

INSURANCE CAPITAL – PART 2



Secular trends are re-shaping the industry and offer opportunities to investors

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This is the second of three articles in which Twelve Capital initiates readers to the different types of investments in the (re)insurance space – namely equity, debt and Insurance-Linked Securities (ILS). The first one delved into the distinctive features of each of them. This article focuses on secular trends such as climate change and population dynamics, exploring their implication for the insurance sector and investors. Finally, the last article will explain the so-called insurance cycle and provide an outlook for investors in insurance equity, debt and reinsurance in the form of ILS.

Executive summary

- Insurers are well positioned to adapt to and navigate secular trends such as climate change, population growth and ageing, increasing cyber-risks, structurally higher interest rates potentially accompanied by (social) inflation.
- These trends should contribute to increasing demand for insurance coverages and attract additional capital into the sector.
- We therefore expect gross premiums written to grow faster than inflation and GDP.
- An active investment management approach in (re)insurance equities, bonds and ILS, such as the one of Twelve Capital, is needed in order to take advantage of these secular trends.

Background

In this article, Twelve Capital takes a closer look at significant trends shaping both society and the insurance industry. Our goal is to break down these trends, showcasing their impacts on insurance companies and, by extension, investors in insurance equity, bonds and ILS. We believe these trends will benefit the sector in the long run. Factors like population growth and ageing are expected to drive demand for protection in the years to come. Similarly, emerging risks will contribute to insurance revenue and profit growth, attracting additional capital to the industry.

This is by no means meant to be an exhaustive list, but what Twelve Capital sees as the core themes that will drive changes in the years to come.

Climate change and insurance

When looking at very relevant themes such as climate change, we believe insurers are well advanced in incorporating environmental themes in their investment strategies and underwriting approach. Moreover, insurers

foster prevention measures and support reconstruction following severe weather events.

Climate change refers to long-term shifts in weather patterns and average temperatures on earth. It is primarily driven by human activities which release greenhouse gases into the atmosphere. Climate change has far-reaching and profound impacts on the environment, global ecosystems, and human societies, and therefore also on the insurance sector.

We are experiencing a higher frequency and/or severity of extreme weather events across the planet, such as hurricanes, wildfires, floods, and droughts, all influenced by climate change. These events can result in extensive property damage and economic losses, both insured and un-insured. The insurance industry, particularly in developed countries where penetration is higher, is therefore facing an increasing number of claims, and the trend is expected to continue in the future.

In recent years, climate change has indirectly affected the availability of reinsurance coverage (also known as capacity) for catastrophe risk and its cost. Particularly, the ability to purchase coverage for lower-attached or aggregate

reinsurance layers and proportional reinsurance has decreased.

In fact, reinsurers are requiring higher compensation for underwriting catastrophe business, while also limiting the total amount they are willing to cover in an effort to contain their P&L volatility. As a consequence, primary insurers have encountered difficulties to get the amount of reinsurance they need at affordable pricing. In this context, ILS managers, who face different capital constraints and regulatory regimes than reinsurers, play a crucial role in closing the protection gap.

In addition, climate change-related events and concerns can cause market volatility and increase the cost of funding (both for equity and debt) for companies that are exposed to catastrophe risk. Similarly, companies that are slow in implementing climate-adaptation measures could also be negatively impacted, which in turn increases the demand for catastrophe insurance.

Reaction and opportunities

To address these challenges, the insurance industry is increasingly factoring climate risk into its risk assessment and pricing models. Since most of the insurance products have a one-to-three-year maturity (including ILS contracts), companies can quickly adjust their pricing to match changing conditions.

The increase in catastrophe events and resulting insured losses has led to significant price increases for these risks – to an extent that these lines are seen as attractive by many players despite the claims pattern. We also observe contractual changes in coverage that are positive for investors, as reinsurers and capital markets try to remove high frequency perils and climate impacted structures from transactions.

