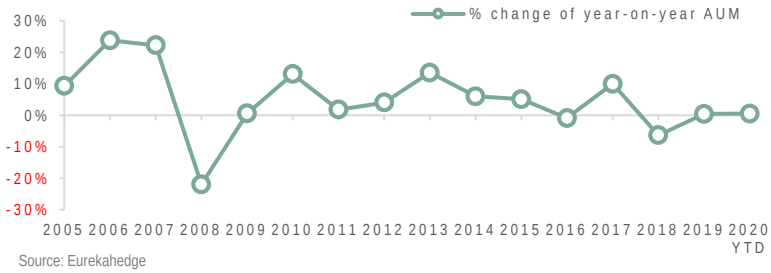

# THE EUREKAHEDGE REPORT

## MARCH 2020

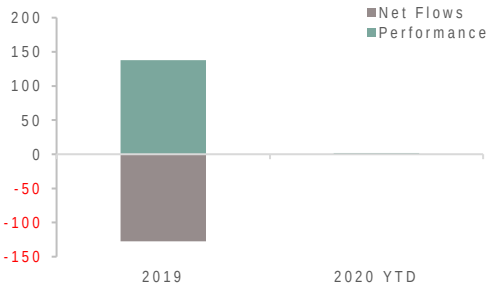
## GLOBAL HEDGE FUNDS AUM (2005 – 2020 YTD)

US$2305 billion AUM 69% NORTH AMERICA



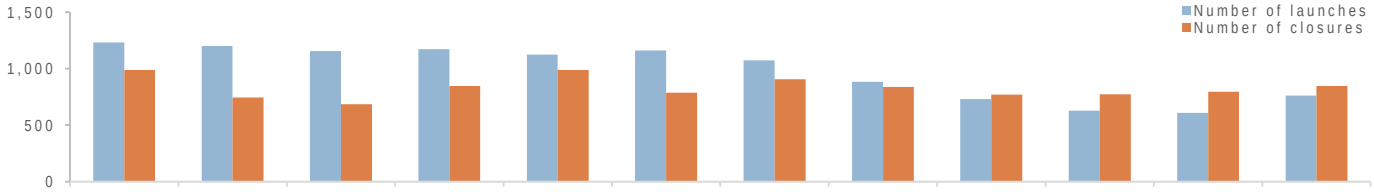

Source: Eurekahedge

## US$127.5 billion investor outflows in 2019
## US$0.4 billion investor inflows in 2020 YTD



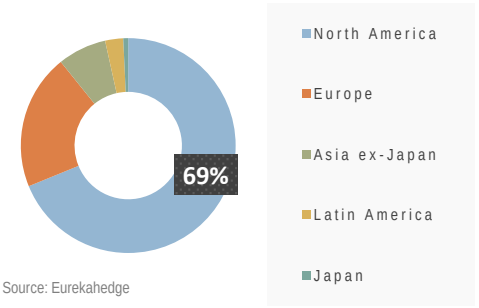

Source: Eurekahedge

## LAUNCHES AND CLOSURES SINCE 2008



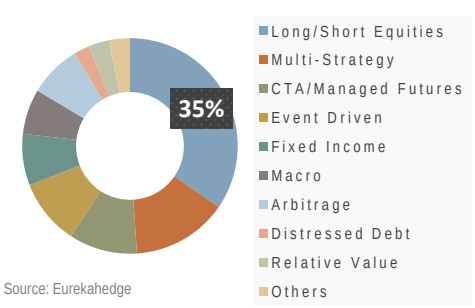

Source: Eurekahedge

## AUM BY INVESTING GEOGRAPHY, 2020



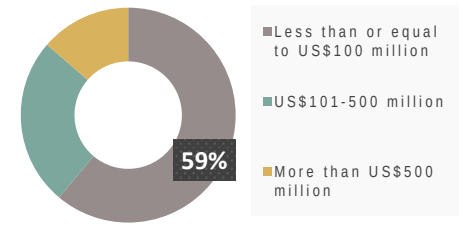

Source: Eurekahedge

## AUM BY STRATEGY, 2020



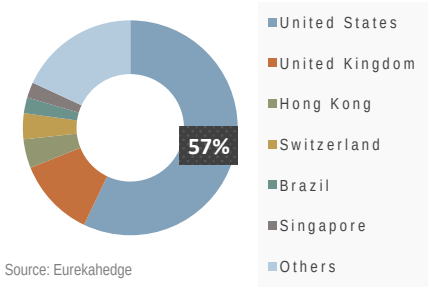

Source: Eurekahedge

## NUMBER OF FUNDS BY FUND SIZE, 2020



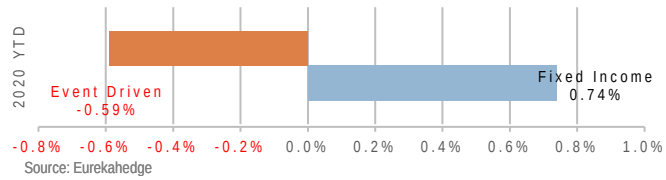

Source: Eurekahedge

## HEAD OFFICE LOCATIONS, 2020



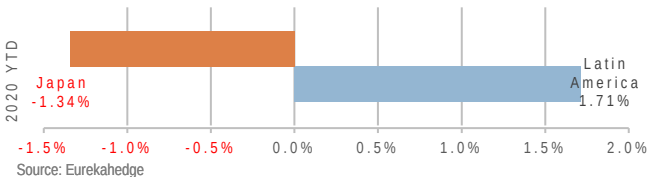

Source: Eurekahedge

## BEST AND WORST STRATEGY, 2020




Source: Eurekahedge

## BEST AND WORST REGIONAL MANDATE, 2020




Source: Eurekahedge

"The *Eurekahedge Hedge Fund Index* was down 1.73% in February, outperforming the underlying equity market which plummeted 7.84% over the same period."

"Preliminary data for February estimated that the global hedge fund industry witnessed US$33.8 billion of performance-driven losses, and US$1.7 billion of net investor inflows."

"The AUM of the global hedge fund industry stood at US$2,270.6 billion as of end-February 2020."

"In February, the *Eurekahedge Greater China Long Short Equities Hedge Fund Index* gained 1.70%, outperforming the Hang Seng Index by 2.39% and the CSI 300 Index by 3.29%."

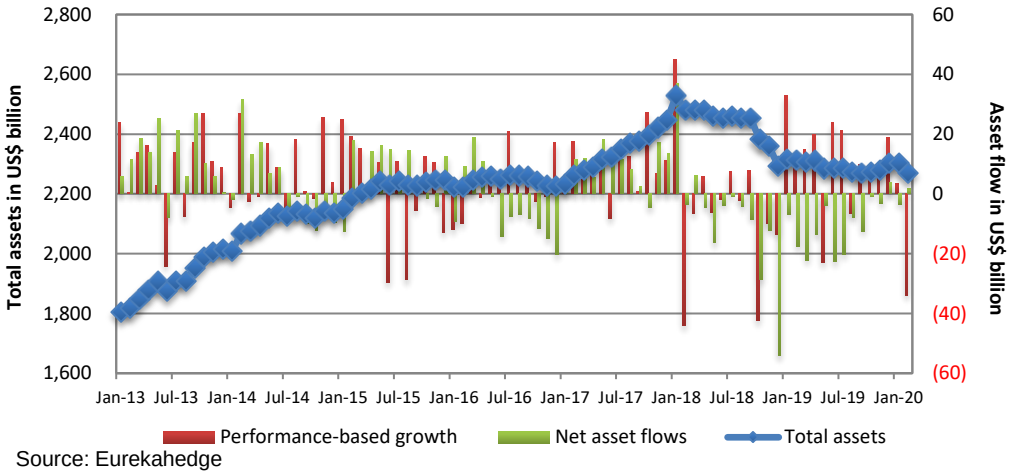
"The *CBOE Eurekahedge Long Volatility Hedge Fund Index* and the *CBOE Eurekahedge Tail Risk Hedge Fund Index* returned 10.27% and 12.28% respectively in February 2020."

# Introduction

The *Eurekahedge Hedge Fund Index* was down 1.73%[1] in February, outperforming the underlying equity market as represented by MSCI ACWI (Local) which plummeted 7.84% over the same period. Global equities started the month on a positive note, driven by the market optimism towards the containment of the COVID-19 as the number of newly infected people in Mainland China decelerated and central banks announced stimulus packages. The three major stock indices in the US recorded new all-time highs during the month, as the encouraging macroeconomic data in the region also contributed to the risk-on sentiment. However, during the second half of the month, market risk sentiment completely shifted as concerns surrounding the extent of the COVID-19 outbreak outside Mainland China, particularly in South Korea and Italy resulted in massive sell-offs of global equities. For the week ending February 28, US equity benchmarks recorded their worst week since the 2008 global financial crisis, with the DJIA and S&P 500 losing 12.36% and 11.49% respectively. In the same vein, European equities ended the month of February in red, with the CAC 40 and DAX down 8.55% and 8.41% respectively, despite the dovish stance exhibited by the ECB and fiscal stimulus announced by the German government. On the other hand, Asian equities outperformed their global peers, despite being the initial epicentre of the coronavirus outbreak as the number of newly infected people in Mainland China decelerated. The Shenzhen Composite Index gained 2.56% during the month, and the Hang Seng Index recorded a small loss of 0.69% in February. Returns were mixed across regions in January, with Asia ex-Japan fund managers returning 0.70%, outperforming their North American peers, who ended the month down 2.16%.

Final asset flow figures for January showed that hedge fund managers recorded performance-based gains totalling US$3.4 billion, offset by net investor redemptions of the same magnitude throughout the month. Preliminary data for February estimated that the global hedge fund industry witnessed US$33.8 billion of performance-driven losses, and US$1.7 billion of net investor inflows. The assets under management (AUM) of the global hedge fund industry stood at US$2,270.6 billion as of end-February 2020. On an annual basis, the industry had seen US$30.4 billion of performance-decline and US$1.7 billion of investor redemptions over the first two months of 2020.

**Figure 1a: Summary monthly asset flow data since January 2013**




Source: Eurekahedge

Key highlights for February:

- The *Eurekahedge Hedge Fund Index* registered its strongest outperformance relative to underlying markets since February 2009, outperforming the MSCI AC World Index by 6.11% in February. Long volatility and tail risk hedge funds led the performance tables in February and have outshined most other strategies as market volatility level remained elevated during the month.

[1] Based on 44.99% of funds which have reported February 2020 returns as at 12 March 2020

- The global hedge fund industry AUM had increased by US$10.3 billion in 2019. Investor redemptions totalling US$127.5 billion have been recorded throughout the year, a level the industry has not seen after the global financial crisis. Going into 2020, net investor outflows of US$1.7 billion and a performance-based decline of US$30.4 billion have been recorded as of February 2020 year-to-date.

- The *Eurekahedge North America Long Short Equities Hedge Fund Index* declined 3.71% in February, weighed by the US equity market sell-offs toward the end of the month. Underlying constituents for the index have outperformed the S&P 500 Index by 4.18% as of February 2020 year-to-date.

- The *Eurekahedge Greater China Long Short Equities Hedge Fund Index* was up 1.70% in February, outperforming the Hang Seng Index by 2.39% and the CSI 300 Index by 3.29%. Optimism over the improving COVID-19 situation in Mainland China and the accommodative policies of the PBOC have provided some support for the region's equity market. On a year-to-date basis, the US$30.3 billion Greater China mandate was up 1.03%.

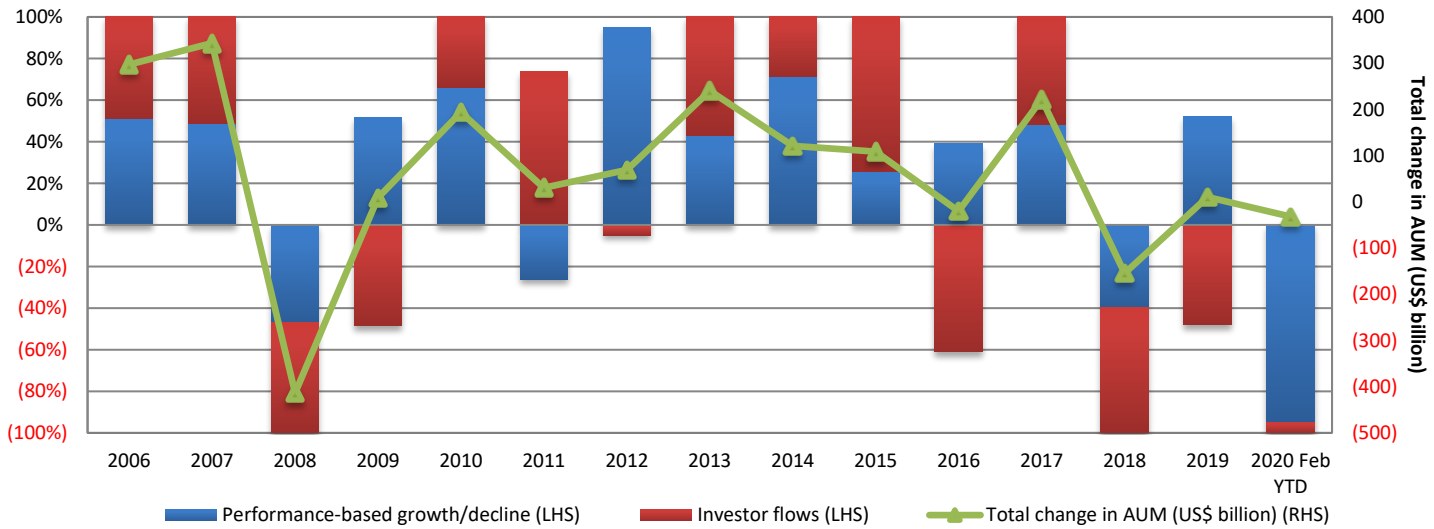
- The *Eurekahedge Fixed Income Hedge Fund Index* was down 0.77% in February, in spite of the risk-off sentiment in the market, which boosted global government bonds throughout the month. The Fed and the ECB have signalled potential policy supports to counter the economic slowdown caused by the COVID-19 outbreak, resulting in lower bond yields during the month.

- Fund managers utilising AI/machine learning strategies lost 0.59% in February, breaking their streak of five consecutive positive months since September last year. On a year-to-date basis, the *Eurekahedge AI Hedge Fund Index* is still up 0.24%.

- The *Eurekahedge Crypto-Currency Hedge Fund Index* was down 1.31% in February, outperforming Bitcoin which ended the month down 8.03%. Fund managers focusing on crypto-currencies are up 17.82% over the first two months of 2020.

- The *CBOE Eurekahedge Long Volatility Hedge Fund Index* and the *CBOE Eurekahedge Tail Risk Hedge Fund Index* returned 10.27% and 12.28% respectively in February 2020. The two strategies known to provide crisis alpha and tail risk protection for institutional portfolios returned to the spotlight on the back of the escalating COVID-19 outbreak situation around the globe.

**Figure 1b: Contribution by hedge fund performance and investor flows for the global hedge fund industry since 2006**




Source: Eurekahedge

Figure 1b shows the share by performance-based growth/decline and net investor flows for the global hedge fund industry since 2006. During the pre-financial crisis period, the share of performance-based growth and investor inflows was almost evenly split with total asset growth coming in at US$343.4 billion. During the financial crisis in 2008, investor outflows accounted for over half of the total loss of capital for the global hedge fund industry as investors grew nervous over the prospect of their investments.

The years following the financial crisis saw accommodative central bank policies largely on the back of asset purchases and low interest rates, setting the momentum for an economic recovery. Investor sentiment improved with positive investor inflows in 2010 and 2011 but the height of the Eurozone crisis witnessed further redemptions in 2012 which were less severe than those in the post-global financial crisis period. In 2013, hedge funds recorded the strongest growth in their AUM since 2007 with assets increasing by US$240.4 billion during the year on the back of strong performance-based gains and investor inflows.

This happened against the backdrop of a global equity market rally and a recovery in the US economy that saw investors scale up their allocations to hedge funds. While the Greek and Ukrainian crisis contributed to some investor nervousness in 2014, investor inflows remained positive with modest performance-driven gains resulting in the industry's asset growing by half the levels seen in 2013. In annual year 2016, performance-driven gains of US$35.1 billion were recorded while investor outflows stood at US$55.1 billion over the same period – the steepest outflows recorded since 2010. Redemption pressure appears to have eased going into 2017 as investors positive sentiment buoyed allocation activity into hedge funds. Hedge funds recorded the strongest growth in their AUM since 2014 with assets increasing by US$221.9 billion in 2017 on the back of strong performance-based gains and investor inflows. Final asset figures for 2017 saw investor inflows of US$114.6 billion of new allocations accounting for almost 52% of the total hedge fund asset growth recorded during the year while performance-driven gains of US$107.3 billion were recorded – the highest performance figures since 2010. Meanwhile, in 2018, international trade conflict between the two largest economies, concerns over slowing global growth and aggressive Fed rate hikes acted as headwinds to hedge fund performance. As a result, performance-based losses of US$44.2 billion and US$42.5 billion were recorded in February and October respectively – the highest monthly performance-based losses since October 2008. In 2019, supported by the robust rallied in the global equity market, the industry recorded its strongest performance-driven gains of US$137.8 billion since 2007. However, the industry AUM only grew by US$10.3 billion year-on-year, as substantial investor redemptions totalling US$127.5 billion were recorded throughout the year. As of February 2020 year-to-date, the industry recorded US$1.7 billion of net investor redemptions, as well as US$30.4 billion of performance-based losses, resulting from the massive equity market sell-offs in February.

**Table 1: Performance-based changes in assets and asset flows in February 2020**

| | Assets at start | Net growth (performance) | Net flows | Assets at end | % change in assets |
|---|---|---|---|---|---|
| ***Hedge funds*** | 2302.7 | (33.8) | 1.7 | 2270.6 | (1.39%) |
| ***By geographic mandate*** | | | | | |
| Asia ex-Japan | 168.5 | (0.5) | (0.1) | 167.9 | (0.37%) |
| Japan | 17.0 | (0.2) | 0.0 | 16.8 | (1.17%) |
| Europe | 466.6 | (5.1) | (0.1) | 461.4 | (1.12%) |
| Latin America | 62.4 | (0.8) | (0.2) | 61.5 | (1.53%) |
| North America | 1588.1 | (27.3) | 2.2 | 1563.0 | (1.58%) |
| ***By strategic mandate*** | | | | | |
| Arbitrage | 183.9 | 0.0 | 0.5 | 184.4 | 0.27% |
| CTA/managed futures | 233.4 | (2.8) | (1.6) | 229.1 | (1.85%) |
| Distressed debt | 53.2 | 0.0 | (0.1) | 53.1 | (0.18%) |
| Event driven | 225.7 | (0.4) | 0.2 | 225.6 | (0.08%) |
| Fixed income | 180.3 | (0.8) | (0.2) | 179.4 | (0.54%) |
| Long/short equities | 795.4 | (18.3) | 2.7 | 779.8 | (1.97%) |
| Macro | 155.3 | (1.5) | 0.9 | 154.7 | (0.40%) |
| Multi-strategy | 332.3 | (10.2) | (1.6) | 320.6 | (3.54%) |
| Relative value | 72.0 | 0.0 | 1.3 | 73.3 | 1.92% |
| Others | 71.1 | 0.0 | (0.5) | 70.7 | (0.57%) |
| ***By fund size (US$ millions)*** | | | | | |
| ≤20 | 20.8 | (0.1) | (0.0) | 20.7 | (0.33%) |
| >20-≤50 | 43.9 | (0.2) | (0.2) | 43.5 | (0.87%) |
| >50-≤100 | 54.4 | (0.2) | (0.5) | 53.7 | (1.30%) |
| >100-≤250 | 241.9 | (0.8) | (0.6) | 240.4 | (0.61%) |
| >250-≤500 | 320.8 | (1.8) | (0.6) | 318.4 | (0.74%) |

| | | | | | |
|---|---|---|---|---|---|
| >500-≤1000 | 471.1 | (1.9) | 1.7 | 470.9 | (0.03%) |
| >1000 | 1149.9 | (28.9) | 2.0 | 1122.9 | (2.34%) |

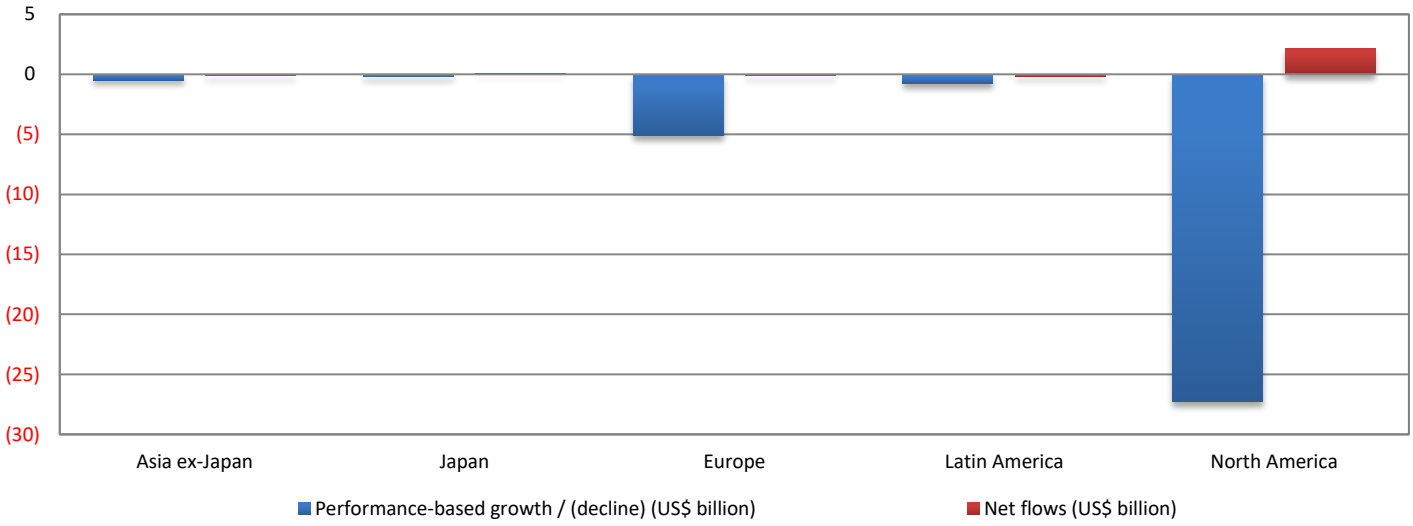
Note: All figures are in US$ billion, and rounded off to 1 decimal place Source: Eurekahedge

North American funds recorded net asset inflows of US$2.2 billion, offset by the performance-based losses of US$27.3 billion during the month of February, as the region's equity markets slumped during the month due to the coronavirus outbreak. Fund managers focusing on the region have reported performance-based losses totalling US$24.8 billion in 2020, partially counterbalanced by net investor inflows of US$4.6 billion over the same period. Total assets in North American hedge funds stood at US$1,563.0 billion in as of February 2020.

European fund managers recorded performance-based losses of US$5.1 billion combined with net outflows of US$0.1 billion during the month. Total assets in European hedge funds stood at US$461.4 billion as of February 2020, below their January 2018 high of US$577.5 billion. On a year-to-date basis, European hedge fund managers have seen performance-driven losses of US$4.7 billion while net asset outflows stood at US$4.1 billion over the same period.

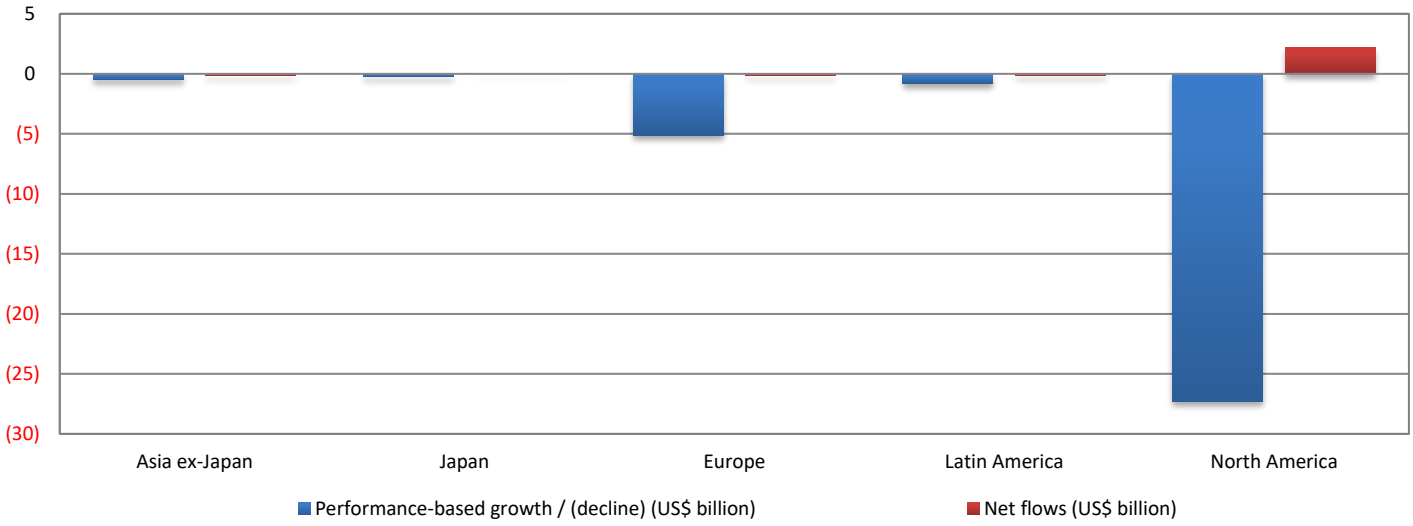
Asian funds registered performance-based losses of US$0.7 billion in February and investor outflows stood at US$0.1 billion during the month. Total assets for Asian hedge funds stood at US$184.7 billion as of February 2020. The Pan-Asia mandate saw US$0.5 billion of performance-driven losses and US$1.6 billion of net investor outflows over the same period.

**Figure 2: February 2020 asset flow by geographic mandate**




Source: Eurekahedge

**Figure 3: 2020 asset flows by geographic mandate**



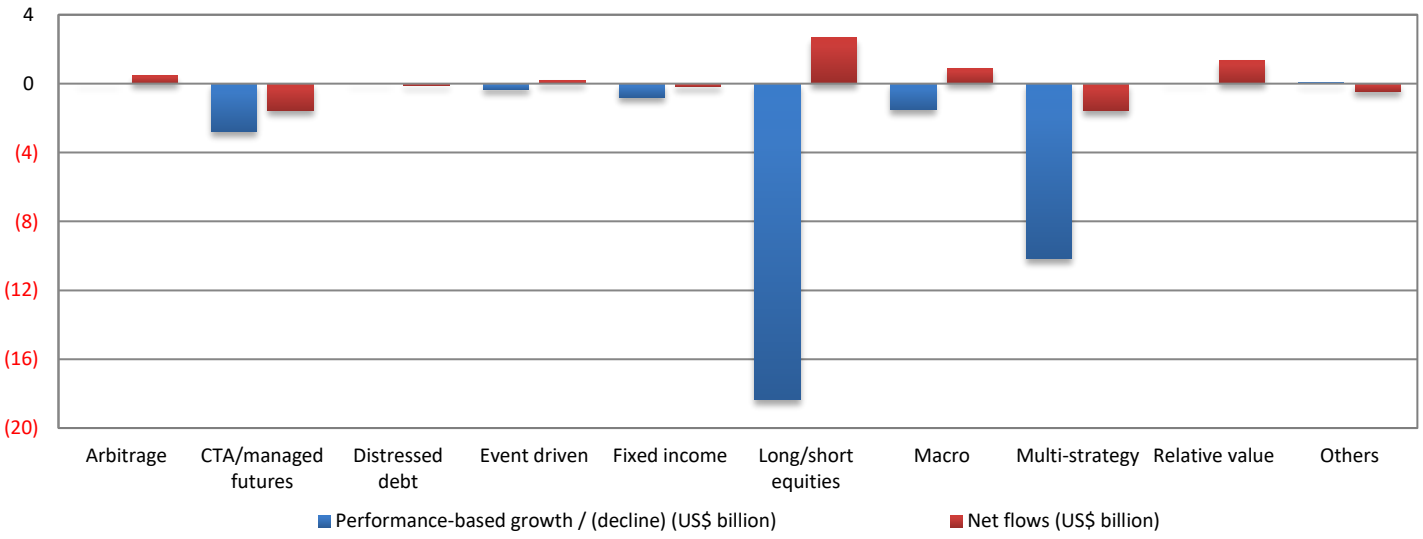

Source: Eurekahedge

Figure 4 gives a breakdown of performance-based gains and net flows for the hedge fund industry by various strategies for the month of February. Net allocation activity was mixed across the board, thanks to the risk-off sentiment among investors towards the end of the month.

Fund managers utilising long/short equities strategies posted the weakest performance-based losses of US$18.3 billion, despite investor allocations of US$2.7 billion throughout the month. The spread of the coronavirus outside Mainland China raised concerns over the severity of the epidemic, resulting in massive global stock sell-offs during the month. On the other hand, the relative value mandate recorded net investor allocations of US$1.3 billion over the month, despite the dominance of market risk aversion throughout the month.

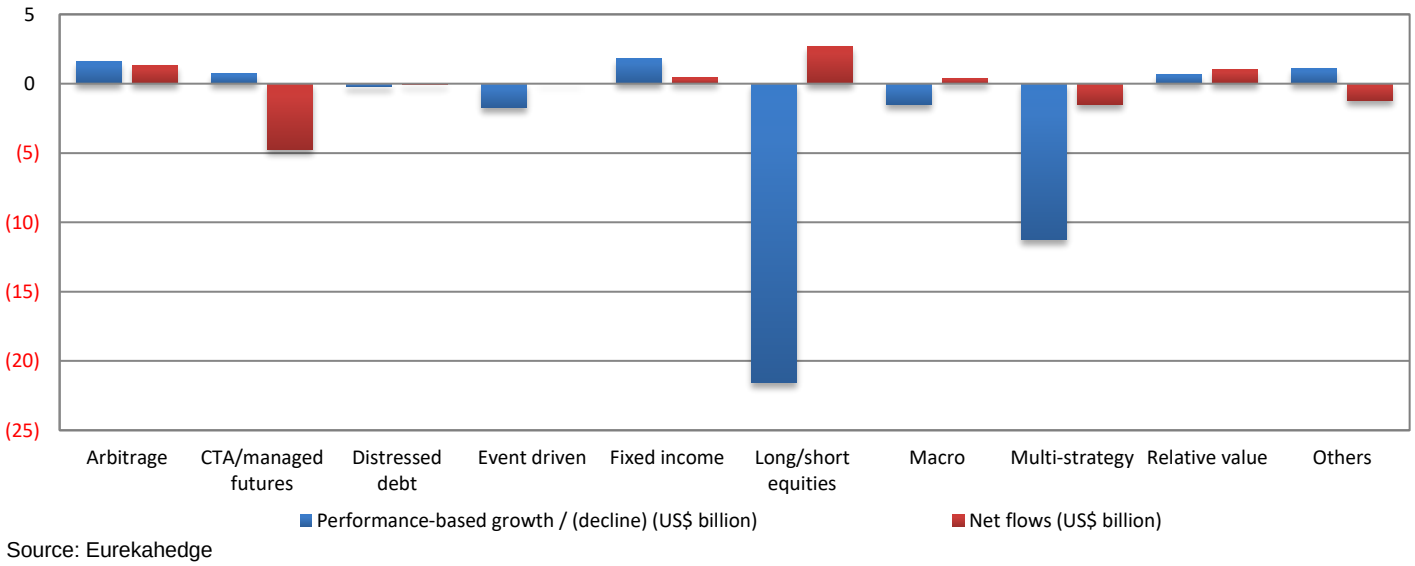
On a yearly basis, long/short equities mandate recorded investor allocations of US$2.7 billion over the first two months of 2020, despite performance-based losses of US$21.6 billion over the same period. CTA/managed futures and multi-strategy mandates have recorded investor redemptions totalling US$4.8 billion and US$1.5 billion respectively as of February 2020 year-to-date.

