## clear alpha

## Monthly Report - January 2019

# Clear Alpha Global Index (CLAXGBL Index) +1.82% in January, -2.62% in the last 12 months

#### About the Clear Alpha Global Index and its sub-indices

The Clear Alpha Global Index<sup>TM</sup> is designed as a benchmark for the universe of trading strategy indices. It is calculated and published daily. Its constituents and their respective weights are updated once a quarter.

At the end of January 2019, the database contained 2,538 live and 2,108 discontinued trading strategy indices. Indices are considered for inclusion in the Clear Alpha Global Index<sup>TM</sup> if they i) are unique due to either a different algorithm, sponsor, region or asset class, and ii) aim to have low correlation to traditional asset benchmarks.

Clear Alpha Global Index Monthly Performance, 2013 to 2019

|      | Jan    | Feb    | Mar   | Apr    | May    | Jun    | Jul    | Aug    | Sep    | Oct    | Nov    | Dec    | Total          |
|------|--------|--------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|----------------|
| 2013 | 0.14%  | -0.19% | 0.14% | 0.27%  | -0.01% | -0.47% | -0.02% | -0.40% | 0.38%  | 0.67%  | 0.15%  | -0.78% | -0.14%         |
| 2014 | -0.75% | 0.10%  | 0.32% | 0.35%  | 0.95%  | 0.64%  | -0.75% | 0.74%  | -0.51% | -0.37% | 0.79%  | 0.07%  | 1.57%          |
| 2015 | 0.09%  | 0.34%  | 0.21% | -0.45% | -0.05% | -1.27% | 0.45%  | -1.88% | 0.31%  | 0.80%  | 0.77%  | -0.11% | -0.81%         |
| 2016 | -0.08% | 1.03%  | 0.25% | -0.37% | -0.13% | 0.70%  | 0.64%  | -0.21% | 0.45%  | -0.02% | 0.05%  | 0.04%  | 2.37%          |
| 2017 | 0.42%  | 1.26%  | 0.17% | 0.77%  | 0.23%  | -0.15% | 0.61%  | 0.92%  | 0.19%  | 0.90%  | 0.30%  | 0.53%  | 6.31%          |
| 2018 | 0.20%  | -2.07% | 0.50% | 0.02%  | -0.06% | -0.58% | 0.17%  | -0.18% | -0.27% | -1.93% | -0.60% | 0.59%  | <b>-4.17</b> % |
| 2019 | 1.82%  |        |       |        |        |        |        |        |        |        |        |        | 1.82%          |

|                     | Jan Return | 1Y Return | 1Y Sharpe | 5Y Return 5Y Sharpe |
|---------------------|------------|-----------|-----------|---------------------|
| Global Index        | 1.82%      | -2.62%    | -1.23     | 7.79% 0.29          |
| Arbitrage           | 1.89%      | -0.26%    | -0.47     | 17.81% 0.77         |
| Carry               | 5.02%      | -0.09%    | -0.32     | 1.92% -0.07         |
| Commodity           | -0.24%     | 0.56%     | -0.15     | 40.24% 0.97         |
| Fixed Income        | 1.96%      | 12.45%    | 1.83      | 30.63% 0.89         |
| Volatility          | 1.39%      | -6.17%    | -0.83     | 8.14% 0.14          |
| Economic Indicators | 3.43%      | -2.34%    | -0.93     | 0.61% -0.19         |
| Research            | 4.39%      | -6.38%    | -1.12     | -14.26% -0.65       |
| Macro               | 1.95%      | 3.11%     | 0.31      | 13.21% 0.57         |
| Momentum            | -0.12%     | -6.09%    | -1.41     | 2.43% -0.07         |
| Mean Reversion      | 0.94%      | -7.17%    | -0.73     | 2.11% -0.04         |
| Trend Following     | -0.56%     | -5.81%    | -1.78     | 1.92% -0.09         |

The Global Index surged +1.82% in January, its best calendar month return in six years. The market environment was supportive, with equity indices posting gains across the globe, interest rates falling, and volatility declining. In addition, EM currencies closed substantially higher, as did the price of oil and commodities in general.

Across our database, Carry algorithms achieved the strongest performance (+5.02%) thanks to a rally in EM currencies coupled with a drop in low yield G10 currencies. In second position was the Equity Factors sub-index (called "Research" in our database) which rose +4.39% as small cap and value factors produced high excess returns (+2.1% and +3.1%, respectively).

Fixed Income Arbitrage, Volatility Arbitrage (short volatility) and Macro strategies made respectable contributions of +1.96%, +1.39% and +1.95%. Fixed Income strategies benefitted from falling rates; short volatility strategies from lower implied and realised volatilities across equities, commodities and FX. Macro algorithms made gains, predominantly on FX Value (PPP convergence) positions and bond versus equity asset allocation algorithms.

Commodity Arbitrage (-0.24%) and Trend Following (-0.56%) strategies finished marginally negative. Commodity Arbitrage indices lost ground as front-end future prices rose and curves flattened; Trend Following indices were incorrectly positioned for price reversals in Equity, Commodity and FX markets; however, multi-asset algorithms offset some of the losses through long equity and bond positions.

### Clear Alpha Global Index<sup>™</sup> (Bloomberg: CLAX <Go>)

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annual performance is blank for indices that were not live during the full year  $\,$ 

### Top 3 Sub-index Constituents<sup>1</sup>

(ranked by 1 year Sharpe ratio)

