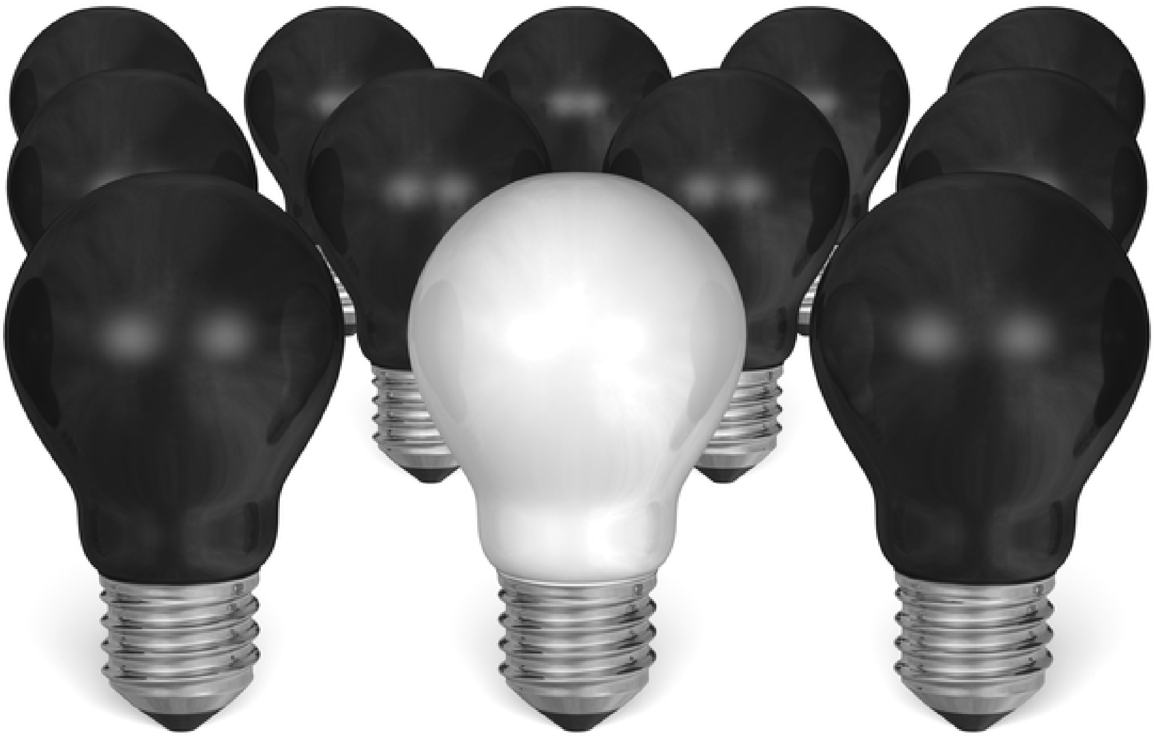
Alternatives & Innovation Quarterly

September 2015



Alternatives & Innovation Quarterly

Welcome to the September 2015 quarterly edition of Alt IQ. Alt IQ provides Frontier's up-to-date thinking on opportunities and innovations in alternative and emerging asset classes, strategies and markets.

As flagged in the June AltIQ, we have now concluded our research on the investment opportunity resulting from the drop in oil price and the broader US energy dynamic. The research has focused on US E&P (exploration & production/upstream) oil companies and has reviewed both tradeable and private opportunistic investment strategies across the risk/return spectrum.

We believe the US energy opportunity should provide attractive risk-adjusted returns for investors prepared to invest in the distressed/stressed space. However, we have a preference for certain strategies and managers with energy expertise as we believe this is central to generating attractive returns. This AltIQ provides a brief overview of our key views and conclusions, however we have also completed a detailed research report on this opportunity. Please contact your Consultant for a copy or further information.

In this edition we also review the case for insurance linked securities (ILS). Frontier reviewed the investment case for ILS in 2010 and concluded that while the historical ILS return stream was attractive, there were a number of risks to overcome to warrant a standalone allocation. Since that time, the market has developed and we believe warrants further consideration.

This review is focused on catastrophe (cat) bonds, one area of the ILS market and provides an overview of the market with a focus on the evolution of the sector since our initial review and current pricing dynamics. We will address the private ILS market in a future edition.

We hope AltIQ provides you with some food for thought.