Moreover, climate change has made customers more aware of their “protection gap”. Customers are increasingly realising the importance of protecting their own goods or activities from the risk of natural catastrophes. Areas once considered low-risk have become more susceptible to climate-related events, increasing the need for insurance coverage. Many insurers are responding by creating climate-resilient products and offering coverage for climate-related risks.

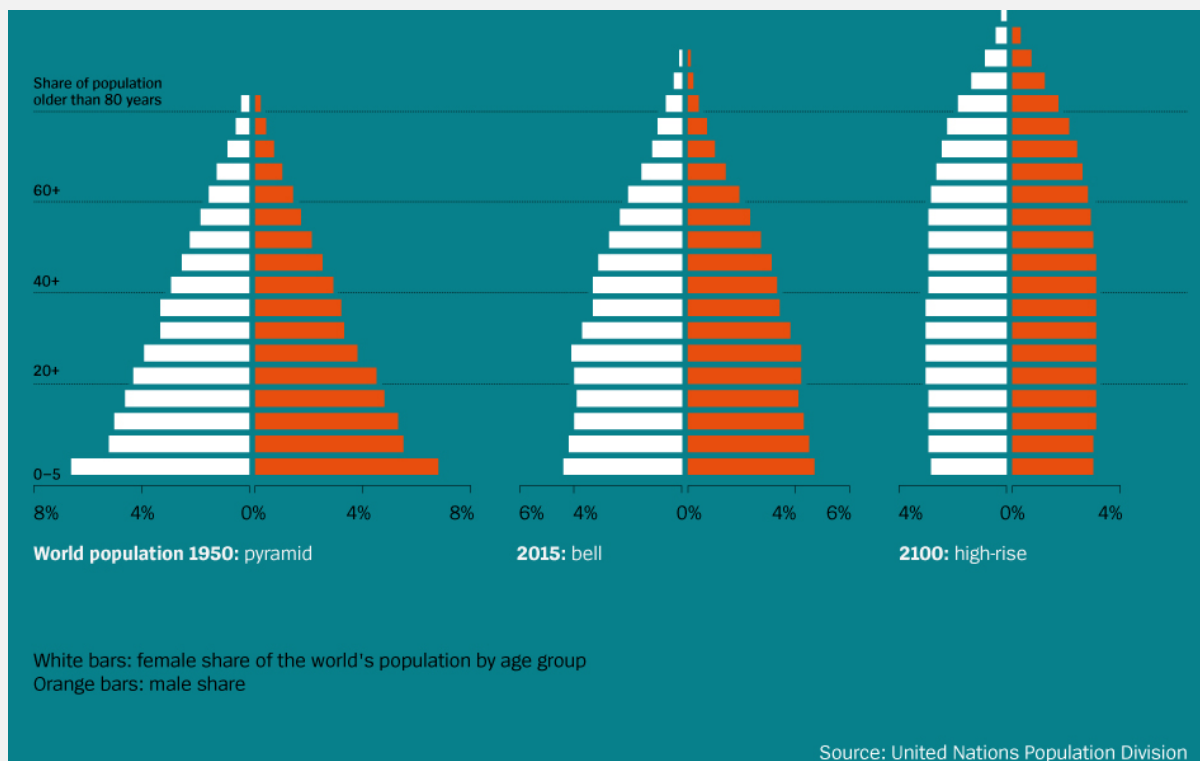
Finally, given their large balance sheet size and investments, insurers can play a key role in the financing of shift towards greener practices: the so-called green transition. They can decide to invest in green technologies and sustainable projects as well as providing coverage for these. These actions may contribute to mitigating climate change.

Population growth and ageing

In 2022 the global population hit 8bn, marking an addition of 1bn people in less than 15 years. The population growth in the past century was driven by increased births, reduced child mortality, and a longer lifespan. As a consequence, we have observed a widening of the base of the global population pyramid (Figure 1).

We have now entered in a phase where birth rates have decelerated and the proportion of working-age population is expected to continue to increase. The ratio of working-age individuals to under 15 years-old grew from 1.7 in 1950 to 2.6 in 2022. This will progressively lead to a thickening of the population pyramid.