**Figure 4: February 2020 asset flow by strategy employed**




Source: Eurekahedge

**Figure 5: 2020 asset flow by strategy employed**




Source: Eurekahedge

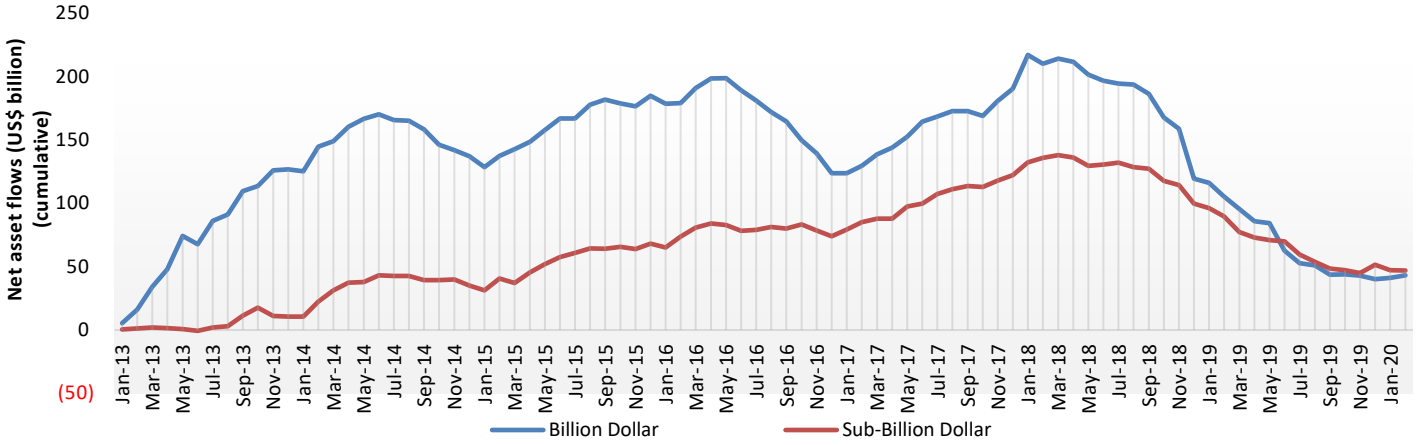
**Table 2: Performance-based changes in assets and asset flows 2020**

| | Assets at start | Net growth (performance) | Net flows | Assets at end | % change in assets |
|---|---|---|---|---|---|
| ***Hedge funds*** | 2302.6 | (30.4) | (1.7) | 2270.6 | (1.39%) |
| ***By geographic mandate*** | | | | | |
| Asia ex-Japan | 169.7 | (0.3) | (1.5) | 167.9 | (1.08%) |
| Japan | 17.1 | (0.2) | (0.1) | 16.8 | (1.62%) |
| Europe | 470.2 | (4.7) | (4.1) | 461.4 | (1.88%) |
| Latin America | 62.5 | (0.5) | (0.5) | 61.5 | (1.61%) |
| North America | 1583.1 | (24.8) | 4.6 | 1563.0 | (1.27%) |
| ***By strategic mandate*** | | | | | |
| Arbitrage | 181.5 | 1.6 | 1.3 | 184.4 | 1.59% |
| CTA/managed futures | 233.1 | 0.7 | (4.8) | 229.1 | (1.73%) |
| Distressed debt | 53.4 | (0.2) | (0.1) | 53.1 | (0.56%) |
| Event driven | 227.3 | (1.7) | 0.0 | 225.6 | (0.75%) |
| Fixed income | 177.1 | 1.8 | 0.4 | 179.4 | 1.26% |
| Long/short equities | 798.7 | (21.6) | 2.7 | 779.8 | (2.37%) |
| Macro | 155.8 | (1.5) | 0.4 | 154.7 | (0.72%) |
| Multi-strategy | 333.3 | (11.2) | (1.5) | 320.6 | (3.82%) |
| Relative value | 71.6 | 0.7 | 1.0 | 73.3 | 2.38% |
| Others | 70.8 | 1.1 | (1.2) | 70.7 | (0.18%) |
| ***By fund size (US$ millions)*** | | | | | |
| ≤20 | 20.2 | 0.5 | 0.1 | 20.8 | 2.96% |
| >20-≤50 | 42.6 | 1.3 | 0.1 | 44.0 | 3.26% |
| >50-≤100 | 54.8 | 1.9 | (2.1) | 54.6 | (0.44%) |
| >100-≤250 | 239.3 | 11.3 | (8.3) | 242.2 | 1.24% |
| >250-≤500 | 330.2 | 11.2 | (20.5) | 320.9 | (2.81%) |
| >500-≤1000 | 470.9 | 20.0 | (17.3) | 473.7 | 0.59% |
| >1000 | 1134.3 | 91.5 | (79.4) | 1146.4 | 1.07% |

Note: All figures are in US$ billion, and rounded off to 1 decimal place Source: Eurekahedge

Figure 6 shows the cumulative investor flows since 2013, with 2H 2016 showing a pronounced decline in investor flows for billion dollar hedge funds. In 2016, billion dollar hedge funds saw steep investor redemptions for seven consecutive months between June 2016 and December 2016, totalling US$75.0 billion. Sub-billion dollar hedge funds have also recorded redemptions over the same period, totalling US$8.8 billion. Redemption pressure eased going into 2017, with billion dollar hedge funds seeing inflows of US$66.5 billion in 2017. Sub-billion dollar funds also realised an encouraging year, with US$48.1 billion of inflows recorded over the same period. Throughout 2018, billion dollar hedge funds had seen redemptions totalling US$70.9 billion, while their sub-billion dollar counterparts recorded net outflows totalling US$22.5 billion over the year. Billion dollar hedge funds recorded performance-based losses of US$28.9 billion, despite net investor inflows of US$2.0 billion in February.

**Figure 6: Cumulative investor flows since 2013**

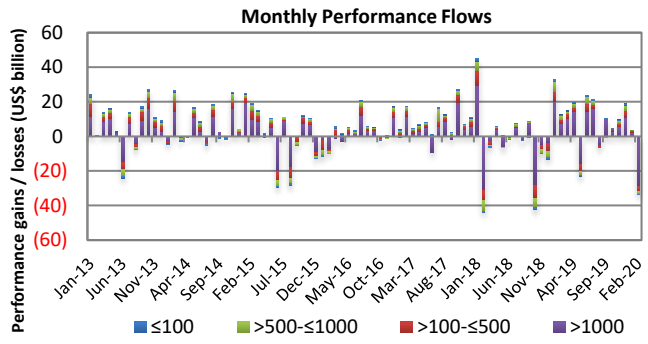



Source: Eurekahedge

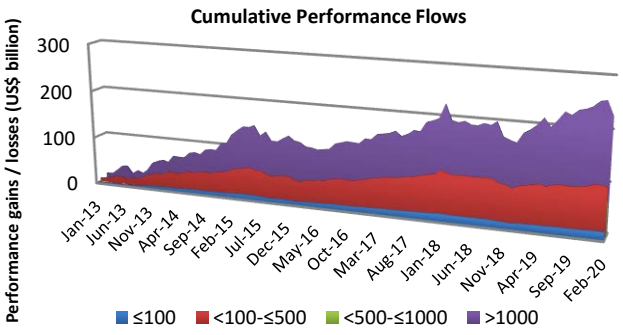
Figures 7 and 8 illustrate performance and net asset flows across the various fund size categories since January 2013. Over the period depicted, the global hedge fund industry has raked in performance-based gains of US$437.8 billion. Billion dollar hedge funds account for over half of these gains as they have delivered cumulative performance-based gains of US$224.5 billion since the start of 2013. Funds managing assets in the US$100 million to US$500 million range have seen performance-based gains of US$98.7 billion, compared to US$66.4 billion in performance gains posted by funds managing between US$500 million and US$1000 million.

A similar picture emerges based on net asset flows, with the global hedge fund industry attracting US$92.1 billion since January 2013, out of which billion dollar hedge funds accounted for US$43.1 billion of these net capital allocations. Given this preference on part of investors to allocate to larger billion dollar hedge funds, the success of small to medium sized hedge funds (less than US$500 million) will become increasingly dependent on the skill of the managers in growing them to a point where they can gather enough scale to attract large institutional investors.

**Figure 7: Performance based gains/losses by fund size**

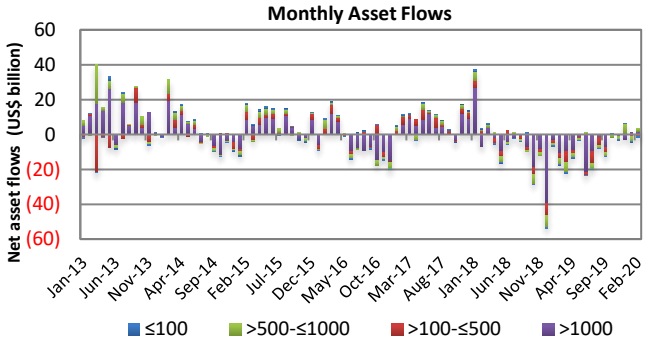



Source: Eurekahedge (US$ million)

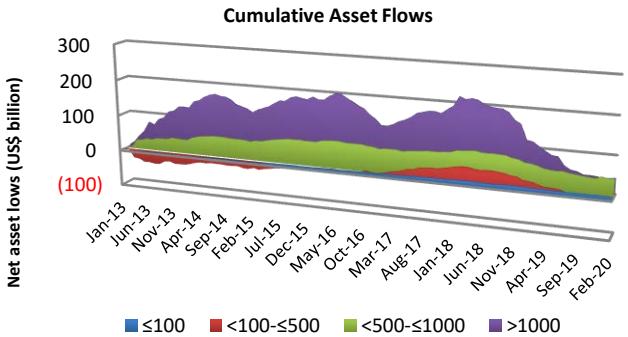



Source: Eurekahedge (US$ million)

**Figure 8: Net asset flows by fund size**




Source: Eurekahedge (US$ million)




Source: Eurekahedge (US$ million)

"In February, the *Eurekahedge Hedge Fund Index* was down 1.73%, outperforming the underlying equity market which lost 7.84% over the month."

"Approximately 34.4% of the underlying constituents of the *Eurekahedge Hedge Fund Index* posted positive returns in February."

"Returns were negative across regions, with Asia ex-Japan fund managers down 0.70% in February, outperforming their regional peers over the month."

"The *Eurekahedge Fixed Income Hedge Fund Index* was down 0.77% in February, despite the risk-off sentiment in the market which pushed yields lower during the month."

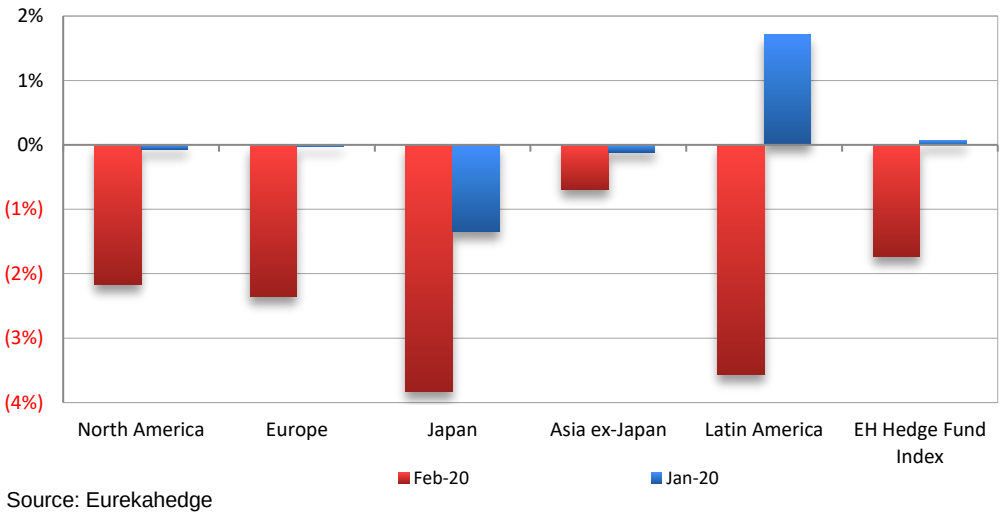
"Tail risk and long volatility hedge funds recorded the strongest returns of 12.28% and 10.27% respectively, thanks to the elevated market volatilities during the month."

# Introduction

The *Eurekahedge Hedge Fund Index* was down 1.73%[1] in February, outperforming the underlying global equity market as represented by the MSCI ACWI (Local) which lost 7.84% over the month. Global equities rallied earlier into the month, supported by the improving situation in China over the COVID-19 outbreak and stimulus packages announced by central banks. The tech-heavy NASDAQ Composite recorded a new all-time high for the week ending February 14, as the encouraging macroeconomic data in the region also contributed to its performance during the period. However, the market risk sentiment quickly shifted towards the end of the month as investors grew concerned over the surging number of newly infected people outside China, particularly in South Korea and Italy, resulting in global equity sell-offs over the final week of the month. For the week ending February 28, the DJIA and S&P 500 plummeted 12.36% and 11.49% respectively – recording their worst weekly returns since the 2008 global financial crisis. On a similar note, European equities finished the month in negative territory, despite the dovish stance exhibited by the ECB and fiscal stimulus packages announced by the German government. The FTSE100 and DAX Index were down 9.68% and 8.41% respectively during the month. On the other hand, Asian equities outperformed their global peers as the spread of COVID-19 in Mainland China decelerated. The Shenzhen Composite Index gained 2.56% during the month, and the Hang Seng Index recorded a small loss of 0.69% in February.

Approximately 34.4% of the underlying constituents of the *Eurekahedge Hedge Fund Index* posted positive returns in February, and 41.7% of the fund managers in the database were able to generate positive returns in 2020. Returns were negative across regions, with Asia ex-Japan fund managers down 0.70% in February, outperforming their regional peers over the month. Fund managers focusing on Europe lost 2.35%, despite the ECB's accommodative stance. Looking at year-to-date returns, Asia ex-Japan hedge funds lost 0.81%, ahead of their North American peers who were down 2.23%.

**Figure 1: February 2020 and January 2020 returns across regions**

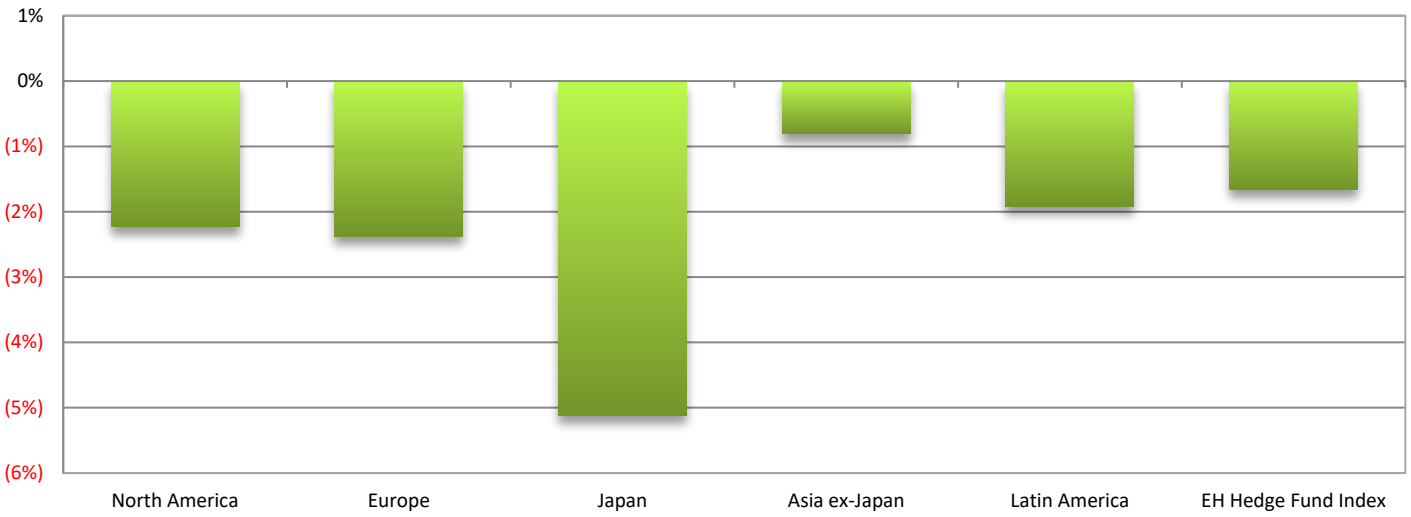



Source: Eurekahedge

The figure below illustrates the 2020 performance of hedge fund managers across regions. All regional mandates were down for the year, despite the positive geopolitical development surrounding the US-China trade negotiations earlier into the year. The global COVID-19 outbreak resulted in the weak performance of global equities and bonds which contributed to the mixed performance of fund managers throughout the month. Asia ex Japan hedge funds led the pack with their 0.81% loss in February 2020. On the other end, fund managers focusing on Japan were down 5.11% over the same period, trailing behind the other regional mandates.

[1] Based on 44.99% of funds which have reported February 2020 returns as at 12 March 2020

**Figure 2: 2020 returns across regions**



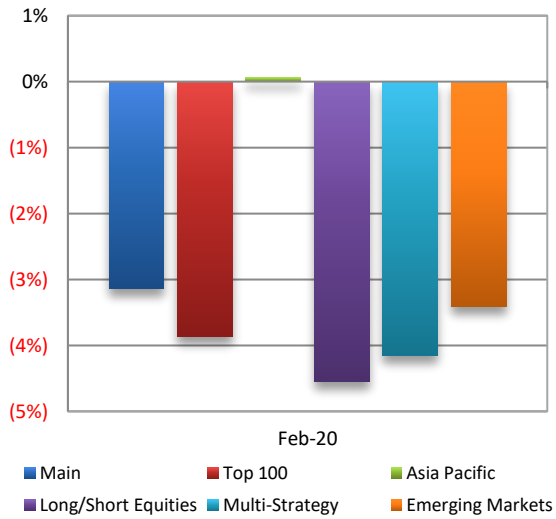

Source: Eurekahedge

# Mizuho-Eurekahedge Asset Weighted Index

The asset-weighted *Mizuho-Eurekahedge Index - USD* was down 3.14% in February, after finishing 2019 with 6.96% return. It should also be noted that the *Mizuho-Eurekahedge Index* is US dollar denominated, and during months of strong US dollar gains, the index results include the currency conversion loss for funds that are denominated in other currencies.

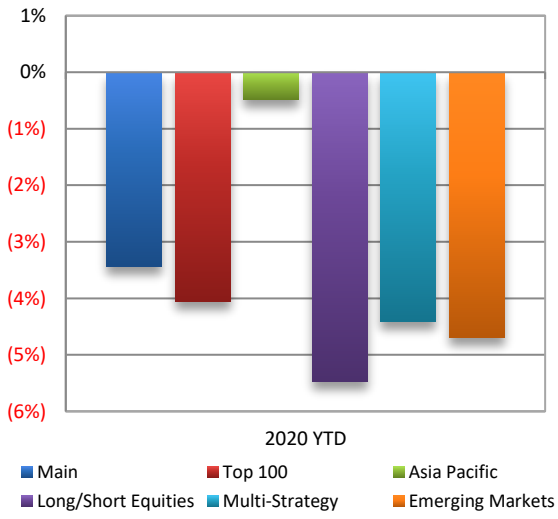
Most of the Mizuho-Eurekahedge indices were down in February, with the exception of the *Mizuho-Eurekahedge Asia Pacific Index* which was flat over the month. Looking at year-to-date performance, all of the Mizuho-Eurekahedge indices were in negative territory, with managers focusing on Asia Pacific generating the smallest loss of 0.48% over the first two months of the year.

**Figure 3a: *Mizuho-Eurekahedge Indices***
**February 2020 returns**




Source: Eurekahedge

**Figure 3b: *Mizuho-Eurekahedge Indices***
**2020 returns**



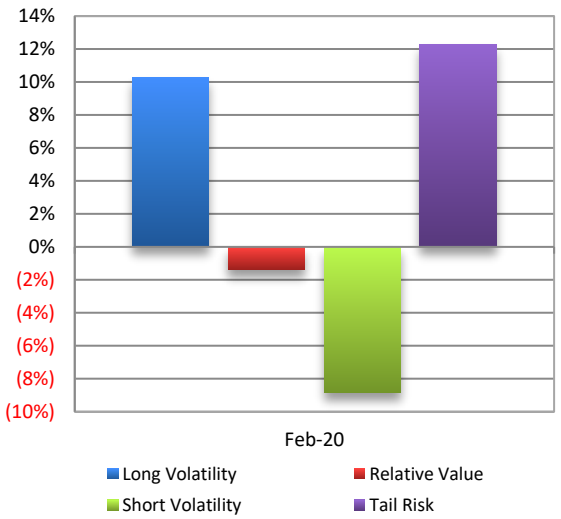

Source: Eurekahedge

# CBOE Eurekahedge Volatility Indexes

The *CBOE Eurekahedge Volatility Indexes* comprise four equally-weighted volatility indices – long volatility, short volatility, relative value and tail risk. The *CBOE Eurekahedge Long Volatility Index* is designed to track the performance of underlying hedge fund managers who take a net long view on implied volatility with a goal of positive absolute return. In contrast, the *CBOE Eurekahedge Short Volatility Index* tracks the performance of underlying hedge fund managers who take a net short view on implied volatility with a goal of positive absolute return. This strategy often involves the selling of options to take advantage of the discrepancies in current implied volatility versus expectations of subsequent implied or realised volatility. The *CBOE Eurekahedge Relative Value Volatility Index* on the other hand measures the performance of underlying hedge fund managers that trade relative value or opportunistic volatility strategies. Managers utilising this strategy can pursue long, short or neutral views on volatility with a goal of positive absolute return. Meanwhile, the *CBOE Eurekahedge Tail Risk Index* tracks the performance of underlying hedge fund managers that specifically seek to achieve capital appreciation during periods of extreme market stress.

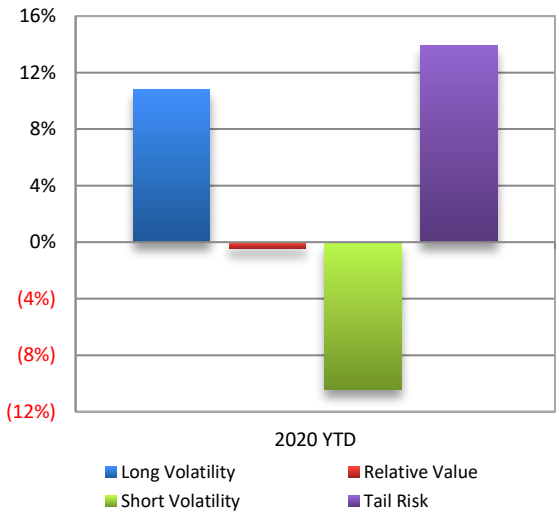
The *CBOE Eurekahedge Volatility Indices* generated mixed returns in February. Tail risk and long volatility hedge funds recorded the strongest returns of 12.28% and 10.27% respectively, thanks to the elevated market volatilities during the month which pushed the CBOE VIX Index past 40 towards the end of the month. In terms of year-to-date returns, tail risk hedge funds topped the chart with their 13.89% return, while short volatility hedge funds were down 10.46%, placing them last among the four volatility strategy categories.

**Figure 4a: *CBOE Eurekahedge Volatility Indexes* February 2020 returns**




Source: Eurekahedge

**Figure 4b: *CBOE Eurekahedge Volatility Indexes* 2020 returns**

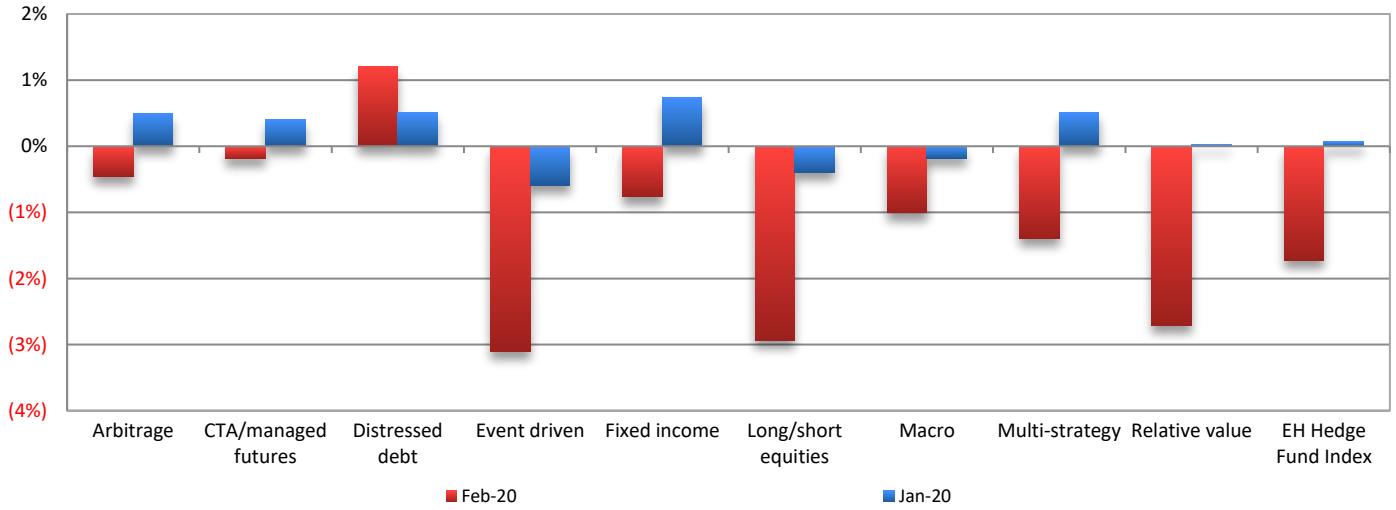



Source: Eurekahedge

# Strategy Performance

Performance across major strategic mandates was mostly negative in February, with the exception of distressed debt hedge funds which gained 1.21% during the month. On the other hand, long/short equities and event-driven hedge funds were down 2.93% and 3.10% respectively, underperforming other strategies over the month.

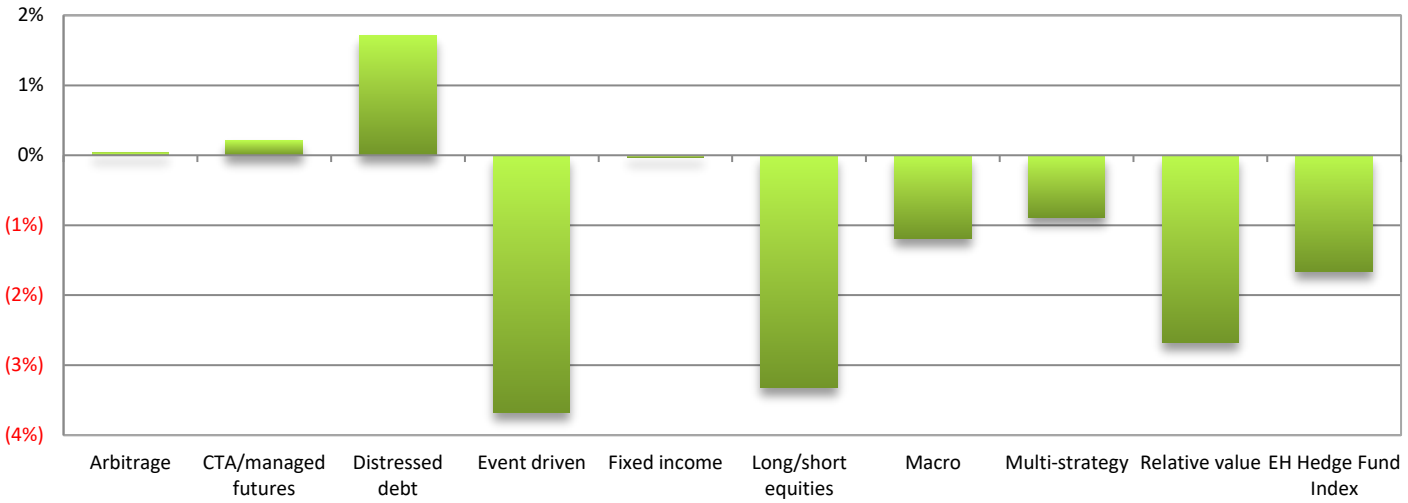
**Figure 5: February 2020 and January 2020 returns across strategies**




Source: Eurekahedge

Looking at 2020 returns, distressed debt and CTA/managed futures mandate ended at the top with 1.72% and 0.21% returns respectively. On the other end, event driven and long/short equities mandates lagged behind, as the sharp decline of the global equity markets weighed on the performance of the fund managers within these mandates.

**Figure 6: 2020 returns across strategies**



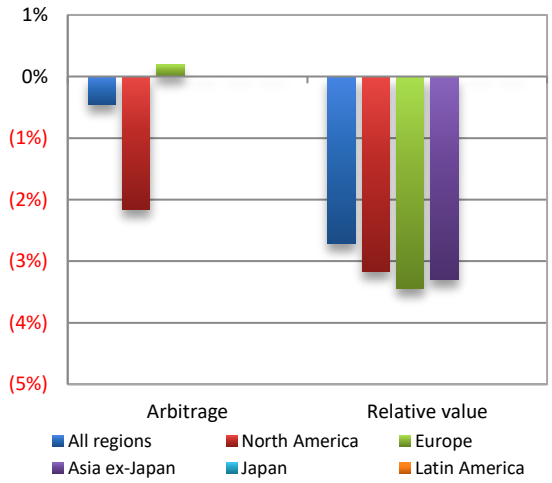

Source: Eurekahedge

**Arbitrage and relative value**

Arbitrage hedge fund managers were down 0.46% during the month, with all of its underlying regional mandate posting mixed returns in February. European arbitrage fund managers led the group with their 0.19% returns during the month. Looking at year-to-date returns, the *Eurekahedge Arbitrage Hedge Fund Index* was up 0.04%, with its underlying European mandates gaining 1.20% return, as of February 2020.

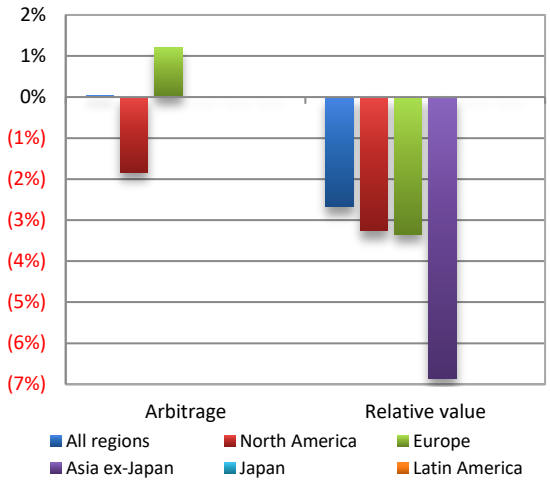
Hedge fund managers utilising relative value strategy ended the month of February down 2.71%, with the underlying European mandate losing 3.44% during the month. In terms of year-to-date returns, the *Eurekahedge Relative Value Hedge Fund Index* was down 2.68% throughout the first two months of the year, with the underlying Asia ex-Japan mandate losing 6.85% over the same period.

**Figure 7a: Arbitrage and relative value February 2020 returns**




Source: Eurekahedge

**Figure 7b: Arbitrage and relative value 2020 returns**



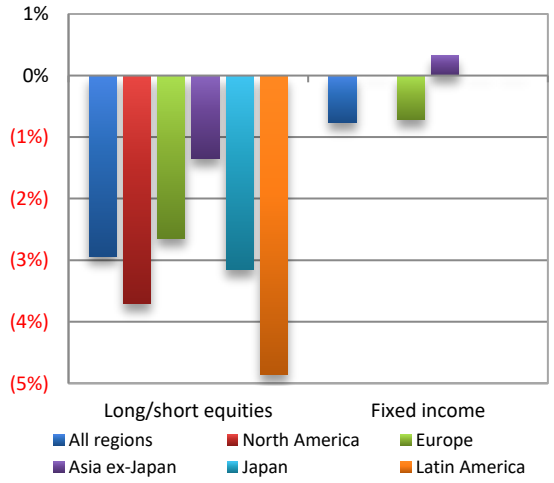

Source: Eurekahedge

## Long/short equities and fixed income

The *Eurekahedge Long Short Equities Hedge Fund Index* ended the month down 2.93%, outperforming the global equity market as represented by the MSCI ACWI (Local) which lost 8.34%. The escalation of COVID-19 outbreak situations outside Mainland China contributed to the weak performance of global equities during the month. Fund managers cited long exposure to consumer discretionary stocks as the biggest detractor to performance over the month. All of the underlying regions of the mandate were in negative territory, with North American and Asia ex-Japan mandates losing 3.71% and 1.35%. In terms of year-to-date returns, despite being the epicentre of the COVID-19 outbreak, Asia ex-Japan mandate was down 1.89%, outperforming North American and European fund managers who lost 4.38% and 2.79% respectively.

