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Hurricane season review and ILS outlook: June-November 2018

- It has been a slightly above-average 2018 Atlantic hurricane season so far in terms of named storms, with late loss developments from Irma in 2017, and a more severe typhoon season in the Pacific. This is expected, in Twelve Capital's view, to lead to at least stable reinsurance pricing for 2019 renewals. Price increases will be more pronounced in loss-affected areas such as Japan and also, selectively, for some Floridian insurers. However, Twelve Capital sees potential for surprise to the upside from these modest base expectations given a recent more positive shift in sentiment around 1/1 renewals.
- Hurricane Florence was the first major[1] Atlantic hurricane of the 2018 hurricane season to cause significant insured losses in the Carolinas, Virginia and Georgia. However, in mid-October, this was followed by Hurricane Michael making landfall in the Florida panhandle. In the East Pacific, meanwhile, hurricane activity was high. Other insured wind events which have taken place since June 2018 included Typhoon Jebi in the West Pacific. The Atlantic/Pacific season generally runs to end-November. Currently, Twelve Capital believes that its ILS and Cat Bond positions will see little or no impact from the hurricanes that made landfall in the US this year.
- Other natural events during the period, with economic impacts of over USD 1bn, included earthquakes and flooding in Japan. After US wildfires in July and August, in November, two further wildfires broke out in northern and southern California which have only recently been contained. The latter will cause significant insured industry losses which could be in excess of USD 10bn.
- Continued growth and innovation seem likely with 2018 another record year in terms of Cat Bond issuance. Twelve Capital expects this to continue into 2019 as investors increasingly seek diversifying asset classes.
- After a benign H1 2018, European reinsurers, Bermudans and Lloyd's businesses saw an active Q3 and Q4 2018, so a significant portion of their annual catastrophe budgets will have been used by year end. However, for insurance equities, the outlook for dividends and buybacks should in Twelve's view remain intact, if no other major events take place in 2018. For Florida primary insurers, damages from Michael are expected to be limited by low retentions. Meanwhile, Twelve Capital's Best Ideas strategy should benefit from the above as well as the Cat Bond outlook and Insurance Equity seasonality.

Events during the hurricane season to date

Hurricanes and typhoons

Table 1 shows hurricanes and tropical storms with significant incurred or expected industry losses.

Table 1: 2018 hurricanes/typhoons with major industry loss estimates*

Hurricane/typhoon	Date of formation up to first landfall	Category at first landfall	Insured industry loss (estimates)	Basin
Florence	31 August – 14 September	1	USD 2.8-5bn	Atlantic
Michael	7 – 10 October	4	USD 7-10bn	Atlantic
Jebi	26 August – 4 September	1	USD 10bn	West Pacific
Mangkhut	7 – 14 September	5	USD 1-2bn	West Pacific
Typhoon Trami	28 September – 2 October	3	USD 2-3bn	West Pacific

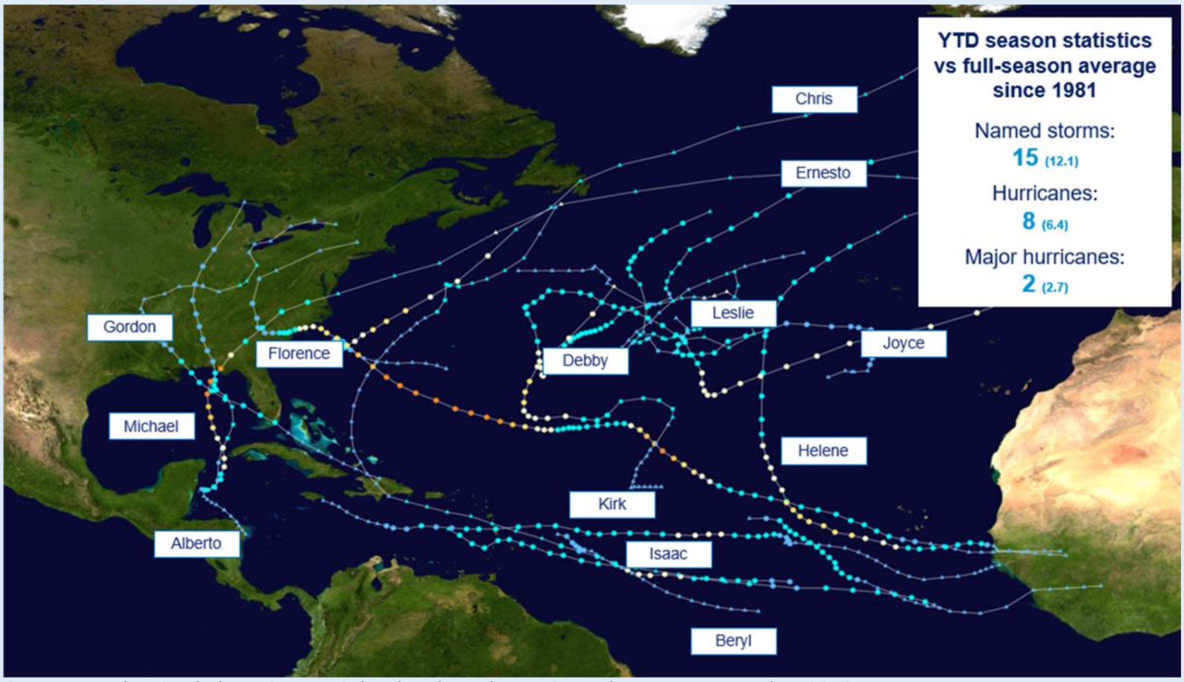
Source: Twelve Capital, RMS, AIR and Swiss Re. As at 21 November 2018. *Of over USD 1bn.

