVERSIFIED PROGRAM

## 2016 REVIEW AND OUTLOOK

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### EXECUTIVE SUMMARY

The Next Edge AHL Fund (the 'Fund') lost approximately 7.0% net of fees for calendar year 2016<sup>1</sup>. Broadly, for the AHL Diversified Program (the "Program"), losses originated predominantly in commodities while trading in fixed income resulted in gains. Although overall performance was negative, the Program generated noteworthy returns in the first and last six weeks of the year when stocks and bonds respectively were falling.

Around forty new markets were added, and new research included extending cash equities trading to trend-following factors. In 2017 it is hoped that Man AHL's ('AHL') collaboration with the University of Oxford in the field of machine learning will lead to direct applications in the Program.

Currently, we feel both equity and bond markets are at elevated levels and 2017 features multiple events with considerable uncertainty in outcome. We would argue that trend-following strategies represent an important component in investors' portfolios, with their potential to perform positively in both up and down markets, their propensity to be long 'things happening', and with their potential Crisis Alpha properties.

### MARKETS OVERVIEW

While we believe 2016 will be remembered for the rise of 'populism', a term coined to interpret the cause of two major and unexpected votes, namely Brexit and the Trump victory in the US presidential election, it was a lack of trends across particularly commodity markets which caused headaches for the Program.

The year got off to a nervous start, with world stocks<sup>2</sup> down around 7.0% by the end February on concerns of a slowdown in China. This did not last long, however, as by May the index was back to where it started. June saw the first of the year's two surprise votes. Brexit initially caused huge moves in markets, but with the exception of Sterling, these proved to be short lived. The subsequent quarter was mixed as markets digested comments

from central bankers. November marked a turnaround in fortunes as the Trump victory propelled equities and the USD higher, but bond prices lower. These themes were underpinned by the US Federal Reserve in December as it talked of more rate rises in 2017 than markets were anticipating.

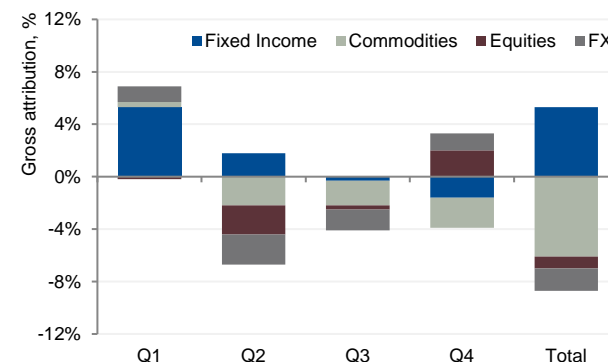
News in commodity markets was dominated by oil, whose price mirrored equities during the first quarter, then fell as OPEC failed to reach an agreement on production cuts, before rising sharply in November when they actually did.

### AHL DIVERSIFIED PROGRAM PERFORMANCE

The Fund lost approximately 7.0% for calendar year 2016<sup>1</sup>.

For the Program by asset class, it was essentially a case of commodities losses being offset by fixed income gains (Figure 1).

Figure 1: 2016 Attribution by quarter and asset class



Source: Man Group database.

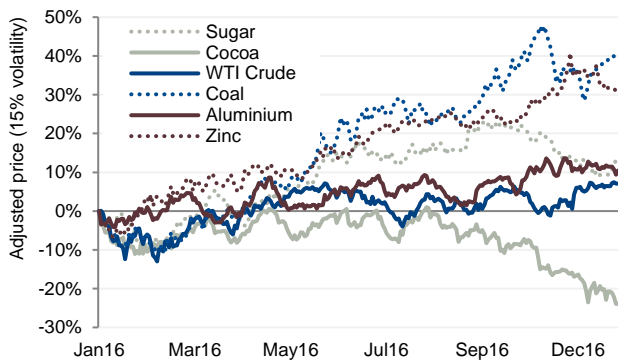
Within energies, the gyrations of the oil price described in the previous section nipped trends in the bud (Figure 2). As with previous years, however, the non-traditional energy markets traded through the Program's allocation to the AHL Evolution Program ('Evolution') trended positively, contributing around