Figure 1: Demographic evolution



Source: <https://www.statista.com/chart/10366/age-structure-of-world-population/>. As at 21 July 2017.

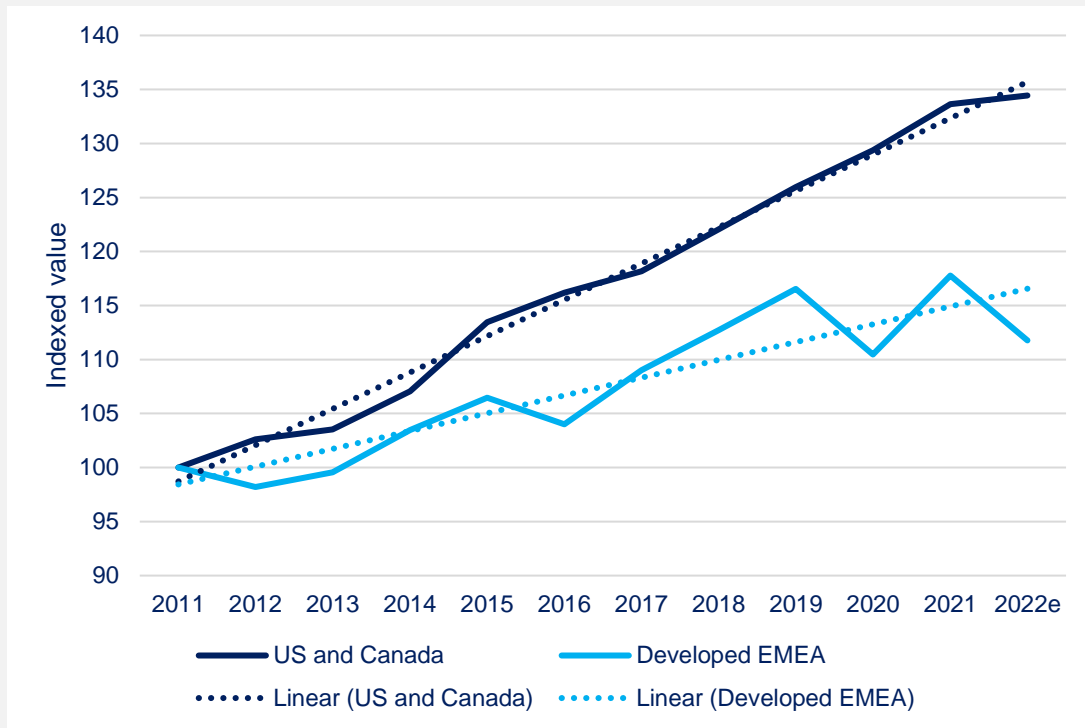
This demographic trend represents an opportunity for the insurance sector, that is mainly twofold:

- **Aging population:** With an aging population and challenges in publicly-funded social security and pension systems, there is an opportunity for growth in long-term insurance savings and pension products in order to preserve income during old-age.
- **Increased working-age population:** the rise in working age population means higher spending power. This can be directed towards bridging the protection gap in property, health or life insurance. Moreover,

specifically in property insurance, wealthier societies will see higher insurable values, leading to higher insurance premiums.

The growth in insurance revenues will maintain the sector attractiveness for investors and draw new capital. Historical data shows that gross written premium growth has outpaced both inflation and GDP growth as highlighted by proprietary data and Swiss Re Sigma studies. A trend we expect to continue in the years to come.

Figure 2: Premium growth



Source: <https://www.sigma-explorer.com/>. As at December 2023.

Cyber risks

Cyber risk is emerging as one of the larger areas of growth in the insurance industry. Cyber-security has gained attention due to digitalisation, especially in areas dealing with sensitive data such as financial institutions or in the healthcare sector, as well as an increasing reliance of companies on cloud infrastructure. Cyber threats also pose potential risks to business continuity in critical sectors such as energy production or transportation.