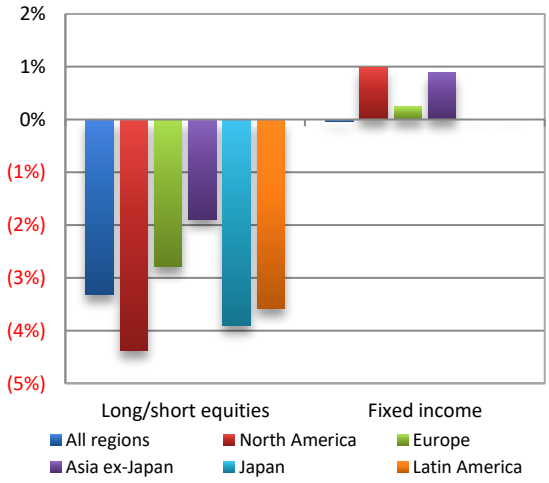
The *Eurekahedge Fixed Income Hedge Fund Index* lost 0.77% in February, despite the risk-off sentiment in the market which pushed yields lower during the month. Gains in government bonds over the month were offset by losses in the high yield market. Looking at their year-to-date return, the fixed income strategic mandate was flat, with all of its underlying mandates in positive territory.

**Figure 8a: Long/short equities and fixed income February 2020 returns**




Source: Eurekahedge

**Figure 8b: Long/short equities and fixed income 2020 returns**



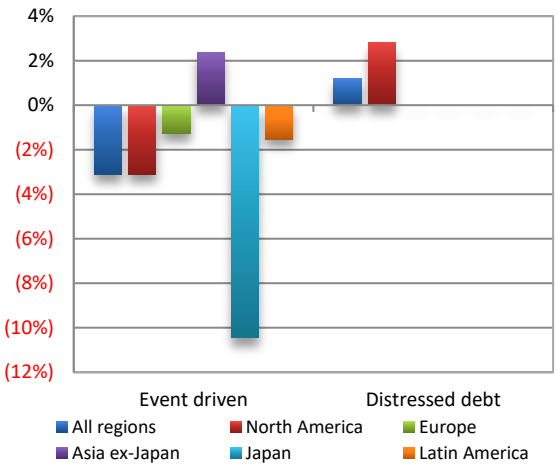

Source: Eurekahedge

**Event driven and distressed debt**

The *Eurekahedge Event Driven Hedge Fund Index* slumped 3.10% during the month, with most of its underlying regional mandates in negative territory. Event driven funds managers focusing on Asia ex-Japan posted gains of 2.37% in February. On a year-to-date basis, event driven hedge funds lost 3.67%, with its underlying Japan mandate losing 14.81% over the first two months of 2020.

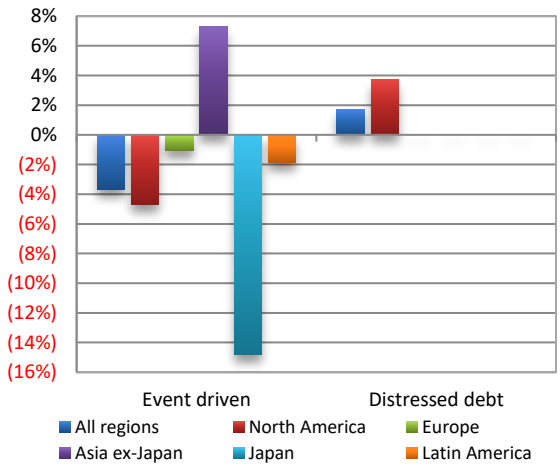
The *Eurekahedge Distressed Debt Hedge Fund Index* was up 1.21% in February, with its underlying North American mandate gaining 2.79% during the month. Looking at their year-to-date performance, distressed debt fund managers were up 1.72% as of February 2019, outperforming their peers utilising other strategies.

**Figure 9a: Event driven and distressed debt February 2020 returns**




Source: Eurekahedge

**Figure 9b: Event driven and distressed debt 2020 returns**



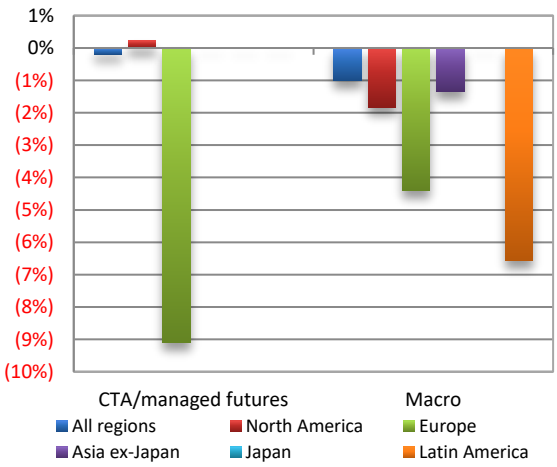

Source: Eurekahedge

**CTA/managed futures and macro**

Hedge fund managers utilising CTA/managed futures strategies were down 0.19% in February, with the underlying European mandates losing 9.09% throughout the month. Energy prices sharply fell during the month, on the back of concerns surrounding falling oil demands in China as factories and businesses remain closed following the Chinese New Year holidays. On the other hand, exposure to precious metals acted as a major performance contributor for some CTA funds during the month. The *Eurekahedge CTA/Managed Futures Hedge Fund Index* was up 0.21% as of February 2019.

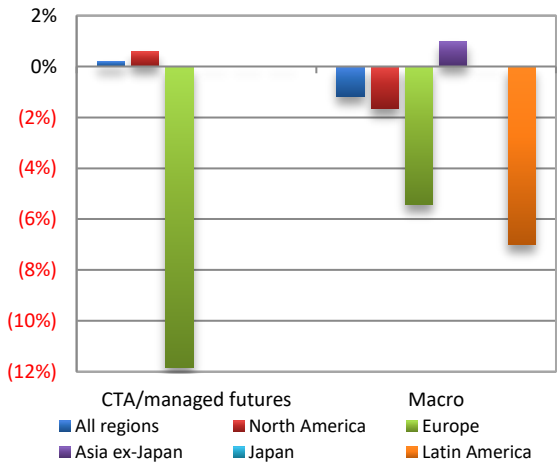
The *Eurekahedge Macro Hedge Fund Index* lost 1.01% in February, with all of its underlying regional mandates in negative territory. The turbulent market throughout the month resulted in a wide dispersion of performance among macro fund managers. Exposure to global equities and high yield bonds were some of the common performance detractors for macro funds in February. On a year-to-date basis, macro fund managers were down 1.19% over the first two months of 2020.

**Figure 10a: CTA/managed futures and macro February 2020 returns**




Source: Eurekahedge

**Figure 10b: CTA/managed futures and macro 2020 returns**



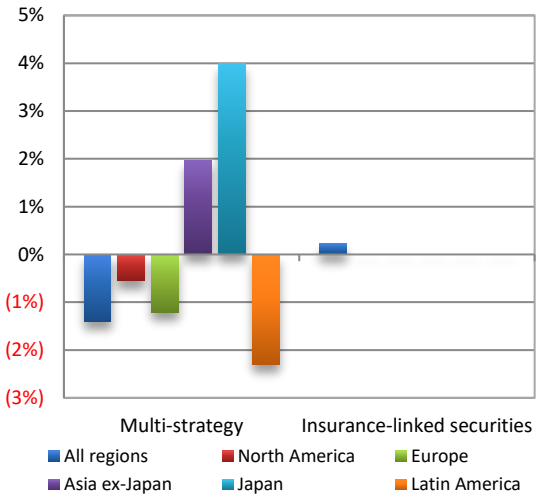

Source: Eurekahedge

**Multi-strategy and insurance-linked securities**

The *Eurekahedge Multi-Strategy Hedge Fund Index* was down 1.40% during the month, with the underlying fund managers focusing on Japan posting the strongest return of 3.99%. Fund managers with significant exposure to below-investment grade bonds largely contributed to the poor performance of the mandate during the month. In terms of year-to-date return, the *Eurekahedge Multi-Strategy Hedge Fund Index* was down 0.89% as February 2020, with its underlying regional mandates recording mixed returns.

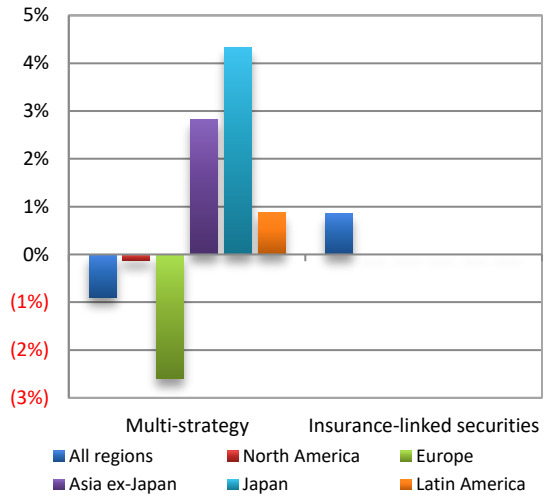
The *Eurekahedge ILS Advisers Index* gained 0.24% in February, after they generated 0.92% return in 2019. ILS hedge fund managers suffered considerable losses from the recent Atlantic hurricane seasons in 2018 and 2017, during which the index was down 3.92% and 5.60% respectively.

**Figure 11a: Multi-strategy and insurance-linked securities February 2020 returns**




Source: Eurekahedge

**Figure 11b: Multi-strategy and insurance-linked securities 2020 returns**

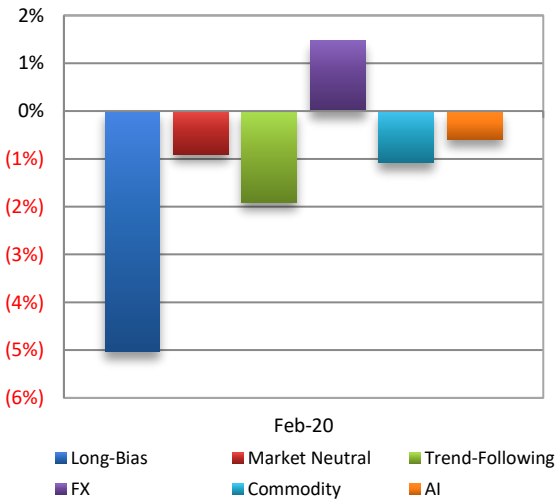



Source: Eurekahedge

**Sub-strategies**

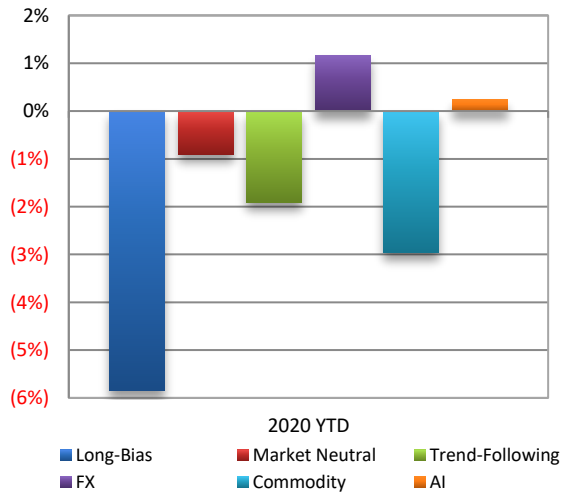
All of the secondary strategic mandates posted negative returns in January, with the exception of FX strategies as they returned 1.47% over the month on the back of strong US dollar and Japanese yen. Looking at year-to-date returns, most of the sub-strategies were negative, with the exception of fund managers utilising FX and AI strategies who led the group by returning 1.16% and 0.24% respectively over the first two months of 2020.

**Figure 12a: Sub-strategies February 2020 returns**




Source: Eurekahedge

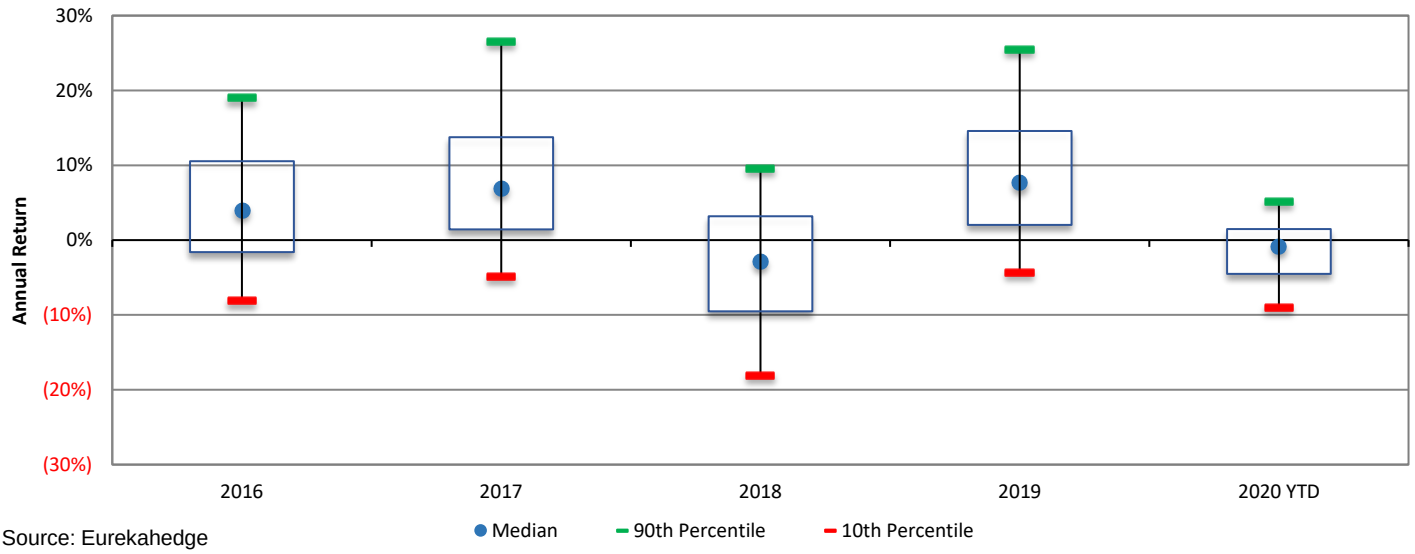
**Figure 12b: Sub-strategies 2020 returns**




Source: Eurekahedge

Figure 13 provides the performance distribution of hedge funds in the Eurekahedge database, showing the median return, 10th and 90th percentile returns, as well as the top and bottom quartile returns on a yearly basis since 2016.

**Figure 13: Performance distribution of global hedge funds**



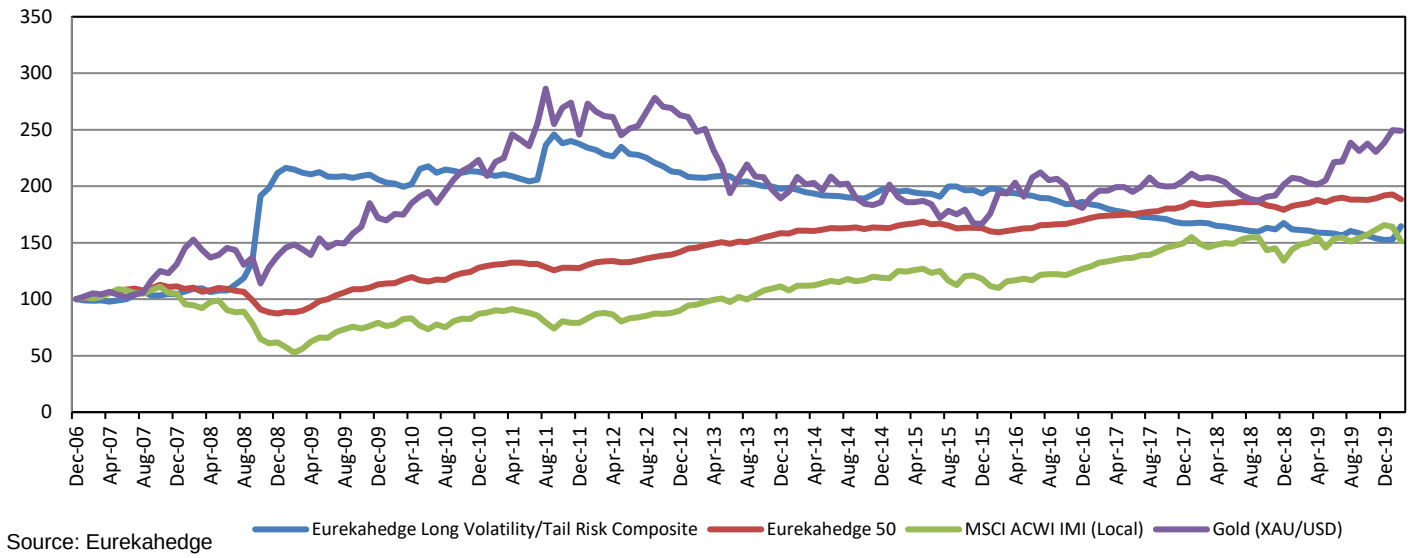

Source: Eurekahedge

# Tail risk protection: The price of watching over your tail

The return of market volatility on the back of the escalating COVID-19 outbreak situation around the globe has pushed two particular niche hedge fund strategies back into the spotlight: the *CBOE Eurekahedge Long Volatility Hedge Fund Index* and the *CBOE Eurekahedge Tail Risk Hedge Fund Index* returned 10.27% and 12.28% respectively in February 2020. The two strategies which provide crisis alpha and protection for institutional portfolios have long since generated debates among asset owners and academics alike. While these fund managers are capable of generating substantial returns to offset losses during black swan events, these strategies may often act as performance detractors during bull market runs resulting in a drag on portfolio returns. In this report we will take a look at the risk-return profile of these strategies as opposed to more traditional hedge fund strategies and assess the impact of allocation into long volatility and tail risk strategies in an institutional portfolio of hedge funds.

Figure 1 below compares the performance of the *Eurekahedge Long Volatility/Tail Risk Composite* and the *Eurekahedge 50* against the global equity market as represented by the MSCI ACWI IMI (Local) and gold price in US dollar. The *Eurekahedge Long Volatility/Tail Risk Composite* is a custom equal-weighted index comprising hedge funds utilising long volatility and tail risk strategies. Long volatility fund managers take a net long view on implied volatility with the goal of positive absolute return, while tail risk fund managers specifically aim to generate substantial returns during periods of market distress.

**Figure 1: *Eurekahedge Long Volatility/Tail Risk Composite* performance since the end of 2006**




Source: Eurekahedge

As observed in Figure 1, the *Eurekahedge Long Volatility/Tail Risk Composite* has managed to generate strong returns during the 2008 global financial crisis and the 2011 Eurozone debt crisis, thereby providing a hedge for institutional portfolios during a black swan event.

**Table 1: Performance in numbers - *Eurekahedge Long Volatility/Tail Risk Composite***

| | Eurekahedge Long Volatility/ Tail Risk Composite | Eurekahedge 50 | MSCI ACWI IMI (Local) | Gold (XAU/USD) |
|---|---|---|---|---|
| 2007 | 4.25% | 11.35% | 4.93% | 30.90% |
| 2008 | 102.94% | (21.58%) | (41.12%) | 5.59% |
| 2009 | (2.60%) | 29.35% | 28.10% | 24.54% |
| 2010 | 3.25% | 13.12% | 9.99% | 29.67% |
| 2011 | 11.67% | (0.17%) | (9.02%) | 10.05% |
| 2012 | (10.68%) | 11.10% | 13.56% | 7.07% |
| 2013 | (6.80%) | 11.69% | 23.80% | (28.02%) |

| | | | | |
|---|---|---|---|---|
| 2014 | (0.61%) | 3.04% | 6.82% | (1.79%) |
| 2015 | (1.60%) | (0.01%) | (0.52%) | (10.36%) |
| 2016 | (3.70%) | 4.27% | 7.33% | 8.53% |
| 2017 | (10.23%) | 6.96% | 17.51% | 13.08% |
| 2018 | 0.15% | (1.50%) | (10.10%) | (1.51%) |
| 2019 | (8.97%) | 7.14% | 23.49% | 18.28% |
| 2020 year-to-date | 7.99% | (1.85%) | (8.64%) | 4.54% |
| 3-year annualised return | (3.43%) | 2.79% | 4.57% | 8.30% |
| 3-year annualised volatility | 6.32% | 3.37% | 11.77% | 9.99% |
| 3-year Sharpe ratio (RFR = 2%) | (0.86) | 0.23 | 0.22 | 0.63 |
| 5-year annualised return | (3.34%) | 2.65% | 3.91% | 5.51% |
| 5-year annualised volatility | 5.76% | 3.19% | 11.38% | 12.95% |
| 5-year Sharpe ratio (RFR = 2%) | (0.93) | 0.21 | 0.17 | 0.27 |
| 10-year annualised return | (2.04%) | 5.14% | 6.92% | 3.57% |
| 10-year annualised volatility | 7.44% | 3.69% | 11.72% | 15.98% |
| 10-year Sharpe ratio (RFR = 2%) | (0.54) | 0.85 | 0.42 | 0.10 |

Source: Eurekahedge

Table 1 provides the detailed risk return statistics of the four indices shown in the figure above. Key takeaways include:

1. The *Eurekahedge Long Volatility/Tail Risk Composite* was up 7.99% over the first two months of 2020, as concerns over the COVID-19 outbreak's impact on the global economic growth resulted in elevated market volatility in February. The *Eurekahedge 50* and the MSCI ACWI IMI (Local) were down 1.85% and 8.64% respectively over the same period.

2. Fund managers utilising long volatility and tail risk strategies returned 102.94% in 2008 and 11.67% in 2011, in contrast to how the *Eurekahedge 50* slumped 21.58% in 2008 and ended 2011 mostly flat. On the other hand, the *Eurekahedge Long Volatility/Tail Risk Composite* has recorded annualised returns of -3.43% over the last three years, -3.34% over the last five years, and -2.04% over the last ten years, exemplifying the cost investors must pay in exchange for the tail risk protection afforded by these funds.

Table 2 provides the correlation values between the *Eurekahedge Long Volatility/Tail Risk Composite*, the *Eurekahedge 50*, the global equity market, as well as gold since the end of 2006. As observed in the table below, long volatility and tail risk strategies are very negatively correlated against the global equity market and the *Eurekahedge 50* which represents 50 large hedge funds with strong track record of performance. The *Eurekahedge 50* returns are weakly but positively correlated against gold, with a correlation coefficient of 0.15.

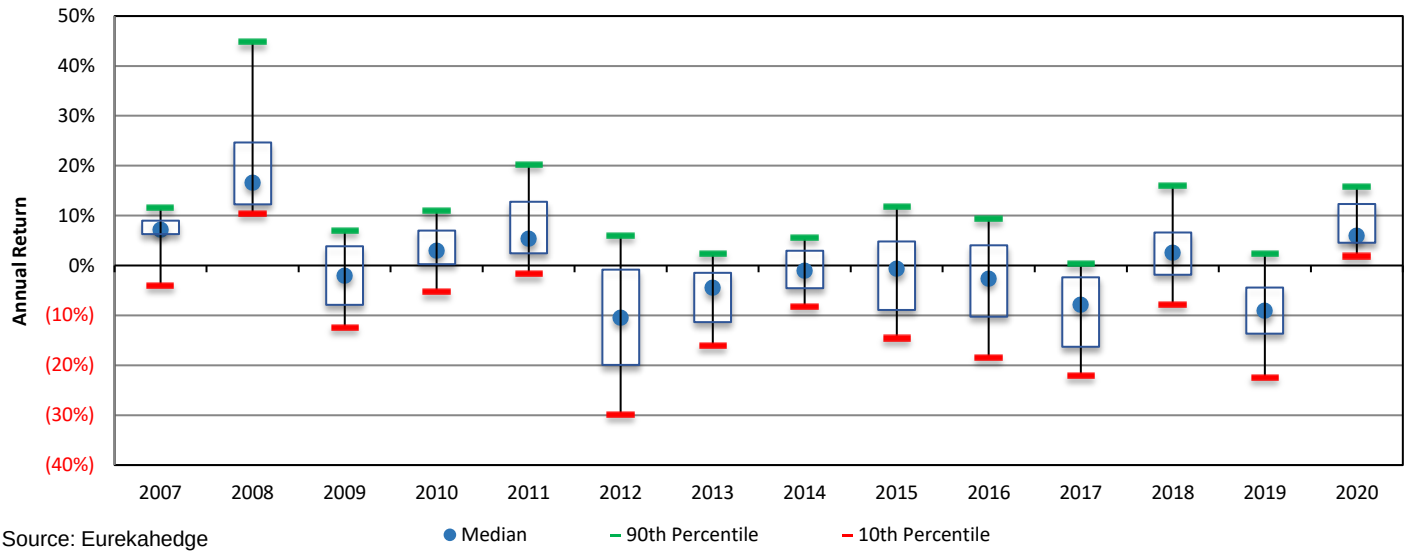
**Table 2: Correlation matrix**

| | Eurekahedge Long Volatility/ Tail Risk Composite | Eurekahedge 50 | MSCI ACWI IMI (Local) | Gold (XAU/USD) |
|---|---|---|---|---|
| Eurekahedge Long Volatility/Tail Risk Composite | 1.00 | | | |
| Eurekahedge 50 | -0.65 | 1.00 | | |
| MSCI ACWI IMI (Local) | -0.61 | 0.82 | 1.00 | |
| Gold (XAU/USD) | -0.12 | 0.15 | 0.02 | 1.00 |

Source: Eurekahedge

Figure 3 provides the performance distribution of all long volatility and tail risk hedge funds in the Eurekahedge database. The year 2008 saw substantial performance dispersion among the fund managers in this category, with the top 10% returning no less than 44.82% for the year. The distress caused by the COVID-19 outbreak, which have since evolved into a pandemic as of March has pushed global equities into the negative territory, resulting in another chance for long volatility and tail risk strategies to excel. The top 10% of the *Eurekahedge Long Volatility/Tail Risk Composite* constituent funds have returned at least 15.79% as of February 2020 year-to-date, and given the volatile market situation throughout the first half of March, they are on track to continue their strong performance.

**Figure 2: Performance distribution of long volatility and tail risk hedge funds**

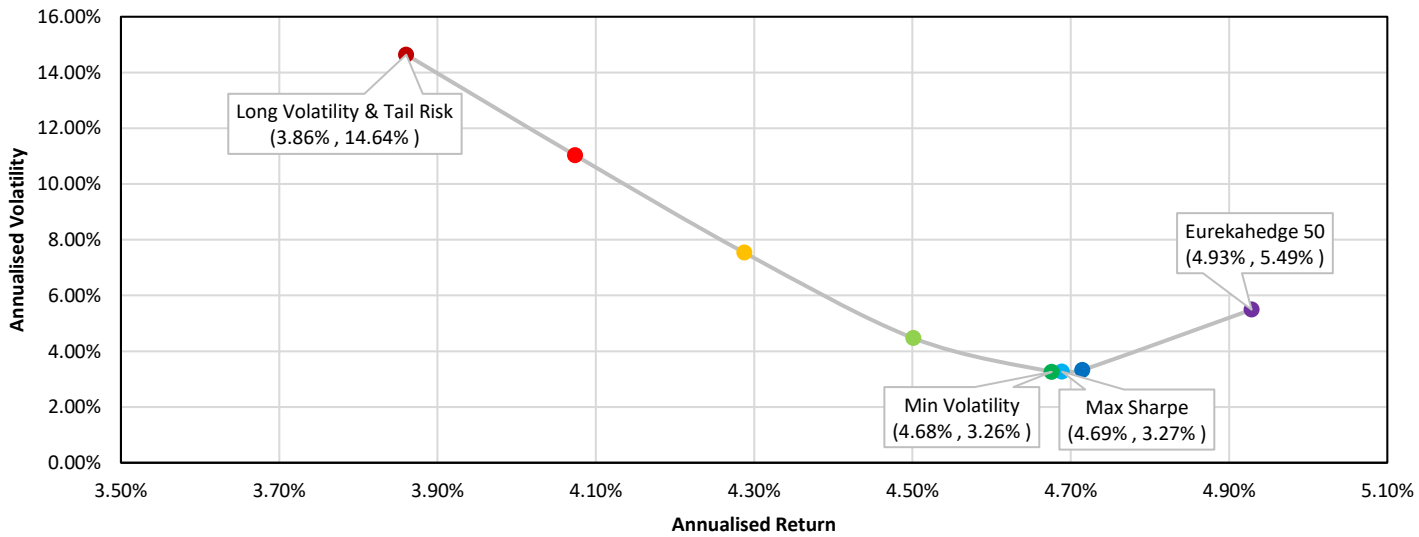



Source: Eurekahedge

The following section of the report focuses on the construction of a portfolio comprising the *Eurekahedge 50* and the *Eurekahedge Long Volatility/Tail Risk Composite* to illustrate how a tail risk protection component would affect the volatility and risk-adjusted performance of a hedge fund portfolio.

Figure 3 provides the annualised returns and volatilities of portfolios constructed from the *Eurekahedge 50* and the *Eurekahedge Long Volatility/Tail Risk Composite* at various different weights during the period starting December 2006. As shown in the figure, allocating a portion of the portfolio into long volatility/tail risk strategies resulted in lower volatilities, owing to the negative correlation between the returns of the two indices.

**Figure 3: Long volatility/tail risk portfolio optimisation (since December 2006)**




Source: Eurekahedge

Table 3 provides the portfolio allocation weights and the risk-return statistics of the portfolios shown in the figure above. The allocation of 22% to 24% of the portfolio into long volatility/tail risk strategies have resulted in higher Sharpe ratios and lower volatilities compared to the *Eurekahedge 50* on its own. On the other hand, the tail risk protection strategies have resulted in a performance drag between 0.24% and 0.25% per annum.

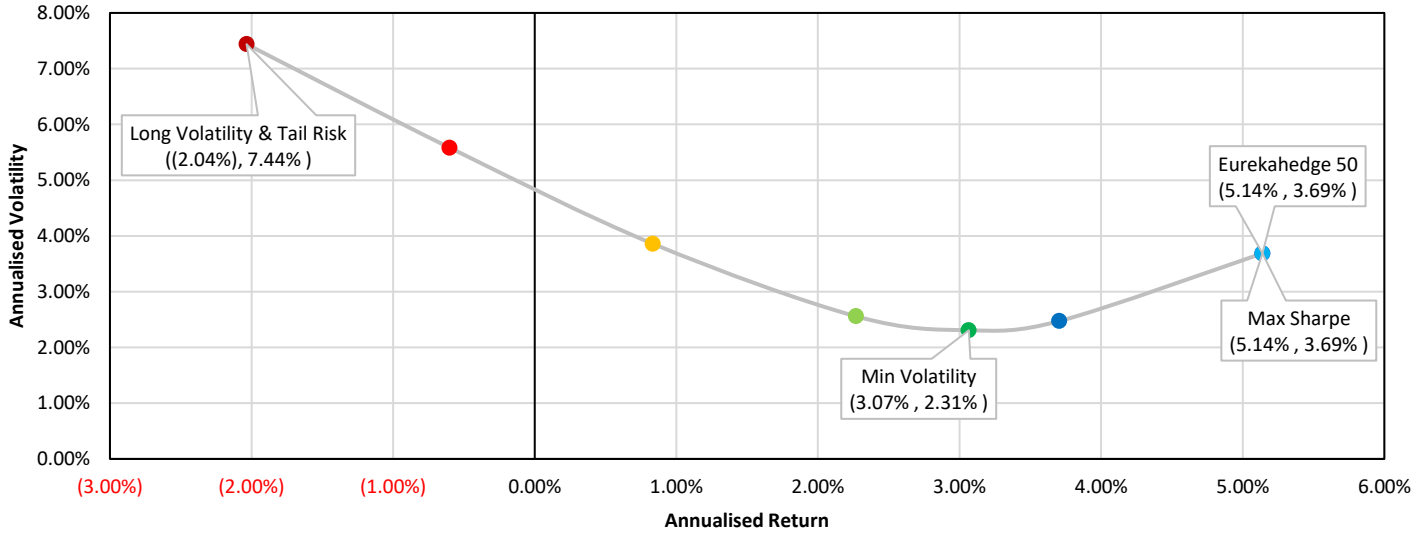
**Table 3: Long volatility/tail risk portfolio optimisation (since December 2006)**

| Eurekahedge 50 | Eurekahedge Long Volatility/Tail Risk Composite | Portfolio Annualised Return | Portfolio Annualised Volatility | Portfolio Sharpe Ratio (RFR = 2%) | Remark |
|---|---|---|---|---|---|
| 1.00 | 0.00 | 4.93% | 5.49% | 0.53 | |
| 0.80 | 0.20 | 4.71% | 3.33% | 0.82 | |
| 0.78 | 0.22 | 4.69% | 3.27% | 0.82 | Max Sharpe Portfolio |
| 0.76 | 0.24 | 4.68% | 3.26% | 0.82 | Min Volatility Portfolio |
| 0.60 | 0.40 | 4.50% | 4.47% | 0.56 | |
| 0.40 | 0.60 | 4.29% | 7.54% | 0.30 | |
| 0.20 | 0.80 | 4.07% | 11.03% | 0.19 | |
| 0.00 | 1.00 | 3.86% | 14.64% | 0.13 | |

Source: Eurekahedge

Figure 4 provides the annualised returns and volatilities of portfolios constructed from the *Eurekahedge 50* and the *Eurekahedge Long Volatility/Tail Risk Composite* at various different weights within the last 10 years. It is worth noting that the financial market has not witnessed a black swan event of a similar magnitude to the 2008 global financial crisis within the last 10 years, diminishing the value of a tail risk protection strategy for the period. As shown in the figure below, the addition of *Eurekahedge Long Volatility/Tail Risk Composite* does not improve the portfolio Sharpe ratio, but still reduces the portfolio volatility by virtue of its negatively correlated returns against the *Eurekahedge 50*.