| Arbitrage - Carry                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                            |                                                  | 1Y<br>Sharpe | 1Y<br>return | Jan-19<br>return | YTD<br>return | 2018<br>return | 2017<br>return | 2016<br>return |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|--------------------------------------------------|--------------|--------------|------------------|---------------|----------------|----------------|----------------|
| 2   2   2   2   2   2   3   3   3   4   4   5   4   4   5   5   5   5   5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Arbitrage - Carry                                          |                                                  |              |              |                  |               |                |                |                |
| 3   BOA Merrill Lynch Foreign Exchange Arbitrage   G10 FX Carry Arbitrage   1.0   6.5%   3.1%   3.1%   2.2%   0.7%   0.8%     Arbitrage - Commodity Future Arbitrage   1.8   1.7%   1.7%   0.4%   1.1%   1.1%   0.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.2%   1.   | 1) Societe Generale FX G10 Carry                           | G10 FX Carry Arbitrage                           | 1.7          | 12.4%        | -0.6%            | -0.6%         | 8.2%           | -7.5%          | 3.6%           |
| Arbitrage - Commodity   Yield Optimization                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 2) CIBC FX G10 USD Carry                                   | G10 FX Carry Arbitrage                           | 1.7          | 11.3%        | 0.6%             | 0.6%          | 8.5%           |                |                |
| 1) Societe Generale Roll Alpha 1 Vt8 Commodity Future Arbitrage 1.8 11.7% 0.4% 0.4% 12.1% 10.1% 6.2% 2) CIBC COT Enhanced Roll Agriculture Commodity Congestion Arbitrage 1.7 3.1% 0.3% 0.3% 3.1% 1.5% 2.2% 3) Nomura Commodity Intra Curve Commodity Future Arbitrage - 3 Commodities 1.3 5.6% 0.6% 0.6% 4.8% 3.0% 1.1% Arbitrage - Fixed Income Valuation of Commodity Future Arbitrage - 3 Commodities 1.3 5.6% 0.6% 0.6% 4.8% 3.0% 1.1% Arbitrage - Fixed Income Valuation of Commodity Future Arbitrage - 3 | 3) BOA Merrill Lynch Foreign Exchange Arbitrage            | G10 FX Carry Arbitrage                           | 1.0          | 6.5%         | 3.1%             | 3.1%          | 2.2%           | -0.7%          | 6.8%           |
| 2   CIBC COT Enhanced Roll Agriculture   Commodity Congestion Arbitrage   1.7   3.1%   0.3%   0.3%   0.3%   3.1%   1.5%   2.2%   3   Nomura Commodity Intra Curve   Commodity Future Arbitrage - 3 Commodities   1.3   5.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.6%   0.   | Arbitrage - Commodity Yield Optimization                   |                                                  |              |              |                  |               |                |                |                |
| Arbitrage - Fixed Income   Commodity Future Arbitrage - 3 Commodities   1.3   5.6%   0.6%   0.6%   0.6%   0.4%   3.0%   1.1%   Arbitrage - Fixed Income                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 1) Societe Generale Roll Alpha 1 Vt8                       | Commodity Future Arbitrage                       | 1.8          | 11.7%        | 0.4%             | 0.4%          | 12.1%          | 10.1%          | 6.2%           |
| Arbitrage - Fixed Income  1) Societe Generale BOSS Global Yield Curve Carry Arbitrage 2.3 9.6% 2.0% 2.0% 7.1% 1.4% -0.5% 2) Barclays Star 20 EUR Curve Steepening 1.9 5.8% 0.2% 0.2% 4.2% 2.8% 0.7% 3) DB Diversified Municipal Arbitrage 2 US Muni Rate Curve Arbitrage 1.3 4.3% 0.3% 0.3% 0.3% 3.0% 2.8% -1.9%  Arbitrage - Volatility  1) Morgan Stanley FX VolNet Premium FX Volatility Arbitrage - Short Variance Swaps -   2.3 9.7% 1.7% 1.7% 6.1% 3.4% -6.3% 2) BOA Merrill Lynch Short Synthetic Variance Index - GL Short SPDR Gold ETF Variance Swaps 1.6 10.2% 1.7% 1.7% 8.6% 11.7% 7.8% 3) Credit Suisse Adaptive Volatility Index All Rolls USD Short USD Swaption Straddles 1.4 6.5% 0.0% 0.0% 0.0% 6.5% 6.5% 6.5%  Economic Indicators - Research 1) BOA Merrill Lynch Japan Long-Short Volatility Index Qlobal Equity Long/Short Low Vol Factor Global Equity Long/Short Low Vol Factor 1) BE Equity Low Beta TurnOver Control Factor Global Equity Long/Short Low Vol Factor 1) BOA Merrill Lynch Europe Long-Short Volatility Europe Equity Long/Short Low Vol Factor 1) Nomura Macro Cross-Country Government Bonds Relative Value Investing 1) Boarclays Global MEDES Global Fixed Income Turn of Month 1.5 4.3% 1.1% 1.1% 3.1% 0.8% 1.5% 3) Barclays FX Switch Carry Value Momentum Factor Allocation 1,4 5.7% 1.5% 1.5% 1.5% 4.0% -1.0% 0.2%  Momentum - Mean Reversion 1) Societe Generale Interest Rates Strangle Premium Euro Short EUR Swaption Strangle 1,3 3.0% 0.2% 0.2% 0.2% 2.8% 4.6% 6.5%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 2) CIBC COT Enhanced Roll Agriculture                      | Commodity Congestion Arbitrage                   | 1.7          | 3.1%         | 0.3%             | 0.3%          | 3.1%           | 1.5%           | 2.2%           |
| 1   Societe Generale BOSS   Global Yield Curve Carry Arbitrage   2.3   9.6%   2.0%   2.0%   7.1%   1.4%   -0.5%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 3) Nomura Commodity Intra Curve                            | Commodity Future Arbitrage - 3 Commodities       | 1.3          | 5.6%         | 0.6%             | 0.6%          | 4.8%           | 3.0%           | 1.1%           |
| 2.9   Barclays Star 20   EUR Curve Steepening   1.9   5.8%   0.2%   0.2%   4.2%   2.8%   0.7%   3.9   DB Diversified Municipal Arbitrage 2   US Muni Rate Curve Arbitrage   1.3   4.3%   0.3%   0.3%   0.3%   3.0%   2.8%   -1.9%   Arbitrage - Volatility                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Arbitrage - Fixed Income                                   |                                                  |              |              |                  |               |                |                |                |
| 3) DB Diversified Municipal Arbitrage 2  US Muni Rate Curve Arbitrage  1.3 4.3% 0.3% 0.3% 0.3% 3.0% 2.8% -1.9%  Arbitrage - Volatility  1) Morgan Stanley FX VolNet Premium  FX Volatility Arbitrage - Short Variance Swaps -   2.3 9.7% 1.7% 1.7% 6.1% 3.4% -6.3% 2) BOA Merrill Lynch Short Synthetic Variance Index - GL  Short SPDR Gold ETF Variance Swaps 1.6 10.2% 1.7% 1.7% 8.6% 11.7% 7.8% 3) Credit Suisse Adaptive Volatility Index All Rolls USD  Short USD Swaption Straddles  1.4 6.5% 0.0% 0.0% 0.0% 6.5% 6.5% 6.5%  Economic Indicators - Research  1) BOA Merrill Lynch Japan Long-Short Volatility Index  Japan Equity Long/Short Low Vol Factor  Global Equity Long/Short Low Vol Factor  3) BOA Merrill Lynch Europe Long-Short Volatility  Europe Equity Long/Short Low Vol Factor  1) Nomura Macro Cross-Country  Government Bonds Relative Value Investing  1) Board Fixed Income Turn of Month 1) 4 5.7% 1.5% 1.5% 1.5% 1.5% 1.5% 1.5% 1.5% 1.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 1) Societe Generale BOSS                                   | Global Yield Curve Carry Arbitrage               | 2.3          | 9.6%         | 2.0%             | 2.0%          | 7.1%           | 1.4%           | -0.5%          |