[1] A major hurricane is classified as a hurricane that experienced an intensity of 3 or greater on the Saffir-Simpson scale during its lifetime.

In the Atlantic, it has been a slightly above-average hurricane season in 2018 to date in terms of the number of storms, with the major events being Hurricane Florence followed by Hurricane Michael. In the Pacific, meanwhile, hurricane activity has been well above average in 2018, in terms of the number of storms.

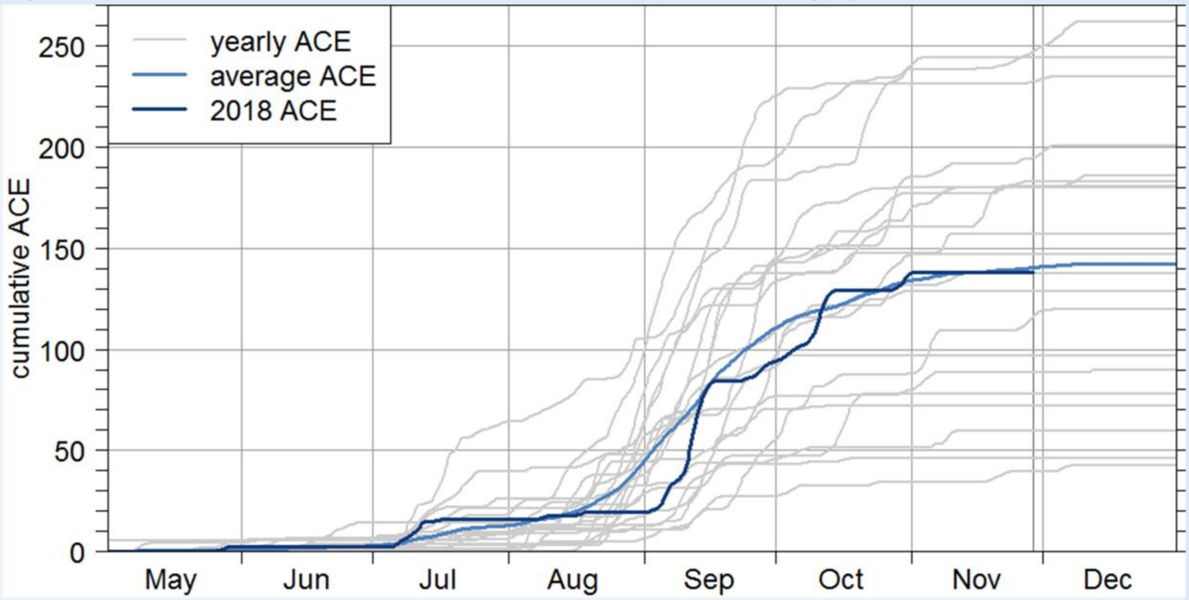
Figure 1 shows the Atlantic storms, with the track of the storms being identified by the dotted lines while the strength of the storms is indicated by the colour of the dots – with warmer colours representing stronger storms.

Figure 1: Atlantic hurricane season: map of tropical storm systems



Source: Twelve Capital, NASA, NHC (National Hurricane Center). As at 7 November 2018.