**Figure 4: Long volatility/tail risk portfolio optimisation (last 10 years)**




Source: Eurekahedge

Table 4 provides the portfolio allocation weights and the risk-return statistics of the portfolios shown in the figure above. A 29% allocation into long volatility/tail risk strategies resulted in the minimum volatility portfolio over the last 10 years.

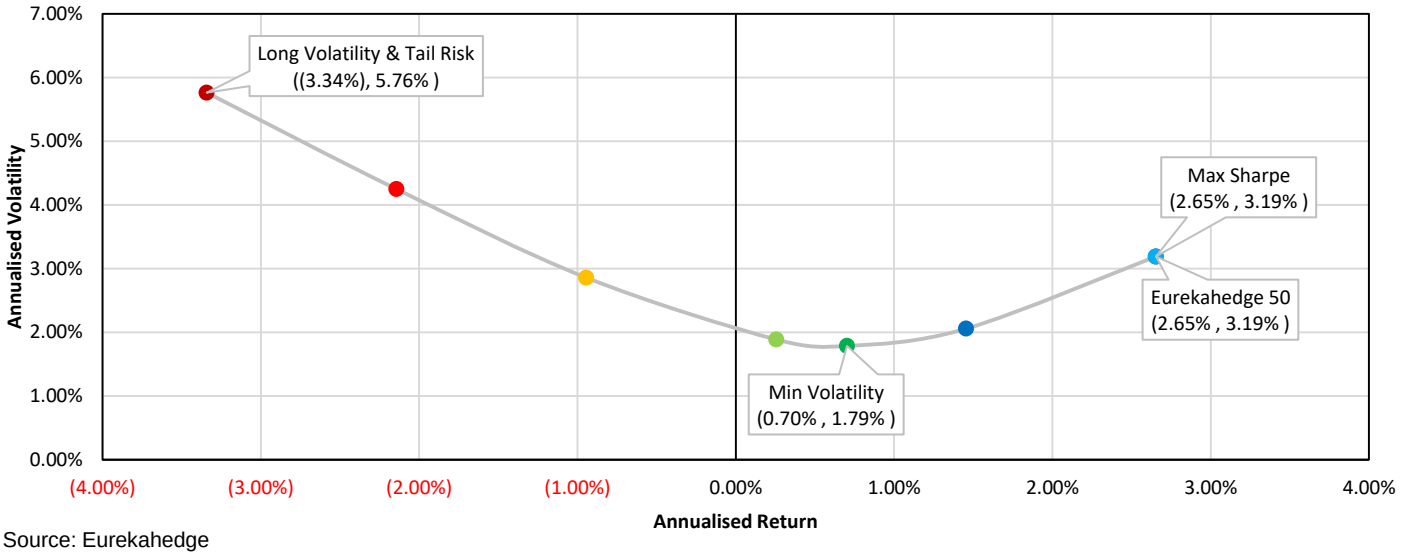
**Table 4: Long Volatility/Tail Risk portfolio optimisation (last 10 years)**

| Eurekahedge 50 | Eurekahedge Long Volatility/Tail Risk Composite | Portfolio Annualised Return | Portfolio Annualised Volatility | Portfolio Sharpe Ratio (RFR = 2%) | Remark |
|---|---|---|---|---|---|
| 1.00 | 0.00 | 5.14% | 3.69% | 0.85 | Max Sharpe Portfolio |
| 0.80 | 0.20 | 3.70% | 2.47% | 0.69 | |
| 0.71 | 0.29 | 3.07% | 2.31% | 0.46 | Min Volatility Portfolio |
| 0.60 | 0.40 | 2.27% | 2.56% | 0.11 | |
| 0.40 | 0.60 | 0.83% | 3.86% | (0.30) | |
| 0.20 | 0.80 | (0.60%) | 5.58% | (0.47) | |
| 0.00 | 1.00 | (2.04%) | 7.44% | (0.54) | |

Source: Eurekahedge

Figure 5 provides the annualised returns and volatilities of portfolios constructed from the *Eurekahedge 50* and the *Eurekahedge Long Volatility/Tail Risk Composite* at various different weights within the last five years. Further reducing the length of period analysed, we observe a similar outcome: the lack of a period of significant market distressed in the recent years results in the inability of long volatility/tail risk strategies to improve portfolio Sharpe ratio, which is completely expected given the nature of the strategy.

**Figure 5: Long volatility/tail risk portfolio optimisation (last 5 years)**




Source: Eurekahedge

Table 5 provides the portfolio allocation weights and the risk-return statistics of the portfolios shown in the figure above. A 33% allocation into long volatility/tail risk strategies resulted in the minimum volatility portfolio over the last five years. However, given the market development within the first two weeks of March 2020, it may be too early to gauge the extent of the market rout. The magnitude of the impact of the COVID-19 pandemic on the global economy over the upcoming months may result in a completely different landscape and tilt the figures in favour of allocating more heavily into tail risk protection strategies.

**Table 5: Long volatility/tail risk portfolio optimisation (last 5 years)**

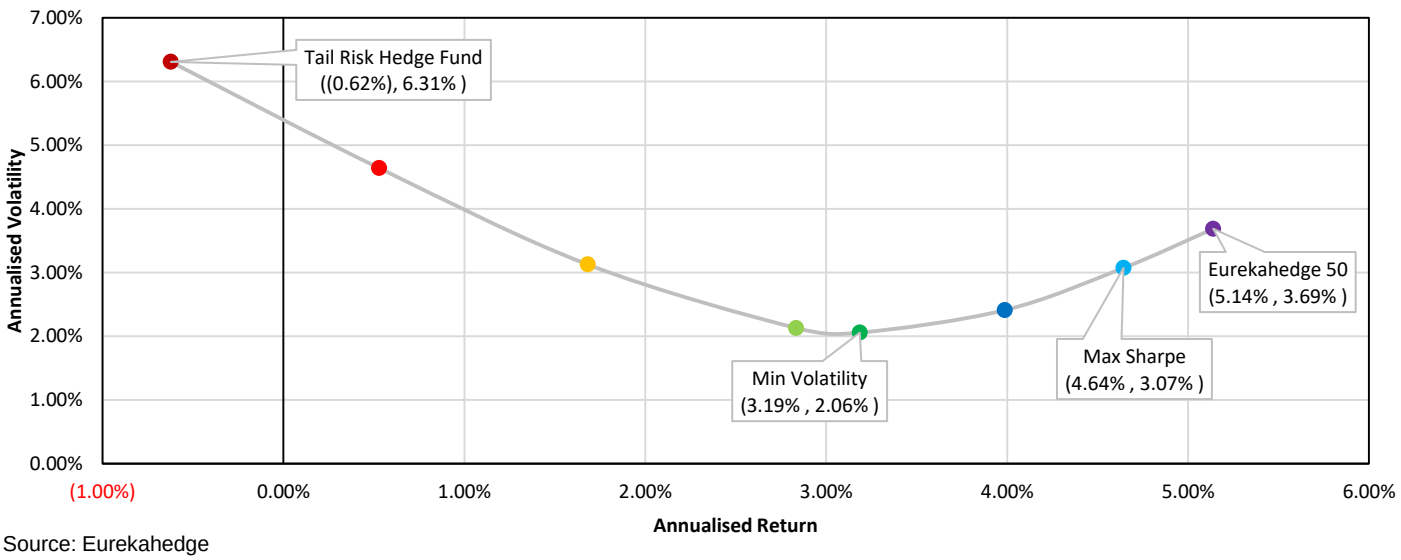
| Eurekahedge 50 | Eurekahedge Long Volatility/Tail Risk Composite | Portfolio Annualised Return | Portfolio Annualised Volatility | Portfolio Sharpe Ratio (RFR = 2%) | Remark |
|---|---|---|---|---|---|
| 1.00 | 0.00 | 2.65% | 3.19% | 0.21 | Max Sharpe Portfolio |
| 0.80 | 0.20 | 1.45% | 2.06% | (0.27) | |
| 0.67 | 0.33 | 0.70% | 1.79% | (0.73) | Min Volatility Portfolio |
| 0.60 | 0.40 | 0.26% | 1.89% | (0.92) | |
| 0.40 | 0.60 | (0.94%) | 2.86% | (1.03) | |
| 0.20 | 0.80 | (2.14%) | 4.25% | (0.98) | |
| 0.00 | 1.00 | (3.34%) | 5.76% | (0.93) | |

Source: Eurekahedge

Given the nature of long volatility and tail risk strategies, hedge fund allocators may have concerns surrounding the survivability of hedge funds within this category. Long volatility and tail risk hedge funds are expected to constantly record minor losses during periods of suppressed market volatility, raising the question of whether a fund is capable of surviving through long bull markets until the next market downturn. To address this concern and to emphasise the importance of selecting a hedge fund manager with strong track record, one such fund is selected among the constituents comprising the *Eurekahedge Long Volatility/Tail Risk Hedge Fund Composite*.

Figure 6 provides the annualised returns and volatilities of portfolios constructed from the *Eurekahedge 50* and a single tail risk hedge fund managing over US$1 billion in asset and having a robust track record spanning over more than 10 years. This particular tail risk hedge fund is capable of marginally improving the portfolio Sharpe ratio and reducing portfolio volatility over the last 10 years.

**Figure 6: Tail risk hedge fund portfolio optimisation (last 10 years)**




Source: Eurekahedge

Table 6 provides the portfolio allocation weights and the risk-return statistics of the portfolios shown in the figure above. The maximum portfolio Sharpe ratio was attained by allocating roughly 9% of the portfolio asset into the tail risk hedge fund, while the minimum portfolio volatility was achieved by allocating 34% of the portfolio asset into the same fund. We believe that provided sufficient information to select tail risk hedge fund managers with robust track record and sufficiently big assets under management, a single-digit percentage allocation would be closer to the ideal allocation for maximum risk-adjusted return as opposed to the 22% allocation suggested in Table 3.

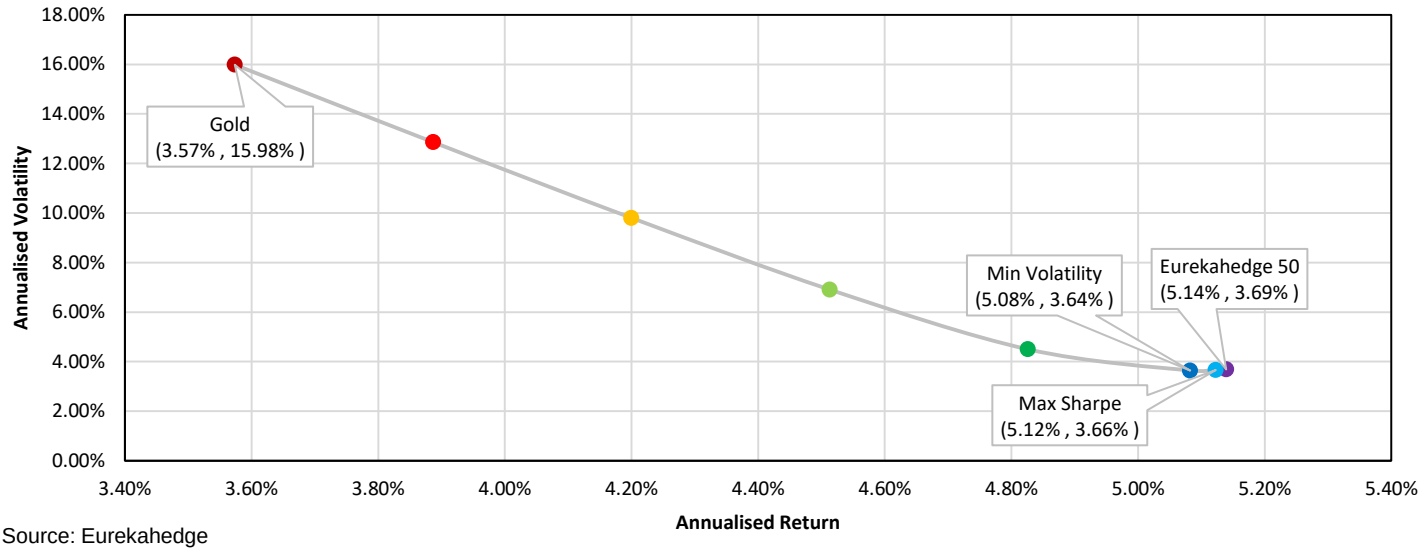
**Table 6: Tail Risk hedge fund portfolio optimisation (last 10 years)**

| Eurekahedge 50 | Tail Risk Hedge Fund | Portfolio Annualised Return | Portfolio Annualised Volatility | Portfolio Sharpe Ratio (RFR = 2%) | Remark |
|---|---|---|---|---|---|
| 1.00 | 0.00 | 5.14% | 3.69% | 0.85 | |
| 0.91 | 0.09 | 4.64% | 3.07% | 0.86 | Max Sharpe Portfolio |
| 0.80 | 0.20 | 3.99% | 2.41% | 0.82 | |
| 0.66 | 0.34 | 3.19% | 2.06% | 0.58 | Min Volatility Portfolio |
| 0.60 | 0.40 | 2.83% | 2.13% | 0.39 | |
| 0.40 | 0.60 | 1.68% | 3.13% | (0.10) | |
| 0.20 | 0.80 | 0.53% | 4.64% | (0.32) | |
| 0.00 | 1.00 | (0.62%) | 6.31% | (0.42) | |

Source: Eurekahedge

This section of the report takes a look at the ability of gold, which is typically seen as a safe haven asset to act as a tail risk protection component for a hedge fund portfolio. Figure 7 provides the annualised returns and volatilities of portfolios constructed from the *Eurekahedge 50* and gold at various different weights within the last 10 years.

**Figure 7: Gold portfolio optimisation (last 10 years)**




Source: Eurekahedge

Table 7 provides the portfolio allocation weights and the risk-return statistics of the portfolios shown in the figure above. It could be observed from Table 7 that allocation to gold offers negligible improvements to the portfolio Sharpe ratio and volatility. The weak, but still positive correlation between the performance of gold and the *Eurekahedge 50* index resulted in minimal diversification benefits over the last 10 years. Referring to Table 1, we can also observe that gold returned 5.59% in 2008, which would not offset much of the 21.58% loss registered by the *Eurekahedge 50* without substantial tilt of portfolio allocation towards gold. However, looking at a longer time period starting from the end of 2006, maximum Sharpe ratio would be achieved through 12% portfolio allocation into gold. This difference could be attributed to the strong rally of gold throughout 2007 and 2009, which would not be accounted for in Table 7.

**Table 7: Gold portfolio optimisation (last 10 years)**

| Eurekahedge 50 | Gold | Portfolio Annualised Return | Portfolio Annualised Volatility | Portfolio Sharpe Ratio (RFR = 2%) | Remark |
|---|---|---|---|---|---|
| 1.00 | 0.00 | 5.14% | 3.69% | 0.85 | |
| 0.99 | 0.01 | 5.12% | 3.66% | 0.85 | Max Sharpe Portfolio |
| 0.96 | 0.04 | 5.08% | 3.64% | 0.85 | Min Volatility Portfolio |
| 0.80 | 0.20 | 4.83% | 4.50% | 0.63 | |
| 0.60 | 0.40 | 4.51% | 6.91% | 0.36 | |
| 0.40 | 0.60 | 4.20% | 9.80% | 0.22 | |
| 0.20 | 0.80 | 3.89% | 12.86% | 0.15 | |
| 0.00 | 1.00 | 3.57% | 15.98% | 0.10 | |

Source: Eurekahedge

Based on the figures above, while an argument could be made for the use of gold to enhance portfolio Sharpe ratio and provide diversification benefits, an allocation towards long volatility and tail risk hedge fund strategies would provide better tail risk protection during periods of extreme market distress.

Table 8 below summarises the risk-return statistics of the optimised maximum Sharpe ratio portfolios over the period starting from the end of 2006 and ending February 2020.

**Table 8: Maximum Sharpe portfolios (since December 2006)**

| Portfolio Allocation | Portfolio Annualised Return | Portfolio Annualised Volatility | Portfolio Sharpe Ratio (RFR = 2%) |
|---|---|---|---|
| 78% Eurekahedge 50<br>22% Long Volatility/Tail Risk | 4.69% | 3.27% | 0.82 |
| 88% Eurekahedge 50<br>12% Gold | 5.22% | 5.54% | 0.58 |

Source: Eurekahedge

In conclusion, despite the performance drag introduced by long volatility and tail risk hedge fund strategies over the long run, institutional portfolios could reap the benefit of downside protection during periods of extreme market distress, and generate better risk-adjusted returns by making a small allocation into these strategies. Take note that the double digit allocation into a composite of long volatility/tail risk strategies is likely exaggerated on account of the smoothening of returns on an index level, and a more realistic allocation will likely lie in the low-to-high single digits as examined in our single fund allocation scenario earlier. The ability of these managers to deliver crisis alpha during periods of heightened market volatility when correlations across asset classes tend to breakdown offers much needed downside protection for institutional investors, if utilised tactically in anticipation of major market corrections the gains here can be even more significant.

# Introduction

**"The *Eurekahedge Hedge Fund Index* was up 0.08% year-to-date as of January 2020, outperforming the underlying global equity market as represented by the MSCI ACWI IMI which was down 0.89% over the same period."**

**"Fund managers around the globe registered 8.65% return in 2019 – their strongest annual performance since 2013."**

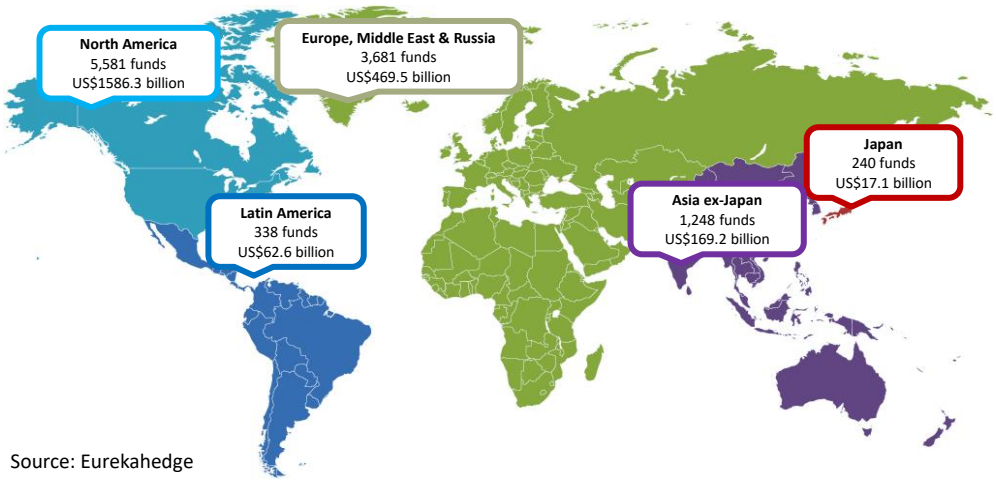
**"Interest level among hedge fund investors has been weak, as the industry recorded seven consecutive quarters of net outflows from the Q2 2018 up to Q4 2019, totalling US$260.6 billion."**

**"Long/short equities have remained as the single most popular strategy among the primary strategic mandates, with 34.6% market share as of January 2020."**

The *Eurekahedge Hedge Fund Index* was up 0.08% year-to-date as of January 2020, outperforming the underlying global equity market as represented by the MSCI ACWI IMI, which was down 0.89% over the same period. In 2019, the positive development of the US-China trade negotiations and the Fed's shift of stance on their policy rates were the primary drivers of the global equity market performance. After the breakdown of the trade talks in August, which resulted in the sharp decline of risk assets during the month, the two leading economies finally agreed on a phase-one deal in October, easing their 18-month long trade tension. The said deal was officially signed in January 2020. Throughout 2019, the Federal Reserve announced three 25 bps rate cuts to support the US economy from the risks associated with slowing global growth and trade uncertainties. The tech-heavy NASDAQ recorded a 35.23% gain in 2019 – followed by the 28.88% gain of the S&P 500 over the same period. Fund managers around the globe registered 8.65% return in 2019 – their strongest annual performance since 2013. Going into 2020, the outbreak of COVID-19 in China raised concerns among investors over the potential adverse effect on the global economic outlook, resulting in several sell-offs in the equity market over the first few months of the year.

The yields of the US 10-year bond dipped lower in 2019, despite the persistent risk-on sentiment throughout the year. The dovish stance of the Federal Reserve pushed the yields of US treasuries lower, resulting in the spread between the yields of the US 2-year and 10-year bonds to invert in August 2019 for the first time since 2007. Similarly, the yields of the German 10-year bond hit an all-time low in September 2019, as the German economy slowed down in Q2 2019, pushing the ECB to cut its deposit rates and restart their asset purchase programmes.

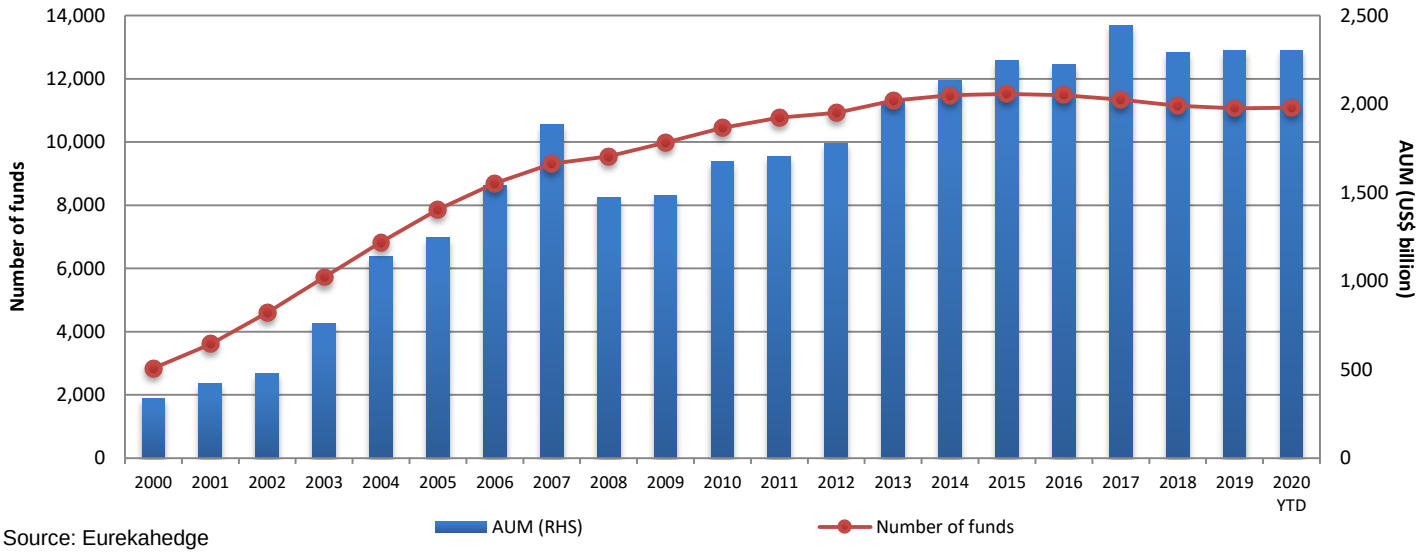
**Figure 1: Global hedge fund industry map**




Source: Eurekahedge

The industry's total assets under management (AUM) increased by US$10.3 billion in 2019, driven by performance-based gains counterbalanced with substantial investor redemptions. Interest level among hedge fund investors has been weak, as the industry recorded seven consecutive quarters of net outflows from the Q2 2018 up to Q4 2019, totalling US$260.6 billion, despite the performance-based gains of US$82.7 billion recorded over the same period.

**Figure 2: Industry growth over the years**




Source: Eurekahedge

Over the past 10 years, the global hedge fund industry has witnessed varying market conditions with periods of growth, stress and rebound. In the years prior to the 2008 financial crisis, optimism in hedge funds was seen by its accelerated growth both in the industry AUM and the number of funds. In 2006, the global hedge fund industry was managed by 8,694 funds with total assets worth US$1.54 trillion. By mid-2008, the industry's asset base grew over US$400 billion to breach the US$1.95 trillion mark, much of this is attributed to strong investor inflows. Over 2007 and mid-2008 alone, investor inflows stood at US$239.9 billion while performance-based gains stood at US$168.4 billion. The financial crisis of 2008 affected the industry's strength with the global hedge fund industry registering losses of US$413.6 billion at the end of 2008, with redemptions accounting for over half of the losses. Investor redemptions continued in 2009 totalling over US$122.9 billion despite excellent performance-based gains of US$131.5 billion during the year.

Hedge funds managed to ride on excellent performance-based gains between 2010 and 2014 despite going through redemption pressures which were strong during the Eurozone crisis in 2011. Despite uninterrupted redemptions due to market uncertainty between July 2014 and December 2014, global hedge funds registered excellent asset growth totalling up to US$121.0 billion over the year, with performance-based gains accounting for 71% of this growth. For the annual year 2015, net investor inflows accounted for the bulk of asset growth, with allocations totalling US$80.7 billion while a further US$27.9 billion was attributed to performance-driven gains. Going into 2016, global hedge fund industry faced strong redemptions which stood at US$55.1 billion – the highest recorded loss since 2010, while performance-based gains stood at US$35.1 billion in the same year. The situation reversed in 2017 with US$114.6 billion investor inflows, on top of the US$107.3 billion performance-based gains, resulting in the strongest annual AUM growth the industry has seen after the end of 2013. In contrast to the previous year, the industry's total AUM saw a substantial decline in 2018, which could be attributed to the strong investor redemptions and performance-based losses of US$93.4 billion and US$61.0 billion respectively. The escalation of the US-China trade war combined with aggressive Fed rate hikes resulted in multiple equity sell-offs during the year. Going into 2019, supported by the positive progress of the US-China trade talks and the Fed's shift to a more patient stance which resulted in performance-based gains of $137.8 billion – the strongest since 2006, offset by substantial investor redemptions of $127.5 billion which occurred on the first 11 months of the year.

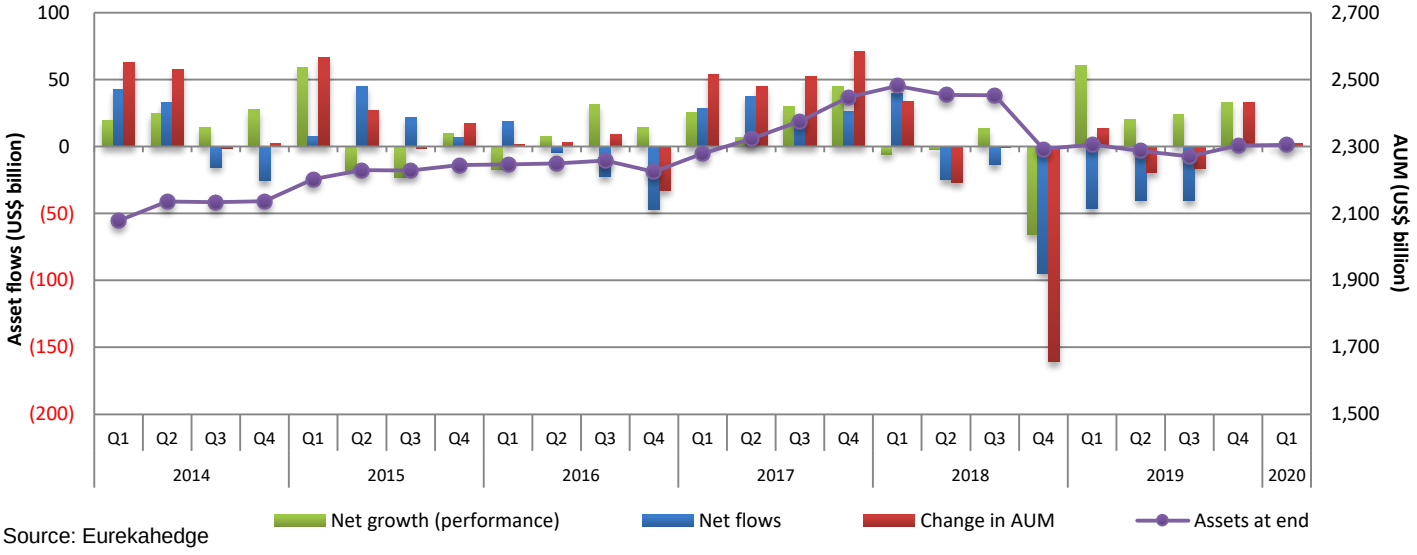
# Industry composition and growth trends

**Asset flows**

Figure 3 summarises the quarterly asset flows into the global hedge fund industry over the course of the last seven years - attributing the growth in AUM to both performance gains and investor flows. In 2014, the industry recorded four quarters of positive performance-based gains, despite strong redemptions from North America and Europe focused funds in the second half of the year. Investor allocations were positive in all four quarters in 2015, with Q2 and Q3 2015 seeing the highest allocations

totalling US$66.4 billion, despite both quarters witnessing performance driven losses totalling US$41.2 billion. Going into 2016, tough trading environment and uncertainties over major political events which occurred since the start of Q2 of 2016 resulted in strong redemptions totalling US$73.8 billion in the last three quarters of the year. Supported by the global equity market rallies and recovering economies in European and Asian countries, the hedge fund industry made a comeback in 2017 with US$114.6 billion investor inflows and US$107.3 billion performance-based gains over the year. In 2018, the industry suffered strong investor redemptions and performance-based losses totalling US$93.4 billion and US$61.0 billion respectively, as the international trade conflict and the aggressive stance of the Federal Reserve weighed on the performance of global equities throughout the year. Going into 2019, the positive development of the US-China trade negotiations combined with the Fed's accommodative stance contributed to the robust performance of equities throughout the year, resulting in performance-based gains of US$137.8 billion for the hedge fund industry, in spite of investor redemptions totalling US$127.5 billion throughout the year. As of January 2020, performance-based gains of US$0.4 billion and investor allocations of US$1.6 billion have been recorded.

**Figure 3: Quarterly asset flows in global hedge funds**




Source: Eurekahedge

Table 1 below shows the asset allocations across the various regional mandates since the end of 2014.