| Arbitrage - Volatility  1) Morgan Stanley FX VolNet Premium  FX Volatility Arbitrage - Short Variance Swaps -   2.3   9.7%   1.7%   1.7%   6.1%   3.4%   -6.3%   2) BOA Merrill Lynch Short Synthetic Variance Index - GL  Short SPDR Gold ETF Variance Swaps   1.6   10.2%   1.7%   1.7%   8.6%   11.7%   7.8%   3) Credit Suisse Adaptive Volatility Index All Rolls USD  Short USD Swaption Straddles   1.4   6.5%   0.0%   0.0%   6.5%   6.5%   6.5%    Economic Indicators - Research  1) BOA Merrill Lynch Japan Long-Short Volatility Index  Japan Equity Long/Short Low Vol Factor   1.8   10.1%   -0.2%   -0.2%   9.1%   -0.8%   2) DB Equity Low Beta TurnOver Control Factor   Global Equity Long/Short Low Vol Factor   1.2   10.2%   1.8%   1.8%   5.8%   4.6%   -2.8%   3) BOA Merrill Lynch Europe Long-Short Volatility   Europe Equity Long/Short Low Vol Factor   1.1   7.5%   -2.0%   -2.0%   8.5%   2.9%    Economic Indicators - Macro  1) Nomura Macro Cross-Country   Government Bonds Relative Value Investing   1.6   3.2%   0.4%   0.4%   3.3%   0.4%   0.2%   2) Barclays Global MEDES   Global Fixed Income Turn of Month   1.5   4.3%   1.1%   1.1%   3.1%   0.8%   1.5%   3) Barclays FX Switch   Carry Value Momentum Factor Allocation   1.4   5.7%   1.5%   1.5%   4.0%   -1.0%   0.2%    Momentum - Mean Reversion  1) Societe Generale Interest Rates Strangle Premium Euro   Short EUR Swaption Strangle   1.3   3.0%   0.2%   0.2%   2.8%   4.6%   6.5%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 2) Barclays Star 20                                        | EUR Curve Steepening                             | 1.9          | 5.8%         | 0.2%             | 0.2%          | 4.2%           | 2.8%           | 0.7%           |
| 1) Morgan Stanley FX VolNet Premium FX Volatility Arbitrage - Short Variance Swaps -   2.3   9.7%   1.7%   1.7%   6.1%   3.4%   -6.3%   2) BOA Merrill Lynch Short Synthetic Variance Index - GL Short SPDR Gold ETF Variance Swaps   1.6   10.2%   1.7%   1.7%   8.6%   11.7%   7.8%   3) Credit Suisse Adaptive Volatility Index All Rolls USD Short USD Swaption Straddles   1.4   6.5%   0.0%   0.0%   6.5%   6.5%   6.5%    Economic Indicators - Research  1) BOA Merrill Lynch Japan Long-Short Volatility Index   Japan Equity Long/Short Low Vol Factor   1.8   10.1%   -0.2%   -0.2%   9.1%   -0.8%   2) DB Equity Low Beta TurnOver Control Factor   Global Equity Long/Short Low Vol Factor   1.2   10.2%   1.8%   1.8%   5.8%   4.6%   -2.8%   3) BOA Merrill Lynch Europe Long-Short Volatility   Europe Equity Long/Short Low Vol Factor   1.1   7.5%   -2.0%   -2.0%   8.5%   2.9%    Economic Indicators - Macro   1) Nomura Macro Cross-Country   Government Bonds Relative Value Investing   1.6   3.2%   0.4%   0.4%   3.3%   0.4%   0.2%   2) Barclays Global MEDES   Global Fixed Income Turn of Month   1.5   4.3%   1.1%   1.1%   3.1%   0.8%   1.5%   3) Barclays FX Switch   Carry Value Momentum Factor Allocation   1.4   5.7%   1.5%   1.5%   4.0%   -1.0%   0.2%    Momentum - Mean Reversion   1.3   3.0%   0.2%   0.2%   2.8%   4.6%   6.5%    1) Societe Generale Interest Rates Strangle Premium Euro   Short EUR Swaption Strangle   1.3   3.0%   0.2%   0.2%   2.8%   4.6%   6.5%    10   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0    11   1.0   1.0   1.0   1.0   1.0   1.0   1.0    12   1.0   1.0   1.0   1.0   1.0   1.0   1.0    13   1.0   1.0   1.0   1.0   1.0   1.0    14   1.0   1.0   1.0   1.0   1.0    15   1.0   1.0   1.0   1.0   1.0    16   1.0   1.0   1.0   1.0   1.0    17   1.0   1.0   1.0   1.0   1.0    18   1.0   1.0   1.0   1.0   1.0    19   1.0   1.0   1.0   1.0   1.0    10   1.0   1.0   1.0   1.0   1.0    11   1.0   1.0   1.0   1.0    12   1.0   1.0   1.0   1.0    13   1.0   1.0   1.0   1.0    14   1.0   1.0   1.0   1.0    15   1.0    | 3) DB Diversified Municipal Arbitrage 2                    | US Muni Rate Curve Arbitrage                     | 1.3          | 4.3%         | 0.3%             | 0.3%          | 3.0%           | 2.8%           | -1.9%          |
| 2) BOA Merrill Lynch Short Synthetic Variance Index - GL 3) Credit Suisse Adaptive Volatility Index All Rolls USD Short USD Swaption Straddles 1.4 6.5% 0.0% 0.0% 6.5% 6.5% 6.5% 6.5% Economic Indicators - Research  1) BOA Merrill Lynch Japan Long-Short Volatility Index 2) DB Equity Low Beta TurnOver Control Factor 3) BOA Merrill Lynch Europe Long-Short Volatility Europe Equity Long/Short Low Vol Factor 1) Nomura Macro Cross-Country Government Bonds Relative Value Investing 3) Barclays Global MEDES Global Fixed Income Turn of Month 1.5 4.3% 1.1% 1.1% 3.1% 3.1% 0.2% 4.6% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Arbitrage - Volatility                                     |                                                  |              |              |                  |               |                |                |                |
| 3) Credit Suisse Adaptive Volatility Index All Rolls USD  Short USD Swaption Straddles  1.4 6.5% 0.0% 0.0% 6.5% 6.5% 6.5% 6.5% 6.5% 6.5% 6.5% 6.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 1) Morgan Stanley FX VolNet Premium                        | FX Volatility Arbitrage - Short Variance Swaps - | 2.3          | 9.7%         | 1.7%             | 1.7%          | 6.1%           | 3.4%           | -6.3%          |
| Economic Indicators - Research  1) BOA Merrill Lynch Japan Long-Short Volatility Index 2) DB Equity Low Beta TurnOver Control Factor 3) BOA Merrill Lynch Europe Long-Short Volatility 4.6% -2.8%  3) BOA Merrill Lynch Europe Long-Short Volatility 5 Europe Equity Long/Short Low Vol Factor 6 Indicators - Macro 1.0 Indicators - Macro 1.1 Indicators - Macro 1.2 Indicators - Macro 1.3 Indicators - Macro 1.4 Indicators - Macro 1.5 Indicators - Macro 1.6 Indicators - Macro 1.7 Indicators - Macro 1.8 Indicators - Macro 1.9 Indicators - Macro 1.0 Indicators - Macro 1.1 Indicators - Macro 1.2 Indicators - Macro 1.3 Indicators - Macro 1.4 Indicators - Macro 1.5 Indicators - Macro 1.6 Indicators - Macro 1.7 Indicators - Macro 1.7 Indicators - Macro 1.8 Indicators - Macro 1.9 Indicators - Macro 1.1 Indicators - Macro 1.1 Indicators - Macro 1.2 Indicators - Macro 1.3 Indicators - Macro 1.4 Indicators - Macro 1.5 Indicators - Macro 1.7 Indicators - Macro 1.7 Indicators - Macro 1.8 Indicators - Macro 1.9 Indicators - Macro 1.1 Indicators - Macro 1.1 Indicators - Macro 1.2 Indicators - Macro 1.3 Indicators - Macro 1.4 Indicators - Macro 1.5 Indicators - Macro 1.7 Indicators - Macro 1.8 Indicators - Indicators - Macro 1.8 Indicators - Indicators - Indicators - Ind | 2) BOA Merrill Lynch Short Synthetic Variance Index - GL   | Short SPDR Gold ETF Variance Swaps               | 1.6          | 10.2%        | 1.7%             | 1.7%          | 8.6%           | 11.7%          | 7.8%           |
| 1) BOA Merrill Lynch Japan Long-Short Volatility Index 2) DB Equity Low Beta TurnOver Control Factor 3) BOA Merrill Lynch Europe Long-Short Volatility Europe Equity Long/Short Low Vol Factor 1.2 10.2% 1.8% 1.8% 5.8% 4.6% -2.8% 3) BOA Merrill Lynch Europe Long-Short Volatility Europe Equity Long/Short Low Vol Factor 1.1 7.5% -2.0% -2.0% 8.5% 2.9%  Economic Indicators - Macro 1) Nomura Macro Cross-Country Government Bonds Relative Value Investing 1.6 3.2% 0.4% 0.4% 3.3% 0.4% 0.2% 2) Barclays Global MEDES Global Fixed Income Turn of Month 1.5 4.3% 1.1% 1.1% 3.1% 0.8% 1.5% 3) Barclays FX Switch Carry Value Momentum Factor Allocation 1.4 5.7% 1.5% 1.5% 4.0% -1.0% 0.2%  Momentum - Mean Reversion 1) Societe Generale Interest Rates Strangle Premium Euro Short EUR Swaption Strangle                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 3) Credit Suisse Adaptive Volatility Index All Rolls USD   | Short USD Swaption Straddles                     | 1.4          | 6.5%         | 0.0%             | 0.0%          | 6.5%           | 6.5%           | 6.5%           |
