04 Underwriting Systemic Risk

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Infrastructure, partnerships, and town planning essential to contain rising catastrophe and extreme weather exposures

According to the latest global Allianz Risk Barometer, cyber incidents (1st), natural catastrophe (3rd), and weather volatility (7th), stand out as major systemic risks globally. Macroeconomic developments and political risks also feature in the top 10 rankings, at fourth and eighth, respectively. While in the local context, Santam's Insurance Barometer research findings featured economic challenges and crime as the top concerns among participating South African businesses, households, and brokers.

Systemic risks are those with the potential to trigger widespread losses across multiple business sectors or geographic regions, threatening the stability and functioning of the economy as a whole, and the insurance industry specifically. Global insurers and reinsurers are concerned about systemic risk events because such events can lead to highly correlated losses across multiple lines of insurance coverage, threatening the solvency of the industry.

South African insurers are not immune to the risks faced by their global peers, but they must chart and navigate the domestic risk landscape through the country's unique socioeconomic lens. The result is that climate change and extreme weather feature just as prominently during local risk discussions as the potential for another July 2021 looting and rioting incident, which ended up costing the South African economy over R50 billion.

In Santam's world, the major systemic risks listed in the Allianz Risk Barometer might be reordered as weather volatility (1st), natural catastrophe (2nd), and macroeconomic developments (3rd). Infrastructure failure, which does not feature on the global risk radar's top 10, is a top five contender locally, alongside cyber incidents and political risks. Cyber risk remains an emerging exposure class making up a small but fast-growing portion of current insurance product portfolios, with client education and awareness serving as critical drivers of market adoption.

The interconnected nature of risks is increasingly evident, as insured covers like business interruption (BI) and fire / explosion can now be triggered or magnified by systemic risks like cyber incidents, extreme weather or catastrophes, and political unrest and violence. Imagine, for instance, a cyberattack hitting one of the major cloud infrastructure providers, where the resultant business continuity fallout would ripple across thousands of businesses that rely on their services.

In the SA environment, weather volatility is more easily tangible than cyber risk. 2024 was the hottest year on record with global temperature averages 1.55°C higher than the pre-industrial average (1850 -1900), and also the first year to exceed the 1.5°C global warming limit set by the 2015 Paris Agreement. The rising frequency and severity of extreme weather events has been felt and clearly evidenced in catastrophe reports published by global reinsurance brokers.

Aon's 2025 Climate and Catastrophe Insight puts the total economic losses caused by natural catastrophe events in 2024 at USD368 billion, of which USD145 billion was covered by insurers and reinsurers. Similarly, Gallagher Re's Natural Catastrophe and Climate Report 2024, noted that the annual average loss from natural catastrophes from 2017 to 2024 had cost insurers USD146 billion, suggesting a 'new normal' for catastrophe losses approaching USD150 billion annually.

North American hurricanes have been major contributors to insured losses in the period, with Hurricane Helene and Hurricane Milton each costing insurers around USD20 billion. However, severe storms and flooding were the other main perils. For context, the January 2025 Los Angeles (LA) wildfires will dwarf these events, with insured losses estimated to exceed USD40 billion. If the remainder of 2025 follows trend, insurers may see catastrophe reinsurance rates come under pressure into 2026. In South Africa, the biggest events over the last 3 years have mainly been flood and severe storms.

According to Aon's estimates, Hurricane Helene, which struck Florida's Big Bend coastal region in late September 2024, caused USD75 billion in economic losses, making it the costliest global event of the year. Hurricane Milton, which made landfall in early October 2024, accounted for USD35 billion in economic losses, with USD20 billion covered by insurers, making it the costliest single global insured loss event for 2024.

Global reinsurer reports reveal a **60% natural catastrophe risk protection gap**

These reports reveal a global natural catastrophe protection gap of around 60% of the total economic losses, leaving communities and governments to make up the shortfall. There are big disparities in catastrophe risk coverage depending on the region and peril type. While U.S.-based hurricane events benefit from higher insurance penetration, only around a third of flood-related losses in South Africa's 2022 KwaZulu-Natal (KZN) floods were insured. Insurers and reinsurers covered approximately R15 billion of the estimated R50 billion in total damages following that catastrophe.