Figure 3: Cyber perils

	High Severity	High Frequency
Systemic	Cloud Outage	Ransomware
Idiosyncratic	Data Breach	Errors and Omissions

Source: Twelve Capital.

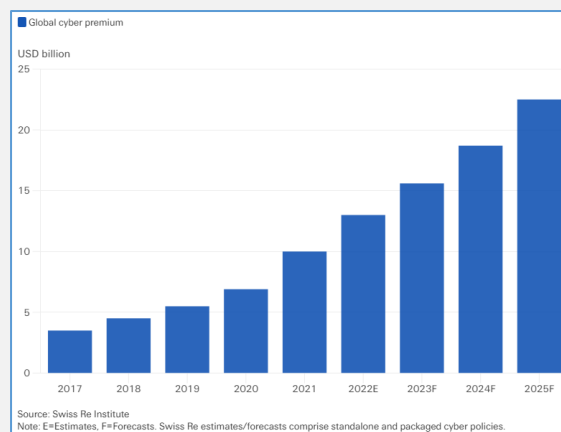
Figure 3 illustrates the main types of cyber events that are likely to cause catastrophic losses, both from a single large event (severity) as well as from a build-up of smaller ones (frequency). Cloud outages pose a significant severity as companies increasingly rely on them and downtime in a data centre can result in substantial business interruption losses. Large-scale data breaches, stealing sensitive information, can lead to significant fines and remediation costs. Ransomware incidents involve malware infecting devices and causing outages, often part of coordinated campaigns. Errors and omissions, such as accidental data loss or software failures, can also cause business interruptions and require remediation.

If we look at recent statistics about the purchase of cyber insurance, we note that 30% to 50% of large listed companies do not have cyber coverage. The number would be materially higher if we were to look at small or medium sized enterprises. As companies face growing risks and expenses associated with cyber events, there is a growing interest in purchasing specialised cyber insurance.

15bn in 2023, growing from USD 3.5bn in 2017. We expect the market to grow at a double-digit pace for the foreseeable future, thanks to a combination of higher demand and price increases. In the long-term the cyber market could rival with the natural catastrophe market in terms of sums-at-risk.

Beside aggregation of risk in a cyber catastrophe scenario – something we have not yet witnessed – the biggest challenge to the cyber market is to securing sufficient capital to support its planned strong growth. We expect to see more activity in the ILS space where alternative capital providers will support growth of currently experienced cyber (re)insurers such as Beazley or Munich Re. However, there is still large untapped potential for equity and debt raising for cyber-focused ventures.

