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June 2020

On the Front Lines of Climate Change: The Opportunity in P&C Insurers

When considering climate change and the increasing frequency and severity of natural disasters, a common perception might conclude that the property & casualty insurance industry faces significant credit risk from these highly unpredictable events. The industry's exposure is significant—nearly 90% of its $60 billion in insured losses in 2019 were due to natural disasters.[1]

However, we conclude the contrary. In essence, insurers provide a form of risk or uncertainty funding, and we see the P&C industry as essential to managing the growing risks to property and livelihoods from the effects of climate change. By insuring a portion of the total economic losses from natural disasters, P&C insurers can help fund prompt recoveries. Yet, the uninsured portion of economic losses from natural disasters continues to rise unabatedly.

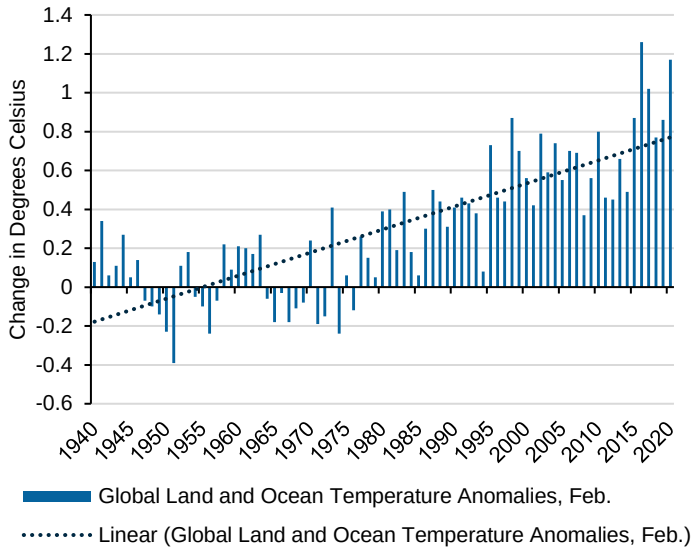
While the widening "protection gap" presents P&C insurers with challenges, it also highlights the industry's expanding growth opportunities, which continue to support our overweight positioning across the global P&C insurance industry.

The effects of climate change are increasingly pervasive, as those who recently experienced the Northern Hemisphere's warmest winter on record might attest. This occurrence coincides with the longer-term trend of rising land and sea temperatures (Figure 1). More recently, each year from 2016-2019 registered rising temperatures of at least +0.5 degrees Celsius, and three out of the last five years registered temperature increases of at least +1.0 degrees.

Our focus is not on the causality of rising land and sea temperatures, rather it is on the likely investment ramifications. And a four-fold increase in natural disasters over the last 50 years is one of the likely results of a warming planet (Figure 2).

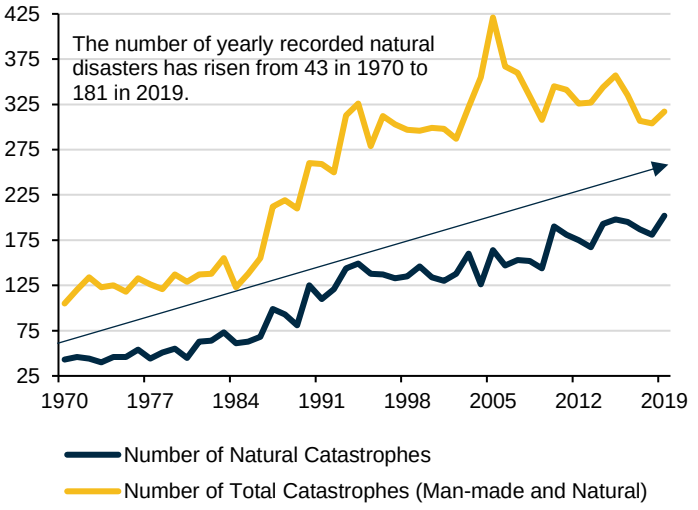
[1] *According to the Swiss Re Institute.*

Figure 1. Rising Land and Ocean Temperatures



Source: National Oceanic and Atmospheric Administration as of April 2020.