As always, we're keen to find ways to differentiate our clients "from the pack", and enhance portfolio outcomes. If you would like to discuss any of these topics further, please contact your Consultant – we would be pleased to provide further detail on these views and other alternative or new investment strategies in the context of your investment strategy and fund objectives.

Oil price opportunities

As flagged in prior AltIQ publications, Frontier has been reviewing the case for opportunistic investing in US energy. We have previously considered opportunities from the oil price fall from a liquid and low cost perspective via traditional long only high yield and emerging market debt investments. We concluded that this was not a strong risk-adjusted return opportunity.

We have now focused on US E&P (Exploration & Production/upstream) oil companies, particularly shale, as this industry is at the centre of the current stress caused by the fall in oil price. However, we acknowledge that the opportunity set is broader than this. We have reviewed both tradeable and private opportunistic investment strategies across the mid to higher risk/return spectrum. These strategies are also typically illiquid and higher fee approaches. We believe the US energy opportunity should provide attractive opportunities for distressed/stressed oriented managers to generate outsized risk-adjusted returns.

The opportunity set

The backdrop to the opportunity set is not only the dramatic fall in the oil price, but the combination of significant growth in capital market participation in the US energy growth story. Most of the growth has been in the high yield market but also in the investment grade, bank loan and private investor market. The focus of the current opportunity is in the lower quality high yield sector as much of the debt raised during this period is not economic at current oil prices. The availability of the high yield market to E&P issuers has varied over recent periods depending on market sentiment and view of the oil price and this dynamic impacts the opportunity set for investors in stressed/distressed areas.

Thorough due diligence and specialist knowledge of region specific factors is critical in assessing individual investments. There exists meaningful asymmetry of information in the US energy market and high quality managers are using a range of internal knowledge from existing investments and specialists to form views and narrow markets of interest. Therefore, we consider the skill set to assess this opportunity as specialised.

There are a range of investment strategies being considered by managers across the liquidity and risk/return spectrum (Table 1 on page 3). We believe that the traditional distressed for control approach likely has more risks at this stage of the cycle and preferred managers have tended to focus on balance sheet restructuring opportunities in the mid to slightly higher risk spectrum.

Oil price opportunities

Table 1 – Overview of strategies used by stressed/distressed managers

Strategy	Market Liquidity	Target Return Profile[1]
New debt issuance including exchanges (layering)	tradeable, relatively more liquid	low to mid
Stressed high yield debt (performing)	tradeable, relatively more liquid	mid
DIP[2] financing (yet to occur)	tradeable, less liquid	mid to high
Off balance sheet/private debt financing	private, less liquid	mid to high
Off balance sheet structured deals (e.g. debt/equity upside and/or asset based) financing	private, illiquid	mid to high (risk matched)
Distressed for control	typically tradeable to private (illiquid)	high
Platform investing (equity in management company, building platform via asset purchases)	private, illiquid	high
Private equity	Private, illiquid	high

1. Indicative returns: low: low double digit returns, mid: around 15%, high: 20%+
2. Debtor-in-possession financing which is typically senior to all existing debt, equity and any other securities issued by the company

Further catalysts for stress/distress

In addition to the oil price remaining low, there are a number of catalysts for further stress in E&P companies over the near-term that combine to provide opportunities for investors (Table 2). Of particular relevance are Reserve Based Lending (RBL) redeterminations and oil hedges rolling off for companies that are already suffering from poor balance sheets and reducing revenue.

Table 2 – Further catalysts for distress

Issue	Details
Hedges rolling off	• Oil hedges are expected to roll off by end 2015/2016 • Recent oil price fall has moved the forward curve prices down, reducing the effectiveness of forward hedging
RBL redeterminations	• RBL redeterminations are approaching in October • RBL refers to senior revolver lending by banks and is a meaningful part of the market • RBL is under regulatory scrutiny and tightening conditions are possible
Overleveraged balance sheets	• Some companies achieved additional financing mid-year, in some cases this has just added to leverage
Revenue	• The oil price at which E&P companies are productive varies substantially • For many companies, the current oil price is still uneconomic

Oil price opportunities

Is this a single factor strategy?

An investment at this time in the US energy market risks being a single factor strategy – one whose success is intrinsically tied to the oil price recovery. As such, we have looked for strategies that have a less directional relationship to the oil price and that are expected to perform in a range of oil price scenarios. Structured investments in the mid to higher risk area that also include exposure (via equity, warrants and/or underlying asset capacity) to additional upside from an oil price recovery should achieve strong returns if and when the oil price returns to a higher level.