Domestic extreme weather-related losses were less severe in 2023 and 2024. Per Santam's Integrated Report 2024, we experienced a similar number of significant weather-related events in 2024 as in 2023. Total claims from events exceeding R100 million per event increased in 2024. Events were widespread across the Western Cape, Eastern Cape, and KwaZulu-Natal. **The continued encroachment of commercial, industrial, and housing developments on 50-year flood lines remains a major challenge for insureds.**

There is an interesting parallel between local floods and LA wildfires. In the US, the spread of the LA wildfires was worsened by insufficient firefighting funding, aging infrastructure and flammable

Failing Infrastructure Top 3 Concern:

63% commercial respondents indicated a high risk

83% said it's their biggest risk over next two years

housing. In South Africa, the impact of the KZN floods was amplified by poor urban planning, failing infrastructure, and inadequate storm water drainage maintenance. This shows that losses arising from systemic risks such as natural catastrophe and weather volatility are amplified by inadequate or poorly maintained infrastructure.

Inadequate or poorly maintained infrastructure was a top three concern among commercial survey respondents. Almost two thirds (63%) said that failing infrastructure presented a high risk to their businesses overall, and 83% singled out poor infrastructure as the primary emerging risk to their businesses over the next two years. Businesses and households flagged a range of infrastructure issues spanning deteriorating road and rail infrastructure, interrupted water supply, and the well-documented issues across the national electricity grid.

Insurers have direct and indirect exposures to infrastructure shortcomings. For example, at the direct level, they insure dams and power stations, while the indirect impact arises from higher loss and damage to insured assets due to failing or poorly maintained infrastructure. For example, in the 2022 KZN floods, several landslides occurred during heavy rainfall, contributing to significant downstream flooding and property damage. Additionally, if the canals and waterways had been fully functioning, the industrial areas around the Durban port would likely have suffered a smaller impact.

The threat of a national grid failure was top of mind in the 2022-2023 Insurance Barometer. Insurers, guided by their reinsurance partners, had to implement grid failure exclusions and other underwriting actions in response. Santam saw significant improvement in its power surge-related claims experience due to a combination of reduced loadshedding, explicit top-up cover, and the rooting out of fraudulent damage claims.

With the frequency of loadshedding having dropped significantly, businesses and households surveyed seem more concerned about the rising cost of electricity.

But we are not yet out of the woods; the threat of a national grid failure is ever-present due to our aged and ailing infrastructure, so we must be wary of complacency. In the meantime, insurers' focus will shift to achieving exposure and premium balance with more clients installing solar power at their properties, which presents new risks such as lithium battery fires and storm damage to solar panels.

Sticking with infrastructure, local insurers have significant exposures due to the deterioration of ports, railways, and roads. Delays in clearing goods through the country's major ports contribute to spoilage, forcing insurers to review cover for this peril. South African insurers have also had to accommodate the significant shift from rail to road as the primary method for moving goods inland, leading to higher volumes of road traffic and road network deterioration.

Santam has identified town planning and improved flood and wildfire defences as valuable mitigants against exposures to natural catastrophe and weather volatility. Our Partnership for Risk and Resilience (P4RR) programme has assisted 102 municipalities with climate action plans (CAP), flood responses, and firefighting equipment, among others. There are plenty of positive spin-offs from working closely with municipalities.

One example is the Quick Reaction Force (QRF), an aerial firefighting initiative cooperatively funded by multiple insurers to deploy helicopters to fight wildfires. The rationale for the programme is simple; if you can contain a wildfire within the first 10-15 minutes to deploy helicopters, you have a far greater chance of suppressing it, significantly reducing damage and saving lives. The programme has run successfully for several years in the Western Cape Winelands region and has been expanded to the Lowveld. Going forward, the challenge is partnering these firefighting resources with established Fire Protection Associations (FPAs) within the current regulatory framework.

The P4RR programme is part of Santam's broader strategy to mitigate systemic risks through corporate social responsibility (CSR) initiatives and public-private partnerships (PPPs). While only 25% of business respondents surveyed expect to find a solution to address systemic risks, 65% of them believe a solution will take the form of PPPs.