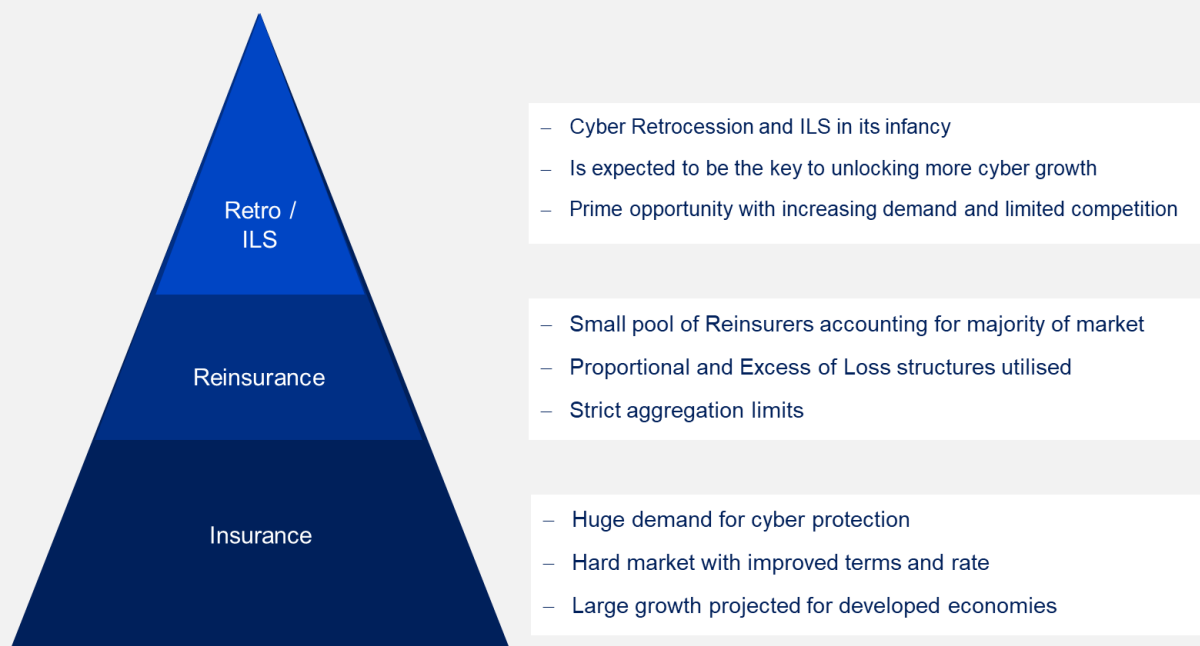
Figure 4: Cyber premium projections



Source: <https://www.swissre.com/risk-knowledge/advancing-societal-benefits-digitalisation/about-cyber-insurance-market.html>.

So far, only a small pool of insurers has been focusing on covering cyber risk, with over two thirds of the global market being concentrated in 20 players. This is due to the market's limited maturity, uncertainties about risk aggregation, and a shortage of underwriting skills. We estimate the cyber insurance market size in terms of gross written premiums at around USD

Figure 5: Capital availability for cyber



Source: Twelve Capital.

Figure 5 illustrates the current cyber market. Starting from the bottom, we observe huge and growing demand for cyber insurance. Like with property catastrophe, insurance companies need a reinsurance market in order to offload critical catastrophe risk so that they can satisfy internal and external risk and capital requirements. At the moment there is only a small pool of cyber reinsurers, and with strict aggregation limits many of them are unable to provide additional capacity thus limiting primary insurance companies to write more cyber insurance. Finally, at the top of the diagram is the Retro/ILS market, where key aggregation risk can be transferred, but currently there is limited (almost none) capacity, ultimately constraining the middle and bottom tiers.

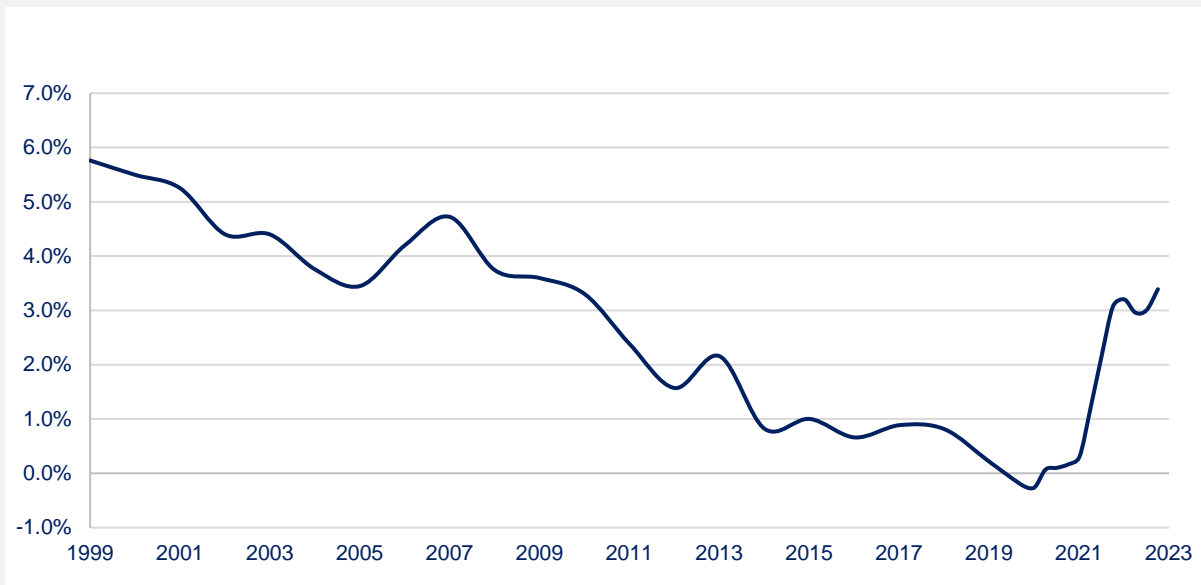
There are likely a number of Cyber Cat Bonds being launched in the upcoming quarters, working to make investment in cyber by ILS and capital markets simpler. However, this remains