**1. Past performance is not indicative of future results. Returns may increase or decrease as a result of currency fluctuations.** Next Edge AHL Fund (the "Fund") returns are net of all fees and expenses associated with Class A Units. Returns for 2016 are unaudited. Therefore, performance statistics containing 2016 figures shown in this material are subject to final confirmation. The historical annualized rates of return for the Next Edge AHL Fund Class A Units as of December 30th, 2016, are 1-year -7.13%, 3-year 4.90%, 5-year -0.31%, 10-year N/A, and CARR 0.07%. The Fund obtains exposure to the returns of a diversified portfolio of financial instruments across a range of global markets including, without limitation, stocks, bonds, currencies, short-term interest rates, energy, metals and agricultural commodities (the "Underlying Assets") managed by AHL Partners LLP (the "Investment Manager") using a predominantly trend-following trading program (the "AHL Diversified Program"). The AHL Diversified Program is implemented and managed by the Investment Manager. While it is intended that the Underlying Assets will be managed with the same investment objectives and strategies used by the Investment Manager in managing the assets of AHL Diversified Program, their investments may not be identical and the returns of the Underlying Assets will differ from the returns of AHL Diversified Program. Differences in performance will be due to a number of factors including but not limited to fees, taxes, currency hedging, foreign exchange, variations in trading programmes and allocations, cash flows and asset size. The leverage, strategy and investments of AHL Diversified Program have varied over time and as a result performance in any future period will vary. The information about the performance of AHL Diversified Program is not, and should not be construed to be, an indication about the future performance of the Underlying Assets or the Fund.

**2.** MSCI World Net Total Return Index, hedged to USD.

+0.9% overall. Coal, in particular, almost doubled on Chinese demand and a price squeeze caused by ongoing concerns over the safety of French nuclear reactors, among other things.

**Figure 2: Price behavior<sup>3</sup> for several key commodity markets**

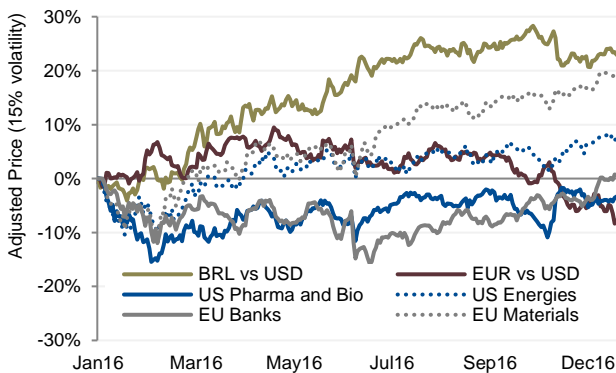


Source: Man Group database.

Trading in both metals and agricultural commodities also resulted in losses, but dispersion by instrument was high. Aluminium prices were rangebound, whereas zinc prices were propelled consistently higher by a combination of mine closures and robust Chinese buying. Long sugar positions, particularly in summer, benefited from poor forecasts for crop yields as a result of extreme weather.

FX trading was mixed. Long emerging market currencies versus the US Dollar dominated the best performers, despite sharp reversals in these markets after the surprise US election result in November (Figure 3). Crosses involving developed markets, and most notably the Euro, however, were rangebound.

**Figure 3: Price behavior<sup>3</sup> for key FX and equity markets**



Source: Man Group database.

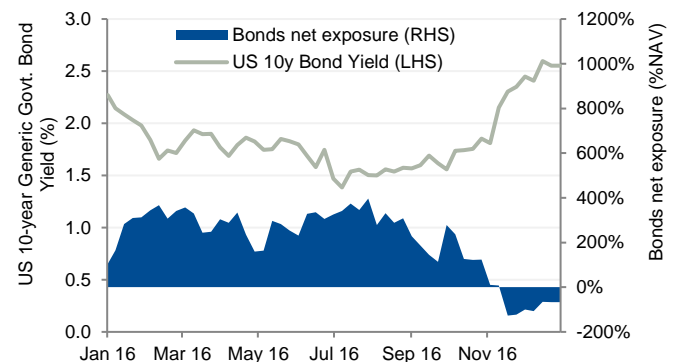
In equities, the Program entered 2016 flat then built into a short throughout January as concerns about a slowdown in China weighed on markets. The sudden reversal at the end of February, with world stocks<sup>4</sup> rebounding 5% in one week, hit short positioning hard and losses were incurred. It was an uncharacteristic year for AHL's cash equity trading, which trades momentum on sectors constructed as baskets of single-name stocks. In each of the preceding three years it has outperformed equity index trading, and the two now have equal share of the asset class's risk allocation in the Program. This year, however,

both cash and index futures strategies have performed similarly in aggregate.

Top and bottom performers in equities arose from cash equities trading. The woes of the European banking sector were widely publicized, and the strategy generated positive returns through short positioning to November, before turning long and contributing to performance as the sector rebounded (Figure 3). Trading in European Materials, on the other hand, was beneficial through predominantly long positioning. Losses were greatest in the US Pharmaceuticals & Biotechnology sector, where prices were rangebound and exhibited sharp reversals, particularly around November when it became apparent that Hillary Clinton, the sector's nemesis, would be unsuccessful in her bid to be the next US president.