Conclusions

We believe that challenges to the US energy markets should create attractive opportunities for investors in distressed/stressed areas to generate outsized risk-adjusted returns. The key conclusions from our research are as follows.

- This is likely a longer-term theme, although recent oil price falls have brought stressors forward creating near-term opportunities.
- This is not a beta opportunity. Active identification of quality assets and companies that will survive a lower oil price and an ability to structure solutions is required.
- Preferred strategy characteristics include:
  - Mid to higher risk approaches focused on private debt/structured solutions;
  - Reduced exposure to the single factor risk of the oil price; and
  - Measured exposure to potential upside gains (via equity, warrants).
- Preferred method of accessing this market dynamic is via a broader opportunistic strategy (with energy expertise). This approach helps mitigate the timing and complexity risks and potential competition in this space. We have a number of preferred opportunistic managers.
- Energy specific strategies are also a reasonable access method given the complex and specialist nature of the opportunity. We have identified a number of strategies that are likely to provide an attractive risk/return proposition and reduce the single factor risk of the oil price.

Frontier intends to continue to research managers in this space, considering both diversified and energy specific products.

Catastrophe (cat) bond market

Frontier reviewed the investment case for Insurance Linked Securities (ILS) in 2010 and concluded that while the historical ILS return stream was attractive, there were a number of risks to overcome including market capacity, complexity, regulatory risk and fees. Since that time, the market has developed and we believe warrants further consideration. We have chosen to focus this section on the cat bond market given its lower cost and relative simplicity and will address the private ILS markets in a future AltIQ.

Cat bond focused strategies, a sub-set of the broader ILS market, can add diversification to a portfolio. Cat bonds have exhibited a reasonably stable return profile over many years and have fundamental return drivers with little relationship to the return drivers of other asset classes. This has resulted in a low correlation over time to equities and high yield bonds. While valuations do not currently appear attractive relative to history, we believe that should valuations improve, this asset class can provide attractive risk and return characteristics when executed by a well-established manager via a diversified portfolio.

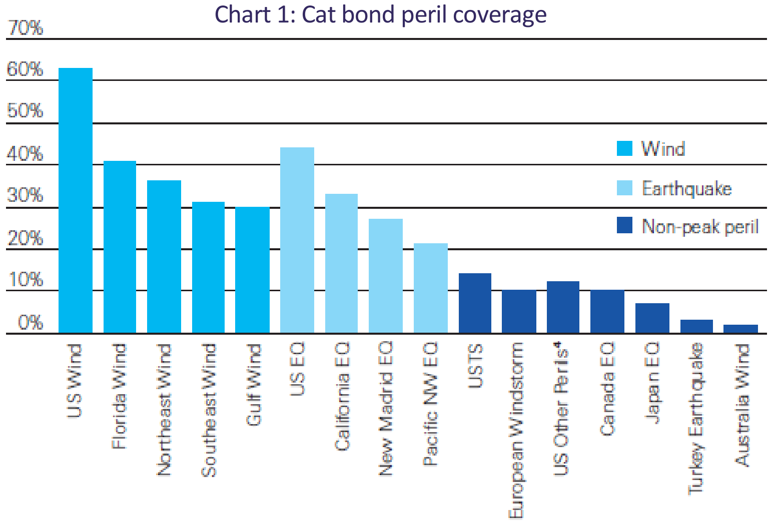
ILS overview

ILS form a relatively new asset class for institutional investors, having emerged in its current form in the mid-1990s. ILS typically service the reinsurance market and cover a number of sectors and event types, most commonly relating to catastrophes (e.g. earthquakes) and weather events (e.g. hurricanes). ILS instruments access capital markets directly, enabling capital-constrained (re)insurance companies to expand their risk-bearing capacity.

Why does the ILS market exist?

Insurers for the most part are primarily interested in writing multiple lines of low volatility business (e.g. property catastrophe, auto, marine, theft, fire, life, etc.). Further, rating agency requirements cause (re)insurers to favour diversification over profitability. Catastrophe risk is extremely capital intensive for insurers which creates an opportunity for investors to harvest risk premiums by re-insuring some of this risk. The demand for re-insurance outweighs traditional re-insurance supply, a trend that managers and brokers estimate will grow wider over the coming decade, despite expected growth of 20% per annum in the cat bond market.