an area where demand is likely to exceed supply for quite some time.

Higher for longer interest rates potentially accompanied by (social) inflation

The disruptions in the supply chain caused by the Covid pandemic and the rise in energy prices due to the Ukraine war ignited inflationary pressure in most major economies worldwide. Central banks have responded by rising interest rates, ending a decreasing yield trend that lasted for more than two decades. We anticipate interest rates to remain elevated in the short term and not decrease to the historical lows observed between 2014 and 2021.

Figure 6: 10 Year EUR swaps



Source: Twelve Capital, Bloomberg. As at 30 September 2023.

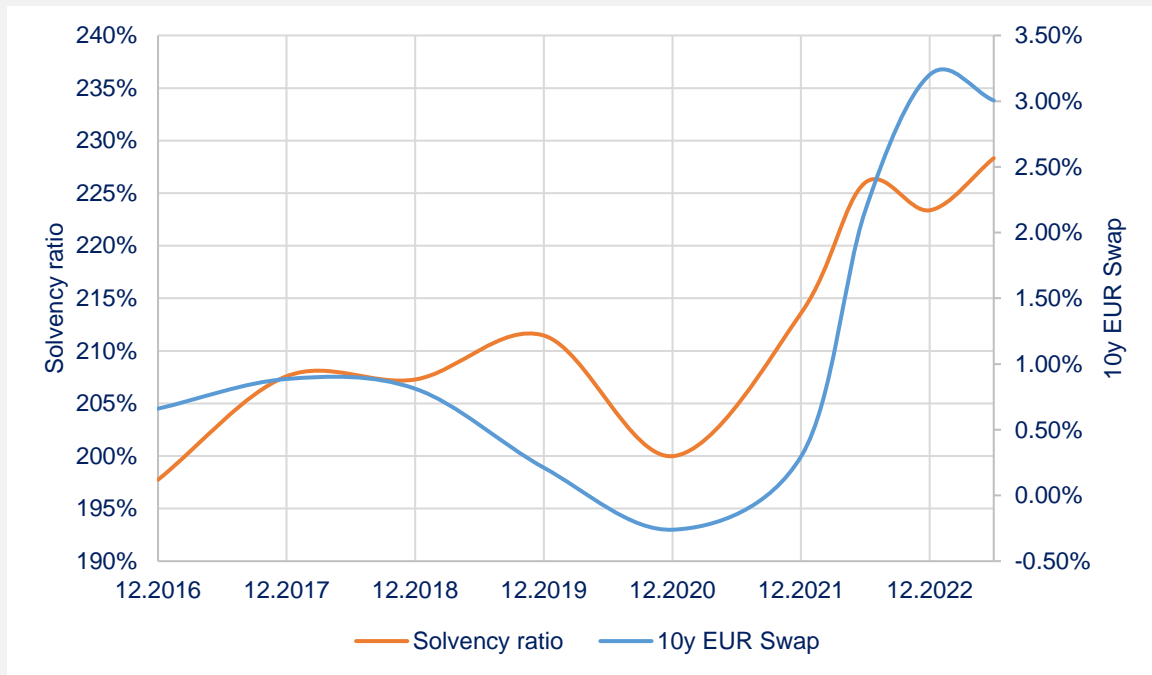
This sharp increase in rates has led to unrealised loss positions in insurers' large fixed income portfolios. We believe that, in most cases, these losses are manageable as investments are often held to maturity. In addition, the decrease in rates has also translated into higher discounting for liabilities, resulting in lower market value of technical liabilities. One exception are life-insurers with products that offer guarantees or that can be surrendered easily with limited penalties. These companies might face asset-liabilities imbalances and be forced to crystallise losses.

