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Has Hurricane Ian taken us to the brink of a major reinsurance market correction?

November 2022

Are we on the brink of a major market correction? This paper considers the situation today compared to three major market corrections in the last 30 years. "Market correction" in this context refers to a material shift upwards in risk transfer premium, in the reinsurance and insurance linked securities markets (ILS) due to a shift in the supply and demand of risk bearing capital.



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The resulting market conditions are known as a "hard market" and in extremis a "very hard market". The three previous such periods in consideration were:

- 1993 subsequent to Hurricane Andrew in 1992
- 2002 following the terror attack events of 9/11
- 2006 subsequent to Hurricanes Katrina, Rita and Wilma ("KRW")

In addition to the prior year loss experience, each of these periods is analysed in respect of the following variables

- The extent to which the losses were unexpected or unanticipated. This could be due to model risk, the nature of the cause of loss, the degree of contract uncertainty and the impact of inflation in its various forms
- The strength of the (re)insurance industry balance sheet in the relevant years (1992, 2001, 2005 and now 2022)
- The response of the capital markets either in the provision of equity capital or in allocation to the ILS market

Given that:

- 2022 has seen further losses globally, including Hurricane lan
- Prior years' loss activity was already causing a hardening in the reinsurance and ILS markets
- The (re)insurance industry balance sheet is being impacted by the effects of inflation
- Capital markets appear to be less willing to respond to the call of the reinsurance industry

Schroders Capital's ILS team believes that the answer to the question is yes, we appear to be on the brink of a major market correction.

Introduction

Long before Hurricane Ian made landfall in Florida, a broad consensus was forming in the reinsurance and ILS markets that the 2023 catastrophe renewal season was going to be one of the most difficult for protection buyers in a long time. By definition, this would be attractive to protection sellers such as ILS funds.

At recent conferences and in direct conversations, reinsurance brokers – generally the advocate of the protection buyer – were not even trying to push back on the question of, or the need for, risk premium increases. The more general concern was: will there be enough capacity to satisfy the demand for protection? When the answer to the question about the sufficiency of available capital seems as if it will be "no", then these circumstances would typically be considered to be a hard market (a major correction in risk premium).

In this paper we look at the current market situation and contrast it with three other major market corrections in the last 30 years:

- The 1993 renewal post Hurricane Andrew
- The 2002 renewal post the terror attacks of 9/11
- The 2006 renewal post Hurricanes Katrina, Rita and Wilma

The goal of the paper is to assess whether Hurricane lan is indeed the trigger for a major, broad-based market correction in the reinsurance industry.



Market corrections - infrequent and rarely triggered by a single event

When reviewing the historic development of reinsurance pricing, it is tempting to assign the trigger to a major headline event or series of events. The truth behind the sharp corrections is generally

In each of the three previous corrections, a confluence of factors contributed to an environment conducive to a market correction, following a trigger headline event. In the table "Comparison of Market Changing Events" (see Appendix), we summarise and contrast the previous three corrections with the current market environment. Specifically, we look at the prior years' loss history coming into the market turning point. We examine what was different or the same as today, and consider the overall health of the reinsurance industry's balance sheet. Finally, we reflect upon the capital market's response to the need for additional risk capital.

Prior years' loss activity

Investors will recall that the insured losses of 2017, then the second most expensive year in the history of the reinsurance market, did not trigger the hoped-for correction that many had anticipated. Risk premiums did increase, but not to the level expected, partly because of capital in-flows to the market.

Similarly, in 2011 the reinsurance market experienced what was probably the most expensive insured catastrophe loss year in history, with earthquakes in Japan and New Zealand and floods in Thailand. Renewals in 2012 did see premium increases locally in the impacted markets, but the global response was muted. One key difference between these years and the so-called trigger events in 1992, 2001 and 2005 was that the catastrophe loss experience in the five years preceding both 2011 and 2017 had been relatively benign. Insured catastrophe losses in many cases remained within insurance companies' reinsurance retentions.