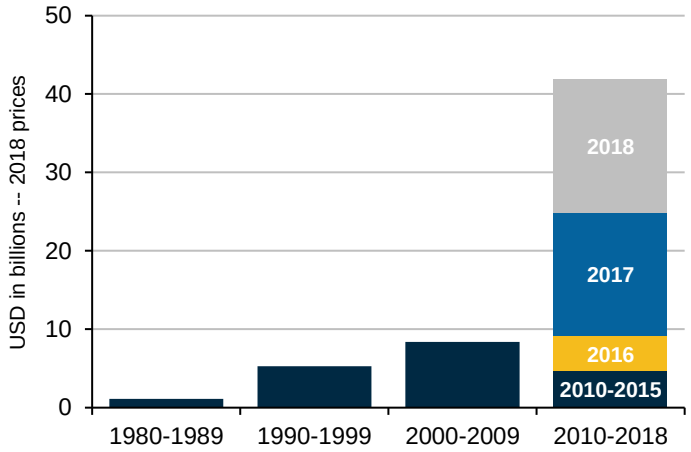
Figure 2. A Half Century of More Frequent Natural Disasters



Source: Swiss Re Institute, sigma 2/2020

The increased frequency of natural disasters has primarily occurred in two categories: meteorological weather events, such as tornadoes, which have increased in frequency by more than 2.5 times from 1980 to 2019, and water-related events, such as droughts or floods, which have increased in frequency by nearly 6.5 times since 1980, according to Munich Re.[2] Natural weather and man-made factors have contributed to conditions conducive to wildfires, which have also occurred with increasing frequency and severity in recent years. Since 1980, 70% of the insured global wildfire losses occurred in only three years, 2016 through 2018 (Figure 3).

Figure 3. Global Insured Losses from Wildfires



Source: Swiss Re Institute, sigma 2/2019

As natural disasters have become more frequent, their effects have become more severe amid increased urbanization and habitation in previously undeveloped areas. In 1970, just over one third of the world's population lived in urban areas, according to the United Nations. The UN recently estimated that more than two thirds of the population will live in urban areas by 2050 with 90% of the increase expected to occur in Asia and Africa. Although the COVID-19 pandemic has highlighted some concerns around urban density, the urbanization trend will likely continue in much of the world over the longer term.

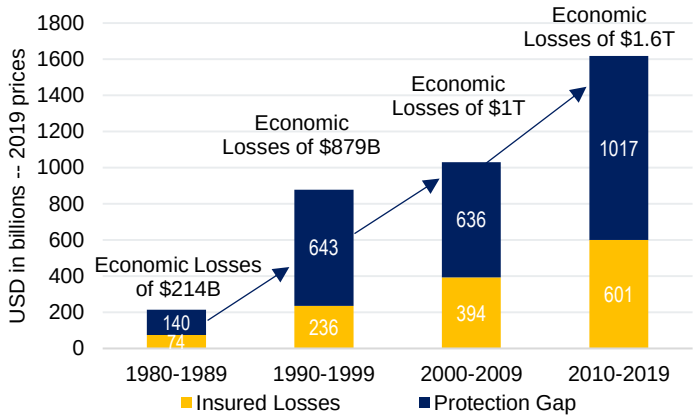
In addition to the human tragedy from natural disasters, the rising frequency and significance of these events brings broader economic risks as well. Yet, these risks and losses are increasingly uninsured.

[2] *Reinsurers provided about 16% of the capital to the global P&C insurance industry as of 2018 (see Figure 6). Therefore, several global reinsurers conduct highly sophisticated research on climate change.*

A Growing Protection Gap

The widening gap between the economic losses and the insured losses from natural disasters (the protection gap) points to the industry's opportunity to protect and diversify from the risks of climate change. For example, in the 1980s, the inflation-adjusted protection gap totaled $140 billion, and it subsequently ballooned by more than seven times to more than $1 trillion during the decade ending in 2019 (Figure 4).