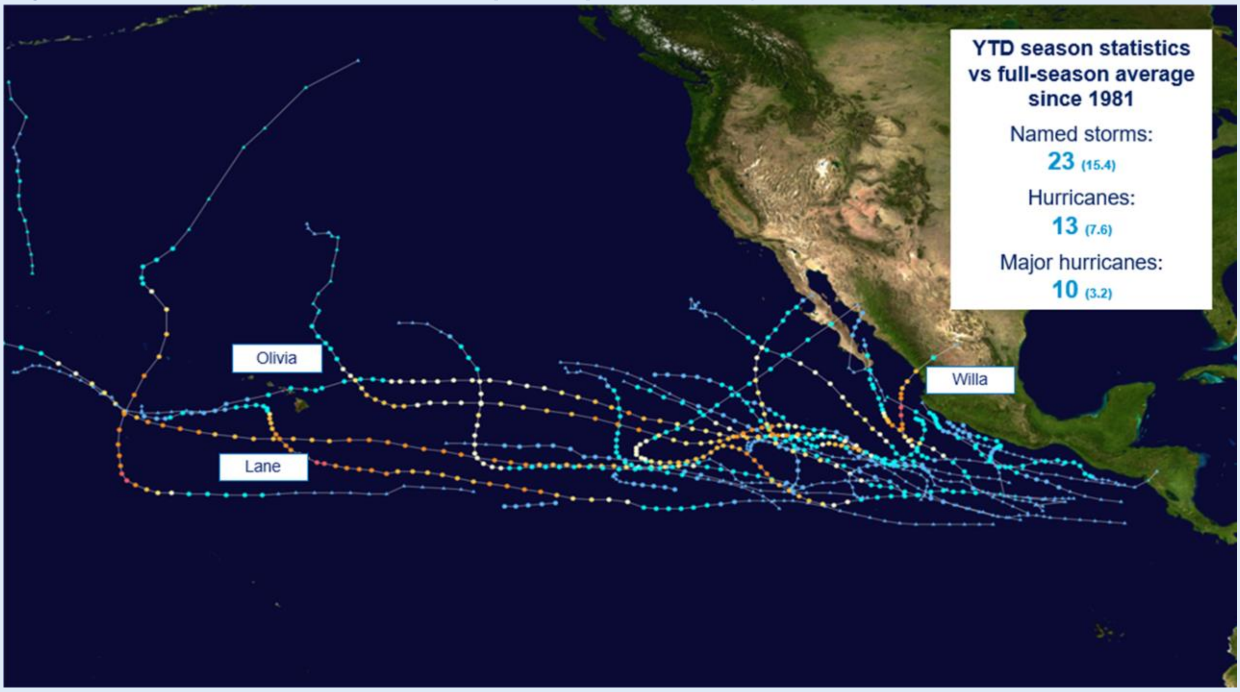
Figure 2: Atlantic hurricane season – accumulated cyclone energy (ACE)



Source: Twelve Capital, NHC. As at 28 November 2018.