As can be seen in the table, in each of the years in which a significant correction took place, there were losses or a series of losses in the years preceding the trigger event. Whilst not of the same magnitude as the events leading up to 2022, in each case the events represented record loss amounts at the time in their respective markets.

2022 itself represents an exception. It was the sixth consecutive period with catastrophe losses, aggregating over \$50 billion per annum in insured losses. In total, even before taking Hurricane lan into account the cumulative loss experience since 2017 is in excess of \$500 billion. In addition, 2020 was also preceded by Covid-19 losses and an as yet unknown quantum of losses arising out of the Ukraine war.

In light of the above it is interesting to look at the information in the following chart, which shows changes to risk-adjusted property catastrophe reinsurance premium levels (indexed, 1992 = 100) plotted against major insured catastrophe losses since 1992 (inflated to 2022 values) not including Hurricane lan.

The green arrows describe the percentage increase in reinsurance premium during the relevant period. As we have stated above, the market was heading for hard market territory even before Hurricane Ian. There is now a broad expectation in the reinsurance market that the reinsurance premium index will show a steep onwards curve upwards going forward.

Noting the patterns of the insured losses and the pricing changes is it clear that losses are not the only driver of change. We go on to describe below the factors, other than losses, which lead to hard markets.

Differences between the past and the present

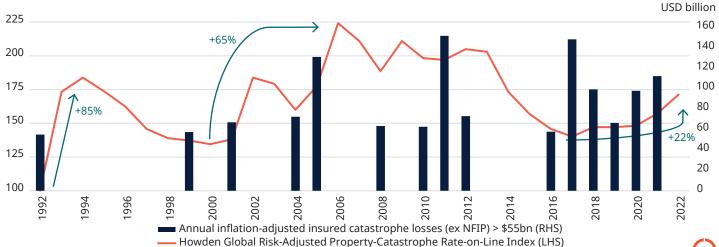
Market corrections are commonly influenced by a variety of factors, both hard and soft, as well as emotions - especially fear.

One of the key differences between 1992 and now is that models for the evaluation of catastrophe risk – although commercially available - were not yet broadly adopted or accepted by either ceding insurers or reinsurers. Hurricane Andrew was the first major (Category 3 or higher) hurricane to make landfall in southern Florida since 1965 and the magnitude of loss caught many by surprise, especially as it didn't impact severely any major metropolitan areas.

Similarly, in 1999 European storms Anatol, Lothar and Martin hit the continent, many European cedents took the position that models which had by then been adopted by reinsurers – did not properly reflect their exposure. In both instances, the incurred loss to several insurance companies exceeded the limits of their reinsurance protections and several of them, particularly post Andrew, were forced into insolvency. Leading reinsurers, including Munich Re and Swiss Re, were caught off guard by the size of aggregate exposure on their books.

In 2001 it wasn't just the (re)insurance market, but the world in general, that was shocked by the unexpected (and unmodelled) peril in the form of the terrorist attacks in the United States on 9/11. Risk managers and underwriters were confronted with hitherto unimagined scenarios. The events opened the eyes of many to as yet unseen or uncontemplated vulnerabilities. A further differentiating factor of the terrorist attacks was that they impacted numerous lines of insurance, some of which had not been viewed as being correlated with property perils. Additionally the burst of the "Dot com bubble" led to strongly falling equity markets exacerbating the weakness of (re) insurer balance sheets.

Hurricane Katrina in 2005 exposed both data quality issues in connection with the coding of property exposures for modelling purposes, and weak coverage terms and conditions. This led to significant deviations between actual incurred losses versus model projections. One catastrophe bond (Kamp Re), which theoretically should not have been impacted by an event with the expected return period of Katrina, suffered a partial default.



Coming into the 2023 renewal, a large volume of catastrophe losses – in 2022 and preceding years - combine with a new and differentiating aspect: The impact of the high inflationary environment.