Chart 1: Cat bond peril coverage



Source: Swiss Re Capital Markets

[4] US Other Perils include Winter Storms, Wildfire, Volcanic Eruption and Meteorite Impact

Catastrophe (cat) bond market

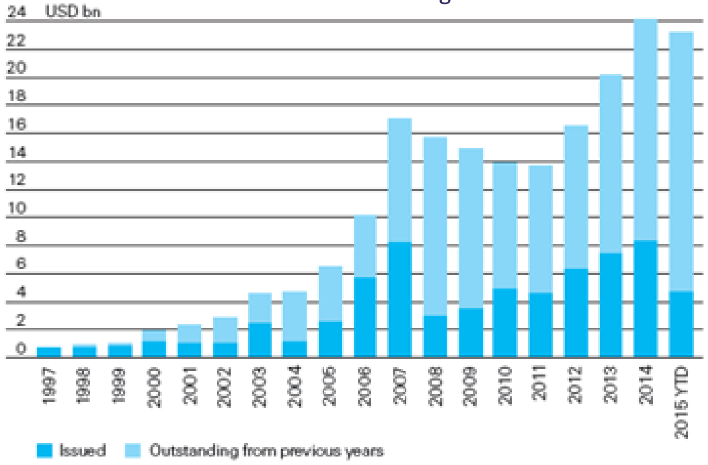
What are cat bonds?

Cat bonds involve the transfer of catastrophe risk (e.g. hurricane or earthquake) from an insurer to a capital markets investor. The catastrophes or "perils" covered (see Chart 1) need not just be based on one event but can be diversified across a number of perils (although US hurricane protection is a dominant peril). There are different triggers for how a cat bond's principal can be reduced but at a high level, the reduction in principal will occur should the losses from perils covered by the cat bond be larger than some specified excess level.

Cat bond market size

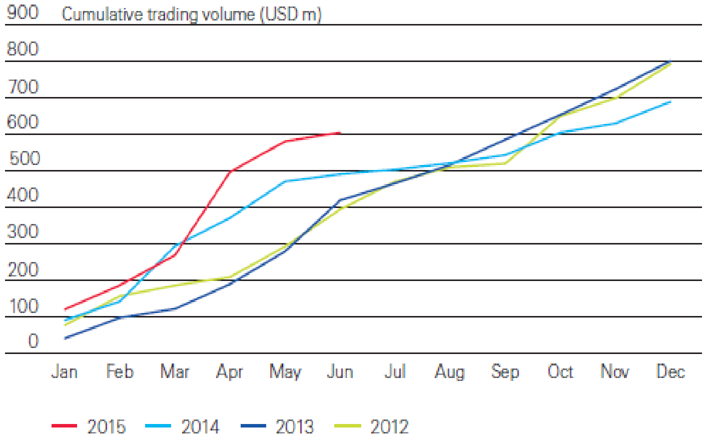
Cat bonds are usually issued with three to four year maturities and so a natural churn occurs in the market's size as older issued bonds mature in each year. New issues during the year, which will replace these maturities, have been steadily rising since a lull in 2008.The size of the total cat bond market is around U$24 billion up from a recent nadir of US$14 billion in 2011. Trading volume in the secondary market for cat bonds has also increased over time (see Chart 3).

Chart 2: Market size of cat bonds split between new issues and outstanding issues



Source: Swiss Re Capital Markets; as of June 30, 2015

Chart 3: Trading volume in secondary market for cat bonds



Source: Swiss Re Capital Markets; as of June 30, 2015

. Catastrophe (cat) bond market

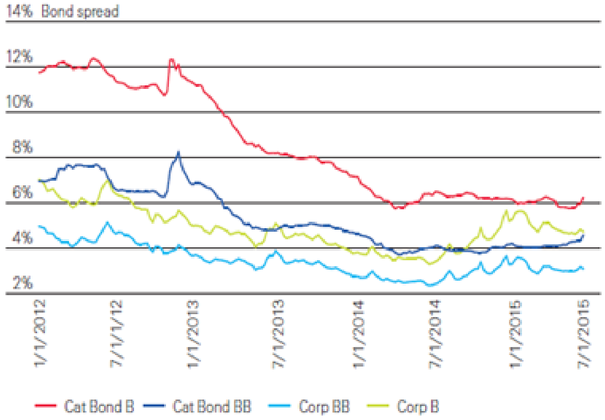
Cat bond pricing and performance

Cat bond spreads (see Chart 4) have been steadily decreasing in line with those observed for high yield bonds (the two markets are typically compared given a similar loss probability), but also, in several managers' views, due to a structural change as the sector matures. The drivers have been partly the same with increased liquidity from central banks as well as the search for yield by new market participants (e.g. pension funds, hedge funds).