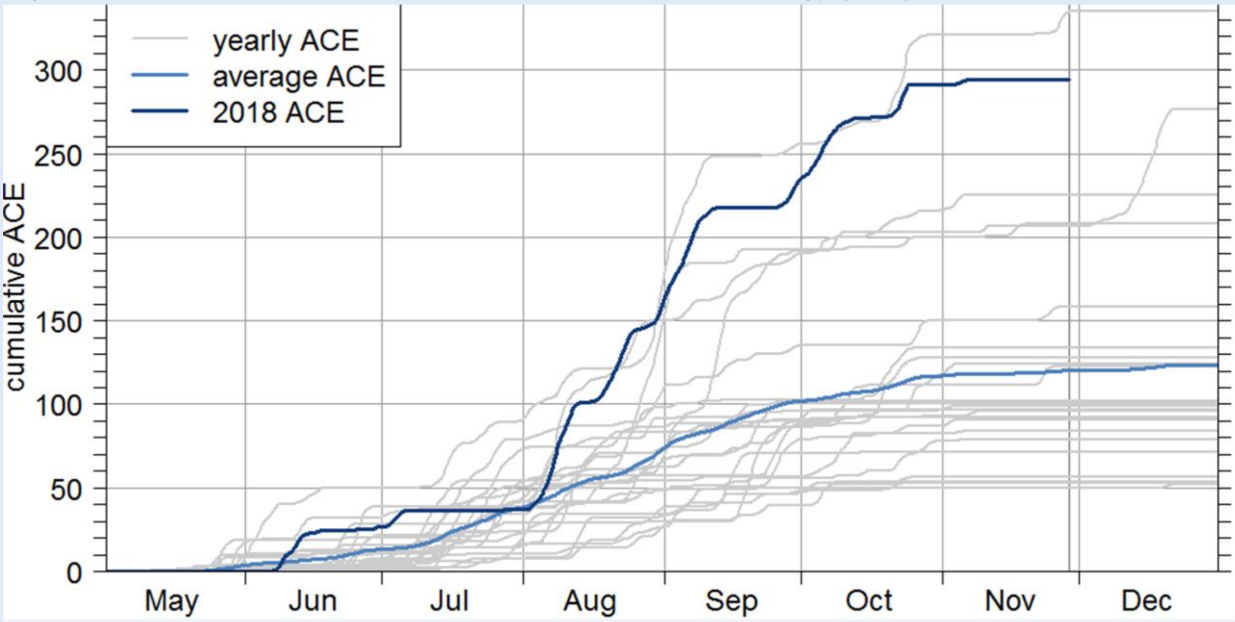
The conclusion drawn from the maps of the storms is also evident in Figure 2 which shows the Accumulated Cyclone Energy (ACE). This is a measure of the number, strength and duration of all tropical storms in a particular year. From this, it is apparent that 2018 has been a slightly above average year in terms of the ACE energy in the Atlantic. As we can see from Figures 3 and 4, however, it has been an exceptional year in the Pacific in terms of ACE, with a higher than average number of named storms.

Figure 3: Pacific hurricane season: map of tropical storm systems



Source: Twelve Capital, NASA, NHC. As at 7 November 2018.

Figure 4: Pacific hurricane season – accumulated cyclone energy (ACE)



Source: Twelve Capital, NHC. As at 28 November 2018.

Other natural catastrophes to date

Other events during the review period which could have economic impacts of over USD 1bn, included wildfires in Greece in July. Elsewhere, after a 6.6 earthquake affected Japan in early September, Japan was struck by several storms causing severe flooding, including Trami, a category 3 storm in late September. A powerful magnitude 7.5 earthquake at a shallow depth of 10km struck Central Sulawesi, Indonesia around the same time. Subsequently, US wildfires took place in late July and early August. Severe weather hit Italy and other parts of southern Europe in late October/early November. Most recently, two major wildfires struck northern and southern California causing significant property damage and a number of fatalities during a period of over two weeks. Following recent relief from rain, both fires are now 100% contained.

Performance impact

Cat Bonds

The impact on Cat Bond markets from Hurricane Florence was seen in widening spreads, this is a typical market reaction to such an event since loss development uncertainty and potential attachment erosion in aggregate trigger structures result in temporarily higher risk for investors. While certain bonds saw large price moves, including the two FloodSmart bonds sponsored by the National Flood Insurance Program (NFIP)[2], the overall market impact was limited. There were no surprises across funds and mandates and it is believed that the impact on the portfolios managed by Twelve Capital will ultimately be limited.

Clearly, a notable negative development for ILS and Cat Bond investors this year has been loss creep from 2017 events, specifically Hurricane Irma. Irma's losses were estimated to be around USD 15bn post landfall in 2017, which have now increased to USD 21bn. This increase in loss is not uniform across all primary insurers and, in some cases, it has led to additional write-downs on some Cat Bonds during 2018, most notably the Citrus series sponsored by Heritage Insurance Group.

Meanwhile, Hurricane Michael made landfall in the Florida panhandle in mid-October, near the borders of Gulf and Bay counties as a category 4 hurricane, leading to estimates of USD 7bn to USD 10bn of insured losses. The storm almost reached category 5, which makes it the strongest storm to hit the US mainland since Hurricane Andrew in 1992. As per the time of writing, Twelve Capital does not believe that Hurricane Michael will have a significant effect on the ILS positions in its portfolios.