This is driving a broad-based global demand for additional catastrophe reinsurance limits, which are expected to grow by at least 10% simply due to increased insurance values. For the US alone this would amount to additional demand of \$20 billion. Added to this are new views of risk for certain peak perils based upon revised models and recent experience (example: flood risk in Europe). For the first time in its history, the catastrophe bond market will also suffer a material loss of principal (based upon the marks as per 30 September, this could be as much as \$3.5 billion).

In prior years (specifically 2005, 2011 and 2017) the catastrophe bond market suffered modest losses and ended the year on a positive basis (gross, before fees, using Swiss Re Global Total Return Index). 2022 may be the first time in its history that the catastrophe bond market ends with a loss for the full year.

Similarities between the past and the present

A common thread across all years is that the trigger event precipitated (or in the case of 2022, was preceded by) a number of involuntary exits of insurers and reinsurers. In 1992 it was largely the result of inadequate reinsurance protection. In 2001 the market was at the tailend of a hyper competitive casualty insurance and reinsurance market, that left many companies with reserve deficiencies. For some, the 9/11 attacks were the straw that broke the camel's back.

Others limped on into 2002 and 2003 but never fully recovered. 2005 only saw some failures of smaller insurers in certain states such as Louisiana. Hurricane Ida in 2021 also resulted in some local insolvencies in Louisiana and also weakened certain Florida residential carriers that had sought to diversify away from their Florida concentration. In 2022 prior to Hurricane Ian forming, a total of 6 Florida insurers were forced into receivership due to poor operating performance, a loss of their rating and their inability to raise new capital.

As alluded to in the previous section, several reinsurers were disturbed by the magnitude of the loss from Hurricane Andrew and began de-risking their portfolios post-Andrew. These reinsurers reduced their catastrophe aggregates and shifted towards what they perceived to be less volatile casualty business. Interestingly, similar behaviour has been observed in 2022 with several reinsurers announcing the intention to reduce or even withdraw entirely from catastrophe reinsurance.

Condition of the (re)insurance industry's balance sheet at the time of the trigger event

The state of the industry's balance sheet and its ability to absorb shock losses at the time of the event is critical in determining how a major loss effect impacts the market. Understanding all the elements of the industry's balance sheet, in particular the quality of its provisions for known and incurred but not reported (IBNR) losses, or the sensitivity of both assets and liabilities to changes in interest rates and inflation, is challenging. Nonetheless, taking a step back and looking at the industry overall, certain trends are recognisable.

In 1992 the Lloyd's insurance market, then still a large provider of catastrophe reinsurance, was still reeling from the impact of the Asbestos, Pollution and Health (APH) claims and was reliant upon capital from wealthy individual members (so-called "Names"). In addition, the catastrophe losses of the late 1980s and early 1990s were exacerbated by what was then termed the London Market Excess of Loss (LMX) spiral. The LMX spiral was where certain Lloyd's syndicates provided retrocession reinsurance to other syndicates, which in turn reinsured themselves with other Lloyd's syndicates. This practice led to a magnification of the loss within the Lloyd's market and ultimately to the insolvency of many Names.

Lloyd's only resolved the question of its legacy liabilities from APH claims and its capital structure with the implementation of the Reconstruction and Renewal plan in 1996. It was therefore poorly placed to capitalise on market opportunities post Hurricane Andrew. Many professional reinsurers, on the other hand, had already recapitalised their balance sheets in the mid-1980s when the APH claims from the past triggered a casualty insurance crisis and hard market in 1985 / 1986. By the time Hurricane Andrew occurred in 1992, many reinsurers had built up significant reserve cushions and were beginning to see the earnings benefit of the hard casualty market flow through to their bottom line.