**Table 1: Monthly asset flows across regions**

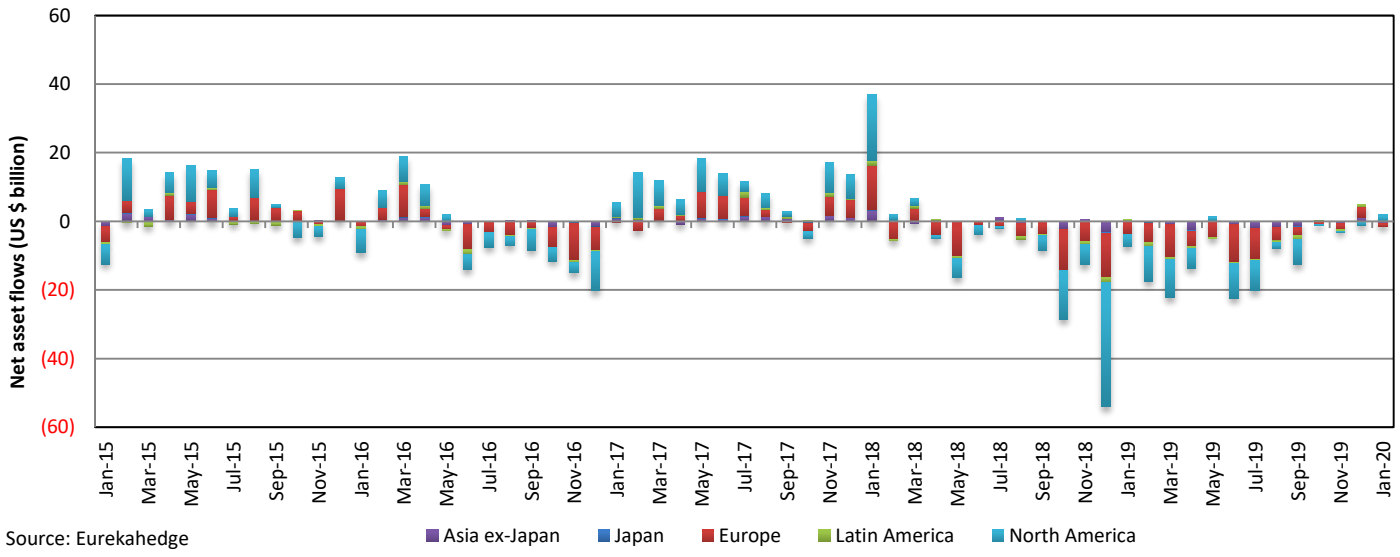
| | Asia ex-Japan | Japan | Europe | Latin America | North America |
|---|---|---|---|---|---|
| **2014** | **2.7** | **(0.1)** | **19.3** | **(5.9)** | **18.8** |
| Jan-15 | (1.4) | (0.3) | (4.6) | (0.6) | (5.6) |
| Feb-15 | 2.4 | 0.1 | 3.6 | (0.3) | 12.2 |
| Mar-15 | 1.3 | 0.1 | (0.5) | (1.0) | 2.0 |
| Apr-15 | 0.5 | 0.0 | 7.1 | 0.8 | 5.8 |
| May-15 | 2.0 | 0.1 | 3.5 | (0.2) | 10.6 |
| Jun-15 | 0.9 | 0.1 | 8.2 | 0.5 | 5.1 |
| Jul-15 | (0.3) | 0.1 | 1.4 | (0.5) | 2.2 |
| Aug-15 | (0.4) | 0.1 | 6.7 | (0.2) | 8.3 |
| Sep-15 | (0.3) | 0.1 | 3.9 | (0.8) | 1.1 |
| Oct-15 | (0.2) | (0.0) | 3.1 | 0.1 | (4.6) |
| Nov-15 | 0.2 | (0.1) | (1.0) | (0.4) | (2.9) |

| | | | | | |
|---|---|---|---|---|---|
| Dec-15 | 0.2 | 0.1 | 9.1 | (0.1) | 3.3 |
| **2015** | **5.0** | **0.6** | **40.5** | **(2.8)** | **37.4** |
| Jan-16 | (0.2) | (0.1) | (1.3) | (0.8) | (6.8) |
| Feb-16 | 0.4 | 0.1 | 3.5 | 0.0 | 5.0 |
| Mar-16 | 1.2 | 0.2 | 9.2 | 1.0 | 7.1 |
| Apr-16 | 1.2 | 0.1 | 2.4 | 0.9 | 6.1 |
| May-16 | (1.1) | (0.1) | (1.1) | (0.4) | 1.9 |
| Jun-16 | (0.9) | (0.2) | (7.3) | (1.2) | (4.6) |
| Jul-16 | (0.2) | (0.1) | (3.2) | 0.0 | (4.1) |
| Aug-16 | 0.2 | (0.1) | (4.0) | (0.3) | (2.7) |
| Sep-16 | 0.1 | (0.0) | (2.0) | (0.4) | (6.0) |
| Oct-16 | (1.8) | (0.1) | (5.7) | (0.1) | (3.9) |
| Nov-16 | (0.4) | (0.1) | (10.8) | (0.6) | (3.1) |
| Dec-16 | (1.6) | (0.1) | (6.8) | (0.2) | (11.6) |
| **2016** | **(3.0)** | **(0.4)** | **(27.0)** | **(2.1)** | **(22.7)** |
| Jan-17 | 0.9 | 0.1 | (0.2) | 0.5 | 3.9 |
| Feb-17 | 0.5 | 0.1 | (2.6) | 0.6 | 13.1 |
| Mar-17 | 0.1 | 0.1 | 3.5 | 0.8 | 7.2 |
| Apr-17 | (0.8) | 0.0 | 1.6 | 0.5 | 4.1 |
| May-17 | 0.9 | 0.1 | 7.5 | 0.1 | 9.6 |
| Jun-17 | 0.6 | 0.1 | 6.7 | 0.2 | 6.4 |
| Jul-17 | 1.5 | 0.1 | 5.5 | 1.6 | 2.9 |
| Aug-17 | 1.3 | 0.0 | 2.0 | 0.6 | 4.2 |
| Sep-17 | 0.8 | (0.0) | (0.4) | 0.8 | 1.4 |
| Oct-17 | (0.5) | (0.1) | (2.5) | 0.3 | (1.8) |
| Nov-17 | 1.6 | 0.2 | 5.5 | 0.9 | 8.8 |
| Dec-17 | 1.0 | 0.1 | 5.2 | 0.4 | 6.9 |
| **2017** | **7.9** | **0.9** | **31.7** | **7.4** | **66.6** |
| Jan-18 | 3.2 | 0.3 | 12.9 | 1.3 | 19.3 |
| Feb-18 | 0.3 | 0.1 | (5.3) | (0.3) | 1.8 |
| Mar-18 | (0.6) | 0.1 | 3.7 | 0.8 | 2.1 |
| Apr-18 | 0.4 | (0.0) | (4.1) | 0.2 | (1.0) |
| May-18 | (0.1) | (0.1) | (9.9) | (0.8) | (5.5) |
| Jun-18 | 0.1 | (0.0) | (1.1) | (0.1) | (2.6) |
| Jul-18 | 1.1 | (0.0) | (1.5) | (0.1) | (0.4) |
| Aug-18 | (0.7) | (0.0) | (3.6) | (0.9) | 0.9 |
| Sep-18 | (0.3) | (0.1) | (3.3) | (0.5) | (4.2) |
| Oct-18 | (2.2) | (0.3) | (11.9) | (0.1) | (14.2) |

| | | | | | |
|---|---|---|---|---|---|
| Nov-18 | 0.5 | (0.1) | (5.8) | (0.7) | (6.1) |
| Dec-18 | (3.3) | (0.4) | (12.6) | (1.6) | (36.2) |
| **2018** | **(1.6)** | **(0.6)** | **(42.5)** | **(2.7)** | **(46.0)** |
| Jan-19 | (0.2) | (0.1) | (3.6) | 0.7 | (3.6) |
| Feb-19 | (0.5) | (0.1) | (5.6) | (1.1) | (10.2) |
| Mar-19 | (0.9) | (0.1) | (9.4) | (0.6) | (11.1) |
| Apr-19 | (2.7) | (0.3) | (4.4) | (0.7) | (5.7) |
| May-19 | 0.2 | (0.0) | (4.8) | (0.2) | 1.2 |
| Jun-19 | (0.8) | (0.1) | (11.1) | (0.2) | (10.3) |
| Jul-19 | (2.1) | (0.2) | (9.0) | (0.3) | (8.7) |
| Aug-19 | (1.8) | (0.1) | (3.9) | (0.5) | (1.7) |
| Sep-19 | (1.5) | (0.2) | (2.5) | (1.3) | (7.1) |
| Oct-19 | (0.3) | (0.1) | (0.6) | 0.1 | (0.2) |
| Nov-19 | (0.6) | (0.1) | (1.9) | (0.5) | (0.1) |
| Dec-19 | 1.1 | 0.1 | 3.0 | 0.7 | (1.2) |
| **2019** | **(10.0)** | **(1.3)** | **(53.8)** | **(3.8)** | **(58.6)** |
| Jan-20 | (0.6) | (0.0) | (0.9) | 0.0 | 1.9 |

Source: Eurekahedge

**Figure 4: Monthly asset flows across regions**




Source: Eurekahedge

Table 2 provides the detailed asset flows breakdown across the primary hedge fund strategies.

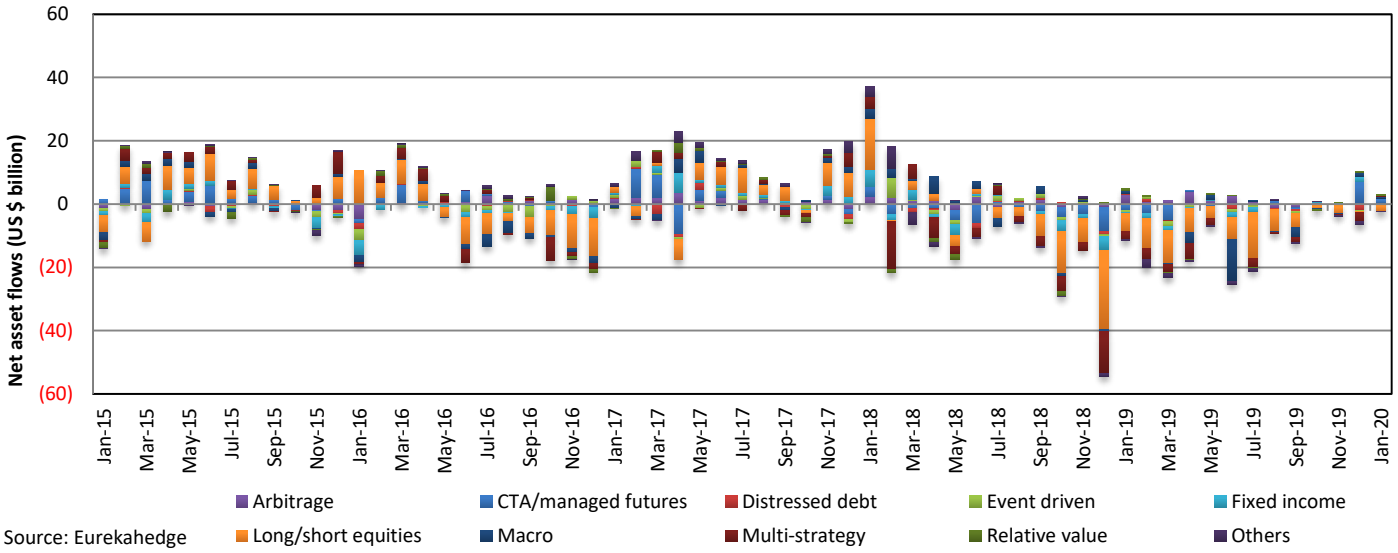
**Table 2: Monthly asset flows across strategies**

| | Arbitrage | CTA/managed futures | Distressed debt | Event driven | Fixed income | Long/ short equities | Macro | Multi-strategy | Relative value | Others |
|---|---|---|---|---|---|---|---|---|---|---|
| **2014** | **(14.00)** | **(16.10)** | **3.32** | **9.49** | **15.31** | **48.64** | **(14.05)** | **12.02** | **(6.67)** | **(3.13)** |
| Jan-15 | (1.32) | 1.57 | (0.03) | (0.93) | (1.34) | (5.41) | (2.62) | (0.61) | (1.67) | (0.08) |
| Feb-15 | (0.09) | 4.97 | 0.20 | (0.48) | 1.24 | 5.61 | 1.83 | 3.80 | 0.79 | 0.06 |
| Mar-15 | (1.61) | 7.31 | 0.17 | (1.50) | (2.85) | (5.71) | 2.26 | 1.77 | 1.21 | 0.88 |
| Apr-15 | (0.15) | 1.38 | (0.02) | 0.17 | 3.18 | 7.51 | 2.11 | 1.97 | (2.15) | 0.15 |
| May-15 | 0.69 | 3.23 | 0.50 | 0.54 | 1.45 | 5.07 | 2.10 | 2.85 | (0.35) | (0.01) |
| Jun-15 | (0.91) | 5.73 | (1.69) | 0.26 | 1.40 | 8.69 | (1.46) | 2.22 | 0.28 | 0.30 |
| Jul-15 | 0.31 | 1.55 | (0.66) | (0.89) | (0.12) | 2.74 | (1.08) | 2.72 | (1.77) | 0.07 |
| Aug-15 | 0.41 | 2.30 | 0.28 | 1.50 | 0.46 | 6.32 | 1.77 | 0.99 | 0.59 | 0.03 |
| Sep-15 | (0.11) | 1.59 | (0.57) | (0.13) | (0.47) | 4.36 | (1.02) | (0.06) | 0.28 | 0.02 |
| Oct-15 | (0.04) | (2.13) | (0.09) | 0.02 | (0.09) | 0.99 | 0.01 | (0.09) | (0.15) | (0.11) |
| Nov-15 | (1.90) | (0.42) | 0.01 | (2.01) | (3.46) | 2.00 | (0.34) | 3.84 | (0.30) | (1.51) |
| Dec-15 | (2.04) | 1.89 | (0.95) | (0.42) | (0.60) | 6.79 | 1.13 | 6.93 | (0.13) | 0.06 |
| **2015** | **(6.77)** | **28.97** | **(2.86)** | **(3.88)** | **(1.19)** | **38.95** | **4.68** | **26.34** | **(3.38)** | **(0.14)** |
| Jan-16 | (4.79) | (1.20) | (2.00) | (3.40) | (4.71) | 10.49 | (2.40) | (0.54) | (0.18) | (0.43) |
| Feb-16 | 0.32 | 1.88 | (0.04) | (0.11) | (1.46) | 4.49 | 0.11 | 2.25 | 1.50 | 0.10 |
| Mar-16 | 0.34 | 5.95 | 0.11 | 0.24 | (0.19) | 7.28 | 0.43 | 3.56 | 0.87 | 0.23 |
| Apr-16 | 0.44 | 0.83 | (0.26) | (0.61) | (0.27) | 5.08 | 1.04 | 3.94 | 0.21 | 0.39 |
| May-16 | 0.44 | (0.07) | 0.38 | (0.24) | (0.69) | (3.13) | (0.10) | 1.88 | 0.51 | 0.23 |
| Jun-16 | 0.77 | 3.41 | (0.42) | (2.18) | (1.56) | (8.65) | (1.46) | (4.16) | 0.08 | 0.06 |
| Jul-16 | 2.79 | 0.55 | (0.72) | (1.17) | (1.18) | (6.61) | (3.75) | 1.30 | 0.29 | 0.99 |
| Aug-16 | (0.24) | 0.75 | 0.45 | (2.35) | (0.47) | (2.55) | (3.64) | (0.47) | 0.72 | 0.85 |
| Sep-16 | 1.22 | (0.86) | 0.36 | (3.24) | (0.05) | (5.01) | (1.66) | 0.60 | 0.08 | 0.27 |
| Oct-16 | 0.42 | 0.74 | (0.04) | (0.70) | (1.46) | (7.87) | (0.65) | (7.14) | 4.51 | 0.55 |
| Nov-16 | 1.58 | (0.37) | (0.31) | 0.96 | (2.70) | (10.55) | (1.35) | (1.27) | (0.92) | (0.11) |
| Dec-16 | (0.44) | (0.67) | 0.16 | 1.05 | (3.42) | (12.04) | (2.23) | (1.78) | (1.07) | 0.19 |
| **2016** | **2.84** | **10.95** | **(2.34)** | **(11.76)** | **(18.17)** | **(29.06)** | **(15.68)** | **(1.83)** | **6.61** | **3.30** |
| Jan-17 | 1.78 | (0.29) | 0.29 | 1.02 | 0.68 | 1.91 | (1.00) | 0.02 | (0.15) | 0.89 |
| Feb-17 | 2.03 | 9.24 | 0.46 | 1.95 | (0.84) | (3.00) | (0.93) | (0.13) | 0.00 | 2.89 |
| Mar-17 | 1.94 | 7.49 | (3.24) | 0.40 | 2.46 | 0.88 | (1.96) | 3.47 | 0.42 | (0.04) |
| Apr-17 | 3.51 | (9.77) | (0.65) | (0.84) | 6.45 | (6.34) | 4.39 | 2.06 | 2.98 | 3.62 |
| May-17 | 1.24 | 3.29 | 2.32 | (1.25) | 1.05 | 5.27 | 3.77 | (0.17) | 0.82 | 1.85 |
| Jun-17 | 2.02 | 2.27 | (0.36) | 0.96 | 1.08 | 5.69 | (0.18) | 1.48 | 0.35 | 0.67 |
| Jul-17 | 1.48 | (0.35) | (0.02) | 1.19 | 0.86 | 8.17 | 0.91 | (1.62) | 0.34 | 0.66 |
| Aug-17 | 1.50 | 0.36 | (0.02) | 0.24 | 0.78 | 3.21 | 0.48 | 1.13 | 0.55 | (0.15) |
| Sep-17 | (0.21) | (0.31) | (0.58) | 0.38 | 0.59 | 4.67 | (1.03) | (1.56) | (0.17) | 0.78 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Oct-17 | 0.92 | (0.51) | (0.01) | (1.17) | (0.35) | (0.89) | 0.30 | (1.40) | (1.35) | (0.14) |
| Nov-17 | 1.47 | 1.24 | (0.16) | (0.05) | 3.21 | 7.13 | 1.52 | 0.65 | 0.79 | 1.25 |
| Dec-17 | (1.83) | (1.58) | (1.58) | (0.89) | 2.46 | 7.38 | 2.14 | 4.34 | (0.36) | 3.59 |
| **2017** | **15.86** | **11.09** | **(3.57)** | **1.94** | **18.44** | **34.09** | **8.42** | **8.27** | **4.23** | **15.87** |
| Jan-18 | 2.35 | 3.11 | (0.05) | 0.24 | 5.20 | 16.28 | 3.14 | 3.72 | 0.00 | 3.03 |
| Feb-18 | 2.21 | (3.26) | (0.17) | 6.18 | (1.77) | (0.20) | 2.78 | (15.33) | (0.96) | 7.02 |
| Mar-18 | 0.97 | (1.52) | (1.10) | 0.53 | 3.25 | 2.68 | 0.54 | 4.69 | (0.12) | (3.80) |
| Apr-18 | 1.09 | (1.54) | (0.35) | (1.47) | (0.98) | 2.09 | 5.57 | (6.49) | (1.20) | (1.25) |
| May-18 | (2.10) | (3.16) | 0.24 | (1.06) | (3.72) | (3.49) | 0.79 | (2.47) | (1.51) | 0.07 |
| Jun-18 | 2.24 | (6.14) | (1.56) | 0.33 | 0.64 | 1.72 | 2.23 | (2.74) | (0.13) | (0.36) |
| Jul-18 | (1.23) | 0.75 | 0.25 | 1.61 | 0.55 | (3.32) | (2.69) | 2.76 | 0.26 | 0.17 |
| Aug-18 | 0.90 | (1.12) | 0.21 | 0.73 | (0.05) | (2.74) | (0.11) | (1.75) | (0.08) | (0.31) |
| Sep-18 | 1.34 | (2.26) | 0.81 | 1.19 | (1.15) | (6.84) | 2.08 | (3.12) | (0.16) | (0.31) |
| Oct-18 | (1.23) | (2.98) | 0.55 | (1.06) | (3.35) | (13.22) | (1.02) | (4.92) | (1.32) | (0.07) |
| Nov-18 | (0.14) | (3.10) | (0.03) | 0.83 | (1.20) | (7.68) | 0.59 | (2.44) | 0.44 | 0.58 |
| Dec-18 | (0.96) | (7.80) | (1.02) | (0.62) | (4.14) | (25.24) | (0.54) | (13.13) | 0.48 | (1.04) |
| **2018** | **5.46** | **(29.01)** | **(2.20)** | **7.43** | **(6.71)** | **(39.96)** | **13.37** | **(41.22)** | **(4.30)** | **3.74** |
| Jan-19 | 3.10 | (2.04) | 0.21 | (0.65) | (0.43) | (5.66) | 0.92 | (2.35) | 0.59 | (0.47) |
| Feb-19 | 0.78 | (3.00) | 0.91 | 0.76 | (1.49) | (9.46) | (0.18) | (3.29) | 0.09 | (2.66) |
| Mar-19 | 1.15 | (5.35) | (0.29) | (1.49) | (1.26) | (10.41) | (0.18) | (2.62) | (0.39) | (1.32) |
| Apr-19 | 4.06 | 0.32 | (0.10) | (0.85) | (0.42) | (7.68) | (3.28) | (5.07) | (0.55) | (0.15) |
| May-19 | 1.05 | (0.71) | 0.01 | 0.15 | 0.20 | (3.86) | 1.52 | (2.14) | 0.50 | (0.46) |
| Jun-19 | 2.73 | (0.54) | (1.04) | (1.13) | (1.48) | (6.90) | (13.36) | (0.10) | 0.00 | (0.75) |
| Jul-19 | 0.90 | (0.32) | (0.23) | (0.49) | (1.60) | (14.45) | 0.29 | (3.02) | (0.12) | (1.16) |
| Aug-19 | (1.53) | 0.97 | (0.03) | 0.13 | (0.12) | (6.88) | (0.28) | (0.44) | 0.17 | 0.03 |
| Sep-19 | (1.22) | (0.57) | (0.55) | (0.51) | (0.20) | (4.41) | (3.03) | (1.60) | (0.08) | (0.30) |
| Oct-19 | 0.47 | (0.46) | (0.02) | (0.09) | 0.32 | (0.78) | (0.27) | (0.21) | (0.01) | 0.03 |
| Nov-19 | 0.26 | (0.52) | 0.02 | (0.03) | 0.10 | (2.35) | (0.32) | (0.48) | 0.20 | (0.01) |
| Dec-19 | (0.32) | 7.03 | (1.68) | (0.25) | 1.78 | (0.45) | 1.11 | (2.92) | 0.41 | (0.95) |
| **2019** | **11.43** | **(5.18)** | **(2.78)** | **(4.42)** | **(4.59)** | **(73.29)** | **(17.05)** | **(24.25)** | **0.80** | **(8.15)** |
| Jan-20 | 0.17 | 1.44 | (0.08) | 0.26 | (0.07) | (2.21) | 0.47 | 0.44 | 0.05 | (0.04) |

Source: Eurekahedge

**Figure 5: Monthly asset flows across strategies**



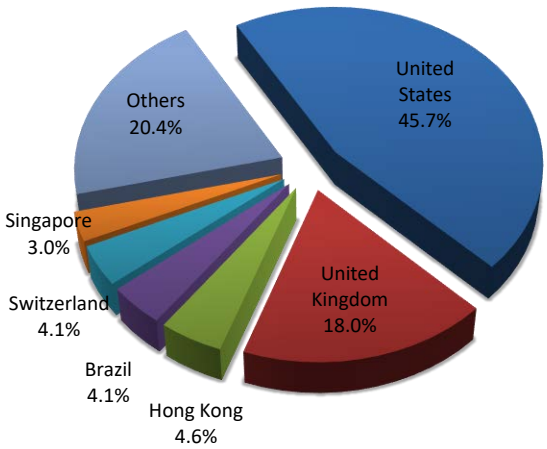

Source: Eurekahedge

**Head office location**

Figure 6a provides the industry population breakdown based on head office location by the end of 2010, while Figure 6b provides the same data as of January 2020. The United States and the United Kingdom continued to dominate with the largest hedge fund populations in the world. The former's population share stood at 57.1% as of January 2020, while on the other hand, the United Kingdom's market share declined to 11.9%.

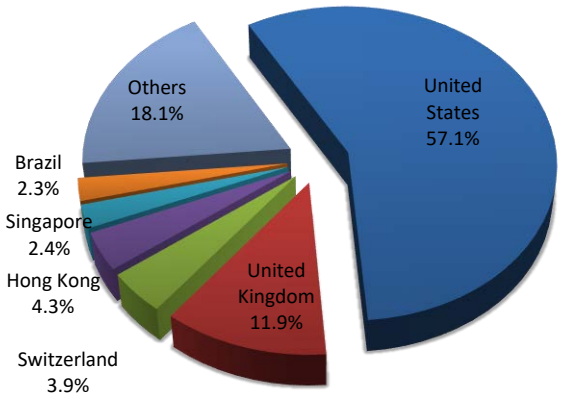
**Figures 6a-6b: Industry breakdown by head office location**

**2010**




Source: Eurekahedge

**2020**



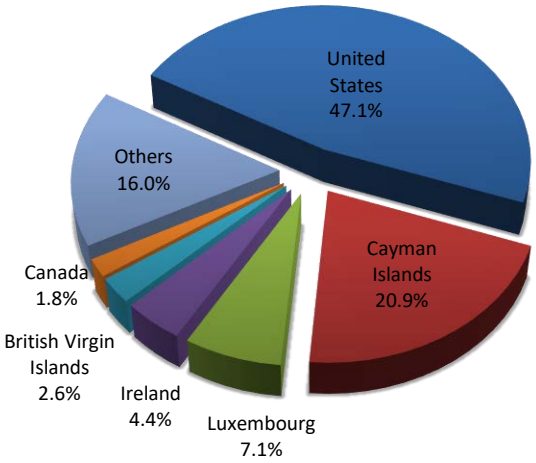

Source: Eurekahedge

**Domicile**

Figure 7 shows the hedge fund industry population breakdown by country of domicile. The United States and the Cayman Islands continue to be the top two choices capturing 68.1% of the population between the two. The implemented tax cuts in the United States might potentially be able to lure hedge fund managers to domicile their funds in the country, on top of offering proximity to the largest pool of investors in the world. Among offshore jurisdictions, the Cayman Islands remained as the most popular choice for hedge fund domicile. Luxembourg and Ireland collectively accounted for 11.1% of the industry population,

offering hedge fund managers the benefits of having low tax policies and being members of the European Union, which might help with regulatory compliance, which is crucial for marketing their funds toward European investors.

**Figure 7: Industry breakdown by domicile**

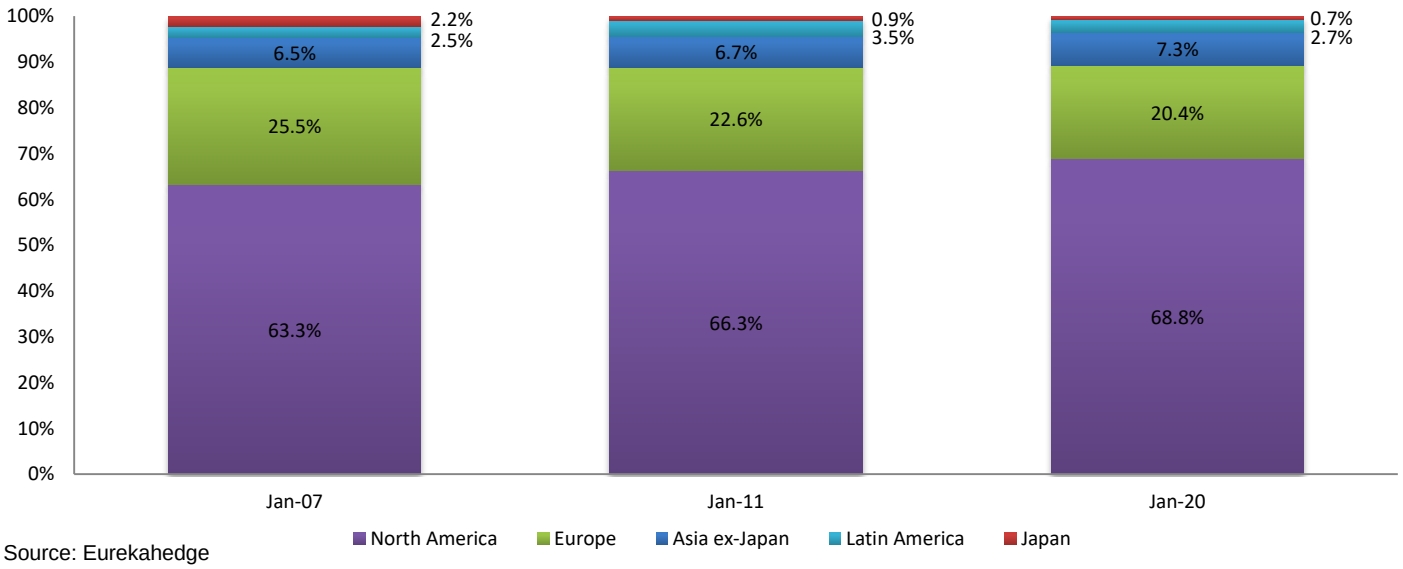



Source: Eurekahedge

**Geographic mandates**

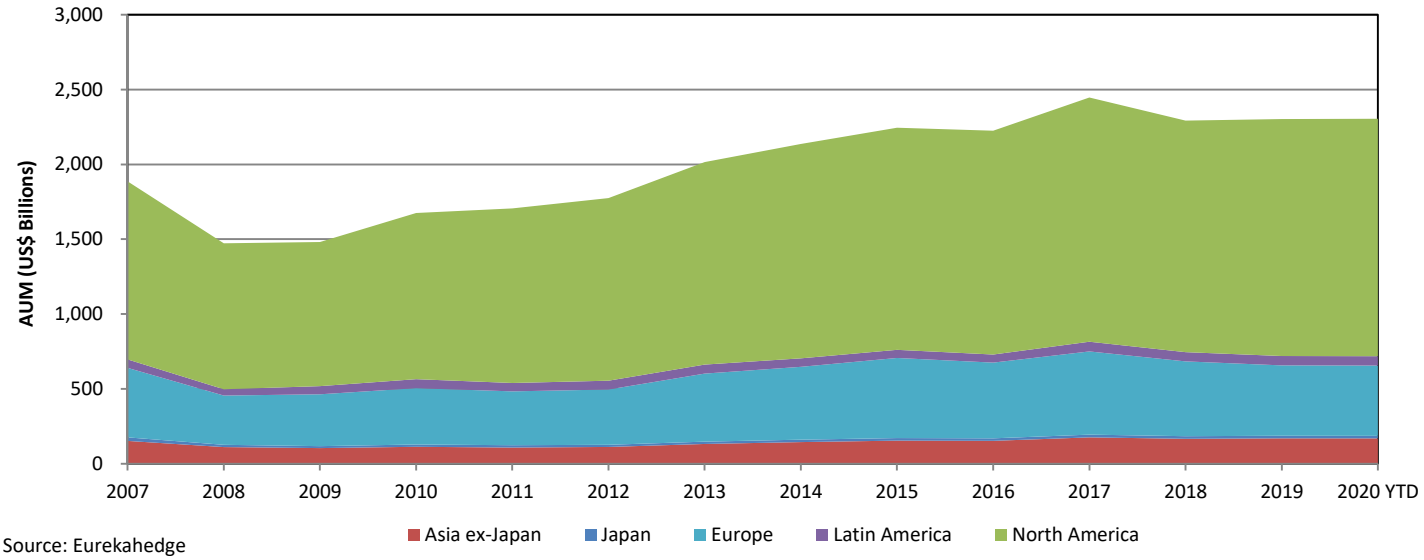
Figure 8a and Figure 8b provide the AUM distribution of the global hedge fund industry over time. It could be observed that the distribution has mostly remained the same over the past decade, with North American funds accounting for over two-thirds of the total industry AUM. Europe has maintained their position as the second biggest hedge fund industry in the world, overseeing 20.4% of the total industry AUM as of January 2020. At the same time, hedge funds focused in Asia and Latin America collectively manage 10.8% of the industry AUM.