| 2) DB Equity Low Beta TurnOver Control Factor Global Equity Long/Short Low Vol Factor 1.2 10.2% 1.8% 1.8% 5.8% 4.6% -2.8% 3) BOA Merrill Lynch Europe Long-Short Volatility Europe Equity Long/Short Low Vol Factor 1.1 7.5% -2.0% -2.0% 8.5% 2.9% Economic Indicators - Macro  1) Nomura Macro Cross-Country Government Bonds Relative Value Investing 1.6 3.2% 0.4% 0.4% 3.3% 0.4% 0.2% 2) Barclays Global MEDES Global Fixed Income Turn of Month 1.5 4.3% 1.1% 1.1% 3.1% 0.8% 1.5% 3) Barclays FX Switch Carry Value Momentum Factor Allocation 1.4 5.7% 1.5% 1.5% 4.0% -1.0% 0.2% Edomentum - Mean Reversion  1) Societe Generale Interest Rates Strangle Premium Euro Short EUR Swaption Strangle 1.3 3.0% 0.2% 0.2% 2.8% 4.6% 6.5%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Economic Indicators - Research                             |                                                  |              |              |                  |               |                |                |                |
| 3) BOA Merrill Lynch Europe Long-Short Volatility Europe Equity Long/Short Low Vol Factor 1.1 7.5% -2.0% -2.0% 8.5% 2.9% Economic Indicators - Macro  1) Nomura Macro Cross-Country Government Bonds Relative Value Investing 1.6 3.2% 0.4% 0.4% 3.3% 0.4% 0.2% 2) Barclays Global MEDES Global Fixed Income Turn of Month 1.5 4.3% 1.1% 1.1% 3.1% 0.8% 1.5% 3) Barclays FX Switch Carry Value Momentum Factor Allocation 1.4 5.7% 1.5% 1.5% 4.0% -1.0% 0.2% Momentum - Mean Reversion  1) Societe Generale Interest Rates Strangle Premium Euro Short EUR Swaption Strangle 1.3 3.0% 0.2% 0.2% 2.8% 4.6% 6.5%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 1) BOA Merrill Lynch Japan Long-Short Volatility Index     | Japan Equity Long/Short Low Vol Factor           | 1.8          | 10.1%        | -0.2%            | -0.2%         | 9.1%           | -0.8%          |                |
| Economic Indicators - Macro  1) Nomura Macro Cross-Country  Government Bonds Relative Value Investing 1.6 3.2% 0.4% 0.4% 3.3% 0.2% 0.2% 2) Barclays Global MEDES  Global Fixed Income Turn of Month 1.5 4.3% 1.1% 1.1% 3.1% 0.8% 1.5% 3) Barclays FX Switch  Carry Value Momentum Factor Allocation 1.4 5.7% 1.5% 1.5% 4.0% -1.0% 0.2%  Momentum - Mean Reversion  1) Societe Generale Interest Rates Strangle Premium Euro  Short EUR Swaption Strangle 1.3 3.0% 0.2% 0.2% 2.8% 4.6% 6.5%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 2) DB Equity Low Beta TurnOver Control Factor              | Global Equity Long/Short Low Vol Factor          | 1.2          | 10.2%        | 1.8%             | 1.8%          | 5.8%           | 4.6%           | -2.8%          |
| 1) Nomura Macro Cross-Country Government Bonds Relative Value Investing 1.6 3.2% 0.4% 0.4% 3.3% 0.4% 0.2% 2) Barclays Global MEDES Global Fixed Income Turn of Month 1.5 4.3% 1.1% 1.1% 3.1% 0.8% 1.5% 3) Barclays FX Switch Carry Value Momentum Factor Allocation 1.4 5.7% 1.5% 1.5% 4.0% 1.0% 0.2% 4.0% 0.2% 4.0% 0.2% 6.5%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 3) BOA Merrill Lynch Europe Long-Short Volatility          | Europe Equity Long/Short Low Vol Factor          | 1.1          | 7.5%         | -2.0%            | -2.0%         | 8.5%           | 2.9%           |                |
| 2) Barclays Global MEDES Global Fixed Income Turn of Month 1.5 4.3% 1.1% 1.1% 3.1% 0.8% 1.5% 3) Barclays FX Switch Carry Value Momentum Factor Allocation 1.4 5.7% 1.5% 1.5% 4.0% -1.0% 0.2% Momentum - Mean Reversion  1) Societe Generale Interest Rates Strangle Premium Euro Short EUR Swaption Strangle 1.3 3.0% 0.2% 0.2% 2.8% 4.6% 6.5%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Economic Indicators - Macro                                |                                                  |              |              |                  |               |                |                |                |
| 3) Barclays FX Switch Carry Value Momentum Factor Allocation 1.4 5.7% 1.5% 1.5% 4.0% -1.0% 0.2% Momentum - Mean Reversion  1) Societe Generale Interest Rates Strangle Premium Euro Short EUR Swaption Strangle 1.3 3.0% 0.2% 0.2% 2.8% 4.6% 6.5%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 1) Nomura Macro Cross-Country                              | Government Bonds Relative Value Investing        | 1.6          | 3.2%         | 0.4%             | 0.4%          | 3.3%           | 0.4%           | 0.2%           |
| Momentum - Mean Reversion  1) Societe Generale Interest Rates Strangle Premium Euro Short EUR Swaption Strangle 1.3 3.0% 0.2% 0.2% 2.8% 4.6% 6.5%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 2) Barclays Global MEDES                                   | Global Fixed Income Turn of Month                | 1.5          | 4.3%         | 1.1%             | 1.1%          | 3.1%           | 0.8%           | 1.5%           |
| 1) Societe Generale Interest Rates Strangle Premium Euro Short EUR Swaption Strangle 1.3 3.0% 0.2% 0.2% 2.8% 4.6% 6.5%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 3) Barclays FX Switch                                      | Carry Value Momentum Factor Allocation           | 1.4          | 5.7%         | 1.5%             | 1.5%          | 4.0%           | -1.0%          | 0.2%           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Momentum - Mean Reversion                                  |                                                  |              |              |                  |               |                |                |                |
| 2) Societe Generale Credit Furone Strangle Premium Short Credit Strangle - Europe 0.5 4.2% 1.2% 3.1% 3.0% 1.7%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 1) Societe Generale Interest Rates Strangle Premium Euro   | Short EUR Swaption Strangle                      | 1.3          | 3.0%         | 0.2%             | 0.2%          | 2.8%           | 4.6%           | 6.5%           |
| 27 555766 5676 476 576 476 576 576 576 576 576 576 576 576 576 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 2) Societe Generale Credit Europe Strangle Premium         | Short Credit Strangle - Europe                   | 0.5          | 4.2%         | 1.2%             | 1.2%          | 3.1%           | 3.0%           | 1.7%           |
| 3) Societe Generale Tactical Short Europe Single Stock Mean Reversion - Short 0.2 2.1% 0.0% 0.0% 2.1% 0.9% 1.3%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 3) Societe Generale Tactical Short                         | Europe Single Stock Mean Reversion - Short       | 0.2          | 2.1%         | 0.0%             | 0.0%          | 2.1%           | 0.9%           | 1.3%           |
| Momentum - Trend Following                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Momentum - Trend Following                                 |                                                  |              |              |                  |               |                |                |                |
| 1) BNP Paribas Alpha Momentum ex-Agriculture and Livestock Commodity Trend Following - Long/Short 1.1 12.2% -3.4% -3.4% 17.8% -5.5% -7.3%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 1) BNP Paribas Alpha Momentum ex-Agriculture and Livestock | Commodity Trend Following - Long/Short           | 1.1          | 12.2%        | -3.4%            | -3.4%         | 17.8%          | -5.5%          | -7.3%          |
| 2) Societe Generale Gold to Oil Commodity Trend Following - Gold and Oil 0.8 6.4% 2.0% 2.0% 5.4% 6.4% 1.8%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 2) Societe Generale Gold to Oil                            | Commodity Trend Following - Gold and Oil         | 8.0          | 6.4%         | 2.0%             | 2.0%          | 5.4%           | 6.4%           | 1.8%           |
| 3) BNP Paribas BPSTAR USD Enhanced Series 3 USD Swap Rates Trend Following 0.7 2.1% 0.2% 0.2% 1.1% 0.2%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 3) BNP Paribas BPSTAR USD Enhanced Series 3                | USD Swap Rates Trend Following                   | 0.7          | 2.1%         | 0.2%             | 0.2%          | 2.2%           | 1.1%           | 0.2%           |