Figure 4: A Widening Protection Gap from Rising Uninsured Losses



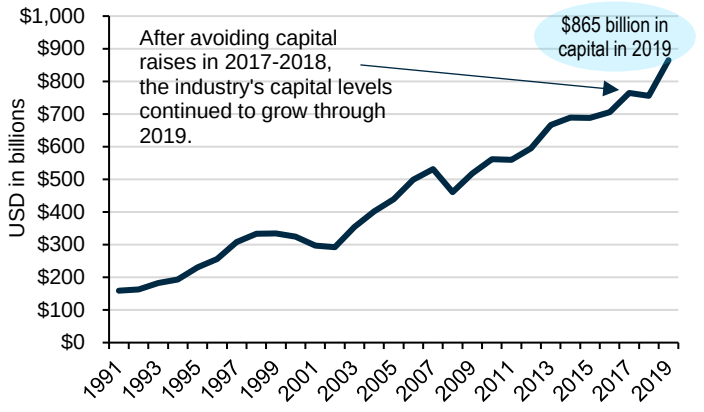
Source: Swiss Re Institute, sigma 2/2020

While the effects of climate change have been significant contributors to the widening protection gap, insufficient risk-adjusted pricing and/or risk modeling complexities may well have led insurers to avoid or miss some protection opportunities.

There are pockets of heightened incidence as well. In 2017-2018, North America endured a series of hurricanes and wildfires leading to insured losses accounting for about 75% of the industry's accumulated global insured losses and nearly 65% of the accumulated economic losses, according to the Swiss Re Institute. Most of these losses occurred in the U.S. and resulted in a record global protection gap of about $280 billion for 2017 and 2018 combined.

Yet, as a testament to the sector's resilient operating model and its solid credit profile, U.S. P&C insurers' diversified earnings largely absorbed the record losses, and the U.S. industry avoided the need to raise meaningful amounts of new capital (Figure 5). The long-term growth in capital reflects solid earnings from overall effective risk management and investment gains from a sizable investment portfolio that totaled about $1.9 trillion in 2019.

Figure 5. U.S. P&C Industry Capital Continues to Grow



Source: PGIM Fixed Income and SNL

Although the insured U.S. losses in 2017-2018 were record setting, they weren't the worst-case scenario for the P&C insurance industry. If any of the storms of 2017-2018 had veered directly toward higher-density areas, the outcome could have resulted in a significantly higher loss-claim event. In terms of a worst-case scenario for a single-loss event, estimates reach as high as $250 billion, well above the $219 billion in total insured losses from the multiple events that were absorbed in 2017 and 2018 combined.

The potential losses from such a worst-case scenario would equate to about 12% of current total global P&C industry capital of more than $2 trillion—a significant, but not a credit altering, loss event. This worst-case scenario could become a capital event in the period of occurrence, yet it would also likely lead to sharply higher pricing, which would help capital raising and accelerate a post-event capital recovery.

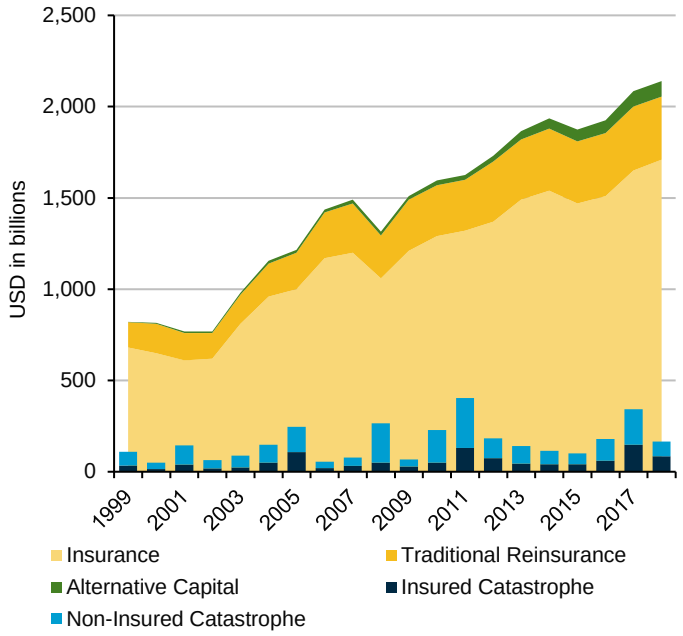
While the U.S. P&C industry is the largest single country market and accounts for more than 40% of the global industry's capital of over $2 trillion, its recent experience demonstrates the broader industry's ability to absorb significant losses given increasingly global risk syndication. This global sharing/spreading of risk across geographies and markets is a key factor that helps improve loss absorption and reduces the need for new capital raising in individual local markets. The full absorption of the record consecutive loss years of 2017 and 2018 within U.S. P&C industry's earnings clearly demonstrates the benefits of such global risk spreading that expands individual local market's loss-absorption capacity.