**Figure 8a: AUM distribution by geographic mandate**




Source: Eurekahedge

**Figure 8b: AUM growth by geographic mandate since 2007**

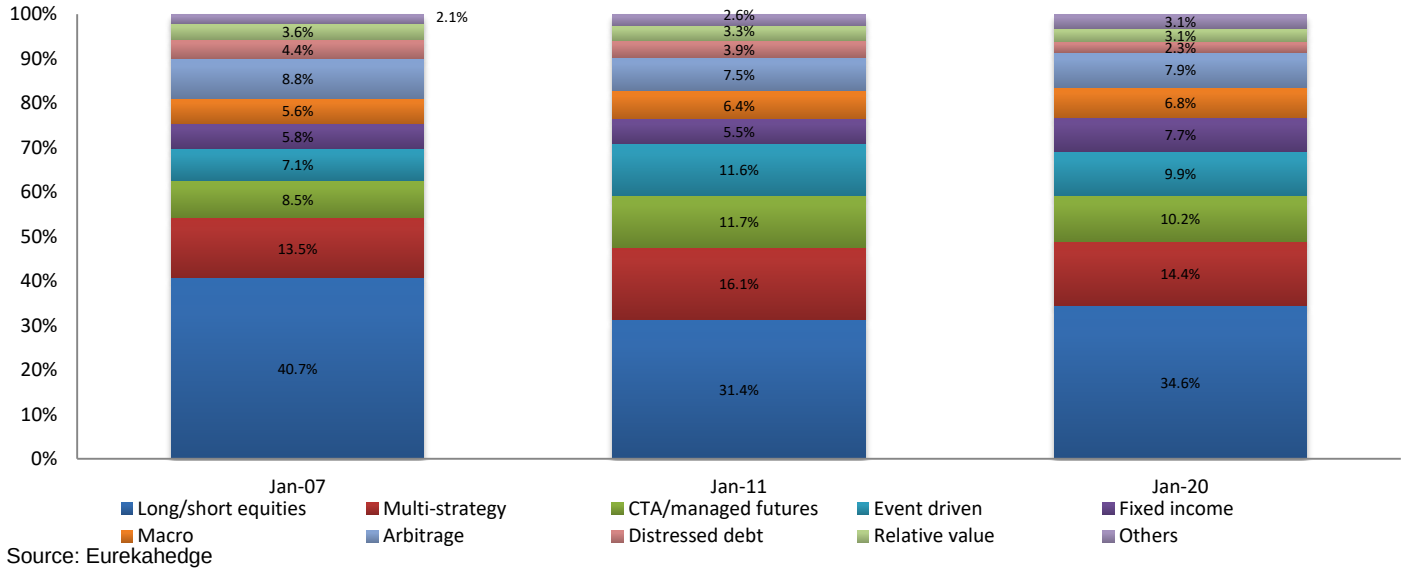



Source: Eurekahedge

**Strategic mandates**

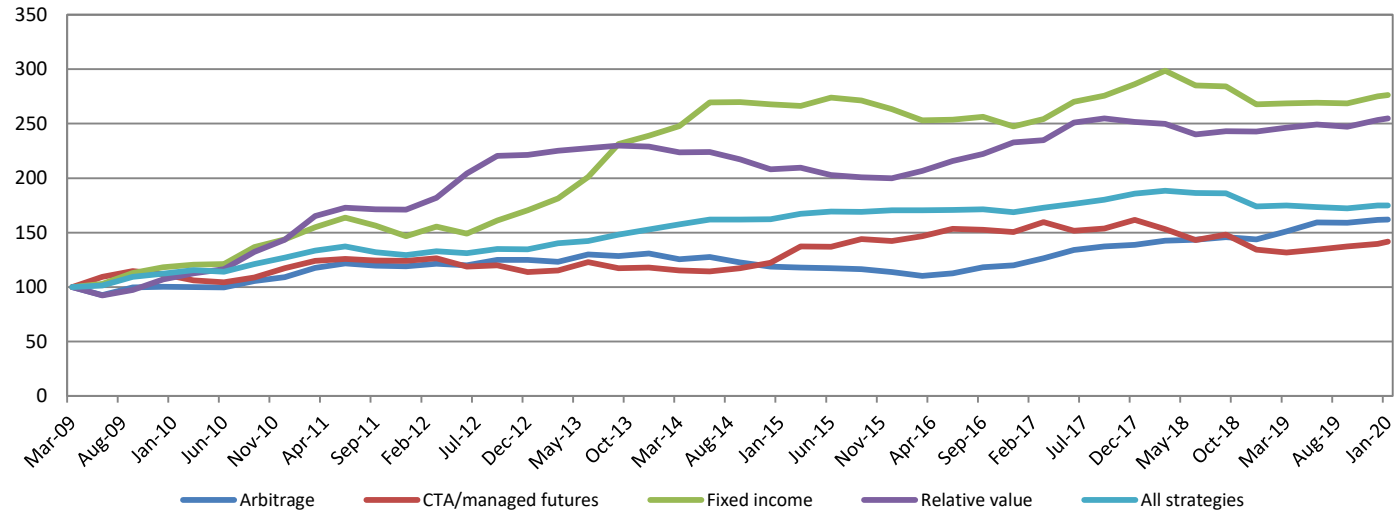
Long/short equities have remained as the single most popular strategy among the primary strategic mandates, with 34.6% market share as of January 2020. Multi-strategy, CTA/managed futures and event driven hedge funds follow behind with 14.4%, 10.2% and 9.9% market shares respectively. These four strategic mandates have roughly maintained their shares of the industry AUM over the last decade. Fixed income hedge funds came in fifth with 7.7% AUM share in January 2020, up from the previous figures of 5.5% in 2011 and 5.8% in 2007. These hedge funds are known for lower volatilities and often considered as the safer investment vehicles during times in which the equity market performs poorly, which might explain the surge in AUM share following the 2008 crisis.

**Figure 9a: AUM distribution by strategic mandate**




Source: Eurekahedge

**Figure 9b: Relative AUM growth by strategic mandate since March 2009**

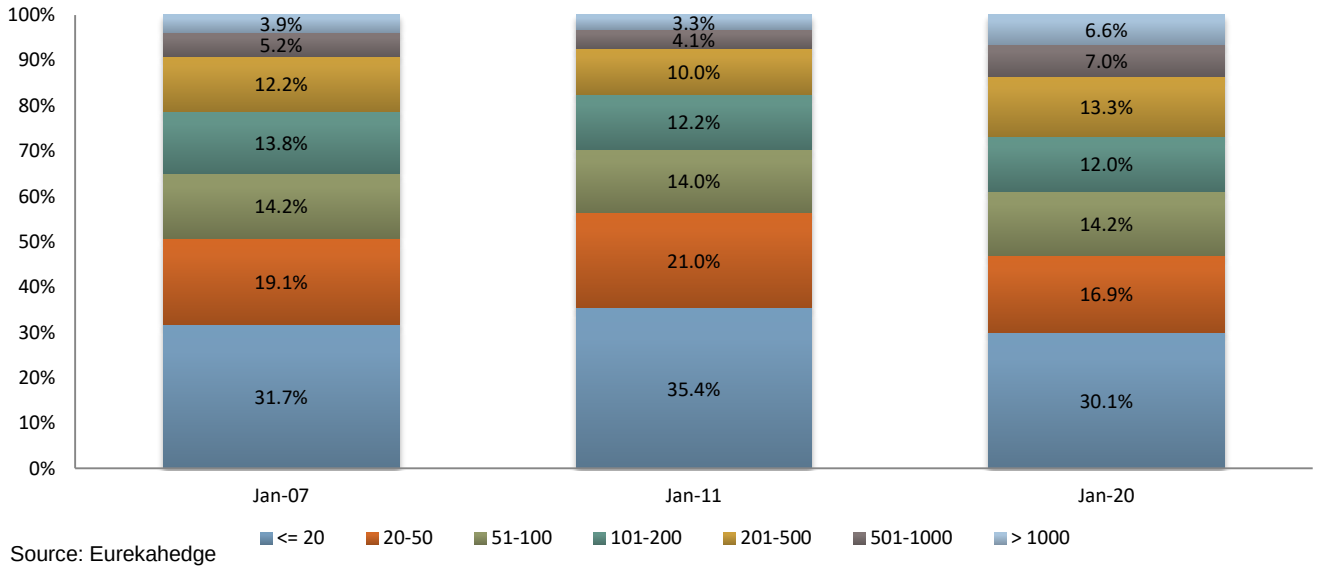



Source: Eurekahedge

**Fund sizes**

Figure 10 provides the industry population breakdown based on fund size. The number of funds managing up to US$100 million in assets has declined from 64.9% in 2007 to 61.1% in 2020, while on the other hand the number of funds managing more than US$1 billion has increased from 3.9% to 6.6% over the same period. This shift in population might indicate a shift in preferences of the hedge fund investors toward larger hedge funds, better survivability of larger hedge funds, or both. The increasingly demanding regulations over the last few years have driven compliance costs up, while on the other hand average hedge fund fees have declined over the past decade. Combined with the increasing competition from both within the hedge fund industry, as well as other alternative investment vehicles, it may come as no surprise that the survival rate among smaller hedge funds has declined.

**Figure 10: Industry breakdown by fund size (US$ million)**

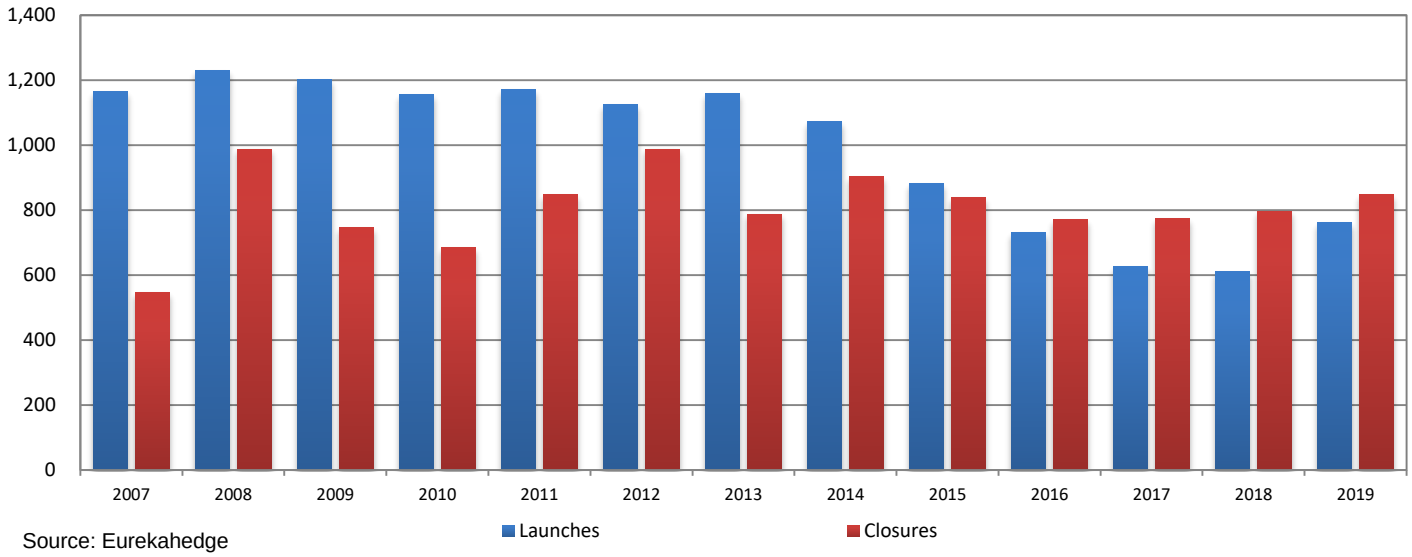



Source: Eurekahedge

**Launches and closures**

Figure 11 gives a clear profile of the yearly growth and attrition rate of the industry since 2007. The industry grew at its fastest pace prior to 2008, with the biggest difference between fund launches and closures. During the peak of the global financial crisis in 2008, market turmoil and the collapse of the equity market led to enormous redemptions which caused a large number of hedge funds to close down. Following the crisis, regulatory reforms and the introduction of stricter directives on alternative investment vehicles put intense pressure on the launch activities of hedge funds. The increased compliance costs and more stringent requirements for transparency caused the hedge fund industry population's growth to slow down, and eventually dip into the negative territory in the last four years, as closures surpassed launches.

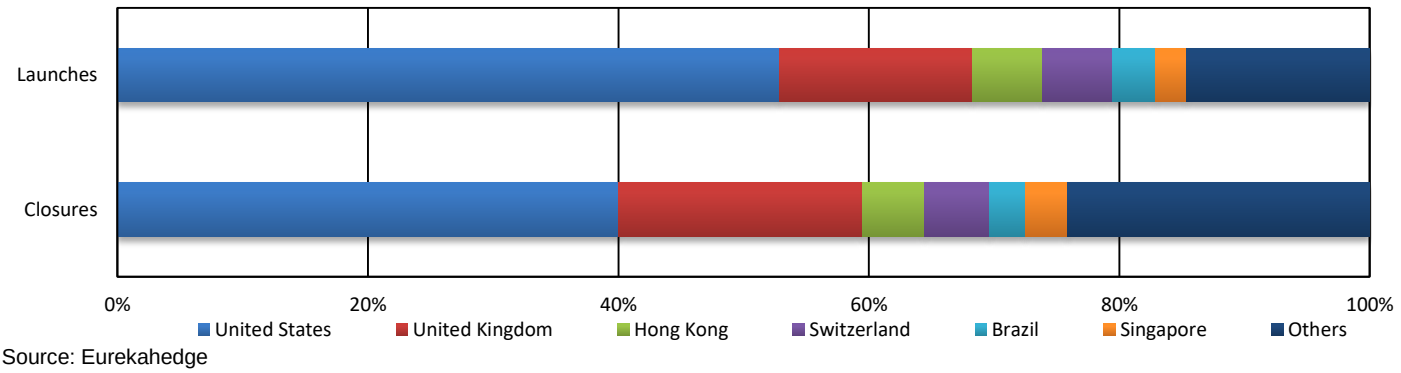
**Figure 11: Launches and closures across the global hedge fund industry**




Source: Eurekahedge

The following figures provide the breakdown of the launch and closure activities of the global hedge fund industry since 2008 based on head office location, domicile, geographic and strategic mandate, and fund size.

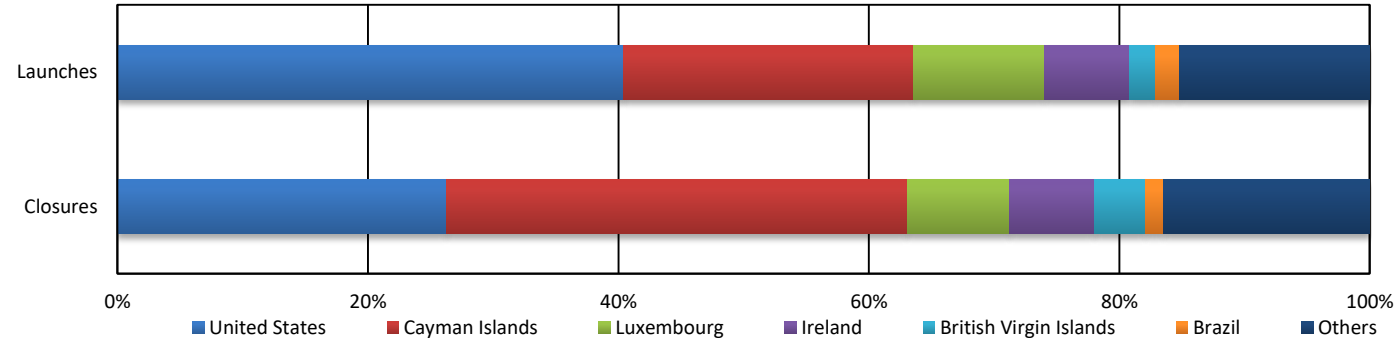
**Figure 12a: Launches and closures since 2008 by head office location**




Source: Eurekahedge

As one would expect based on their population shares, funds located in the United States and the United Kingdom also accounted for the two largest portions of hedge fund launch and closure activities. Roughly 40% of the hedge funds that launched since 2008 were located in the United States, a testament to the importance of proximity to the largest pool of investors in the world. Hong Kong and Switzerland also saw a notable amount of launch and closure activities due to their strategic locations as hubs for fund managers that desire access to the Greater China region and European Union respectively.

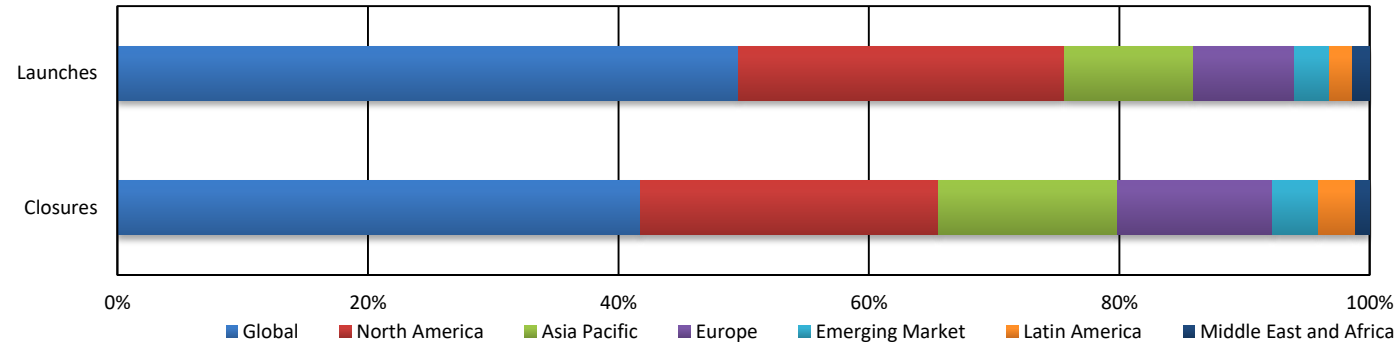
**Figure 12b: Launches and closures since 2008 by domicile**




Source: Eurekahedge

Figure 12b shows that the United States domiciled funds comprise over 40% of the global industry launches since 2008. Cayman Islands, Luxembourg and Ireland are the next major locations preferred by hedge fund managers for their funds' domicile. However, looking at closures, Cayman Islands saw even more closures than the United States over the same period. One reason that might have contributed was the introduction of the AIFMD in 2011 which encouraged hedge funds that are marketed toward European investors to move into the European Union by making it easier for onshore funds to obtain their AIFMD passports. This would also explain the increase in population share of hedge funds domiciled in Luxembourg and Ireland.

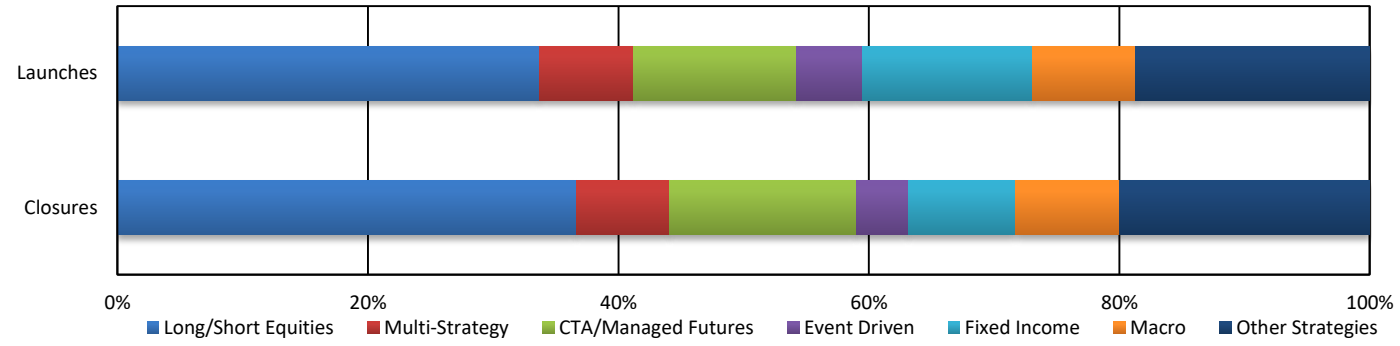
**Figure 12c: Launches and closures since 2008 by geographic mandate**




Source: Eurekahedge

Following the global financial crisis in 2008, demand for globally investing hedge funds increased due to the extra layer of diversification offered by these hedge funds by investing in multiple regions. However, they also contribute the largest number of closures by virtue of their population size in the industry. Unsurprisingly, North American focused hedge funds still account for a sizeable portion of the launch and closure activities, coming in the second place for both launches and closures.

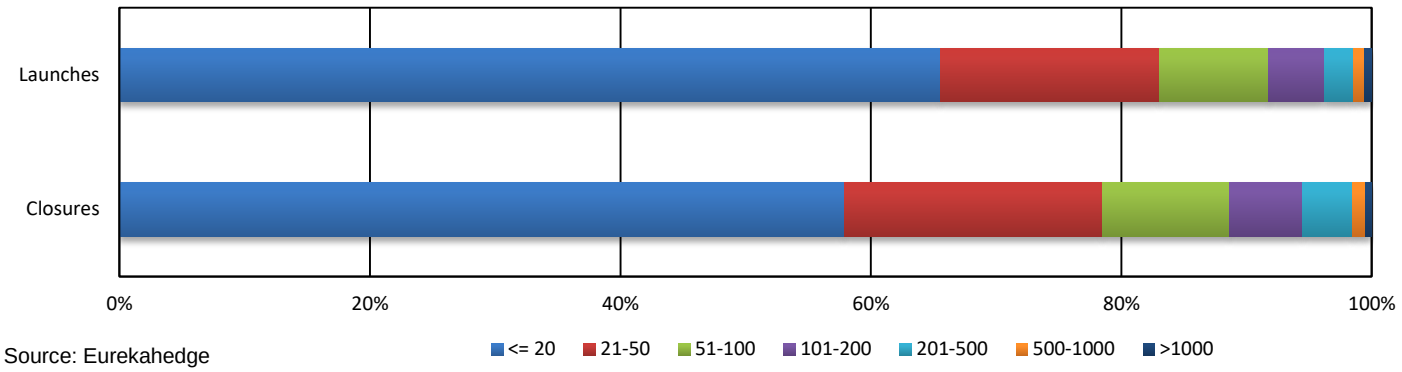
**Figure 12d: Launches and closures since 2008 by strategic mandate**




Source: Eurekahedge

Over a third of the launch activities in the hedge fund industry since 2008 were contributed by long/short equity hedge funds. Fixed income hedge funds came in second in terms of launches, despite having a noticeably lower number of closures compared to CTA/managed futures hedge funds.

**Figure 12e: Launches and closures since 2008 by fund size (US$ million)**

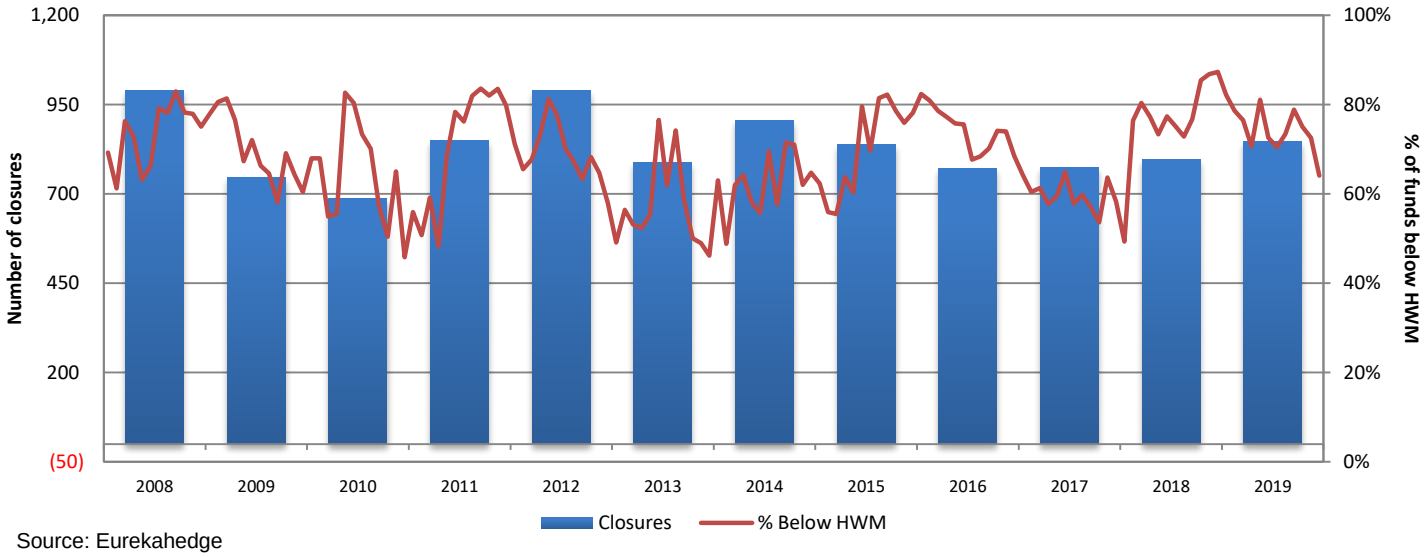



Source: Eurekahedge

Small hedge funds managing up to US$20 million in assets accounted for more than half of the launch and closure activities within the industry since 2008. This number is a lot higher compared to their population share shown in Figure 10, signifying the high attrition rate within this segment of the hedge fund industry compared to the rest.

Figure 13 below compares the percentage of funds below their perpetual high water mark (HWM) against the number of fund closures since 2008 to test the relationship between underperformance within the hedge fund industry and the number of funds closing down. As of December 2019, the percentage of funds below their high water marks stood at under 80% lower from its peak in last December 2018, thanks to the robust performance of global equities in 2019.

**Figure 13: Percentage of funds below HWM compared to number of closures**




Source: Eurekahedge

The following table provides several key statistics on the pre-closure performance of hedge funds that liquidated within the past five years. These annualised returns of the now obsolete funds are calculated over the last 12, 24 and 36 months of their lifespans. On average, these funds generated 3.64% losses in their final year of operation, but looking at the first quartile, the bottom 25% of these funds lost at least 8.82% of their assets in 12 months. Generally, the majority of these funds posted poor to mediocre performance before closing down. However, it is worth noting that these statistics were taken over the last few years of the dead funds' lifespans, capturing different periods of the market, making it difficult to compare them to the underlying equity market's performance.

**Table 3: Pre-closure performance of funds closing in the last five years**

| | Mean | First Quartile | Median | Third Quartile |
|---|---|---|---|---|
| Last 12 months rolling return (%) | (3.64%) | (8.82%) | (2.32%) | 2.75% |
| Last 24 months annualised return (%) | (1.58%) | (5.55%) | (0.45%) | 3.08% |
| Last 36 months annualised return (%) | (0.63%) | (3.43%) | 0.34% | 3.83% |

Source: Eurekahedge

## Fees

Table 4a shows the average performance and management fees charged by newly launched hedge funds aggregated by launch year. Hedge funds that launched in 2019 charge on average 13.81% performance and 1.16% management fees, significantly lower than the '2 and 20' fee structure commonly adopted by many hedge fund managers before the 2008 financial crisis. Increasing competition within the industry, and from other alternative investment vehicles have put considerable pressure on hedge fund fees over the past decade. Among the hedge funds that launched in 2019, 42.00% of them charged 20% performance fees, while only 11.74% charge 2% management fees, suggesting that management fees come under more severe scrutiny than performance fees. It is pertinent to note that lowering fees is not the only way for hedge funds to appeal to their investors. Some hedge funds may offer shorter lock-up periods on top of lower fees, while others may implement stricter high water mark system or hurdle rates. Recent surveys revealed that a sizeable portion of hedge fund managers were willing to negotiate their fee structures.

**Table 4a: Average hedge fund fees by launch year**

| Year | Performance Fees (%) | Management Fees (%) |
|---|---|---|
| 2006 | 17.91 | 1.59 |
| 2007 | 18.06 | 1.63 |
| 2008 | 17.05 | 1.52 |
| 2009 | 16.97 | 1.54 |
| 2010 | 16.88 | 1.55 |
| 2011 | 16.72 | 1.50 |
| 2012 | 16.24 | 1.46 |
| 2013 | 14.91 | 1.33 |
| 2014 | 15.22 | 1.34 |
| 2015 | 14.42 | 1.29 |
| 2016 | 14.44 | 1.27 |
| 2017 | 14.28 | 1.18 |
| 2018 | 14.66 | 1.24 |
| 2019 | 13.81 | 1.16 |

Source: Eurekahedge

Generally, hedge fund fees are also affected by various things such as the complexity of the strategies employed by the fund manager, as well as the type of instruments they trade, since these factors are directly associated to a hedge fund's operational expenses and liquidity. Table 4b breaks down the average performance and management fees of the hedge fund industry based on the strategic mandate employed. Distressed debt and event driven hedge funds tend to be on the expensive side both in terms of management fees as well as performance fees, owing to the complexity of executing these strategies, as well as the lack of liquidity. Fixed income hedge funds, on the other hand, tend to charge both the lowest management fees and performance fees among all the strategic mandates.

**Table 4b: Average hedge fund fees by strategy**

| Strategy | Performance Fees (%) | Management Fees (%) |
|---|---|---|
| Arbitrage | 18.98 | 1.36 |
| CTA/Managed Futures | 17.94 | 1.50 |
| Distressed Debt | 19.14 | 1.74 |
| Event Driven | 16.83 | 1.58 |
| Fixed Income | 10.75 | 1.11 |
| Long/short Equities | 17.50 | 1.53 |
| Macro | 16.59 | 1.47 |
| Multi-Strategy | 15.07 | 1.47 |
| Others | 14.07 | 1.44 |
| Relative Value | 17.41 | 1.43 |

Source: Eurekahedge

## Prime brokers

Table 5b provides a recent market share breakdown for prime brokers based on AUM. For comparison, Table 5a provides the data from before the 2008 financial crisis. Various changes have occurred within the hedge fund prime brokerage industry, including the bankruptcy of Lehman Brothers, the acquisition of Bear Stearns by JPMorgan Chase and Merrill Lynch by Bank of America, to name a few. As of January 2020, the three top prime brokers, Goldman Sachs, JPMorgan Chase, and Morgan Stanley collectively oversee 47.09% of the whole industry AUM. This figure is lower than the 53.22% managed by Morgan Stanley, Goldman Sachs and Bear Stearns in 2007, indicating that the industry AUM has become less concentrated on the top three brokers, but more concentrated on the top 10 brokers, as seen from the decline in the market share of other brokers outside the top 10 shown in the two tables below.

**Tables 5a-5b: Market share of prime brokers by AUM**

| 2007 | |
|---|---|
| Prime Broker | Market Share |
| Morgan Stanley | 20.03% |
| Goldman Sachs | 18.48% |
| Bear Stearns | 14.71% |
| UBS | 7.82% |
| Deutsche Bank | 5.87% |
| Citigroup | 4.18% |
| Credit Suisse | 4.03% |
| Lehman Brothers | 3.58% |
| Merrill Lynch | 2.89% |
| Bank of America | 2.45% |
| Others | 15.96% |

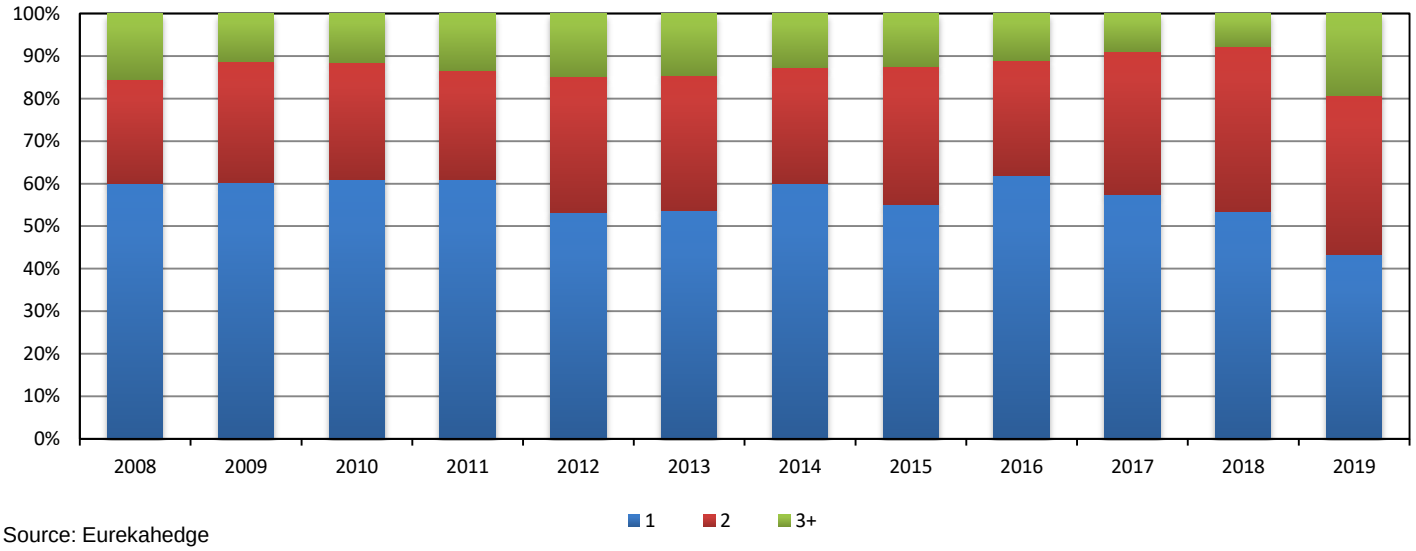
Source: Eurekahedge

| 2020 | |
|---|---|
| Prime Broker | Market Share |
| Goldman Sachs | 16.69% |
| JPMorgan Chase | 16.09% |
| Morgan Stanley | 14.32% |
| Deutsche Bank | 8.64% |
| Credit Suisse | 8.62% |
| Citigroup | 6.04% |
| Bank of America Merrill Lynch | 4.69% |
| UBS | 4.64% |
| Barclays | 3.46% |
| BNP Paribas Fortis | 2.95% |
| Others | 13.87% |

Source: Eurekahedge

The figure below shows the distribution of the number of prime brokers engaged by hedge funds based on their launch year. Generally small hedge funds start with one prime broker and subsequently work with additional prime brokers once they grow bigger, in order to raise more capital.