However, perhaps a key driver has been an absence of catastrophe events, especially in North America with hurricane activity at relatively low levels. Cat bond spreads have (e.g. Hurricane Katrina in 2005). While spreads may not return to long-run levels given the structural changes in the mix of market participants over recent years, spreads are still expected to rise after an event and so could present a good entry point.

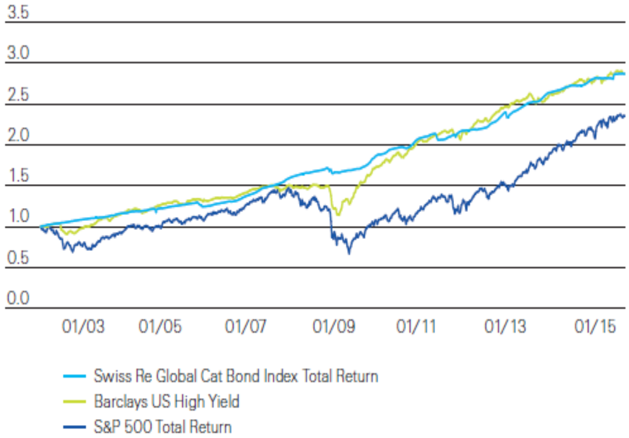
Cat bonds are not exposed to the same risk drivers that impact bonds and equities (e.g. market stresses or economic downturns). The correlations with these economic-driven asset classes have been low (less than 0.25). Cat bonds have offered a steady return stream with little impact on principal given the structuring of the trigger levels for losses from natural events. While cat bonds were impacted by fire-sales in 2008, the impact on pricing was relatively minor with the index down less than 5% over a short period of time. Other noticeable falls in performance have occurred following an event (e.g. March 2011 Japanese earthquake).

Chart 4: Cat bond spreads relative to high yield corporate bond spreads



Source: Swiss re capital market: as of June 2015

Chart 5: Performance of cat bonds relative to equities and high yield bonds



Source: Swiss re capital market: as of June 2015

Catastrophe (cat) bond market

Role in a diversified portfolio

Cat bonds can add diversification to a portfolio and have exhibited a stable return profile over many years with fundamental return drivers that have little relationship to the return drivers of other asset classes. Cat bonds can be a source of defensiveness and downside protection although we note that in times of severe listed market stress, it is likely cat bonds will suffer from illiquidity induced outflows. Further, unlike a traditional bond which, notwithstanding credit risk, is contracted to repay its face value, the principal repayment will be subject to the frequency and extent of covered catastrophe events. Given the annual issuance size for the market, we do not believe that small to medium sized clients will face capacity issues. For larger clients, relatively larger allocations may face some capacity constraints which will ease over time should the market continue to grow as expected.

Risk considerations

The factors that can drive principal losses on cat bonds are mostly different to those for traditional bonds. Cat bonds are sensitive to the risk of a very large natural catastrophe which leads to outsized insurance losses. This is something that is difficult to predict ahead of time and so can obviously be a surprise loss for an investor. Concentration risk in a particular peril (e.g. US hurricane) is a risk that needs to be mitigated by holding a diversified portfolio of cat bonds. The modelling required to understand the potential for an event to occur and the losses that could result is highly complex involving highly trained PhDs, usually with a meteorological background. For example, understanding the possible losses from a cat bond protecting a US hurricane would require performing hundreds of thousands of simulations of hurricane strength and the hurricane path (e.g. does it travel completely up the East Coast of the US which is more urban and will therefore lead to larger insurance losses given there are more homes in its path). For this reason, modelling risk is a real issue for investors although this is mitigated by holding a diversified portfolio.

Conclusion

The cat bond market has matured with increasing issuance and increasingly diverse market participants over recent years. We believe that cat bonds represent a diversifying asset class given the fundamental return drivers for cat bonds differ markedly from those driving other asset classes. Spreads have been decreasing steadily over time and we do not believe now is an attractive entry point. Timing of the investment will depend on market opportunities. These may present themselves after a natural event occurs. We are continuing to monitor this asset class and the broader ILS opportunity set.

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