New Capital Sources Expanding Loss-Absorption Capacity

The industry's expanded risk syndication has not only occurred globally, but it has involved new capital sources as well. Insurers' improved access to data gathering, analysis, and risk management has opened the door to other sources of capital from various institutional investors, otherwise referred to as alternative capital (AC). These investors are drawn by returns on insurance-linked investments that are less correlated and still attractive relative to other investment options across the capital markets. This increased supply of new capital has subsequently lowered the cost of these risk transfers for insurers and traditional reinsurers. The better insurers and reinsurers have responded by buying protection from these lower-priced capital providers for their own retained insured losses, while also generating fee income by helping these investors source such risk exposures for investment.

While not perfect, the AC system appears to be effective thus far given its sustained growth to about $99 billion in total capital provided, which amounted to about 5% of the industry's total available capital. However, AC largely remains focused on property catastrophe risks as it provided 25% of the total capital covering property catastrophe risk in 2018. Recent estimates indicate that AC absorbed about 25%-30% of the record insured losses from the 2017 North Atlantic hurricane season. This highlights the P&C industry's successful evolution of using a competing force to its own benefit. As a result, the expanding risk syndication to AC providers should help the industry absorb the likelihood of rising losses from greater property exposures amid ongoing urbanization and more frequent, intense natural disasters. This can also help P&C insurers narrow the widening protection gap.

Figure 6. Steadily Rising Global P&C (Re)Insurance Capital



Source: Swiss Re Institute, sigma 2/2019

As the addition of alternative capital sources has lowered the cost of these increasingly commoditized risk transfers, the stronger industry players have diversified by growing across other non-property risk lines to cover a broader aspect of economic risks. Others have exited via mergers & acquisitions. While not without some pain, these developments underscore the P&C industry's successful evolution as new entrants have now effectively weeded out the weaker reinsurers. We think the P&C winners will likely be the better diversified, more disciplined insurers and reinsurers that maintain strong credit profiles. After all, insurance is simply selling a promise to pay in the future. This makes for a natural focus on maintaining a strong credit profile as a part of the financial strength that drives business success as an insurer.

Chubb and Liberty Mutual: Two Favored P&C Insurers

The following provides a brief summary of two globally operating P&C names with attractive fundamentals.

Chubb (Senior unsecured debt ratings: A3, Positive / A, Stable): As the world's largest publicly traded P&C insurer, Chubb is Swiss domiciled and listed on the New York Stock Exchange. It has grown from a U.S. focused insurer/reinsurer to now doing business through local operations in 54 countries and territories. More than 40% of its 2019 total insurance premium revenue of $30 billion was generated outside the U.S. Its business is well diversified with more than 60% from a variety of commercial lines and the rest balanced across mainly high-net worth personal lines (auto and homeowner's insurance) as well as accident & health and life insurance. Its resilient business model was reflected in the full absorption of 2017 record catastrophe loss claims of $2.8 billion within its earnings of about $4.8 billion. It ended 2019 with earnings of about $4.5 billion, total equity of over $52 billion, and total assets of over $173 billion.

Liberty Mutual (Senior unsecured debt ratings: Baa2, Stable / BBB, Stable):[3] A private P&C insurer, Liberty Mutual is mutually owned by its policyholders with strong diversification, size, and scale as the third largest insurer in the U.S. and the fifth largest globally. In 2019, more than 20% of its total insurance premium revenue of over $40 billion was generated outside the U.S. About half of Liberty Mutual's total insurance revenue comes from personal lines (auto and homeowner's insurance) and the rest is spread across commercial lines of business, including through Lloyd's of London. The resilience of Liberty Mutual's business model was reflected in still positive earnings of $17 million after absorbing 2017 record catastrophe loss claims of over $3.6 billion. It ended 2019 with earnings of about $1.1 billion, total equity of over $23 billion, and total assets of over $134 billion.

Secondary Events Present Likely Manageable Risks

The growth opportunity for P&C insurers is, of course, not without risk from natural disasters and beyond. The P&C industry has managed its natural disaster losses via improved data gathering and analysis as well as expanding risk syndication. Yet, climate change remains dynamic with potentially complex and non-linear impacts that may not be adequately captured in current data or in current risk models.