**Figure 14: Number of prime brokers by launch year**




Source: Eurekahedge

**Administrators**

Table 6a and Table 6b provide the market share breakdown of the hedge fund administration industry from the end of 2007 and June 2019. State Street has seen its market share jump from 2.97% to 17.65% since 2007 that sent them to the first place, pushing CITCO down to fourth place. Meanwhile, BNY Mellon which was not part of the top 10 from end-2007, took the second spot as of January 2020 by having 13.38% market share. HSBC has shrunk its fund administration business over the past decade to focus on its core businesses, falling from the second place to the seventh place with 3.21% market share. Looking at the combined market share of the top 10 administrators, we can see that the hedge fund administration industry has grown increasingly concentrated over the past decade, with only 29.39% of the total industry AUM managed by administrators outside the top 10 table, down from the 54.50% figure by the end of 2007.

**Table 6a-b: Market share of administrators by AUM**

| 2007 | |
|---|---|
| **Administrators** | **Market Share** |
| CITCO | 12.41% |
| HSBC | 9.47% |
| Citigroup | 5.39% |
| Bank of New York | 3.45% |
| State Street | 2.97% |
| GlobeOp | 2.59% |
| Northern Trust | 2.36% |
| PFPC | 2.31% |
| Morgan Stanley | 2.30% |
| Goldman Sachs | 2.25% |
| Others | 54.50% |

Source: Eurekahedge

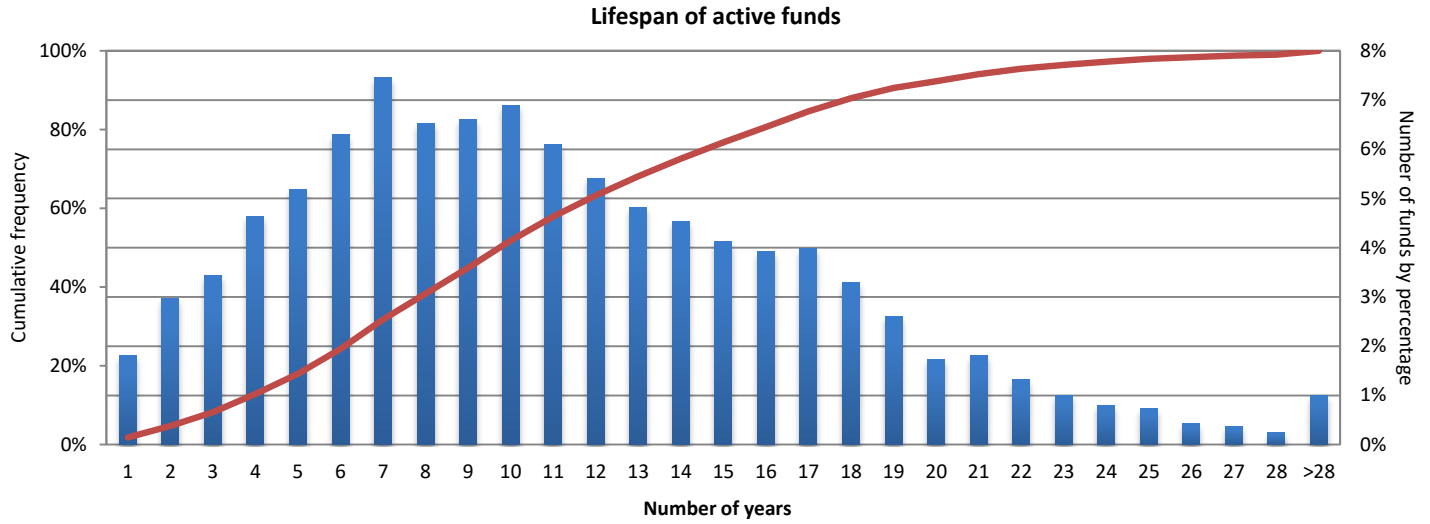
| 2020 | |
|---|---|
| **Administrator** | **Market Share** |
| State Street | 17.65% |
| BNY Mellon | 13.38% |
| SS&C | 11.31% |
| CITCO | 9.81% |
| Apex Fund Services | 3.44% |
| Northern Trust | 3.25% |
| HSBC | 3.21% |
| JPMorgan Chase | 3.11% |
| Morgan Stanley | 2.90% |
| SEI Investment Services | 2.55% |
| Others | 29.39% |

Source: Eurekahedge

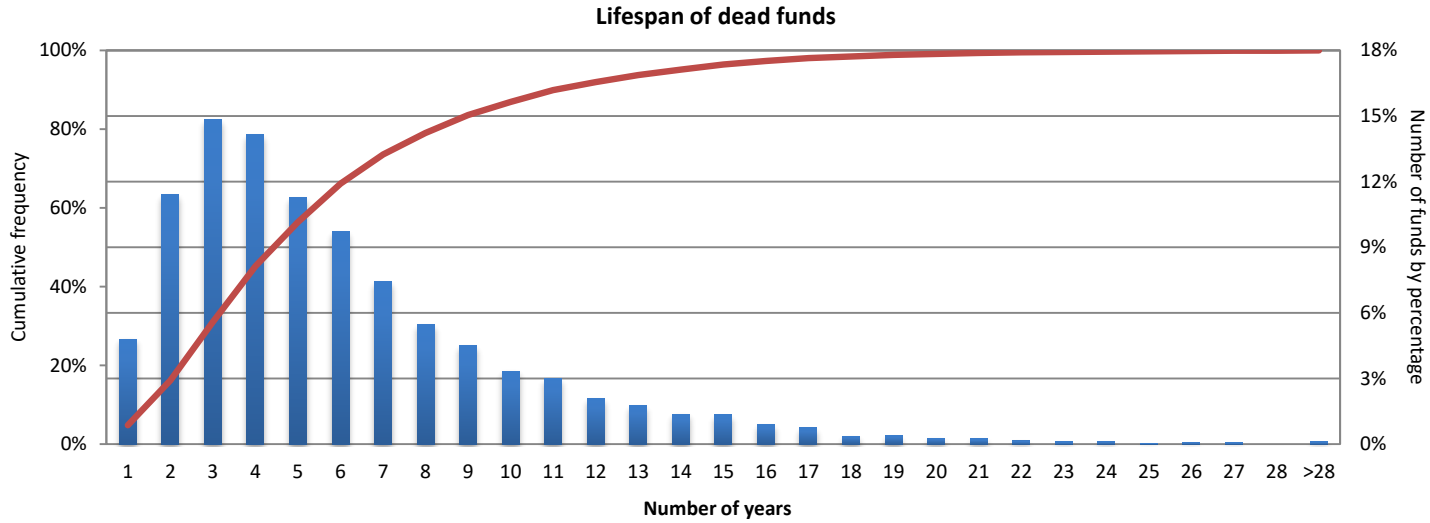
**Lifespan of hedge funds**

Figure 15a and Figure 15b below illustrate the lifespan distributions of active and dead hedge funds respectively. Roughly half of the currently active hedge funds have a track record of nearly 10 years. Hedge funds that live long enough to pass the 20-year mark only account for around 7% of the current global industry population. On the other hand, among the dead hedge funds recorded in Eurekahedge database, nearly 60% died within five years from their launch dates, possibly indicating the difficulty in raising assets and delivering acceptable returns for newly launched hedge fund firms.

**Figures 15a-15b: Distribution of active and dead funds by their lifespan**




Source: Eurekahedge




Source: Eurekahedge

Table 7 provides the lifespan distribution statistics for active and dead hedge funds within the Eurekahedge global hedge fund database. On average, active hedge funds have lived for 10.57 years, while dead funds survived for 5.50 years before closing down. A quarter of the dead hedge funds only survived for at most 2.58 years.

**Table 7: Lifespan statistics of global hedge funds**

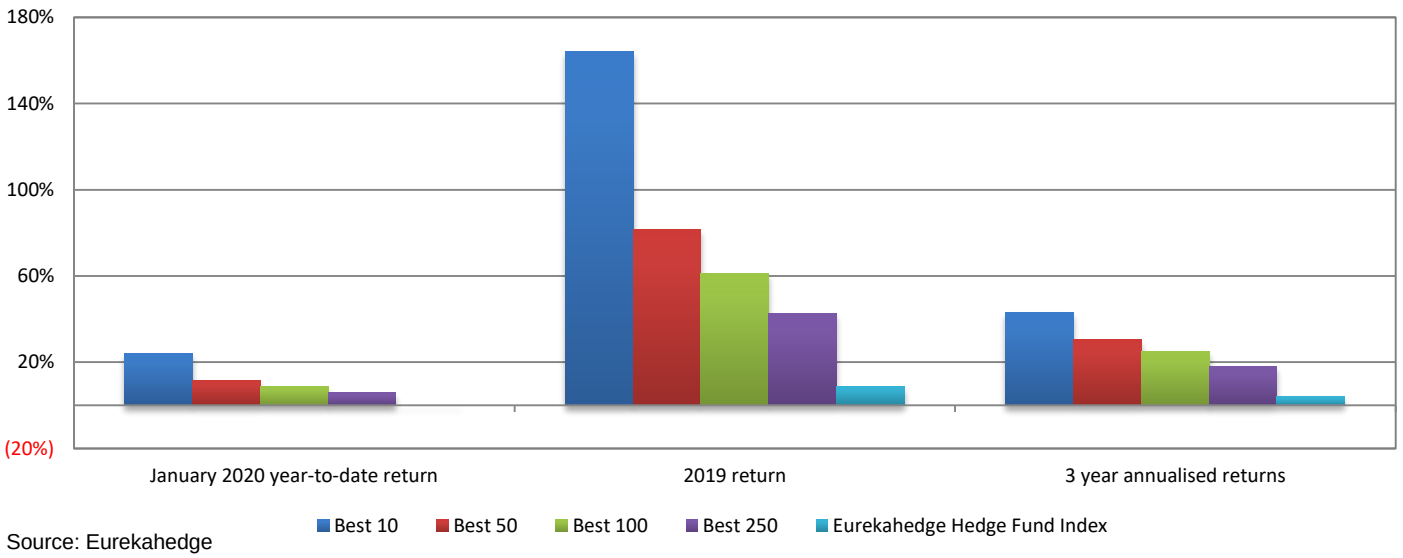
| | Lifespan of Active Funds (year) | Lifespan of Dead Funds (year) |
|---|---|---|
| Mean | 10.57 | 5.50 |
| First Quartile | 6.00 | 2.58 |
| Median | 9.67 | 4.33 |
| Third Quartile | 14.50 | 7.25 |

Source: Eurekahedge

# Performance review

This section of the report will highlight the performance of the top hedge funds and their performance distribution as a whole, before going into a comparison of the global hedge fund industry against other investment vehicles - namely long-only funds and funds of hedge funds, with the MSCI[1] as the benchmark index. We further dissect the global hedge fund industry's performance by strategic and geographic mandates; taking into account their annualised returns and volatilities over the last five years. The section then moves on to assess hedge fund performance across various fund sizes.

**Figure 16: Performance of top hedge funds[2]**

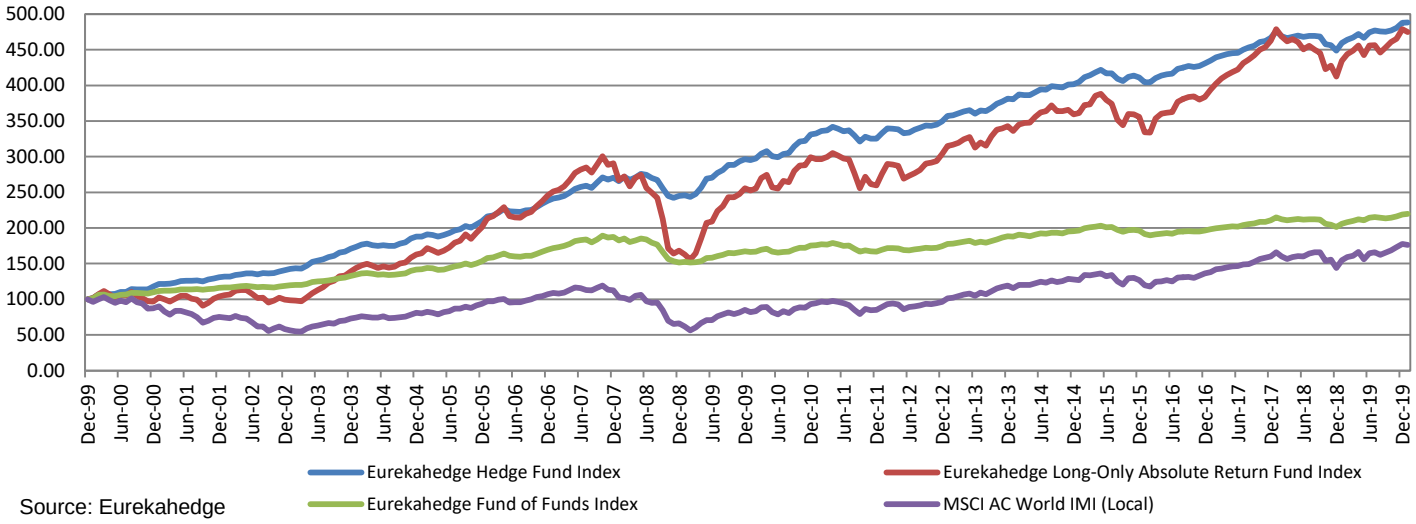



Source: Eurekahedge

In Figure 16, the average performance of the best performing hedge funds under three different metrics (current year-to-date returns, previous year returns, and annualised returns over the last three years) are placed side-by-side for comparison. In 2019, the average year-to-date returns of the 10 top performing hedge funds stood at 163.94%, supported by strong performance of global equities throughout the year. For comparison, the average hedge funds represented by the *Eurekahedge Hedge Fund Index* yielded 8.65% over the same period. Over the last three years, the 10 best performing hedge funds generated 42.84% annualised return on average, while average hedge funds generated 3.94%.

[1] MSCI AC World IMI (Local)
[2] Excludes hedge fund strategic mandates classified as "Others"

**Figure 17: Performance of hedge funds since 1999**




Source: Eurekahedge

The *Eurekahedge Hedge Fund Index* has continued to outperform other investment vehicles, gaining 8.21% annually[3] since December 1999 compared to the *Eurekahedge Long-Only Absolute Return Fund Index* and the *Eurekahedge Fund of Funds Index* which generated 8.06% and 4.00% annualised returns respectively over the same time horizon. As seen in the figure, hedge funds have managed to live up to their value proposition of conserving the wealth of the clientele with the index registering only a slight dip during the financial crisis compared to its long only counterparts and the underlying market as represented by the MSCI index. Hedge funds possess the unique ability to guard against market downturns while delivering consistent and excellent returns over the long term period, and this continually attracts investors who seek to improve the risk-return characteristics of their portfolios. Funds of hedge funds fell behind both hedge funds and long only funds, weighed by their double fee structure, but still managed to outperform the underlying global equity market.

Over the few years prior to 2018, long-only funds were catching up to hedge funds thanks to the bull equity market run around the globe. The downward protection employed by hedge funds to protect their assets during financial crises also acts as a hedge against the equity market, which prevents hedge funds from reaping as much benefit from the market rally as their long only peers.

Table 8 summarises the key performance statistics of the three investment vehicles presented above. Long-only funds outperformed hedge funds in generating the best annualised returns over the three and five year periods. In terms of risk-adjusted returns long-only still topped on the table over the last three years but fell against the hedge funds over the last five period. However, it is worth noting that they have much steeper maximum drawdowns over the last five years at -13.97% compared to the -5.69% and -6.78% maximum drawdowns of hedge funds and fund of funds respectively.

**Table 8: Performance across alternative investment vehicles**

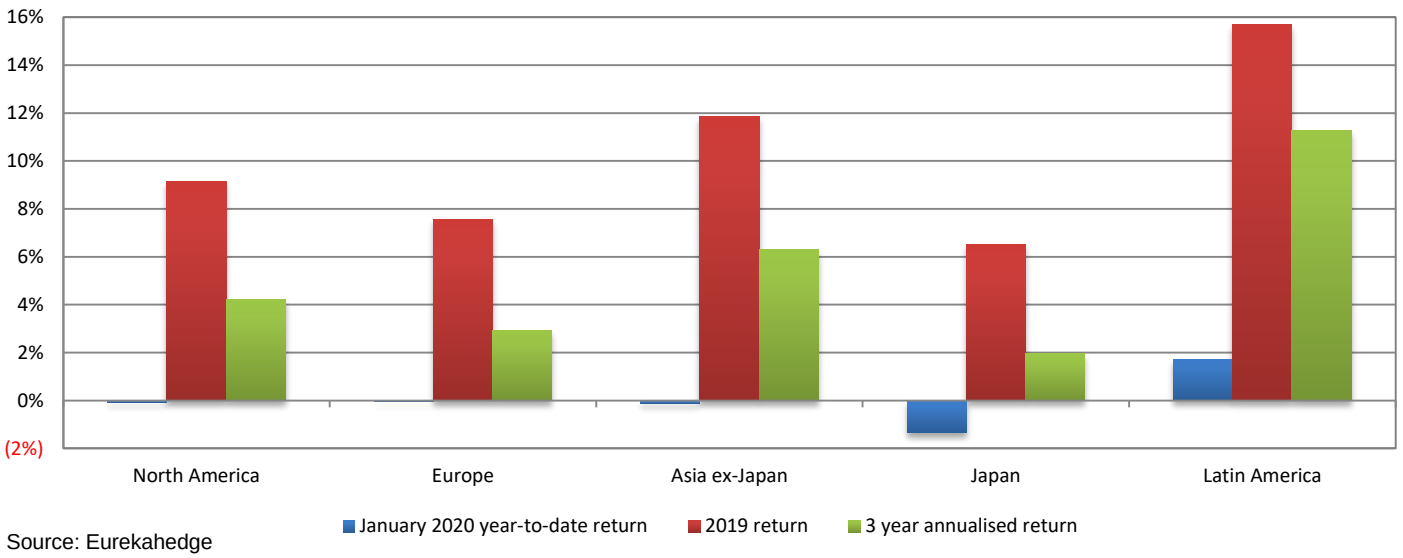
| | Eurekahedge Hedge Fund Index | Eurekahedge Long-Only Absolute Return Fund Index | Eurekahedge Fund of Funds Index | MSCI AC World IMI (Local) |
|---|---|---|---|---|
| January 2020 year-to-date return | 0.08% | (0.82%) | 0.37% | (0.89%) |
| 2019 return | 8.65% | 16.04% | 8.59% | 23.49% |
| 3 year annualised return | 3.94% | 6.40% | 3.50% | 8.41% |
| 3 year annualised volatility | 3.35% | 7.42% | 3.41% | 10.76% |
| 3 year Sharpe ratio (RFR = 2%) | 0.58 | 0.59 | 0.44 | 0.60 |
| 5 year annualised return | 3.81% | 5.62% | 2.24% | 6.75% |
| 5 year annualised volatility | 3.31% | 8.42% | 3.50% | 10.98% |
| 5 year Sharpe ratio (RFR = 2%) | 0.55 | 0.43 | 0.07 | 0.43 |
| Maximum drawdown (5 years) | (5.69%) | (13.97%) | (6.78%) | (13.39%) |

[3] As of January 2020

Source: Eurekahedge

Figure 18 below shows the performance of hedge fund managers across geographic mandates. Similar to their performance in 2019, the Latin American managers topped the table with 1.71% year-to-date return as of January 2020 – followed by Europe and North American managers which earned flat return over the same period. On the other hand, Japan-focused managers lost 1.34%, underperforming their regional peers.

**Figure 18: Performance across geographic mandates**




Source: Eurekahedge

Table 9 below provides detailed performance statistics across the five geographic mandates. Latin American mandate managed to outperform their peers in terms of annualised and risk-adjusted returns over the last three and five year period. However, the European mandate had the lowest annualised volatilities over the last three and five-year periods despite its mediocre annualised return.

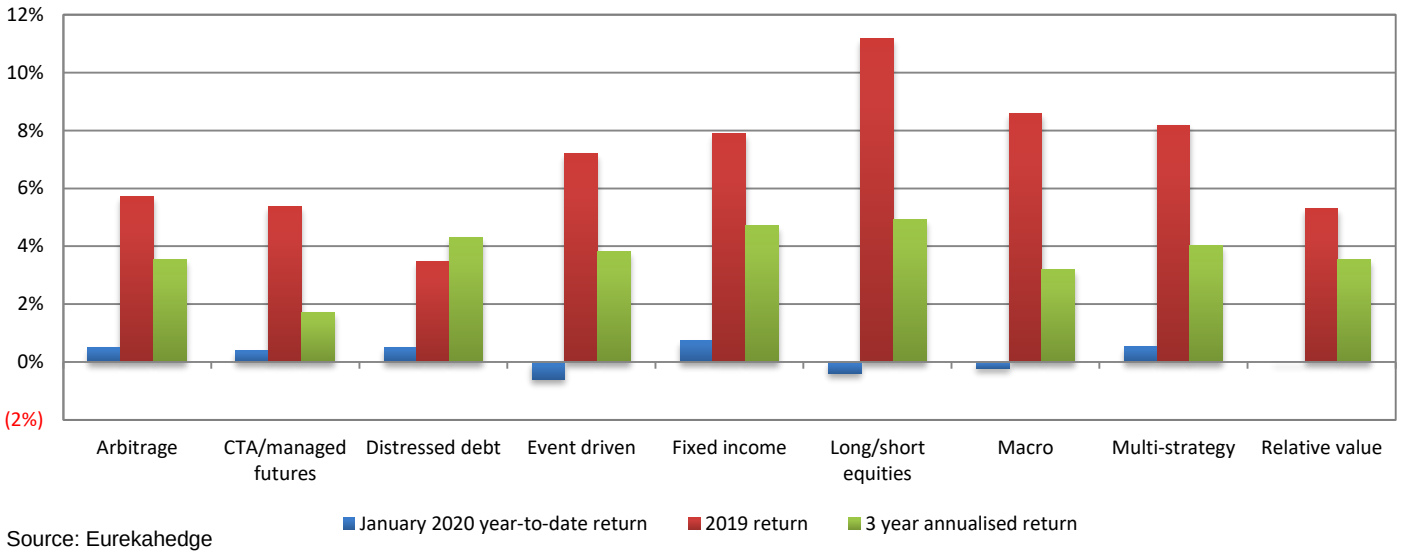
**Table 9: Performance across geographic mandates**

| | North America | Europe | Asia ex-Japan | Japan | Latin America |
|---|---|---|---|---|---|
| January 2020 year-to-date return | (0.07%) | (0.03%) | (0.11%) | (1.34%) | 1.71% |
| 2019 return | 9.13% | 7.57% | 11.86% | 6.53% | 15.68% |
| 3 year annualised return | 4.21% | 2.93% | 6.31% | 1.96% | 11.26% |
| 3 year annualised volatility | 4.37% | 3.13% | 6.23% | 4.63% | 6.68% |
| 3 year Sharpe ratio (RFR = 2%) | 0.51 | 0.30 | 0.69 | (0.01) | 1.39 |
| 5 year annualised return | 4.49% | 2.74% | 5.61% | 3.27% | 11.66% |
| 5 year annualised volatility | 4.28% | 3.58% | 7.66% | 4.78% | 6.32% |
| 5 year Sharpe ratio (RFR = 2%) | 0.58 | 0.21 | 0.47 | 0.27 | 1.53 |
| Maximum drawdown (5 years) | (6.14%) | (5.91%) | (12.27%) | (10.57%) | (4.31%) |

Source: Eurekahedge

Similar to Figure 18, performance was mixed across strategic mandates. As of January 2020 year-to-date, fixed income topped the chart with their 0.74% return, thanks to the dovish stance of major central banks which pushed yields lower. On the other hand, in contrast to their strong performance in 2019, the long/short equities mandate were down 0.39%, underperforming their strategic peers.

**Figure 19: Performance across strategic mandates**




Source: Eurekahedge

Table 10 provides detailed performance statistics across strategic mandates. In terms of annualised returns, long/short equities fund managers generated the strongest returns over the last three years, but fell behind distressed debt fund managers over the last five years. In terms of risk-adjusted returns, the fixed income mandate outperformed other strategies in both periods as seen on their Sharpe ratio. However, arbitrage hedge funds managed to post the smallest maximum drawdown of -1.74% over the five-year period. For comparison, distressed debt and long/short equities hedge funds posted -8.88% and -8.56% maximum drawdowns respectively over the same period.

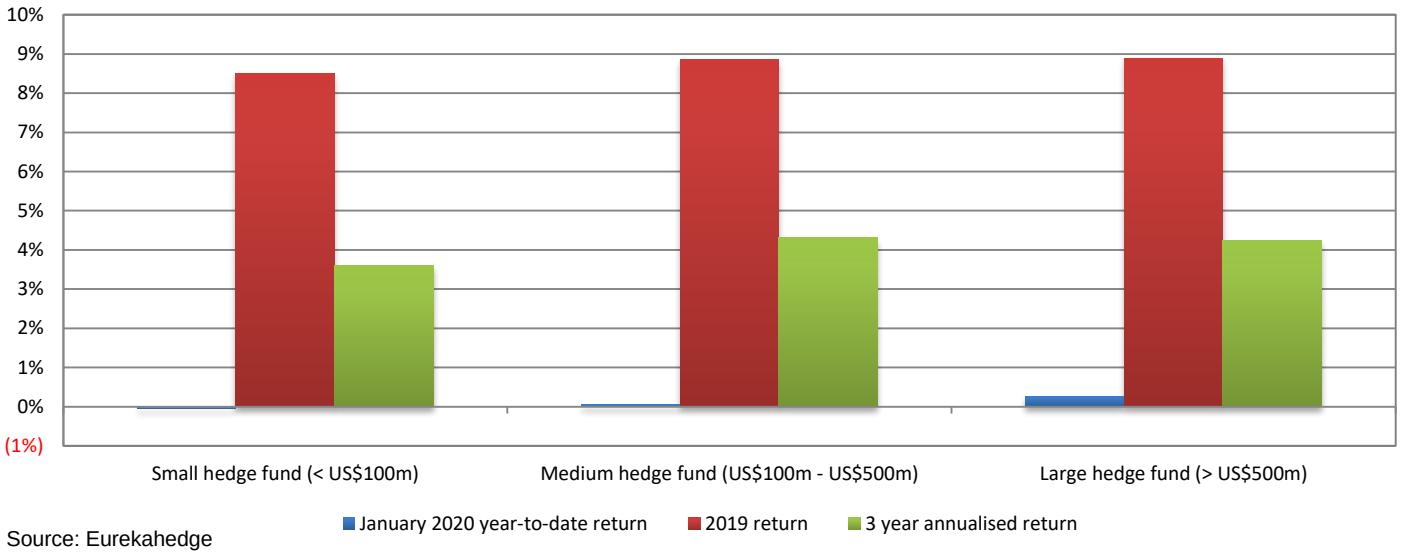
**Table 10: Performance across strategic mandates**

| | Arbitrage | CTA/managed futures | Distressed debt | Event driven | Fixed income | Long/short equities | Macro | Multi-Strategy | Relative value |
|---|---|---|---|---|---|---|---|---|---|
| 2020 January year-to-date return | 0.50% | 0.40% | 0.51% | (0.59%) | 0.74% | (0.39%) | (0.21%) | 0.53% | 0.03% |
| 2019 return | 5.72% | 5.36% | 3.48% | 7.20% | 7.88% | 11.18% | 8.59% | 8.19% | 5.31% |
| 3 year annualised return | 3.53% | 1.70% | 4.29% | 3.82% | 4.72% | 4.93% | 3.21% | 4.04% | 3.53% |
| 3 year annualised volatility | 2.16% | 4.50% | 3.21% | 4.06% | 1.73% | 5.01% | 2.86% | 3.27% | 3.22% |
| 3 year Sharpe ratio (RFR = 2%) | 0.71 | (0.07) | 0.71 | 0.45 | 1.57 | 0.59 | 0.42 | 0.62 | 0.48 |
| 5 year annualised return | 4.18% | 1.00% | 4.86% | 4.80% | 4.53% | 4.78% | 2.73% | 4.10% | 4.33% |
| 5 year annualised volatility | 2.18% | 4.36% | 3.83% | 4.72% | 2.09% | 5.23% | 2.69% | 3.27% | 3.26% |
| 5 year Sharpe ratio (RFR = 2%) | 1.00 | (0.23) | 0.75 | 0.59 | 1.21 | 0.53 | 0.27 | 0.64 | 0.72 |
| Maximum drawdown (5 years) | (1.76%) | (6.55%) | (8.88%) | (7.94%) | (2.80%) | (8.56%) | (4.39%) | (5.35%) | (3.50%) |

Source: Eurekahedge

Figure 20 shows the performance comparison of hedge funds based on their size. In contrast to their negative performance over 2019, in 2020 the performance of hedge funds in terms of fund sizes was in a mixed position. Large hedge funds managing more than US$500 million in assets topped the chart with their 0.27% return as of January 2020 year-to-date, while medium hedge funds managing between US$100 million to US$500 million were trailing closely behind with 0.06% return on average. On the other hand, small hedge funds managing to less than US$100 million in assets recorded 0.04% lost over the same period.

**Figure 20: Performance across fund sizes**




Source: Eurekahedge

Table 11 provides the detailed performance statistics across fund sizes. Large hedge funds generated the lowest annualised volatilities over the last three and five year periods, as well as the smallest maximum drawdown, which is generally expected as their large AUM would give the fund managers wider spread of options to diversify their investments across asset classes and geographies. On the other hand, their large AUM might cost them agility as demonstrated by their lower returns compared to medium and small funds. In terms of risk-adjusted returns, large hedge funds topped the table over the last three years, but fell behind medium hedge funds over the last five years.