This reinforces the widely held view that cooperation between government and the private sector is vital to tackle South Africa's infrastructure gaps over the coming decade. Cooperation, flexibility around the ownership and operation of infrastructure, improved governance, and enabling regulation can ensure that future investments into electricity, transport, and water infrastructure deliver the necessary returns.

Innovation and technology are playing a part in tackling systemic risks too. Santam is using geocoding and geo-mapping to create dynamic peril maps that provide location-specific information about subsidence, earthquake, flood, hail, and lightning density exposures, among others. Data from the geocoding models is used alongside traditional underwriting considerations to set appropriate insurance terms at renewal or when writing new business. Santam has already geocoded over 80% of its property portfolio.

Santam estimates that its geocoding initiatives saved over R300 million in flood loss claims in 2024.

Toyota South Africa Motors (TSAM) offers a case study on how insurance and risk mitigation can complement each other. The firm's Prospecton facility suffered heavy damage during the April 2022 KwaZulu-Natal floods.

The resulting flood damage and 16-week halt in production prompted an insurance claim estimated at over USD350 million. TSAM has since invested approximately R236 million in additional flood prevention measures to safeguard against future events. The business remains insured and continues to operate, demonstrating the critical role of insurance in business resilience and recovery.

One of the unforeseen technology risks arises from South Africa's revamp of its broadband spectrum, notably the planned switch-off of 2G and parts of the 3G bandwidth. Large telecoms firms are already eyeing the cost savings that would accrue from migrating their networks to 4G or better, but this presents challenges for insurers and clients as certain home alarm systems and vehicle telematics devices depend on this existing infrastructure to function.

As far as global reinsurer-enforced terms go, Santam does not expect further systemic risk-related exclusions to impact its South African customers in the short term. Globally, reinsurers have started limiting potential loss exposures to the widespread use of polyfluoroalkyl (PFAS), chemicals found in non-stick cookware, stain-resistant fabrics, and firefighting foams. While this intervention has not yet materialised locally, it may yet come.

Shifting focus to macroeconomic risks, geopolitics and geopolitical fragmentation have the potential to disrupt currencies, financial markets, and supply chains, each presenting challenges to insurers. For instance, global supply chain disruptions affect imports and exports, driving inflation. For insurers, the consequences are felt in the availability and cost of replacement items (especially vehicle parts) and affordability for their insured clients.

Since his second inauguration as President of the United States in January 2025, Donald Trump has issued decrees impacting a range of macroeconomic factors – most notably, the imposition of hefty tariffs on international trade, which, at the time of writing, were being challenged in U.S. courts.

South Africa faces heightened risks amid escalating geopolitical fragmentation, stemming from the ongoing deterioration of U.S.–South Africa relations. Aside from macro-currency and stock market impacts, the agriculture and healthcare sectors are vulnerable, with the African Growth and Opportunity Act (AGOA) under review ahead of its scheduled expiration in September 2025, and the recent termination of certain funding under the U.S. Agency for International Development (USAID) programme.

Amid heightened economic uncertainty, insurers have their work cut out. They'll need to keep a close watch on changing geoeconomic and geopolitical dynamics and assess how these developments impact the businesses and households they insure.

The insurance sector's gross written premium (GWP) and profitability are inextricably tied to macroeconomic metrics like GDP growth and inflation – and any contraction in economic activity hits every line of insurance. By May 2025, the International Monetary Fund (IMF) had downgraded its growth forecast for South Africa from 1.5% to 1%, citing concerns over the impact of U.S. trade tariffs. This adjustment does not factor in the potential impact of any further deterioration of U.S.-South Africa diplomatic relations on the agriculture and tourism sectors.

Future approaches to systemic risk depend heavily on funding, with affordability standing out as the major obstacle to a government-owned flood or wildfire risk pool. These pools would divert funding from education, healthcare, and housing – all priority expenditure items for government. For the time being, South Africa will continue to rely on the political violence risk pool operated by state-owned SASRIA SOC Limited.