Still, prolonged period of higher interest rates presents a great opportunity for both life and P&C players that are observing reinvestment

rates on their assets materially increasing, leading to an additional profit source alongside technical earnings. Concurrently, in risk-based solvency regimes such as Solvency II, the inherent cost of guarantees and options in life contracts decreases in an elevated rates environment. This, in turn, frees up capital – with observable evidence of a positive correlation between movement in rates and in Solvency ratios (see Figure 7).

In summary, higher interest rates are positive for equity and debt investors as they are likely to translate into improved profits and regulatory capital positions of insurance companies.

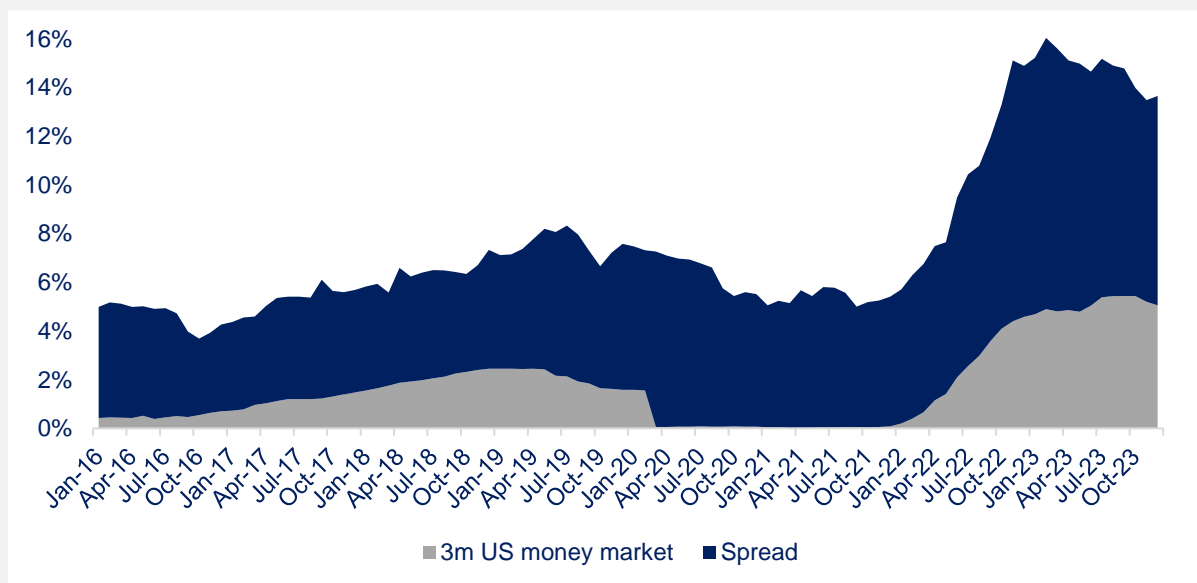
Figure 7: Solvency vs 10y EUR swaps



Source: Twelve Capital. As at 30 June 2023.

For collateralised reinsurance products, such as Cat Bonds or collateralised Retro, the increase in interest rates is beneficial. The collateral that is posted to cover the transaction is often held in US money market funds, meaning that as well as earning a risk premium investors also earn the risk-free rate.

Figure 8: Current Cat Bond yields



Source: Artemis, Twelve Capital. As at 31 December 2023.