In 2001 the state of the (re)insurance industry's balance sheet was very different. In the mid- to late 1990s leading up to 2001, the resilience of the industry had been weakened by a very competitive casualty market (partially as a result of reinsurers shifting away from catastrophe towards casualty business). Reserve deficiencies had already begun to emerge in mid 2000, depressing earnings, and this continued on into the period from 2001 to 2004. Some (re)insurance companies failed or went into voluntary run-off as a result of outsized claims from the terrorist attacks, inadequate protection for such lines as aviation liability and the inability to attract new capital to re-load their balance sheets. Global equity markets were in a bear market mode having declined substantially in the "Dot.com bubble burst" from their peaks in late 1999 / early 2000.

By 2005 the industry's balance sheet was again on a sounder footing. The reserve deficiencies of the late 1990s had been addressed, profits from the hard market post 9/11 were bolstering returns and reserve redundancies were being built up within many balance sheets. Lloyd's had also benefited from the post 9/11 recovery; however, as the 2005 results indicate, it still had an outsized exposure to reinsurance within its business mix, leading to a gross loss ratio for the reinsurance segment of 157%. The new Class of 2001 Bermudian start-ups also came into 2005 with the benefit of no legacy from the early 1990s and strong earnings from the early 2000s. As a consequence, the Katrina, Rita and Wilma (KRW) series of losses were more of an earnings event than a capital event for the reinsurance industry as a whole.

Coming into the hurricane season in 2022, the condition of the (re) insurance industry's balance sheet was markedly different from the situation previously observed.

The heavy loss activity of the years leading up to 2022 had resulted in depressed operating performance. Increasing premium rates across multiple lines of business had led to improved combined ratios for H1 2022, only to see comprehensive income drop dramatically due to unrealised losses on investments. By mid-year 2022, Aon, a leading insurance broker, estimated that total dedicated reinsurance capital had declined by 12% compared to year-end 2021. This was due to the negative effect on their investments from interest rates being raised as central banks tightened to combat emerging inflation. With interest rate increases becoming more pronounced in the 3rd quarter all signs are that the industry will experience further pressure from the asset side of its balance sheet.

As outlined in a previous article <u>What has driven catastrophe bond</u> <u>spreads to record highs?</u> (June 2022), this increased volatility on the asset side of (re)insurers' balance sheets has led to a reduced tolerance to volatility on the liability side of the balance sheet. As a consequence, many reinsurers were already trimming or even exiting their property catastrophe exposure prior to the advent of Hurricane lan.

Another factor creating greater uncertainty about the (re)insurance balance sheet is the direct impact of inflation. Not only will this increase the cost of future claims, but questions are now arising as to whether the spike in inflation will erode most of the benefit gained by insurers through the rate increases gained in recent years. While primary insurance premium increases had begun to moderate in the early part of this year following significant compounded premium increases that started in mid-2019, many market participants are now asking whether the rate of increase will have to accelerate to cover higher inflation and the increased cost of reinsurance.

It is important to note that the current market faces a double blow to the supply and demand equation.

- The reduction in the capitalisation of the (re)insurance balance sheet due to poor asset performance in the high interest rate environment
- 2. The increased demand for protection, coming from higher insured values, driven by inflation

While higher interest rates would generally benefit (re)insurers as the present value of their liabilities are reduced, the sad reality is that interest rate increases are sorely lagging behind the near- and mid-term inflation expectations. Thus, the earnings power of their assets is not sufficient to cover the potential erosion of their reserve strength through the corrosive effects of inflation.

In a recent study of reserve adequacy for US long-tail lines published by the Statistical and Financial Analysis unit of Gallagher Re, the authors only found one line, Workers Compensation, to still have significant reserve redundancies. This line of insurance is not heavily reinsured and will largely be retained within the insurance industry. The other four casualty lines, which are more heavily reinsured, were described as "positioned close to reserve adequacy". Their conclusion was that this meant less room for reserve releases to support current earnings and if inflation gets worse, potential for future deficiencies.