The impact from these unmodeled variables can be significant, particularly for secondary perils (such as wildfires and torrential, flooding rains) that reflect low-to-medium severity events that are rising in frequency. Accumulated losses from these events can be substantial in a given year. Of the $85 billion of insured disaster losses in 2018, more than half were due to such secondary perils, according to the Swiss Re Institute. Secondary events generally receive less monitoring from the industry risk models, which are mainly focused on primary or peak perils, such as hurricanes. While secondary or unmodeled events pose a risk for the P&C industry, we think global risk syndication, improving business diversification, and conservative capital management should leave the industry well-positioned to manage these risks going forward.

COVID-19: A Slow-moving Catastrophe Through 2020

While it remains early, the industry is already bracing for the fallout from COVID-19. At this point, management disclosures suggest that the claims impact for U.S. insurers should likely remain limited to an earnings event and not rise to a capital event. However, the COVID-19 situation appears likely to develop into a sizable, but manageable, catastrophe that is spread out over a few quarters given the unprecedented breadth and yet-to-be-determined economic losses. But unlike typical catastrophes, which occur over a day or days at most, the COVID-19 fallout will hit both sides of insurers' balance sheets with investment marks hurting assets and sharply higher claims losses hitting liabilities.

[3] *Credit ratings provided for Chubb and Liberty Mutual are from Moody's Investors Service and Standard & Poor's, respectively.*

The resulting economic slowdown will further hurt premium revenue, and the broad economic losses from the virus-related shutdowns raises the likelihood of higher litigation costs.

For most of the industry, business interruption policies may have presented the largest exposures. However, in the U.S., these policies appear to have specifically excluded virus-related pandemics for the past several years. The remaining COVID-19 related exposure identified so far appears spread across generally smaller lines of business (such as trade credit, travel, and event cancelation). The current economic slowdown may well also lead to other claims emergence over the next several quarters.

Retroactive legislative expansion of coverage poses some additional risks along with the potential for elevated legal defense costs from coverage-related litigation. However, the potential for elevated claim risks should be offset by a sharply lower frequency of claims across most business lines given the curtailed economic activity from the virus-related shutdowns. Further, the uncertainty regarding the ultimate level of claims, the rising potential for claims litigation, and the reduced investment income from the most recent declines in interest rates is likely to sustain already rising commercial insurance pricing, which should provide an offset to these factors.

In the end, regulators and legislators will likely need to balance such retroactive coverage expansion with solvency risks across several other vulnerable areas of the economy that are currently well protected by insurance, such as personal auto, home, and other key business coverages. Near-term uncertainty aside, we think a public-private partnership—with the Federal government providing a backstop or sharing the coverage of biological pandemic risks, such as it already does for flooding, terrorism, and crop insurance—may be the best solution.

These risks notwithstanding, the P&C insurance industry's ability to annually reprice risk and revise/update terms and conditions to improve the management of risk exposures are key attributes that drive our positive view of the sector. With an active storm season forecast for the second half of 2020—similar to the forecast that preceded the severe losses in 2017 and 2018—a confluence of elevated catastrophe claims and COVID-19 stress could potentially culminate in a capital event. *After all, insurers are paid to manage risk, not just to avoid all risk.* As such, our focus remains on the franchises that are best positioned to maximize the benefit from the subsequent increase in risk pricing, which would help facilitate capital raising and accelerate post-event capital recovery.

Conclusions

The P&C insurance industry is among the most exposed to the economic effects of a changing climate. Its core business focuses on an ability to better pool and absorb the transfer of weather-related risks from the broader economy onto its own balance sheets to more efficiently fund potential losses.

This core competency puts the P&C industry on the front lines of providing risk management solutions to global public and private sector entities exposed to losses from weather-related natural disasters. While not perfect, the system continues to evolve and remains essential to meeting the rising risk exposures from climate change.

Although the P&C insurance industry has managed significant weather-related losses relatively well recently, the widening protection gap may be too large for the P&C industry to close alone. However, we think expanding public-private partnerships with local governments to cover a broader set of economic vulnerabilities to rising weather risks can help support a growth opportunity that benefits society as a whole. While we expect progress in closing the protection gap will be uneven and sometimes volatile, we think the better managed insurers will continue to successfully convert this challenge into a growth opportunity. This continues to drive our overweight allocation to the global P&C insurance sector.

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Source(s) of data (unless otherwise noted): PGIM Fixed Income as of June 2020.

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2020-3547