<u>Disclaimer:</u> to the extent the information relates to the Clear Alpha Global Index<sup>TM</sup> (the "Index"), the information contained herein (including historical prices or values) has been obtained from sources that Clear Alpha considers to be reliable; however, Clear Alpha does not make any representation as to, or accepts any responsibility or liability for, the accuracy or completeness of the information contained herein. For a more complete description of the Clear Alpha Global Index<sup>TM</sup>, reference is made to the document Index Methodology, available from Clear Alpha on request. All data are historical estimations using available data. Clear Alpha does not make any representation herein regarding the advisability of investing in any product based on the Index. Past performance is no guarantee of future performance.

<sup>&</sup>lt;sup>1</sup> All performance figures are based on daily snapshots of published returns, not allowing for corrections or restatements at a later stage. In order for all indices to be comparable, the performance numbers in this report have been adjusted when an index is not published in USD or its return is not expressed as a total return.



## Monthly Report – January 2019

### **Arbitrage Strategies** (CLAXARB Index) +1.89% in January, -0.26% in the last 12 months

#### Carry Strategies (CLAXCAR Index) +5.02% in Jan, -0.09% in the last 12 months

|      | Jan    | Feb    | Mar    | Apr    | May    | Jun    | Jul    | Aug    | Sep    | Oct    | Nov    | Dec    | Total  |
|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 2015 | -2.82% | 1.02%  | -0.83% | 0.97%  | -0.87% | -1.42% | -1.92% | -4.18% | -1.76% | 2.88%  | 0.74%  | -1.03% | -9.04% |
| 2016 | -1.20% | -0.44% | 2.68%  | 0.09%  | -0.90% | 1.69%  | 0.28%  | 0.55%  | 0.74%  | 1.90%  | 0.38%  | 0.88%  | 6.78%  |
| 2017 | -0.05% | 1.91%  | -0.39% | -0.61% | -0.37% | 0.22%  | 0.61%  | -0.40% | 0.67%  | -0.63% | -0.42% | 1.44%  | 1.95%  |
| 2018 | -0.45% | -0.17% | -0.29% | 0.91%  | -0.84% | -1.05% | 1.42%  | -5.05% | 1.49%  | -0.43% | 2.28%  | -3.02% | -5.29% |
| 2019 | 5.02%  |        |        |        |        |        |        |        |        |        |        |        | 5.02%  |

FX Carry strategies came back in January, propelling the carry sub-index up +5.02%. 23 out of 24 indices in this group made gains, with returns ranging from +5.6% to -0.6%. Within the G10 sector, higher yield currencies such as CAD (+3.8%), AUD (+3.1%) and NZD (+2.9%) rose sharply while low yield currencies declined<sup>2</sup>. Most EM currencies gained against the USD3 with returns ranging from +8.6% (ZAR) to -1.9% (RON); the J.P. Morgan EM currency index (FXJPEMCI) was up +3.5%. Global FX carry indices finished up +3.4% on average (across 13 algorithms), while G10 indices were up +2.0% (11 algorithms). In addition, Euro Stoxx 50 dividend carry algorithms contributed +2.1% on average across 9 indices (we classify them as equity carry strategies).

#### Top 3 movers (ranked by 1 month returns)

| ۸-  | bitrage - Carry                   |                              | Jan-19 | YTD return | 1Y Sharpe | 1Y return  |
|-----|-----------------------------------|------------------------------|--------|------------|-----------|------------|
| AII | bitrage - Carry                   |                              | return | TID Tetuin | 11 Sharpe | 11 letuili |
| 1)  | HSBC Global FX Carry              | Global FX Carry Arbitrage    | 5.6%   | 5.6%       | 0.4       | 3.9%       |
| 2)  | CIBC FX Global USD Momentum Enhan | ce Global FX Carry Arbitrage | 5.1%   | 5.1%       | 0.8       | 8.4%       |
| 3)  | DB Ascent Broad                   | Global FX Carry Arbitrage    | 5.0%   | 5.0%       | 0.6       | 8.0%       |

#### Commodity Yield Optimisation (CLAXCYO Index) -0.24% in Jan, +0.56% in the last 12 months

|      | Jan    | Feb   | Mar    | Apr    | May    | Jun    | Jul   | Aug    | Sep    | Oct    | Nov    | Dec    | Total  |
|------|--------|-------|--------|--------|--------|--------|-------|--------|--------|--------|--------|--------|--------|
| 2015 | 0.71%  | 0.08% | 0.30%  | -3.96% | -1.41% | 0.33%  | 0.87% | -0.70% | -0.12% | 2.72%  | 4.07%  | 2.97%  | 5.75%  |
| 2016 | 0.80%  | 2.96% | -0.05% | -2.11% | 0.03%  | 1.04%  | 2.58% | -0.02% | 0.13%  | 0.40%  | 0.73%  | -1.29% | 5.22%  |
| 2017 | 2.41%  | 1.14% | 0.24%  | 1.13%  | -0.19% | 0.78%  | 0.90% | 2.03%  | -0.11% | 0.21%  | 1.61%  | -0.42% | 10.13% |
| 2018 | 1.92%  | 2.16% | 0.73%  | -1.37% | 1.75%  | -3.26% | 2.10% | 2.34%  | -2.48% | -0.04% | -8.78% | 8.60%  | 2.74%  |
| 2019 | -0.24% |       |        |        |        |        |       |        |        |        |        |        | -0.24% |