Capital market response

Hurricane Andrew resulted in the insolvency of 11 insurance companies and forced many reinsurers to reassess their exposure to catastrophe risk.

Similar to today, demand for coverage exploded while existing reinsurers retrenched. This resulted in a massive capacity squeeze and premium increases. For the first time in the reinsurance industry's history, the capital markets stepped in to create "de novo", or new, reinsurance companies that were initially established to write catastrophe reinsurance.

In total, 8 new reinsurers were formed in Bermuda in what became known as the class of 1993. Interestingly, some of these reinsurers, such as Partner Re and Tempest Re, were co-sponsored by leading reinsurers (Swiss Re and General Re) in an effort to create new markets that would also allow them to reduce their own exposure. The need for additional capital also spawned the establishment of the insurance linked securities market with Hannover Re sponsoring the first transfer of catastrophe risk to institutional investors in January 1994 through a vehicle known as Kover Ltd, which in essence was the world's first reinsurance side car.

The capital markets again were prominent in 2001/02 following the market correction triggered by the 9/11 terrorist attacks. This time, most of the new entities (9 in total) were set up as composite entities

with both insurance and reinsurance arms and entertaining a broader range of risk than just property. The ILS market, still in its infancy, began to see increased interest particularly from established reinsurers such as Swiss Re seeking alternative forms of retrocessional capacity through the issuance of catastrophe bonds.

2005 saw what was then an all-time record level of insured catastrophe claims with Hurricanes Katrina, Rita and Wilma, but as stated earlier the impact was more of an earnings than a capital event for the broader industry.

Six new reinsurers were launched by private equity investors hoping to repeat the successes observed post Hurricane Andrew and 9/11. In reality, catastrophe premiums and demand only rose for the North American market while other markets remained stable. Ultimately the hoped-for exits proved difficult, with only one member of the class of 2005 still active as an independently listed reinsurer today. The remainder were ultimately acquired and consolidated into existing competitors. The alternative capital market emerged to become the desired means of addressing short-term capacity disruptions and the use of side cars expanded dramatically post KRW, with 19 vehicles being placed with investors in the 12 months from December 2005.

The importance of the alternative capital market as the preferred source of post-event capacity needs was reconfirmed after the 2017 events (Harvey, Irma, Maria and California wildfires) when existing and new investors stepped in to top up their allocations with total alternative capital reaching a new high in 2018. The speed and ease with which fungible capital in the form of ILS investments entered the market made the prospect of investing permanent capital into a rated start-up balance sheet less attractive to private equity investors. This was particularly so as the time-frame for capitalising on the perceived opportunity seemed to be getting narrower. Further constraints were the minimum capitalisation (>\$1 billion) and the availability of talent required to gain a rating. In the period between 2017 and 2022 only two major new (re)insurers were established.

The situation in the capital markets in 2022, with sharp corrections in the equity market, rising interest rates and increased volatility given macro and political uncertainties, has resulted in a markedly changed situation for the (re)insurance industry. The prospect of further interest rate hikes and uncertainties over the impact of inflation on incumbent (re)insurers' reserve adequacy have served to act as inhibitors for both public and private equity markets to invest in existing balance sheets.

The chart below shows the pattern of development of traditional and alternative capital supporting the reinsurance market since 2006. Note that this shows the situation up to the first half of 2022, so does not reflect the post-Hurricane lan situation. Nevertheless, it shows that the amount of available, risk-bearing capital appears to be reversing the steady growth of recent years.

Development of traditional and alternative capital support in reinsurance



When it comes to the ILS market, Hurricane lan appears to have disrupted what was otherwise shaping up to be a very positive year for investors.

This latest year of underperformance may cause some ILS investors to question the likelihood of returning to the patterns of strong performance prior to 2017, despite the very real prospect of higher yields ahead of us. Pension funds, in particular, are being challenged by the sharp corrections in their more traditional equity and fixed income investments. These can lead to passive breaches in their allocation to alternatives which would restrict further their room for manoeuvre.