Long fixed income positions at the start of the year were the main beneficiary of risk-off markets. In Q4, however, US 10 year government bond yields rose from 1.6% to 2.6%. As Figure 4 shows, the Program quickly went short bonds in November and hence accrued gains in November and December through short positioning. The reactive nature of the conditioned carry algorithm was key here. AHL's bespoke execution platform facilitates reactive trading when it is needed most. For 10-year US treasury bonds, this conditioning cut in aggressively around the first week in November and nullified the long carry signal by the middle of the month, leaving faster momentum signals to take the overall position short.

**Figure 4: US 10-year government bond yields and the Program's aggregate bonds positioning**



Source: Man Group database and Bloomberg.

## RESEARCH

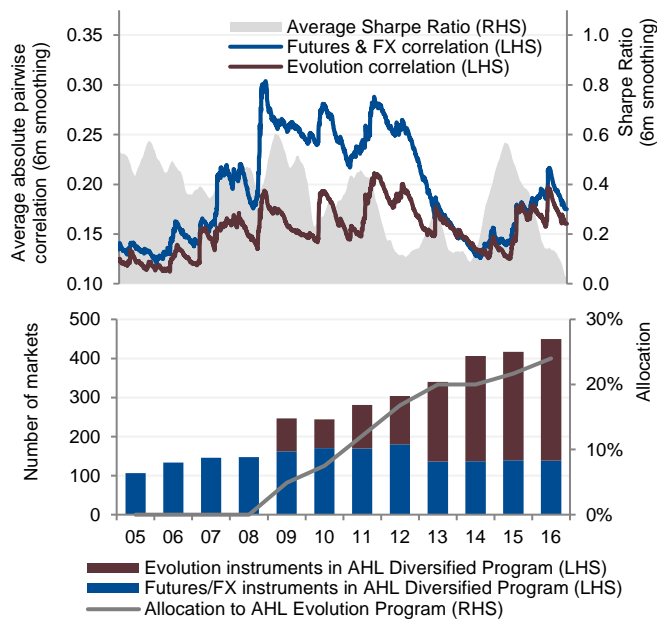
As the previous section showed, some markets have trended in 2016, others have not, and overall negative performance illustrates that trends have not predominated.

Trend-following at the single-market level can be a relatively low Sharpe Ratio strategy; returns have historically been low for a unit of risk. Trend-followers therefore rely on diversification across multiple markets seeking to raise the portfolio Sharpe. In order to identify potential performance drivers, we feel it is useful to examine average Sharpe Ratio per market, and correlation between markets, illustrating diversification. This is done in the top portion of Figure 5, using six month smoothing of simulated data.

3. Represented by total returns from trading futures and OTC instruments. Normalized to 15% return volatility over last 3 years. For equity indices, GICS sectors are used. 2/6

4. MSCI World Net Total Return Index, hedged to USD.

**Figure 5: Average absolute pairwise correlation and average Sharpe Ratio, simulated for current Program markets**



Source: Man Group database.

Looking at the shaded region first, with the exception of 2014, average Sharpe Ratios have declined since the Credit Crisis of 2008. We have argued in previous reviews that this corresponds to periods of heightened central bank intervention, noting in particular the significant impact that Hank Paulson's first 'QE bazooka' had on markets in 2009.

The blue line in Figure 5 also shows that correlation between futures and FX forwards, representing markets typically traded by trend followers, rose post Credit Crisis. This is a quantitative illustration of 'risk-on, risk-off' behavior, as it was termed, where markets which had historically moved in different ways started moving in lock-step, driven mainly by comments by central bankers. This caused a rise in correlation and therefore a decrease in diversification in the Program.

Correlation fell dramatically in 2014 and, coinciding with a rise in average Sharpe, led to a Program net return of 31%.<sup>5</sup> Since then, however, the average market Sharpe Ratio has fallen and correlation has risen. It is this, we believe, that has caused problems for the Program in 2016.