The Commodity Arbitrage sub-index finished slightly lower in January, down -0.24% after volatility normalisation (leverage adjustment). The average return across 37 constituent indices in this group was +0.1%, ranging from +2.7% to -1.7%. With oil prices rising +17.6% in front end march futures (for WTI crude), future curves flattened4 and short front month positions incurred losses. These were partially offset by a steepening Natural Gas curve, where positions in March 20 versus March 19 futures made gains as the difference rose from -0.9% to +4.0%. In addition, congestion arbitrage positions were positive (+0.3% across ten indices; see also the top spot in the table below), showing that congestion trades can be a diversifier when combined with traditional curve carry algorithms.

| Ar | bitrage - Commodity Yield Optimization |                                           | Jan-19<br>return | YTD return | 1Y Sharpe | 1Y return |
|----|----------------------------------------|-------------------------------------------|------------------|------------|-----------|-----------|
| 1) | Credit Suisse Custom 24 (commodity o   | on Commodity Congestion Arbitrage         | 2.7%             | 2.7%       | -0.2      | 0.4%      |
| 2) | UBS CABNS T4                           | Commodity Future Arbitrage - Beta Neutral | 1.8%             | 1.8%       | -0.8      | -4.2%     |
| 3) | DB Commodity Harvest OYE               | Commodity Future Arbitrage - BCOM Weights | 1.3%             | 1.3%       | 0.1       | 2.2%      |

 $<sup>^2</sup>$  The EUR, CHF and SEK were down -0.4%, -1.5% and -2.4% against the USD, respectively. Source: Bloomberg

<sup>&</sup>lt;sup>3</sup> For example, the ZAR, RUB and BRL were up +8.6%, +7.1% and +6.5% respectively (versus the USD). Source: Bloomberg

<sup>&</sup>lt;sup>4</sup> The premium of Mar 20 over Mar 19 WTI oil future prices fell from +6.6% to +1.5% in the course of one month. Source: Bloomberg

### Clear Alpha Global Index<sup>™</sup> (Bloomberg: CLAX <Go>)

## Monthly Report – January 2019



### Arbitrage Strategies (<u>CLAXARB Index</u>) +1.89% in January, -0.26% in the last 12 months

#### Fixed Income Arbitrage Strategies (CLAXFIA Index) +1.96% in Jan, +12.45% in the last 12 months

|      | Jan    | Feb    | Mar    | Apr    | May    | Jun    | Jul    | Aug    | Sep    | Oct    | Nov    | Dec    | Total  |
|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 2015 | 2.21%  | -0.12% | 1.77%  | 0.12%  | -0.27% | -1.57% | 1.33%  | 1.09%  | 1.87%  | 0.41%  | 0.03%  | -1.21% | 5.74%  |
| 2016 | 3.84%  | 0.88%  | -0.29% | -0.34% | -0.27% | 3.22%  | -0.35% | -0.29% | 0.03%  | -1.47% | -4.19% | -1.20% | -0.67% |
| 2017 | -0.43% | 1.25%  | 0.20%  | 1.70%  | 1.47%  | -1.92% | 0.14%  | 0.77%  | -0.08% | 1.19%  | -0.65% | -1.33% | 2.25%  |
| 2018 | 0.41%  | 0.31%  | 1.16%  | 0.27%  | 1.70%  | 1.24%  | 0.84%  | 0.53%  | -1.64% | 1.53%  | 3.58%  | 0.40%  | 10.75% |
| 2019 | 1.96%  |        |        |        |        |        |        |        |        |        |        |        | 1.96%  |

After their impressive performance in 2018, Fixed Income Arbitrage strategies are off to a strong start in 2019 with a +1.96% gain in January. All except one index in this group were positive. The US Fed took a big step by announcing that it would refrain from further rate hikes in the near future. Interest rates fell across the board while credit spreads in both High Yield and Investment Grade sectors contracted<sup>5</sup>. As for the algorithms in our database, all long term curve carry trades (e.g. Société Générale's BOSS, Barclays' SABER – see table below) posted gains (+0.6% on average across six indices), as did credit carry positions. Forward rate bias strategies were positive too, averaging +0.1% across 12 indices, as short term interest rate futures rose. On a related note, USD short term benchmark rates have stabilised in the past month, which may have caused some algorithms to switch back to long Eurodollar futures.

#### Top 3 movers (ranked by 1 month returns)

| Λ. | bitrage - Fixed Income       |                                         | Jan-19 | YTD return | 1Y Sharpe | 1Y return |
|----|------------------------------|-----------------------------------------|--------|------------|-----------|-----------|
| Ai | bitrage - Fixed income       |                                         | return | TID return | 11 Sharpe | 11 return |
| 1) | Societe Generale BOSS        | Global Yield Curve Carry Arbitrage      | 2.0%   | 2.0%       | 2.3       | 9.6%      |
| 2) | Barclays Global SABER        | Global Bond Futures Carry Arbitrage     | 0.7%   | 0.7%       | 0.7       | 2.9%      |
| 3) | Barclays Atlantic HYIGS Beta | HYvs IG Credit Spread Arbitage (Static) | 0.7%   | 0.7%       | 0.4       | 2.7%      |

#### Volatility Arbitrage Strategies (CLAXVOA Index) +1.39% in Jan, -6.17% in the last 12 months

|      | Jan    | Feb    | Mar    | Apr   | May    | Jun    | Jul   | Aug    | Sep    | Oct    | Nov    | Dec    | Total  |
|------|--------|--------|--------|-------|--------|--------|-------|--------|--------|--------|--------|--------|--------|
| 2015 | -1.37% | 2.89%  | -0.90% | 1.10% | 0.13%  | -1.24% | 2.27% | -5.35% | -0.07% | 1.45%  | 0.83%  | -0.12% | -0.64% |
| 2016 | -1.80% | -0.65% | 1.91%  | 0.08% | 2.12%  | -2.29% | 0.74% | 1.39%  | 0.08%  | 0.71%  | -0.20% | 1.12%  | 3.15%  |
| 2017 | 1.22%  | 1.61%  | 0.99%  | 1.35% | 1.07%  | 0.25%  | 1.59% | 0.34%  | 1.32%  | 1.31%  | 0.92%  | 0.71%  | 13.43% |
| 2018 | -0.87% | -7.10% | -0.76% | 0.79% | -0.93% | 0.51%  | 1.22% | 0.13%  | 0.87%  | -2.15% | 0.64%  | -0.67% | -8.26% |
| 2019 | 1.39%  |        |        |       |        |        |       |        |        |        |        |        | 1.39%  |

The Volatility Arbitrage index had its strongest month in more than one year (+1.39%), as equity markets rallied and volatility levels – both implied and realised – receded. The VIX and VStoxx indices were down -8.9 and -8.8 points respectively (to 16.6 and 15.1). One month realised volatilities for the S&P 500 and the Euro Stoxx 50 indices dropped -13.9 and -10.1 points. Equity volatility strategies averaged +2.3% across 38 indices, with very few losses. In other asset classes, commodity strategies gained +3.3% on average, supported by falling implied volatilities in WTI and Brent crude oil<sup>6</sup>. FX volatility strategies were positive too (+0.8%, across 5 indices) as implied volatility came down<sup>7</sup>. Fixed Income volatility strategies were only marginally positive, up 0.1% on average, as USD 10 year interest rates experienced large daily swings early in January<sup>8</sup>.