Is it really different this time? Are we at a tipping point?

For many, be they reinsurance equity or ILS investors, it is easy to understand their scepticism and frustration after years of depressed underwriting / investment performance. Risk premiums have been increasing over the last several years, but at differing rates and not uniformly across all markets. As outlined in this paper, major headline losses are an important, but not the only, determinant in triggering a broad market correction.

Hurricane lan, in and of itself, is not a major surprise. It may represent the largest individual insured nominal loss in the (re)insurance market's history. Even so, an event of this size is not outside the range that the models would have suggested. Indeed, there are certain simulated events that could conceivably generate even higher losses.

In this paper, we have reviewed and contrasted the various factors that led up to, and contributed to, the three major market corrections in the last 30 years. Over the last five years there has been increasing pressure building within the (re)insurance market. But up to the 1 January 2022, renewals period the market continued to function in an orderly fashion.

Earlier this year, during the spring issuance window for catastrophe bonds and the Florida 1 June catastrophe renewals, we observed the first signs of disruption. New bond issuance was strong, but the market's ability to absorb it was weak. Spreads widened substantially and several bond placements fell short of their desired targets or were pulled from the market. The Florida reinsurance market renewal was disorderly and partially saved by a last-minute intervention by the state through the introduction of a further state funded reinsurance layer. \$2 billion was provided by the Reinsurance to Assist Policyholders to help local companies complete their placements.

Several Florida insurance companies were unable to raise additional equity capital and subsequently lost their ratings and went into voluntary or involuntary run-off or liquidation. Inflation is hitting levels not seen since the early 1980s and driving global demand for additional reinsurance capacity. At the same time record inflation levels are increasing the risk of deficiencies in long tail liability reserves on reinsurers' balance sheets. Reinsurance capital is suffering a significant decline for the first time since the 2008 Global Financial Crisis. Reinsurers' appetites for retaining existing catastrophe aggregate commitments or taking on even more exposure are limited to non-existent. Finally, unlike the previous market corrections, it does not appear that the capital markets, particularly those that have funded the alternative capital (ILS) sector, will be in a position to respond to the needs of the reinsurance industry.

As we alluded to earlier in this paper, market corrections are commonly influenced by a variety of factors, both hard and soft, as well as emotions. While the reinsurance market today is not yet in a state of panic, many market participants are expressing increasing levels of concern. An interesting commentary by a trade publication, Inside P&C characterised the atmosphere at the recent Council of Insurance Agents & Brokers (CIAB) Insurance Leadership Forum (a conference attended by the top executives of leading insurers, brokers and reinsurers) as follows:

"At times, the CIAB's Insurance Leadership Forum in Colorado felt like a long succession of break-out sessions in which participants from right through the value chain discussed how the market could solve its catastrophe problem.

"Where they might have hoped for convincing answers about the path forward, they instead found uncertainty, confusion and fear."

Taking all of the factors discussed above it seems to us that 2022 is indeed different from the immediately preceding years and that we may be at a tipping point and possibly the most pronounced correction in decades.