The question that arises is what can be done to fix this problem. One alternative would be to add different trading styles, but we feel this would constitute style drift and potentially water down a trend-following strategy's historical ability to perform when markets are in crisis. Instead, AHL has continued to innovate through the addition of new and differentiating markets, such as interest rate swaps, cash equities, and credit and power derivatives, all traded through the Program's allocation to Evolution. Historically, these have often had price drivers which are quite different to traditional futures markets; price drivers such as weather and emerging market economics. As the maroon line in Figure 5 shows, correlation within these markets has historically been consistently lower than those of futures and forwards markets. Corresponding

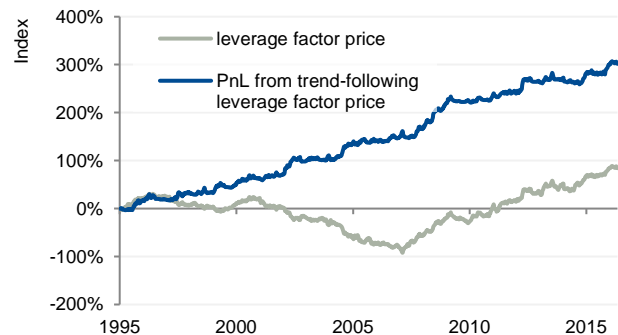
performance has been robust, with a Sharpe Ratio of 1.2 in the last five years.

Hence AHL has sought to add to this list of differentiating markets over time, and as the lower chart in Figure 5 shows, has increased both the number of Evolution markets and the allocation to them within the Program. This year has been no different, with the addition of around forty markets, such as power markets in the US, fuel markets in Asia, and off-the-run mortgage bonds.

Buoyed by its experience trading sectors trends, AHL's equity team has set its sights on factors. Instead of slicing cash equities by sector, the universe is instead sorted by, for example, size, volatility, and leverage, with long/short baskets then formed from each and a price series calculated. For leverage, shown as the grey line in Figure 6 for example, the factor can be in or out of favor for lengthy periods, lending themselves to being trend-followed. The hypothetical track record for doing this is shown in blue. These models were introduced for 12 factors across three regions in summer.

**Figure 6: AHL factor trend following using leverage as an example. Simulated backtest gross results, applying current model to historic data<sup>1</sup>**

Source: Man Group database.



Equity and equity execution research were beneficiaries of the strong growth in AHL's team over 2016, which grew from 115 to 146. Another avenue of expansion has been in machine learning, which is currently the focus of the Oxford-Man Institute (OMI), AHL's collaboration with the University of Oxford. The OMI team have considerable experience applying machine learning techniques to real-world situations, such as in the automotive and aviation industries.<sup>6</sup> AHL has been trading with its own machine learning algorithms for around three years in its multi-strategy programs, and it is planned to include some of this within the Program in 2017.

Additional developments include the formation of a Data Innovation team, whose brief is to investigate new and diversifying data sources for all of AHL's programs. Early work has included, for example, short-interest data, sentiment indicators, and social media feeds.

**5. Past performance is not indicative of future results. Returns may increase or decrease as a result of currency fluctuations.** Please note that the performance data is not intended to represent actual past or simulated past performance of an investment product. The data is based on a representative investment product or products that follow the Program. An example fee load of 3%+1% and 20% has been applied.

**6.** <https://www.ahl.com/the-rise-of-machine-learning>.



## OUTLOOK

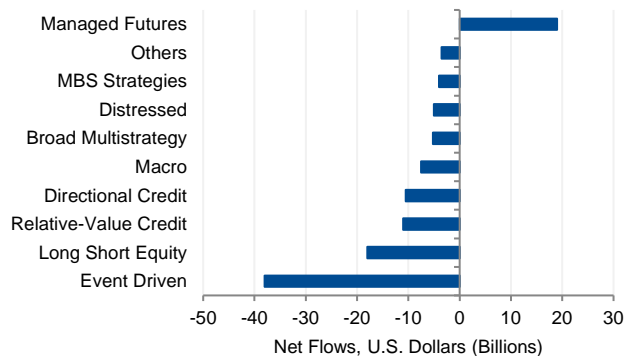
We have always argued that trend-followers may warrant inclusion in investors' portfolios for three reasons:

1. historic track record;
2. low historical correlation to other asset classes; and
3. potential to perform when markets are in crisis.

Despite disappointing performance overall in 2016, we would argue that items two and three are firmly still in place. Overall correlation of the Program to stocks<sup>7</sup> and bonds<sup>8</sup> in 2016 was -0.4 and 0.6 respectively. Further, performance was noteworthy both in the first six weeks of the year, when equities were falling, and in the last six weeks when bonds were falling.

Historically, trend-following is a strategy which loves bubbles. Trend followers hate when markets do nothing. It could be argued that with the Dow Jones Industrial Average within touching distance of 20,000, equities may be in bubble territory. With yields close to zero for many developed nations, the bubble argument is perhaps even stronger for bonds. Thus, we believe that there is currently a case for having an allocation to trend-following strategies in portfolios. This could be the reason for the growth in allocations to managed futures that has been seen in 2016 (Figure 7).