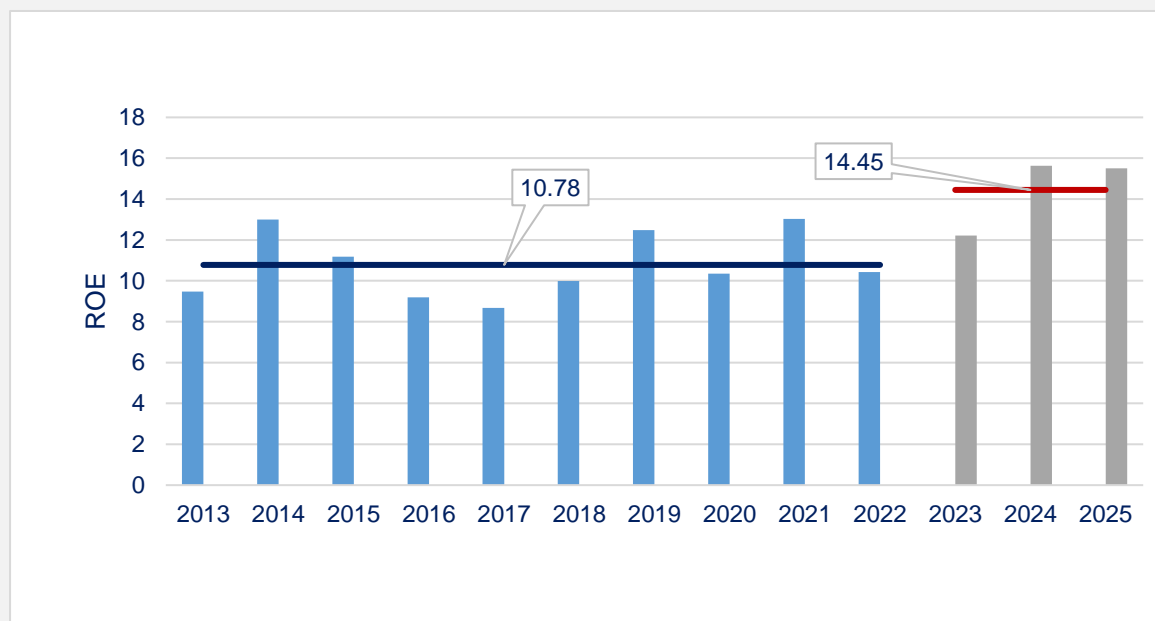
However, we flag that a period of higher interest rates might be accompanied by higher than historically recorded inflation. While the impact of inflation on ILS and Cat Bonds is mostly limited to the increase in buildings' repair costs, equity and bond investors might be exposed to more far-reaching negative effects. In fact, social inflation, a term that describes how insurers' claims cost are increasing above economic inflation due to increase in litigation and settlement costs, can lead to decrease in future profitability and reserve strengthening. We expect those companies exposed to longer tails such as casualty, liability and workers' compensation to be the most exposed.

Should we enter a period of higher interest rates and (social) inflation it might mean for equity investors a mid-term overperformance of life stocks compared to non-life stocks, an inversion from the trend observed over the past 10 years. For credit investors, we would recommend cautiousness towards smaller (re)insurers focussed on long-tail lines and with limited financial flexibility given the likelihood of reserve-strengthening.

To be continued in part 3...

In our next article we will explain the cyclicity of the insurance business and highlight how this can impact investment opportunities. We will start by highlighting that the sector is profitable. Particularly, insurers are entering in a period of improved Return on Equity thanks to the currently strong pricing cycle, as highlighted in Figure 9 where we show the average RoE for large US-focussed P/C players.

Figure 9: Average ROE change



Source: S&P Capital IQ, Twelve Capital. As at December 2023. Estimated figures for 2023, 2024, 2025.

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About Twelve Capital

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(1) to an institutional investor or to a relevant person or to any person arising from an offer referred to in Section 275(1A) or Section 276(4)(c)(ii) of the SFA,

(2) where no consideration is or will be given for the transfer;

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