**Table 11: Performance across fund sizes**

| | Small Hedge Fund (< US$100m) | Medium Hedge Fund (US$100m - US$500m) | Large Hedge Fund (> US$500m) |
|---|---|---|---|
| 2020 January year-to-date return | (0.04%) | 0.06% | 0.27% |
| 2019 return | 8.50% | 8.85% | 8.90% |
| 3 year annualised return | 3.61% | 4.32% | 4.25% |
| 3 year annualised volatility | 3.60% | 3.19% | 2.65% |
| 3 year Sharpe ratio (RFR = 2%) | 0.45 | 0.73 | 0.85 |
| 5 year annualised return | 3.62% | 4.05% | 3.56% |
| 5 year annualised volatility | 3.53% | 3.19% | 2.56% |
| 5 year Sharpe ratio (RFR = 2%) | 0.46 | 0.64 | 0.61 |
| Maximum drawdown (5 years) | (6.30%) | (5.08%) | (3.86%) |

Source: Eurekahedge

**Table 12: Region return map**

| 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|
| Asia ex-Japan 12.04 | Japan 27.98 | Asia ex-Japan 9.72 | Asia ex-Japan 8.67 | Latin America 18.10 | Asia ex-Japan 20.81 | Latin America 6.68 | Latin America 15.68 | Asia ex-Japan -1.00 |
| Latin America 10.91 | Asia ex-Japan 12.56 | North America 6.21 | Japan 6.79 | North America 8.12 | Latin America 13.63 | North America -2.88 | Asia ex-Japan 11.86 | Latin America -1.76 |
| North America 8.81 | North America 11.49 | Japan 5.30 | Europe 4.80 | Japan 1.72 | Japan 12.60 | Europe -4.60 | North America 9.13 | North America -2.26 |
| Europe 7.34 | Europe 10.11 | Latin America 2.03 | Latin America 1.35 | Europe 0.53 | North America 7.95 | Asia ex-Japan -9.18 | Europe 7.57 | Europe -2.34 |
| Japan 5.86 | Latin America 1.35 | Europe 0.97 | North America 0.72 | Asia ex-Japan -0.43 | Europe 7.14 | Japan -9.32 | Japan 6.53 | Japan -5.91 |

Source: Eurekahedge

**Table 13: Strategy return map**

| 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|
| Distressed Debt 14.29 | Equity Long Bias 19.82 | Trend Following 13.49 | AI 17.90 | Distressed Debt 13.92 | Equity Long Bias 17.04 | Distressed Debt 6.15 | Equity Long Bias 16.64 | Tail Risk 13.43 |
| Equity Long Bias 12.91 | Long Short Equities 16.31 | AI 10.57 | Equity Market Neutral 7.39 | Event Driven 10.62 | Long Short Equities 13.06 | Long Volatility 0.83 | Long Short Equities 11.18 | Long Volatility 12.41 |
| Fixed Income 11.69 | Distressed Debt 15.25 | CTA/Managed Futures 10.04 | FX 6.23 | AI 10.16 | Event Driven 9.93 | Fixed Income 0.17 | Macro 8.59 | Distressed Debt 1.63 |
| Event Driven 11.13 | Event Driven 14.38 | FX 6.02 | Arbitrage 5.03 | Relative Value 7.58 | Short Volatility 9.06 | Relative Value -0.15 | Short Volatility 8.32 | FX 1.17 |
| Relative Value 9.83 | AI 14.13 | Multi-Strategy 5.25 | Relative Value Volatility 4.47 | Relative Value Volatility 7.44 | Multi-Strategy 8.62 | FX -0.23 | Multi-Strategy 8.19 | AI 0.51 |
| Short Volatility 9.07 | Short Volatility 9.53 | Macro 5.25 | Long Short Equities 3.69 | Commodity 7.16 | AI 8.41 | Arbitrage -0.55 | Commodity 7.98 | CTA/Managed Futures 0.20 |
| Relative Value Volatility 8.81 | Multi-Strategy 8.26 | Commodity 4.63 | Multi-Strategy 2.55 | Fixed Income 6.73 | Relative Value 7.03 | Equity Market Neutral -1.90 | Fixed Income 7.88 | Fixed Income 0.03 |
| Long Short Equities 8.54 | Equity Market Neutral 7.85 | Short Volatility 4.47 | Relative Value 2.13 | Multi-Strategy 5.52 | Fixed Income 6.56 | Event Driven -2.70 | Event Driven 7.20 | Arbitrage -0.02 |
| Multi-Strategy 7.92 | Arbitrage 7.47 | Fixed Income 4.46 | Macro 2.08 | Equity Long Bias 5.27 | Arbitrage 5.53 | Macro -2.72 | AI 6.29 | Relative Value Volatility -0.45 |
| Arbitrage 7.17 | Relative Value 6.96 | Long Short Equities 3.90 | CTA/Managed Futures 1.21 | Short Volatility 5.09 | Distressed Debt 4.58 | CTA/Managed Futures -3.52 | Arbitrage 5.72 | Multi-Strategy -0.89 |
| Macro 4.86 | Relative Value Volatility 6.04 | Relative Value 3.51 | Short Volatility 1.09 | Arbitrage 4.97 | Macro 4.44 | Multi-Strategy -3.79 | Trend Following 5.70 | Equity Market Neutral -0.95 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| FX 3.95 | Fixed Income 5.90 | Arbitrage 3.45 | Fixed Income 1.06 | Long Short Equities 3.86 | Equity Market Neutral 3.85 | Relative Value Volatility -3.91 | CTA/Managed Futures 5.36 | Macro -1.05 |
| Equity Market Neutral 3.19 | Macro 4.37 | Equity Long Bias 3.45 | Event Driven -0.42 | Macro 3.41 | Relative Value Volatility 3.23 | AI -4.31 | Relative Value 5.31 | Trend Following -1.79 |
| CTA/Managed Futures 2.82 | FX 3.61 | Equity Market Neutral 3.37 | Equity Long Bias -0.53 | CTA/Managed Futures 2.41 | CTA/Managed Futures 2.61 | Commodity -5.53 | Distressed Debt 3.48 | Relative Value -2.73 |
| AI 1.96 | Trend Following 1.02 | Event Driven 3.25 | Long Volatility -1.07 | FX 1.03 | Commodity 0.41 | Tail Risk -5.75 | Equity Market Neutral 1.77 | Commodity -3.12 |
| Long Volatility 0.27 | CTA/Managed Futures 0.80 | Distressed Debt 1.77 | Trend Following -1.94 | Equity Market Neutral -0.39 | Trend Following 0.29 | Long Short Equities -6.25 | FX 0.71 | Long Short Equities -3.30 |
| Commodity -0.61 | Long Volatility -4.44 | Long Volatility 1.58 | Distressed Debt -4.17 | Trend Following -1.02 | FX -0.19 | Trend Following -6.72 | Relative Value Volatility -1.61 | Event Driven -3.75 |
| Trend Following -1.86 | Commodity -5.37 | Relative Value Volatility -0.36 | Commodity -4.64 | Long Volatility -2.82 | Long Volatility -10.95 | Equity Long Bias -9.37 | Tail Risk -10.53 | Equity Long Bias -5.85 |
| Tail Risk -21.21 | Tail Risk -10.98 | Tail Risk -3.22 | Tail Risk -9.51 | Tail Risk -11.81 | Tail Risk -14.22 | Short Volatility -13.03 | Long Volatility -10.68 | Short Volatility -10.46 |

Source: Eurekahedge

# Peer analysis

The following charts were generated with Risk Shell. Contact ***advisor@eurekahedge.com*** to explore Risk Shell analytics and find out how it can help you in fund risk assessment and portfolio construction.

**Figure 21: Peer analysis of hedge funds and other investment vehicles**

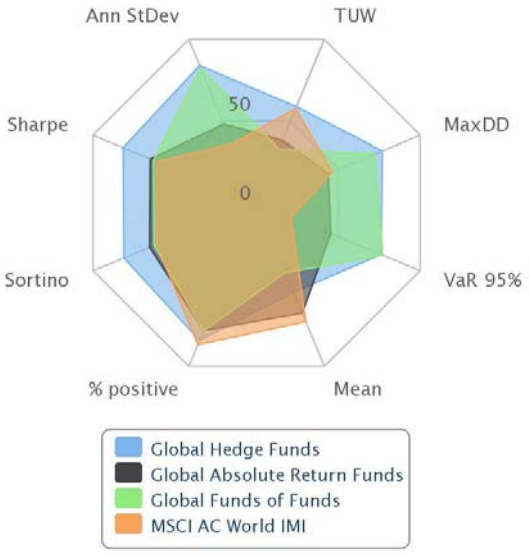
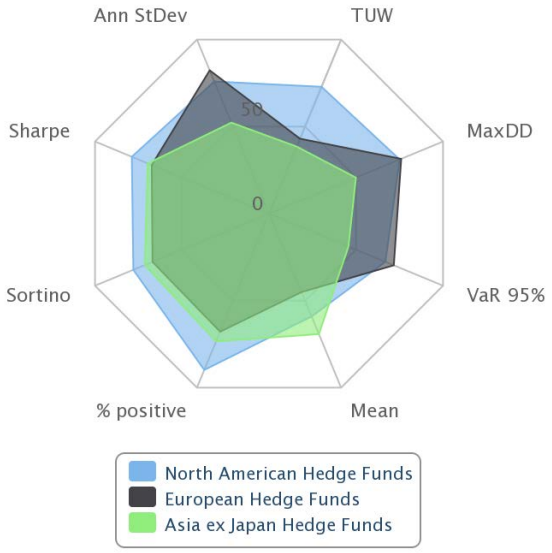



Figure 21 compares the risk-return statistics over the last five years of the *Eurekahedge Hedge Fund Index* and other investment vehicles against the entire *Eurekahedge Global Hedge Fund Database*. Hedge funds fell behind their absolute return counterparts in capturing the region's equity market performance over the last few years. Nevertheless, hedge fund managers were able to provide better downside protection for their investors, as seen from their volatilities and drawdown.

**Figure 22: Peer analysis of hedge funds across geographic mandates**




Similarly, Figure 22 compares the risk-return statistics of the three largest geographic mandates within the global hedge fund industry. Asia ex-Japan mandate yielded the best mean returns compared to their peers focusing on North America and Europe, but fell behind in terms of volatilities. North American fund managers generated the best risk-adjusted returns as seen from their Sharpe and Sortino ratios among the three mandates, while on the other hand European fund managers ended up in last place.

**Figure 23: Peer analysis of hedge funds across strategic mandates**

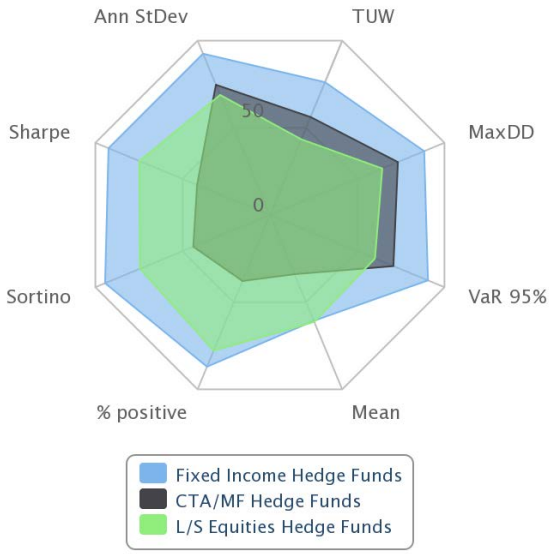



Figure 23 provides the peer analysis of hedge funds across three major strategic mandates within the industry. Over the last five years, long/short equities fund managers generated the best mean returns, but fixed income fund managers yielded better risk-adjusted returns as represented by their Sharpe and Sortino ratios, by virtue of their low volatilities which also contributed to their outperformance over other strategies in maximum drawdown, time underwater and percentage of positive months.

**Figure 24: Peer analysis of hedge funds across fund sizes**

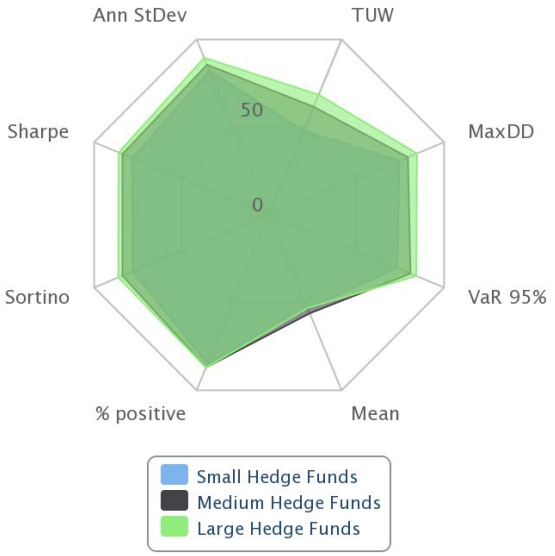



Figure 24 compares the risk-return statistics of hedge funds across different asset sizes. All three classifications of hedge funds generated very similar risk return profiles, with medium hedge funds maintaining slight edge over their bigger counterparts in terms of mean return. However, large hedge funds posted slightly better volatilities, maximum drawdown and value at risk compared to their smaller competitors.

EUREKAHEDGE

# GLOBAL HEDGE FUNDS TOP TEN TABLES

| February 2020 Returns (%)* | |
|---|---|
| Kohinoor Core Fund - Investor Class A EUR | 30.88 |
| QQQ Capital Fund | 23.67 |
| Libertas Real Asset Opportunities Fund - Class A | 18.98 |
| Kinkopf Capital - S&P Select Proprietary | 17.64 |
| Diversified Trend 1 | 16.82 |
| GT Dynamic Trading (P) | 13.77 |
| CTI Capital Global Opportunities Fund - Class A | 13.65 |
| QTS Tail Reaper Strategy | 12.98 |
| GT Systematic Day Trading Program | 12.43 |
| Rock Hill Dragon Fund | 11.96 |

| 3-Month Returns (%) | |
|---|---|
| QQQ Capital Fund | 88.12 |
| Bernett Diversified Global Fund LP | 36.37 |
| Kohinoor Core Fund - Investor Class A EUR | 34.94 |
| Quantitative Global 3x Fund LLC | 30.69 |
| UG Greater China Multi-Strategy Fund | 30.25 |
| Diversified Trend 1 | 27.71 |
| UG Hidden Dragon Special Opportunity Fund | 24.49 |
| Libertas Real Asset Opportunities Fund - Class A | 21.81 |
| Cherry Blossom Trend Enhanced Fund - Class A EUR | 21.53 |
| CTI Capital Global Opportunities Fund - Class A | 20.92 |

| 2020 Returns (%) | |
|---|---|
| QQQ Capital Fund | 77.43 |
| MVPQ Ltd | 39.03 |
| Kohinoor Core Fund - Investor Class A EUR | 34.91 |
| GROW Small Cap Equity Long Short LP | 28.34 |
| WPT Alpha Fund Ltd | 24.60 |
| Haidar Jupiter Fund LLC | 22.98 |
| Quantitative Global 3x Fund LLC | 22.11 |
| Bernett Diversified Global Fund LP | 21.21 |
| Libertas Real Asset Opportunities Fund - Class A | 20.72 |
| Quantitative Tactical Aggressive Fund LLC | 19.52 |

| 2019 Returns (%) | |
|---|---|
| Vanda Global Fund Ltd - Class A | 320.04 |
| GEM Global Energy Fund Ltd | 212.39 |
| PharmaInvest Fund Ltd | 192.56 |
| Emerging Value Opportunities Fund | 186.59 |
| QQFund.com Alpha Beta Program | 149.99 |
| Long Distance Fund I LP | 146.32 |
| PruLev Global Macro Fund - Class B | 115.78 |
| UG Greater China Multi-Strategy Fund | 109.45 |
| The Vilas Fund LP | 106.72 |
| UG Hidden Dragon Special Opportunity Fund | 99.59 |

| Annualised Returns (%)** | |
|---|---|
| The Reaper Fund | 91.41 |
| QQQ Capital Fund | 84.77 |
| Silver 8 Partners LP | 70.36 |
| Leonidas Cryptocurrency Fund | 62.27 |
| One Glass Is Not Enough Wine Fund | 54.63 |
| For Your Lips Only Wine Fund | 53.98 |
| PruLev Global Macro Fund - Class B | 52.71 |
| Dynamo Cougar | 48.56 |
| Raise Alpha Program | 47.19 |
| Parplus Equity Fund | 41.27 |

| Annualised Standard Deviation** | |
|---|---|
| Asian Trade Finance Fund - Class A | 0.17 |
| NN (L) AAA ABS - I Cap EUR | 0.33 |
| Highmore Trade Finance Fund | 0.50 |
| Allianz Credit Opportunities - Class IT13 EUR | 0.51 |
| EOS Sicav Plc - Trade Finance Fund Class B Acc | 0.69 |
| Kames Absolute Return Bond Fund - Class B GBP ACC | 0.70 |
| Candriam Long Short Credit - Class C EUR | 0.82 |
| Omni Secured Lending Fund III - Class A GBP | 1.01 |
| W Financial Fund LP | 1.03 |
| Norron Preserve | 1.07 |

| Sharpe Ratio** | |
|---|---|
| Asian Trade Finance Fund - Class A | 38.38 |
| For Your Lips Only Wine Fund | 24.94 |
| One Glass Is Not Enough Wine Fund | 20.98 |
| From Bordeaux With Love Wine Fund | 17.71 |
| Highmore Trade Finance Fund | 15.79 |
| W Financial Fund LP | 9.09 |
| Pier Special Opportunities Fund LP | 8.60 |
| Omni Secured Lending Fund III - Class A GBP | 7.10 |
| Avendus Absolute Return Fund | 6.37 |
| Amber Hill ES Currency Arbitrage Fund SP - Class C | 6.36 |

| Sortino Ratio** | |
|---|---|
| JGP Hedge FIC FIM | 52.14 |
| Omni Secured Lending Fund III - Class A GBP | 47.63 |
| Waterfall Victoria ERISA Fund Ltd | 35.92 |
| P and J Titan Fund | 34.36 |
| SCIO Fund SICAV-FIS - SCIO Opportunity Fund | 29.84 |
| Rio Arbitragem FIM | 23.34 |
| Waterfall Victoria Fund LP | 22.98 |
| NEO Multi Estrategia FIC FIM | 22.14 |
| LSQ Fund | 21.98 |
| Orchard Landmark | 21.54 |

* Based on 54.84% of funds which have reported February 2020 returns as at 16 March 2020
** For funds with a track record of at least 12 months as at end-February 2020

# HEDGE FUNDS STRATEGY TOP TEN TABLES (JANUARY YTD)**

| Arbitrage | |
|---|---|
| DLD Convertible Arbitrage Strategy | 4.40 |
| Mint Tower Arbitrage Fund - Institutional G-Class | 4.30 |
| Systematic Volatility Arbitrage (VolArb) Program | 4.26 |
| Greenland Global Fund | 3.61 |
| Brehat I | 3.26 |
| Boussard & Gavaudan Absolute Return - Z EUR Class | 3.24 |
| Amber Hill ES Currency Arbitrage Fund SP - Class C | 2.38 |
| Tenor Opportunity Fund | 1.43 |
| SM Merger/Arbitrage LP | 1.36 |
| Commodity Arbitrage Fund - Class A USD | 1.31 |

| CTA/Managed Futures | |
|---|---|
| Quantitative Global 3x Fund LLC | 22.11 |
| QDRA Dynamic Macro Strategy | 18.07 |
| Diversified Trend 1 | 16.02 |
| Cherry Blossom Trend Enhanced Fund - Class A EUR | 15.97 |
| QCAM Grab Strategy | 15.96 |
| Claughton Capital ARP Institutional Program | 13.95 |
| QCM Global Diversified Programme | 13.26 |
| QTS Tail Reaper Strategy | 12.98 |
| QTS Chimera Strategy | 12.60 |
| QCAM Systematic Intelligence - 30 Vol | 12.30 |

| Distressed Debt | |
|---|---|
| Miltonian Capital Distressed & Restructuring Munis | 9.67 |
| ASM Asia Recovery Fund | 4.18 |
| Birch Creek Credit Value Fund LP | 3.89 |
| Schroder GAIA II NGA Turnaround - USD C Acc | 2.97 |
| Miltonian Capital High Yield Multi-Sector | 2.83 |
| Waterfall Victoria Fund LP | 1.00 |
| Waterfall Victoria ERISA Fund Ltd | 1.00 |
| Waterfall Eden Fund LP | 0.60 |
| Alcentra Global Special Situations Fund EUR III A1 | -0.51 |
| Hof Hoorneman Phoenix Fund | -2.65 |

| Event Driven | |
|---|---|
| Numen Credit Opportunities Inc | 16.13 |
| UG Hidden Dragon Special Opportunity Fund | 12.58 |
| DLD Event Driven Strategy | 1.90 |
| LGT (Lux) I Cat Bond Fund USD B2 | 1.90 |
| Marble Ridge LP | 1.63 |
| Twin Securities LP | 1.15 |
| Twin Offshore Ltd | 1.10 |
| AXA IM Novalto - GAIA I-C-1 USD | 1.04 |
| LGT (Lux) III - ILS Plus Fund USD B2 | 1.04 |
| LGT (CH) Cat Bond Fund USD A | 0.93 |

| Fixed Income | |
|---|---|
| Terebinth SNN FI Macro Retail Hedge Fund | 10.85 |
| Nexxt Level Total Return Fund | 6.59 |
| Istanbul Portfoy Aries Hedge Fund | 5.30 |
| MKP Select Offshore Ltd | 4.29 |
| Sanchi Credit Value Fund | 4.28 |
| Camden Bonds Plus Fund LLC | 4.27 |
| AT Total Return Fund | 3.98 |
| Gardena Bond Absolute Return | 3.42 |
| DCI Global Investment Grade Corporate Bond Fund (UCITS) - Class A USD | 3.12 |
| DCI Investment Grade Corporate Bond Fund (UCITS) - Class A USD | 2.66 |

| Long/Short Equities | |
|---|---|
| QQQ Capital Fund | 77.43 |
| GROW Small Cap Equity Long Short LP | 28.34 |
| Connective Capital EE - Enhanced Exposure | 16.63 |
| AlphaQuest Short Bias (AQSB) Program | 15.33 |
| Horseman Japan Fund Ltd - USD | 13.69 |
| Manchester Explorer LP | 13.05 |
| Whetstone Capital LP | 12.87 |
| CTI Capital Global Opportunities Fund - Class A | 12.00 |
| Horseman Global Fund Ltd (Class A) - USD | 10.20 |
| ChinaAMC China Growth Fund - Class A | 10.02 |

| Long-Only Absolute Return | |
|---|---|
| Imara Zimbabwe Fund - Segregated Portfolio | 20.88 |
| Quadriga Igneo UCITS - Class A | 19.68 |
| Harmony Healthcare Feeder Fund | 6.97 |
| HSZ China Fund (HCF) - USD | 5.10 |
| Insync Global Capital Aware Fund | 4.48 |
| Covalis Global Listed Utilities and Infrastructure Fund | 3.25 |
| L1 Capital International Fund | 3.23 |
| Value Partners Chinese Mainland Focus Fund | 3.22 |
| Schroder ISF European Market Neutral - EUR A Acc | 2.49 |
| Allard Investment Fund | 2.36 |

| Macro | |
|---|---|
| Kohinoor Core Fund - Investor Class A EUR | 34.91 |
| WPT Alpha Fund Ltd | 24.60 |
| Haidar Jupiter Fund LLC | 22.98 |
| Bernett Diversified Global Fund LP | 21.21 |
| NEXT-alpha | 10.38 |
| North Emerging Markets Fund - Class A USD | 10.36 |
| Kohinoor Series Three Fund - Class B USD | 10.23 |
| Odey Odyssey Fund - Class USD | 10.17 |
| PruLev Global Macro Fund - Class B | 9.41 |
| Salus Alpha Directional Markets R EUR | 9.00 |

| Multi-Strategy | |
|---|---|
| Libertas Real Asset Opportunities Fund - Class A | 20.72 |
| UG Greater China Multi-Strategy Fund | 16.10 |
| Logica Tail Risk Portfolio | 13.66 |
| Pinerion Managed Volatility Strategy | 7.11 |
| GCI Japan Hybrids | 6.44 |
| Tages Paladin UCITS Fund | 6.39 |
| Aleutian Fund | 5.23 |
| Orthogonal Global Fund LP - Series B Interests | 5.20 |
| Polar Star Spectrum Fund Ltd | 4.91 |
| III Convex Strategies Fund Ltd | 4.70 |

| Relative Value | |
|---|---|
| Longchamp Galileo Equity Income Fund - Class A | 7.54 |
| Assenagon Alpha Volatility (I) | 3.85 |
| Levitas Capital Absolute Return VIX (ARVIX) Fund | 3.74 |
| Twin Tree Capital Partners LP | 2.98 |
| Polygon Convertible Opportunity Master Fund - Class D | 2.78 |
| Dipsea Capital Fund LP | 2.21 |
| Capula Global Relative Value Fund Ltd - Class A USD | 1.49 |
| SEB Eureka Fixed Income Relative Value IC DKK SEED | 1.48 |
| Waha CEEMEA Credit Fund SP | 1.03 |
| III Select Credit Fund LP - Type A | 1.01 |

| Others | |
|---|---|
| MVPQ Ltd | 39.03 |
| Quantitative Tactical Aggressive Fund LLC | 19.52 |
| Blockforce Multi-Strategy Fund | 16.77 |
| Silver 8 Partners LP | 16.71 |
| Rivemont Crypto Fund - Class F | 16.63 |
| Decentral Park Capital LP | 15.68 |
| Leonidas Cryptocurrency Fund | 5.37 |
| Cohalo Dynamic Volatility Strategies (DVS) SMA | 4.21 |
| Artemis Vega Fund LP | 3.60 |
| Caritas Royalty Fund LLC | 2.19 |

* Based on 54.84% of funds which have reported February 2020 returns as at 16 March 2020
** For funds with a track record of at least 12 months as at end-February 2020

EUREKAHEDGE

# ISLAMIC FUNDS TOP TEN TABLES

| February 2020 Returns (%)* | |
|---|---|
| Public China Ittikal Fund | 2.44 |
| PB Islamic Bond Fund | 1.52 |
| Public Islamic Bond Fund | 1.45 |
| Zurich Takaful Shariah Income Fund | 1.43 |
| Public Islamic Income Fund | 1.23 |
| Principal Islamic Lifetime Sukuk Fund | 1.16 |
| Meezan Islamic Income Fund | 0.89 |
| Meezan Sovereign Fund | 0.88 |
| Meezan Tahaffuz Pension Fund - Debt Sub Fund | 0.87 |
| Meezan Cash Fund | 0.86 |

| 3-Month Returns (%) | |
|---|---|
| FALCOM Saudi Equity Fund | 6.99 |
| Zurich Takaful Shariah Income Fund | 3.80 |
| PB Islamic Bond Fund | 3.63 |
| Public Islamic Bond Fund | 3.58 |
| Principal Islamic Lifetime Sukuk Fund | 3.21 |
| Public Islamic Income Fund | 3.03 |
| Meezan Sovereign Fund | 2.96 |
| Meezan Islamic Income Fund | 2.94 |
| Meezan Tahaffuz Pension Fund - Debt Sub Fund | 2.94 |
| Meezan Cash Fund | 2.87 |

| 2020 Returns (%) | |
|---|---|
| Zurich Takaful Shariah Income Fund | 3.19 |
| PB Islamic Bond Fund | 3.10 |
| Public Islamic Bond Fund | 3.05 |
| Principal Islamic Lifetime Sukuk Fund | 2.76 |
| Public Islamic Income Fund | 2.57 |
| Meezan Sovereign Fund | 1.91 |
| Meezan Tahaffuz Pension Fund - Debt Sub Fund | 1.90 |
| Meezan Islamic Income Fund | 1.90 |
| Meezan Cash Fund | 1.84 |
| Meezan Tahaffuz Pension Fund - Money Market Sub Fund | 1.74 |

| 2019 Returns (%) | |
|---|---|
| Al Qasr GCC Real Estate & Construction Equity Trading Fund | 40.08 |
| Qinvest Spyglass US Growth Fund | 37.52 |
| Iman Fund - Class B | 34.68 |
| Deutsche Noor Precious Metals Securities - Class A | 34.26 |
| Amana Growth Fund Investor | 33.05 |
| SC US Equities Passive Fund - Class S | 32.91 |
| SC European Equities Passive Fund - Class S | 30.83 |
| FALCOM Saudi Equity Fund | 29.46 |
| SC Global Sustainable Equities Fund - Class S | 29.25 |
| Hong Leong Dana Makmur | 29.17 |

| Annualised Returns (%)** | |
|---|---|
| Meezan Tahaffuz Pension Fund - Equity Sub Fund | 11.90 |
| Amana Growth Fund Investor | 10.43 |
| Public Islamic Opportunities Fund | 9.92 |
| WSF Global Equity Fund - USD I | 9.82 |
| Insight I-Hajj Syariah Fund | 8.82 |
| Public Islamic Select Enterprises Fund | 8.57 |
| Public Islamic Equity Fund | 7.98 |
| Meezan Tahaffuz Pension Fund - Debt Sub Fund | 7.60 |
| Meezan Tahaffuz Pension Fund - Money Market Sub Fund | 7.50 |
| Amana Income Fund Investor | 7.48 |

| Annualised Standard Deviation** | |
|---|---|
| Principal Islamic Deposit Fund | 0.13 |
| Public Islamic Money Market Fund | 0.14 |
| PB Islamic Cash Management Fund | 0.16 |
| Boubyan KD Money Market Fund II | 0.18 |
| Boubyan USD Liquidity Fund | 0.20 |
| Principal Islamic Money Market Fund | 0.24 |
| Emirates Islamic Money Market Fund Limited Institutional Share Class I USD | 0.24 |
| FALCOM SAR Murabaha Fund | 0.27 |
| Rasmala Trade Finance Fund | 0.35 |
| Meezan Tahaffuz Pension Fund - Money Market Sub Fund | 0.90 |

| Sharpe Ratio** | |
|---|---|
| Public Islamic Money Market Fund | 21.14 |
| PB Islamic Cash Management Fund | 18.34 |
| Rasmala Trade Finance Fund | 13.68 |
| Boubyan KD Money Market Fund II | 10.55 |
| Meezan Tahaffuz Pension Fund - Money Market Sub Fund | 8.34 |
| FALCOM SAR Murabaha Fund | 6.94 |
| Meezan Tahaffuz Pension Fund - Debt Sub Fund | 6.02 |
| Boubyan USD Liquidity Fund | 6.01 |
| Emirates Islamic Money Market Fund Limited Institutional Share Class I USD | 5.50 |
| Insight I-Hajj Syariah Fund | 4.42 |

| Sortino Ratio** | |
|---|---|
| Meezan Tahaffuz Pension Fund - Debt Sub Fund | 26.42 |
| Public Islamic Income Fund | 10.56 |
| Insight I-Hajj Syariah Fund | 7.88 |
| Public Islamic Select Bond Fund | 6.93 |
| Principal Islamic Money Market Fund | 6.63 |
| Public Islamic Bond Fund | 6.62 |
| PB Islamic Bond Fund | 5.98 |
| Amana Participation Fund Institutional Shares | 3.41 |
| Emirates Global Sukuk Fund Limited USD Institutional Share Class (Acc) | 2.71 |
| Public Islamic Enhanced Bond Fund | 2.04 |

* Based on 33.19% of funds which have reported February 2020 returns as at 16 March 2020
** For funds with a track record of at least 12 months as at end-February 2020

# EUREKAHEDGE REGION/STRATEGY INDEX RETURN MATRIX

| | Arbitrage | | CTA/managed futures | | Distressed debt | | Event driven | | Fixed income | | Long/short equities | | Macro | | Multi-strategy | | Relative value | | Insurance-linked securities | | All strategies | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | February 2020 | 2020 YTD Returns | February 2020 | 2020 YTD Returns | February 2020 | 2020 YTD Returns | February 2020 | 2020 YTD Returns | February 2020 | 2020 YTD Returns | February 2020 | 2020 YTD Returns | February 2020 | 2020 YTD Returns | February 2020 | 2020 YTD Returns | February 2020 | 2020 YTD Returns | February 2020 | 2020 YTD Returns | February 2020 | 2020 YTD Returns |
| Asia | (2.37) | (0.94) | | | | | (4.36) | (4.02) | 0.30 | 0.98 | (2.19) | (2.82) | (0.18) | 0.43 | 1.92 | 2.71 | (3.29) | (5.73) | | | (1.60) | (1.97) |
| Asia ex Japan | | | | | | | 2.37 | 7.30 | 0.33 | 0.88 | (1.35) | (1.89) | (1.34) | 0.97 | 1.97 | 2.82 | (3.29) | (6.85) | | | (0.70) | (0.81) |
| Asia inc Japan | | | | | | | 1.72 | 4.75 | 0.30 | 0.98 | (1.89) | (2.48) | (0.18) | 0.43 | 1.69 | 2.55 | (3.29) | (5.73) | | | (0.99) | (1.15) |
| Australia / New Zealand | | | | | | | (2.42) | (0.92) | 0.11 | 1.19 | (5.78) | (2.49) | | | (1.29) | (0.68) | | | | | (4.16) | (1.50) |
| Emerging markets | | | | | | | 2.82 | 6.40 | (1.58) | (1.22) | (2.19) | (2.81) | (1.39) | (1.30) | (1.11) | 0.84 | (2.41) | (5.84) | | | (1.72) | (1.64) |
| Europe | 0.19 | 1.20 | (9.09) | (11.83) | | | (1.28) | (1.06) | (0.72) | 0.24 | (2.64) | (2.79) | (4.40) | (5.43) | (1.21) | (2.59) | (3.44) | (3.35) | | | (2.35) | (2.38) |
| Greater China | | | | | | | | | | | 1.70 | 0.09 | | | 10.90 | 9.81 | | | | | 2.51 | 1.03 |
| India | | | | | | | | | | | (3.96) | (1.88) | | | | | | | | | (3.96) | (1.84) |
| Japan | | | | | | | (10.45) | (14.81) | | | (3.16) | (3.90) | | | 3.99 | 4.32 | | | | | (3.82) | (5.11) |
| Korea | | | | | | | | | | | | | | | | | | | | | (1.67) | (1.37) |
| North America | (2.16) | (1.83) | 0.23 | 0.59 | 2.79 | 3.72 | (3.10) | (4.71) | (0.00) | 0.98 | (3.71) | (4.38) | (1.84) | (1.65) | (0.55) | (0.13) | (3.17) | (3.26) | | | (2.16) | (2.23) |
| Latin America | | | | | | | (1.52) | (1.89) | | | (4.86) | (3.58) | (6.55) | (7.01) | (2.31) | 0.87 | | | | | (3.57) | (1.91) |
| Latin America (Offshore) | | | | | | | | | | | (4.63) | (4.81) | | | (6.65) | (5.14) | | | | | (5.30) | (4.98) |
| Latin America (Onshore) | | | | | | | | | | | (4.96) | (3.06) | (6.55) | (7.01) | (1.52) | 2.13 | | | | | (3.15) | (1.12) |
| All Regions | (0.46) | 0.04 | (0.19) | 0.21 | 1.21 | 1.72 | (3.10) | (3.67) | (0.77) | (0.03) | (2.93) | (3.32) | (1.01) | (1.19) | (1.40) | (0.89) | (2.71) | (2.68) | 0.24 | 0.85 | (1.73) | (1.66) |

* Based on 44.99% of funds which have reported February 2020 returns as at 12 March 2020