**Figure 7: Managed futures strategies, dominated by trend-following, raised capital while others faced withdrawals**



Source: eVestment, data to November 2016.

Indeed, it was this line of thought that prompted us to explore the issue of Crisis Alpha in more detail. In a recent paper<sup>9</sup> using data going back to the 1960s, we showed that trend-following strategies have historically demonstrated the ability to perform in bond market crises as well as equity market crises. We believe this enforces our findings from this year.

Thinking specifically about the year ahead, we believe the risks are clear to see. In America, we find out whether President Trump's actions match his words. In Europe, there are elections in

Germany, France, and The Netherlands. In the U.K., Brexit negotiations are likely to have prominence. Further, if 2016 taught us one thing, it was that uncertainty is particularly high. Polls seem to be unreliable, and voters are fickle. Thus, there are plenty events on the horizon, and considerable uncertainty surrounding their outcome. And, with a hat-tip to Donald Rumsfeld, these are only the known unknowns.

We would argue that trend-following strategies represent an important component in investors' portfolios, with their potential to perform positively in both up and down markets, their propensity to be long 'things happening', and with their potential Crisis Alpha properties.

7. MSCI World Net Total Return Index, hedged to USD.

8. Citigroup World Government Bond Index hedged to USD.

9. <https://www.ahl.com/trend-following-equity-and-bond-crisis-alpha>.

## IMPORTANT INFORMATION

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Unless stated otherwise the source of all information is Man Group plc and its affiliates as of 31 December 2016.

Unless stated otherwise the source of all market data is Man Database and Bloomberg.

This material was prepared by AHL Partners LLP ("AHL Partners") and is presented by Next Edge Capital Corp. ("Next Edge"). 'Man Group' refers to the group of entities affiliated with Man Group plc.

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**<sup>1</sup> SIMULATED HYPOTHETICAL PERFORMANCE** The simulated performance data above reflecting hypothetical results is shown for the time period indicated. Hypothetical Results are calculated in hindsight, invariably show positive rates of return, and are subject to various modeling assumptions, statistical variances and interpretational differences. No representation is made as to the reasonableness or accuracy of the calculations or assumptions made or that all assumptions used in achieving the results have been utilized equally or appropriately, or that other assumptions should not have been used or would have been more accurate or representative. Changes in the assumptions would have a material impact on the Hypothetical Results and other statistical information based on the Hypothetical Results.

The Hypothetical Results have other inherent limitations, some of which are described below. They do not involve financial risk or reflect actual trading by an Investment Product, and therefore do not reflect the impact that economic and market factors, including concentration, lack of liquidity or market disruptions, regulatory (including tax) and other conditions then in existence may have on investment decisions for an Investment Product. In addition, the ability to withstand losses or to adhere to a particular trading program in spite of trading losses are material points which can also adversely affect actual trading results. Since trades have not actually been executed, Hypothetical Results may have under or over compensated for the impact, if any, of certain market factors. There are frequently sharp differences between the Hypothetical Results and the actual results of an Investment Product. No assurance can be given that market, economic or other factors may not cause the Investment Manager to make modifications to the strategies over time. There also may be a material difference between the amount of an Investment Product's assets at any time and the amount of the assets assumed in the Hypothetical Results, which difference may have an impact on the management of an Investment Product. Hypothetical Results should not be relied on, and the results presented in no way reflect skill of the investment manager. A decision to invest in an Investment Product should not be based on the Hypothetical Results.

No representation is made that an Investment Product's performance would have been the same as the Hypothetical Results had an Investment Product been in existence during such time or that such investment strategy will be maintained substantially the same in the future; the Investment Manager may choose to implement changes to the strategies, make different investments or have an Investment Product invest in other investments not reflected in the Hypothetical Results or vice versa. To the extent there are any material differences between the Investment Manager's management of an Investment Product and the investment strategy as reflected in the Hypothetical Results, the Hypothetical Results will no longer be as representative and their illustration value will decrease substantially. No representation is made that an Investment Product will or is likely to achieve its objectives or results comparable to those shown, including the Hypothetical Results, or will make any profit or will be able to avoid incurring substantial losses. Past performance is not indicative of future results and simulated results in no way reflect upon the manager's skill or ability.

The hypothetical performance results shown do not reflect the deduction of investment management fees and certain transaction costs, which will reduce portfolio performance. There is a compounding effect of the fee on performance. As fees are deducted quarterly, the compounding effect will be to increase their impact by an amount directly related to gross portfolio performance. For example, on a portfolio with a 2% annual fee, if gross annual performance is 10%, the compounding effect of the fees will result in net annual performance of 7.81%.