Best Ideas Strategy

The loss creep for Irma, previously mentioned, as well as Hurricane Florence, Hurricane Michael and the spread-widening associated with these events did have a dampening effect on the Cat Bond seasonality performance within Twelve's Best Ideas strategy. Nevertheless, US wind Cat Bonds did perform well, especially within a market environment in which volatility of other asset classes rose sharply during the review period. Within the Best Ideas strategy, significantly reducing Cat Bond exposure in September was beneficial. Even though the seasonality strategy was beneficial to the overall Best Ideas strategy during the review period, November's wildfires in California, the most severe ever recorded, eroded the positive performance stemming from the US wind seasonality.

Private ILS

The impact of the hurricane activity on the private ILS market, mirrors Twelve Capital's observations in the Cat Bond market. There was a certain level of loss creep from prior year's events in loss affected transactions, however, Twelve remains cautiously optimistic that this year's events will not have had any impact on positions.

Insurance Equities

After a benign first half to 2018, European reinsurers, Bermudans and Lloyd's businesses in the main, saw an active Q3, because of Hurricane Florence, Typhoon Jebi, and Typhoon Mangkhut. There were also several large man-made disasters, such as the collapse of a bridge in Genoa and the Lürssen shipyard fire. Twelve expects these to have largely depleted catastrophe budgets for the year up to and including Q3.

Subsequently, in Q4, Hurricane Michael and November's Californian wildfires are estimated to have caused USD 7bn to USD 10bn of insured losses each. Twelve anticipates that a number of Q4 catastrophe budgets are likely to be almost depleted as a result of those two events, meaning that, overall, a significant portion of annual catastrophe budgets will have been used by year end. However, dividends and buybacks should in Twelve's view remain intact, if no other major events take place in 2018. For Florida primary insurers, damages

[2] The US-government administered NFIP enables property owners in participating communities to buy insurance protection against flood losses.

from Michael are expected to be limited by low retentions, and optionality remains at some primary insurers to return capital to shareholders.

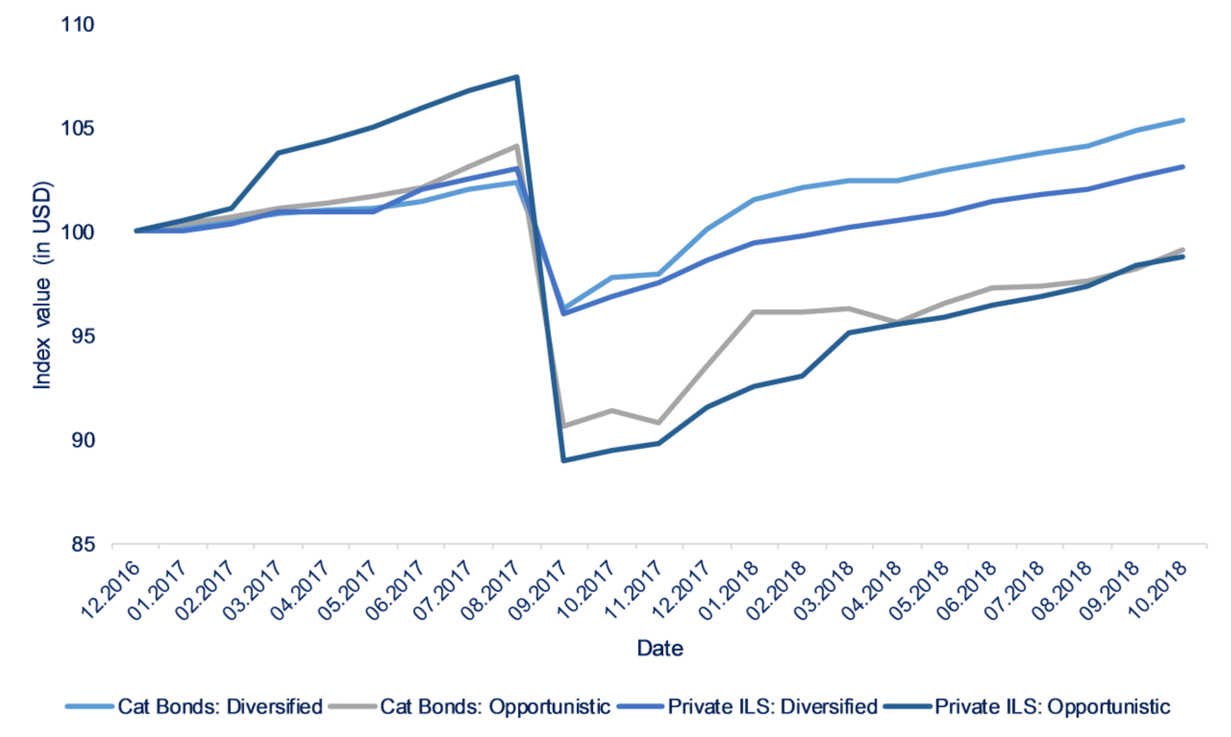
During the hurricane season, the portfolio managers of Twelve Capital were able to exploit attractive trading opportunities. As Hurricanes Florence and Michael approached the US coast, the stocks of US homeowner insurance companies came under significant pressure. Based on its natural catastrophe modelling expertise, Twelve Capital was able to assess potential losses very early and was confident that most of the losses would be borne by reinsurance programmes rather than the US insurance companies themselves. Consequently, there would be a limited impact on the shareholders of these companies. The identification of trading opportunities during the hurricane season also holds true for the ‘Best Ideas’ portfolios. These were designed by Twelve to exploit price inefficiencies in insurance equities, additionally seeking to take advantage of Cat Bond and Insurance Equity seasonality as pricing inefficiencies can occur at the time of insured events during the hurricane season. In addition to opportunistic trades in equities, Twelve Capital’s Best Ideas portfolios also took advantage of market inefficiencies in the insurance debt space that were exploited following Hurricane Florence and Michael.