| ۸۲ | bitrage - Volatility                  |                                     | Jan-19 | YTD return  | 1Y Sharpe | 1Y return  |
|----|---------------------------------------|-------------------------------------|--------|-------------|-----------|------------|
| Ai | bitrage - voiatility                  |                                     | return | TID letuili | 11 Sharpe | 11 letuili |
| 1) | BNP Paribas Volatility Mean Reversion | Short VIX Futures                   | 9.0%   | 9.0%        | -0.2      | -2.1%      |
| 2) | Citi Commodities Pure Brent Vol Carry | Brent Futures Short Volatility      | 9.0%   | 9.0%        | -0.7      | -6.3%      |
| 3) | DB UK Volatility Carry                | Short FTSE 100 delta hedged options | 7.2%   | 7.2%        | -1.1      | -13.1%     |

<sup>&</sup>lt;sup>5</sup> 10Y swap rates fell -5bps in USD, -15bps in EUR, -2bps in GBP and -3bps in JPY. The iBoxx USD IG index was up +3.2% while the HY index was up +4.8%. Source: Bloomberg

<sup>&</sup>lt;sup>6</sup> WTI and Brent crude oil 3-month implied volatilities finished down -14.5% and -10.4%, at 33.9% and 32.3%. Source: Bloomberg.

<sup>&</sup>lt;sup>7</sup> For example, the EUR/USD one month implied volatility fell -1.2%, to 6.0%. Source: Bloomberg.

<sup>&</sup>lt;sup>8</sup> The USD 10Y swap rate covered 15bps ranges on the 3<sup>rd</sup> and 4<sup>th</sup> of January, pushing implied volatility above its average. Source: Bloomberg.

## **Monthly Report – January 2019**



# **Economic Indicator Strategies** (<u>CLAXECI Index</u>) +3.43% in January, -2.34% in the last 12 months

Research Strategies (CLAXRES Index) +4.39% in Jan, -6.38% in the last 12 months

|      | Jan    | Feb    | Mar   | Apr    | May    | Jun    | Jul    | Aug    | Sep    | Oct    | Nov    | Dec    | Total   |
|------|--------|--------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
| 2015 | -1.71% | 0.76%  | 0.69% | -1.30% | 1.63%  | 0.08%  | -2.66% | -3.20% | -1.19% | -1.04% | -0.22% | 0.81%  | -7.22%  |
| 2016 | -3.64% | 1.08%  | 1.80% | -1.12% | -0.79% | -4.33% | 0.73%  | -0.90% | 2.30%  | -0.11% | 2.69%  | 1.72%  | -0.83%  |
| 2017 | 0.08%  | 0.80%  | 0.33% | 0.32%  | -0.68% | 0.99%  | 0.33%  | 0.67%  | 1.12%  | 1.26%  | 0.43%  | 0.33%  | 6.14%   |
| 2018 | -1.37% | -0.51% | 1.89% | -0.87% | -0.02% | -2.17% | -1.75% | -0.17% | -1.89% | -3.28% | -1.16% | -0.82% | -11.54% |
| 2019 | 4.39%  |        |       |        |        |        |        |        |        |        |        |        | 4.39%   |

Equity Factor strategies surged +4.39% in January, an impressive performance offsetting close to a third of last year's losses. Size and Value factors showed the strongest excess returns, up +3.1% (6 algorithms) and +2.1% (14 algorithms) respectively. Quality and Low Vol made smaller gains (+0.4% each, across 17 and 12 algorithms respectively). Cross sectional momentum algorithms were the only ones to finish negative on average, at -0.3%. To some extent, these factor returns can be reconciled with performances of benchmark indices: for example, the Russell 2000 was up +11.2% while the Russell 1000 was up only +8.2%, underscoring small cap strength. Likewise in Europe, the Euro Stoxx 50 index was up +5.3% while the Stoxx 600 index was up +6.2%. Having said that, the Russell 1000 Value index was up only +7.6%, underperforming the cap-weighted version, and showing that the Value Factor implemented by algorithms is using different Value measures.

#### Top 3 movers (ranked by 1 month returns)

| Ec | onomic Indicators - Research                                                 | Jan-19<br>return | YTD return | 1Y Sharpe | 1Y return |
|----|------------------------------------------------------------------------------|------------------|------------|-----------|-----------|
| 1) | BOA Merrill Lynch US Long-Short Size US Equity Long/Short Size Factor        | 5.6%             | 5.6%       | 0.1       | 2.7%      |
| 2) | JPMorgan Equity Risk Premium Global V. Global Equity Long/Short Value Factor | 4.8%             | 4.8%       | -0.2      | 0.2%      |
| 3) | JPMorgan Equity Risk Premium Global Lc Global Equity Long/Short Size Factor  | 4.7%             | 4.7%       | -0.1      | 1.3%      |

#### Macro Strategies (CLAXMAC Index) +1.95% in Jan, +3.11% in the last 12 months

|      | Jan    | Feb    | Mar    | Apr    | May    | Jun    | Jul    | Aug    | Sep    | Oct    | Nov   | Dec    | Total  |
|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|--------|--------|
| 2015 | -0.55% | -0.49% | 0.22%  | -0.55% | -0.04% | -2.19% | 1.72%  | -0.20% | 0.57%  | 1.10%  | 0.29% | 0.06%  | -0.10% |
| 2016 | 0.80%  | 1.79%  | -0.38% | -0.37% | -0.95% | 1.08%  | 1.27%  | -0.33% | -0.35% | -0.92% | 0.45% | -0.26% | 1.82%  |
| 2017 | -0.00% | 1.39%  | 0.35%  | 1.30%  | 0.44%  | -0.21% | 0.24%  | 1.49%  | 0.38%  | 0.92%  | 1.01% | 0.56%  | 8.13%  |
| 2018 | 0.13%  | -0.96% | 0.93%  | 0.48%  | -0.54% | 0.49%  | -0.53% | -0.82% | 2.22%  | -1.37% | 0.08% | 1.23%  | 1.28%  |
| 2019 | 1.95%  |        |        |        |        |        |        |        |        |        |       |        | 1.95%  |

The Macro sub-index rose +1.95% during January, driven mostly by gains on FX Value convergence positions and EM FX outperformance (+1.4% across 13 algorithms). FX Value trades such as short CHF versus long CAD were profitable while EM currencies rallied<sup>9</sup>. Commodity backwardation positions were moderately profitable, gaining +0.2% on average for 21 indices, as long energy and short agriculture positions finished positive<sup>10</sup>. Fixed Income macro algorithms were mostly positive (+0.4%) helped by lower interest rates. Equity macro strategies were up by the same amount (+0.4%) thanks to profitable long equity positions. Finally, asset allocation algorithms which switch between equities and bonds were very successful (+3.8% across 4 indices, see also table below) as they benefitted from the rally in both equities and bonds<sup>11</sup>.

| Ec | onomic Indicators - Macro     | Jan-19                                  | YTD return | 1Y Sharpe | 1Y return |       |
|----|-------------------------------|-----------------------------------------|------------|-----------|-----------|-------|
| EU | onomic malcators - Macro      | return                                  | TID return |           |           |       |
| 1) | Societe Generale Fed Model US | US Bond vs Equity Macro Allocation      | 7.9%       | 7.9%      | -0.3      | -3.2% |
| 2) | DB Global Ascent II           | Global FX Carry vs FRB Macro Allocation | 6.0%       | 6.0%      | 0.5       | 8.2%  |
| 3) | CIBC FX EM USD Value          | EM FX Value Convergence                 | 3.6%       | 3.6%      | -0.7      | -5.7% |

<sup>&</sup>lt;sup>9</sup> The CAD/CHF cross was up +5.2% in January; the J.P. Morgan EM currency index was up +3.5%. Source: Bloomberg.