Appendix

Comparison of market changing events

Event	Hurricane Andrew	Sept 11 Terrorist Attack	Hurricanes Katrina, Rita & Wilma	Hurricane lan
Year	1992	2001	2005	2022
Catastrophe experience in prior years	1989 - Hurricane Hugo in the US. 1990 - 8 European Winter	1999 - European Storms Anatol, Lothar & Martin (\$bn loss heavily reinsured).	2004 - Four Major Hurricanes (Charley, Frances, Ivan and Jeanne) make landfall in the US.	2017 - Harvey, Irma, Maria (HIM) + California Wildfires (Tubbs, Atlas, Thomas).
	Storms, four of which generated significant insured losses (Daria, Herta, Vivian, Wiebke). 1991 - Typhoon Mireille in Japan.			2018 - Hurricanes Florence and Michael, Typhoons Jebi and Trami in Japan, Camp and Woolsey Wildfires in the US.
				2019 - Typhoons Faxai and Hagibis in Japan, Australian Bushfires.
				2020 - Covid 19, Hurricanes Laura and Sally, Midwest Derecho in the US.
				2021 – Winter storm Uri in the US, European Flooding (Bernd), Hurricane Ida in the US.
				2022 - European Winter storm Zanep, Australian Floods, French Severe Convective Storm, Ukraine War.
What was different compared to 2022? (or in 2022 versus earlier years)	No broad use of catastrophe modelling	Unexpected / unmodelled loss (Terrorism)	Poor data quality and loose terms and conditions resulted in outsized losses versus model indications New Florida domestic property insurers being formed as major national writers reduced their Florida exposure	Demand for additional catastrophe capacity limits due to new model assessment of certain risk (European Flood) and inflation.
	Magnitude of loss.	Event triggered losses in many lines of business (Life, Aviation, General Liability, Workers Compensation, Event Cancellation, Property). Property only 50% of total loss.		
				Catastrophe bond market more heavily impacted than in 2005 and 2017
What was similar compared to 2022? (or in 2022 versus earlier years)	Several insurance company insolvencies or need for a recapitalisation.	Some reinsurance company failures.		Several Florida or Coastal residential property insurers lose rating and / or become insolvent (Six exits prior to lan).
	Many reinsurers initiated a de-risking of their catastrophe exposure			

Event	Hurricane Andrew	Sept 11 Terrorist Attack	Hurricanes Katrina, Rita & Wilma	Hurricane lan
Year	1992	2001	2005	2022
Condition of the (re) insurance industry balance sheet at the time of the event	Lloyd's weak - still suffering from aftermath of the asbestos legacy crisis and the LMX Spiral Professional reinsurers - strong balance sheets following balance sheet reloading in the mid 1980s and benefit from strong casualty profits post 1985 / 86 casualty hard market.	(Re)insurance industry balance sheet was weak after a prolonged soft market in casualty lines. Reserve deficiencies from the hyper competitive casualty market in the late 1990s were already appearing in 2000 and continued on into 2002, 2003 and 2004.	Lloyd's had an outsized exposure to reinsurance (157% loss ratio in 2017) Professional reinsurers' balance sheet and reserve strength improved over 2001 as earning from 2002 - 2004 hard market comes through to bottom line.	Sixth year of high cat loss activity. Many reinsurance carriers reducing catastrophe exposure with some exiting entirely. Large mark-to-market losses on investment portfolios due to sharp correction in interest rates. Operating income up to June 30th still positive but comprehensive income mostly negative. Inflation driving up loss cost, raising question of reserve adequacy for prior years' losses.
Capital market response	High willingness by Private Equity to fund NewCo reinsurers in Bermuda (8 new companies formed in 1992 / 93).	High willingness of Equity Markets to reload existing balance sheets. Private Equity funded several NewCo reinsurers in Bermuda (9 new companies formed in 2001/02).	Limited need to reload for existing carriers. Six new start-up reinsurers formed. PE enthusiasm for NewCo reinsurers limited as many 2001 formations did not achieve the hopedfor IPO exit. Sidecar reinsurance vehicles become fashionable (19 side car formations in 12 months from December 2005)	Equity markets and PE less attracted to investing in existing balance sheets (problem of MtM valuation of asset side of balance sheet). Only two new larger reinsurers (Equity >\$1 billion) formed in the years between 2017 and 2020. PE interest more on distribution businesses (brokers, MGAs) than on insurance balance sheet investments. Some ILS investors have endured under- performance during the last 5 -6 years. Some ILS investors unable to top up due to passive breaches in their asset allocation due to sharp correction in equity and debt markets. LDI problem for certain ILS allocators exacerbating the problem.

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