Twelve Capital manages commingled as well as tailor-made investment solutions enabling investors to access such equity seasonality returns. Against a backdrop of volatile equity markets in general, plus a relatively active hurricane season, 2018’s seasonality strategies have so far delivered positive returns since September 2018, while also outperforming both the broader insurance sector and wider equity markets on an absolute basis.

Performance of Twelve Capital’s ILS Strategies

The ILS strategies managed by Twelve Capital have held up well during the hurricane season of 2018. Most strategies have already reached their pre HIM[3] levels thanks to strong 2018 year-to-date performance. Figure 5 shows the performance of a number of Twelve’s ILS strategies.

Figure 5: Performance of ILS strategies managed by Twelve Capital



Source: Twelve Capital. As at 31 October 2018.

[3] Hurricanes Harvey, Irma, Maria in 2017.

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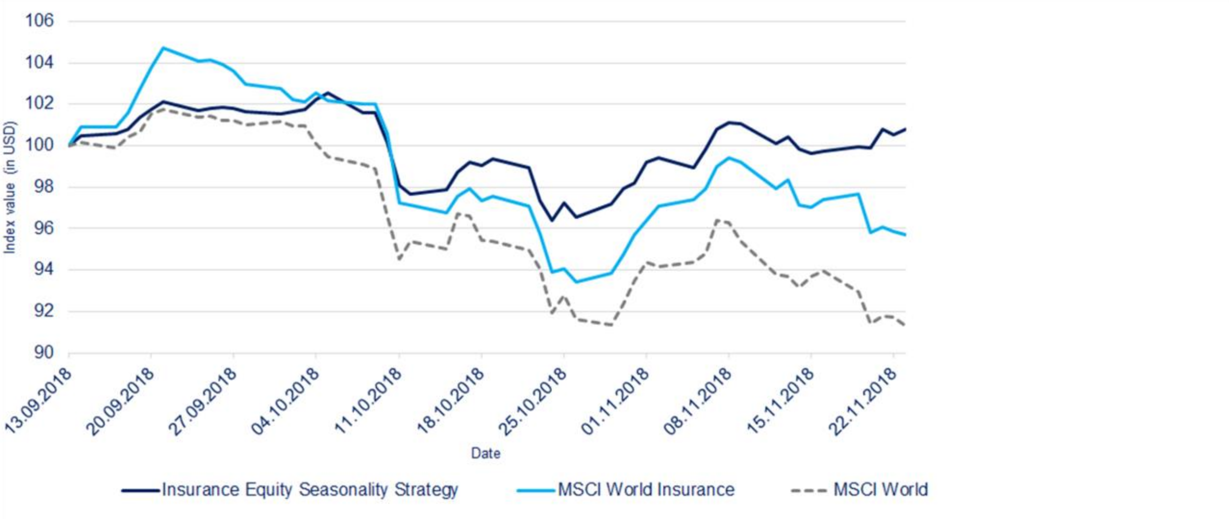
Figure 6: Insurance Equity Seasonality Strategy



Source: Bloomberg, Twelve Capital. As at 21 November 2018. Past performance is not indicative of future returns. The MSCI World Insurance Index is an index which measures the equity performance of the c.80 largest listed global insurance companies weighted by free-float of market capitalisation. The MSCI World Index is a broad global equity index that represents large and mid-cap equity performance across 23 developed market countries. It covers c.85% of the free float-adjusted market capitalisation in each country.