<sup>&</sup>lt;sup>10</sup> The BCOM Energy sub-index was up +9.0%, the BCOM Agriculture sub-index was up +2.8%. Agriculture curves are steeper on average than Energy curves, hence the short versus long. Source: Bloomberg.

<sup>11</sup> The MSCI World Index was up +7.7%, the J.P. Morgan Global Aggregate Bond index was up +1.4%. Source: Bloomberg.

# Monthly Report – January 2019



# Momentum Strategies (CLAXMOM Index) -0.12% in January, -6.09% in the last 12 months

#### Mean Reversion Strategies (CLAXMRE Index) +0.94% in Jan, -7.17% in the last 12 months

|      | Jan    | Feb    | Mar   | Apr    | May    | Jun   | Jul    | Aug    | Sep    | Oct    | Nov    | Dec    | Total  |
|------|--------|--------|-------|--------|--------|-------|--------|--------|--------|--------|--------|--------|--------|
| 2015 | 0.24%  | 0.52%  | 0.75% | -0.24% | 0.37%  | 0.06% | -0.20% | -3.32% | 2.36%  | 0.19%  | 0.27%  | 0.56%  | 1.48%  |
| 2016 | -1.54% | 0.33%  | 0.08% | -0.18% | 0.45%  | 1.56% | -0.05% | 0.40%  | 1.01%  | 0.19%  | -0.31% | -0.25% | 1.65%  |
| 2017 | 0.75%  | 0.38%  | 0.84% | 0.73%  | 0.37%  | 0.47% | 1.18%  | 1.73%  | 0.07%  | 0.65%  | -0.86% | 1.21%  | 7.77%  |
| 2018 | -1.42% | -6.31% | 0.37% | 0.81%  | -0.45% | 0.37% | 1.37%  | 0.43%  | -0.76% | -2.81% | 0.43%  | -1.55% | -9.35% |
| 2019 | 0.94%  |        |       |        |        |       |        |        |        |        |        |        | 0.94%  |

Mean Reversion strategies gained +0.94% in January, predominantly due to buy-write positions on the S&P 500 and Euro Stoxx 50 indices (as per the table below). The nine buy-write representative algorithms in our database were up +1.8% on average, benefitting from the rally in the underlying equity markets<sup>12</sup>. Meanwhile, short-term mean reversion algorithms (which are usually variance based) gained +1.4% on the Euro Stoxx 50 (eight indices) and +0.4% on the S&P 500 index (ten indices); the latter were less profitable because the index saw fewer corrections (negative daily returns) during the month.

#### Top 3 movers (ranked by 1 month returns)

| Me | omentum - Mean Reversion               | Jan-19                  | YTD return | 1Y Sharpe | 1Y return |       |
|----|----------------------------------------|-------------------------|------------|-----------|-----------|-------|
|    |                                        |                         | return     |           |           |       |
| 1) | BNP Paribas Buy Write 103              | Euro Stoxx 50 Buy-Write | 5.9%       | 5.9%      | -0.7      | -7.8% |
| 2) | Credit Suisse 3 Month Protected Equity | 3.8%                    | 3.8%       | 0.0       | 2.4%      |       |
| 3) | BNP Paribas 103 EU Call Carry          | Euro Stoxx 50 Buy-Write | 3.4%       | 3.4%      | -0.4      | -1.5% |

#### Trend-Following Strategies (CLAXTRF Index) -0.56% in Jan, -5.81% in the last 12 months

|      | Jan    | Feb    | Mar    | Apr    | May    | Jun    | Jul    | Aug    | Sep    | Oct    | Nov    | Dec    | Total  |
|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 2015 | 1.82%  | -0.36% | 0.33%  | -0.62% | -0.00% | -2.08% | 0.73%  | -1.01% | 0.60%  | -0.32% | 0.82%  | -1.36% | -1.51% |
| 2016 | 0.68%  | 1.01%  | -1.21% | 0.24%  | -0.22% | 1.75%  | -0.05% | -1.33% | 0.59%  | -0.27% | 0.13%  | 0.04%  | 1.32%  |
| 2017 | -0.22% | 1.54%  | -0.68% | 0.33%  | 0.26%  | -1.28% | 0.28%  | 0.58%  | -1.13% | 1.39%  | -0.17% | 0.83%  | 1.70%  |
| 2018 | 2.51%  | -2.55% | -0.13% | -0.27% | 0.01%  | -0.10% | -0.42% | 0.51%  | -0.52% | -3.05% | -0.06% | 1.25%  | -2.90% |
| 2019 | -0.56% |        |        |        |        |        |        |        |        |        |        |        | -0.56% |

The Trend following sub-index lost -0.56% in January as the market broadly corrected from recent (negative) trends. Commodity strategies lost -2.8% (across 17 indices) as commodity prices rebounded<sup>13</sup>. FX strategies declined -1.3% (across 15 indices), with G10 pairs such as AUD/USD and CAD/USD posting losses<sup>14</sup>. Equity strategies tumbled -3.7% (across 5 indices) as they were predominantly short following the bear market in 2018. Fixed income strategies made gains (+0.5%, 13 indices) as interest rates continued to fall, and bond prices rose<sup>15</sup>. Finally, multi-asset trend following strategies were positive on average (+0.8%) across a total of 34 indices; due to this larger number of constituents, it carries a substantial weight in the overall sub-index performance. These algorithms are often constrained to long-only positions based on trends, which explains the positive return.

| NA   | omentum - Trend Following              | Jan-19                                  | YTD return | 1Y Sharpe | 1Y return |           |
|------|----------------------------------------|-----------------------------------------|------------|-----------|-----------|-----------|
| 1410 | omentum - Trena i onowing              |                                         | return     | TTD Tetum | 11 Sharpe | 11 letuin |
| 1)   | Societe Generale Global Momentum       | ETF Trend Following - Long Only         | 10.2%      | 10.2%     | -0.7      | -8.6%     |
| 2)   | HSBC Dynamic 5 ETF                     | Multi-Asset Trend Following - Long Only | 4.0%       | 4.0%      | -0.9      | -2.6%     |
| 3)   | Societe Generale Interest Rate Trend F | 3.8%                                    | 3.8%       | 0.1       | 2.7%      |           |

<sup>&</sup>lt;sup>12</sup> The S&P 500 index was up +7.9%, the Euro Stoxx 50 index up +5.3%. Source: Bloomberg

<sup>13</sup> The BCOM Energy sub-index was down -5.7% in October, -3.5% in November, -18.9% in December; it rose +9.0% in January. Source: Bloomberg

<sup>&</sup>lt;sup>14</sup> The AUD and CAD were down -9.7% and -7.8% against the USD in 2018; they rose +3.2% and +3.9% in January. Source: Bloomberg

<sup>&</sup>lt;sup>15</sup> The USD 10 year swap rate was down -17bps in November, -33bps in December, and -5bps in January. Bunds (0.25% Aug 2028) were up +0.9% in October, +0.7% in November, +0.7% in December, and +1.4% in January. Source: Bloomberg