ILS market developments and outlook

The ILS market has been a growing asset class for over 20 years and now stands at an approximate size of USD 100bn. The frequency of events during 2017, such as HIM, have led to the first real test of the ILS market, which it has passed with its reputation intact despite significant losses in certain lines of business. Twelve Capital expects strong market growth and innovation to continue through new perils and sponsors. This will help to further improve portfolio diversification in the medium term and support portfolio construction.

Continued growth and innovation seem likely with 2018 becoming another record year in terms of Cat Bond issuance. According to Artemis, USD 12.8bn of Cat Bonds and ILS risks were issued in 2018 and the Cat Bond market has grown to USD 37.2bn. Twelve Capital expects these trends to continue into 2019 with investors increasingly looking for diversifying asset classes.

Hurricanes Florence and Harvey highlight the relatively low market penetration of private market US flood coverage. The NFIP is the dominant insurance provider for flood-threatened zones. Third party catastrophe modelling firms (e.g. AIR, RMS and Katrisk) now offer sophisticated modelling solutions for quantifying US flood risk which could lead to increased private market participation as insurers look to optimise risk selection for profitable flood underwriting.

There has been valuable innovation in terms of new and, mostly, diversifying perils. This year saw the first pure flood and wildfire Cat Bonds offered to investors highlighting the increasing coverage and appetite for ILS capacity. Buyers are seeking focused coverage protection with risk carriers seeking adequate risk-return for the capacity they provide. Additionally, the IBRD[4] sponsored several South and Central American earthquake bonds. More than USD 1.3bn in notional was issued, aimed at helping emerging economies to cope with natural catastrophes.

At the top end of the protection tower, there is less available capacity which results in a lower level of competition. At the same time there is a strong demand from buyers for efficient capacity. As a result Twelve Capital is seeing significant interest in its ‘Dodeka’ Private Cat Bond product (see box below). Due to the limited competition at this level, Twelve Capital is able to leverage support to access other attractive areas of the protection tower.

[4] International Bank for Reconstruction and Development.

Twelve Capital's 'Dodeka' series refers to the firm's Private Cat Bond offering, which was first launched in 2014. Twelve Capital, with its in-depth understanding of the insurance industry and in-house structuring capabilities, sources the underlying risk and structures the Cat Bond itself. Key features of the series include:

- Providing exposure to a different set of risks than standardised public Cat Bonds.
- Further diversifying the risks available to the firm's investors.
- A limited number of subscribers gain access to a more tailored product with ongoing follow-up and reporting by Twelve Capital.

Outlook

The outlook for (re)insurance pricing from here is important not only for ILS but also for equity valuations of European reinsurers, Bermudans and Lloyd's businesses, in particular.

Currently, base expectations are for renewals to be at least stable at 1 January 2019. In addition, confidence around rate increases in relation to 1 April Japanese catastrophe market renewals are currently higher given the 'payback' nature of relationships, after the losses in Japan. Elsewhere, certain Lloyd's businesses may benefit from a hardening of rates in loss-affected specialty markets which cover non-standard risks.[5] However, Twelve Capital sees potential for surprise to the upside from these modest base expectations, noting how sentiment around 1/1 renewals has become incrementally more positive since the Monte Carlo Rendezvous in September.

Twelve sees significant upside potential in reinsurance stocks in the next months. The news-flow around these stocks is still dominated by the reporting of natural catastrophe losses in 2018. Expectations for higher reinsurance premiums in 2019 are currently low. Even small improvements in pricing could lead to a re-rating of reinsurance stocks.

[5] Such as hospital buildings, sports people, etc.

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About Twelve Capital

Twelve Capital is an independent investment manager specialising in insurance investments for institutional clients. As at 30 September 2018, the firm had approximately USD 4.4bn in assets under management. Twelve Capital's investment expertise covers the entire balance sheet of insurance companies, including Insurance Bonds, Insurance Private Debt, Catastrophe Bonds, Private Insurance-Linked Securities and Insurance Equity. The firm also structures portfolios of its Best Ideas. Twelve Capital was founded in October 2010 and has offices in Zurich and London.