Marius Botha

Partner
Financial Risk Management: Actuarial

Tel: +27 77 602 4371
Email: marius.botha@kpmg.co.za

Mohammed Ahmed

Manager
Financial Risk Management: Actuarial

Tel: +27 66 391 2248
Email: mohammed.ahmed@kpmg.co.za

Too risky to insure : pooling as a solution to complement traditional insurance

South Africans are increasingly paying more for less and this holds true for insurance cover. The number of South Africans who are fully protected by insurance cover is reducing due to economic and underwriting pressures. Risks that were once insurable are gradually becoming systemic in nature and less insurable, with some risks becoming uninsurable.

Our understanding of risk is dynamically changing with risk exposures growing larger in severity and more frequent in incidence, which means that risk events are becoming increasingly difficult to predict and complex to analyse.

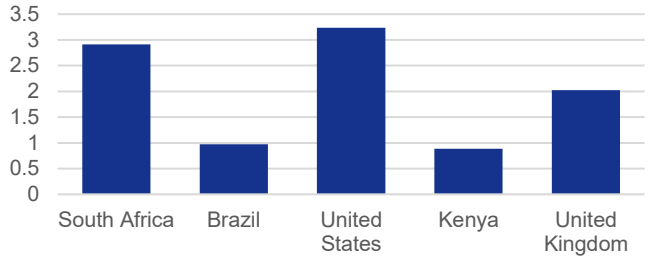
These factors will likely lead to a wider divide in the extent of assets that may be insured. Without deliberate intervention by the insurance industry, we might witness a regression in the ability of and confidence in the industry to serve its purpose.

So, what can the South African insurance industry do about this?

Context is key

It is widely known that South Africa has a high insurance penetration rate relative to global peers. This is typically defined as the ratio of insurance premiums to a country's gross domestic product (GDP)[1]:

General insurance penetration rates

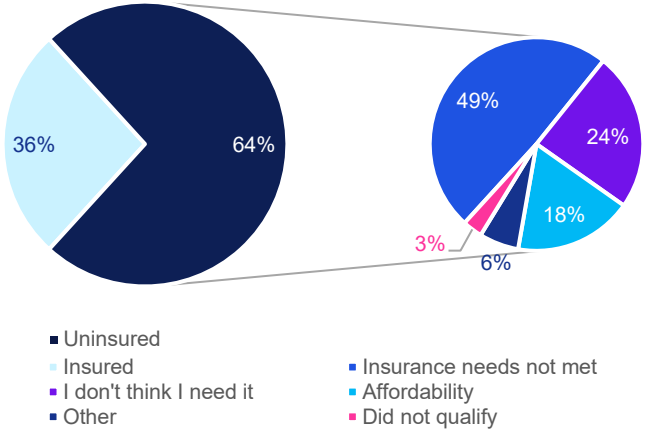


Looking at the table above, at first glance the general insurance penetration rate for the South African insurance market, at just below 3% of GDP, is in close range compared to developed markets like the United States (US) or the United Kingdom (UK).

However, this indicator alone does not tell the full story as the formal corporate sector in South Africa contributes the vast majority of these premiums.

The reality is that a large extent of the South African population is uninsured or underinsured. According to TransUnion's Q2 2024[2] industry poll, 64% of South African homeowners are either underinsured or not insured at all.

Uninsured homes



Of those consumers who do not have insurance cover for their homes, 67% said that affordability or the availability of suitable products were the main reasons for not having insurance cover.

The reality of not having insurance cover for your home becomes pronounced when natural disasters occur and communities face widespread disruption. An example of this occurred with the KwaZulu-Natal floods in 2022. This weather event resulted in over 400 deaths, the displacement of more than 40,000 people and R54 billion in damages in aggregate. The total extent of insurance payouts was only R27 billion, i.e. half the total loss was uninsured. This material loss of value, for businesses and individuals, stands in stark contrast to the perception that the South African insurance market is deeply penetrated.

[1] https://data.worldbank.org/

[2] https://www.transunion.co.za/content/dam/transunion/za/business/documents/insurance-trends-h1-2024.pdf

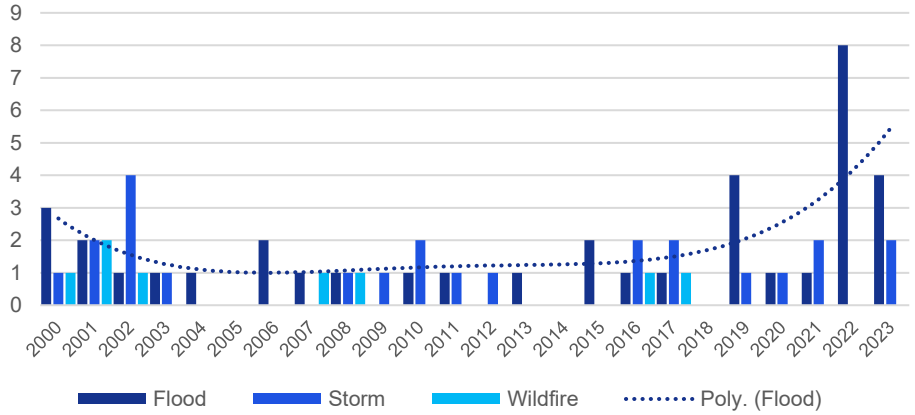
KPMG

Multifaceted challenge

Solving for the insurance gap is only going to become more difficult. Across a wider range of risks, South Africans are finding it harder to access cover or afford increasing premiums for the same cover, and in some cases are being priced out of the market entirely. Rising climate-related natural disasters, electricity grid instability and infrastructure failures have resulted in insurers raising premiums and introducing stricter underwriting terms and conditions. Second order effects include an increase in the extent of regulatory and economic capital required to be held, higher reinsurance premiums and a higher return-on-equity demanded from shareholders, further driving up premium costs.

According to the National Research Foundation - South African Environmental Observation Network (NRF – SAEON)[3] there has been an increase in the number of flood-related incidents in South Africa. Up until 1996, no more than one flood-related incident per year was experienced. This increased to an average of four flood-related incidents per year for 2019 and 2023. In 2022, a record number of eight incidents were recorded. It is reasonable to expect this pattern to continue or worsen with the effects of climate change.

Natural disasters over time in South Africa



Adding to this challenge is the prolonged extent of underinvestment by the South African government in maintaining and upgrading critical infrastructure. As the Chief Underwriting Officer at Santam, Michael Cheng, noted in a recent Daily Investor article[4], infrastructure failure may not appear among the top global risks, but in South Africa it ranks in the top five.

In fact, 83% of respondents in a recent commercial survey identified poor infrastructure as the leading emerging risk to their business over the next two years. This is largely due to failing roads, inadequate stormwater systems and weak urban planning, all of which significantly amplify the damage caused by extreme weather events.

The 2022 KwaZulu-Natal floods were a clear example, with blocked canals and neglected drainage systems contributing heavily to the destruction. Furthermore, urban and commercial development continues in flood-prone areas like Ladysmith and St Francis Bay, and in dolomitic zones such as Centurion, putting even more properties at risk.

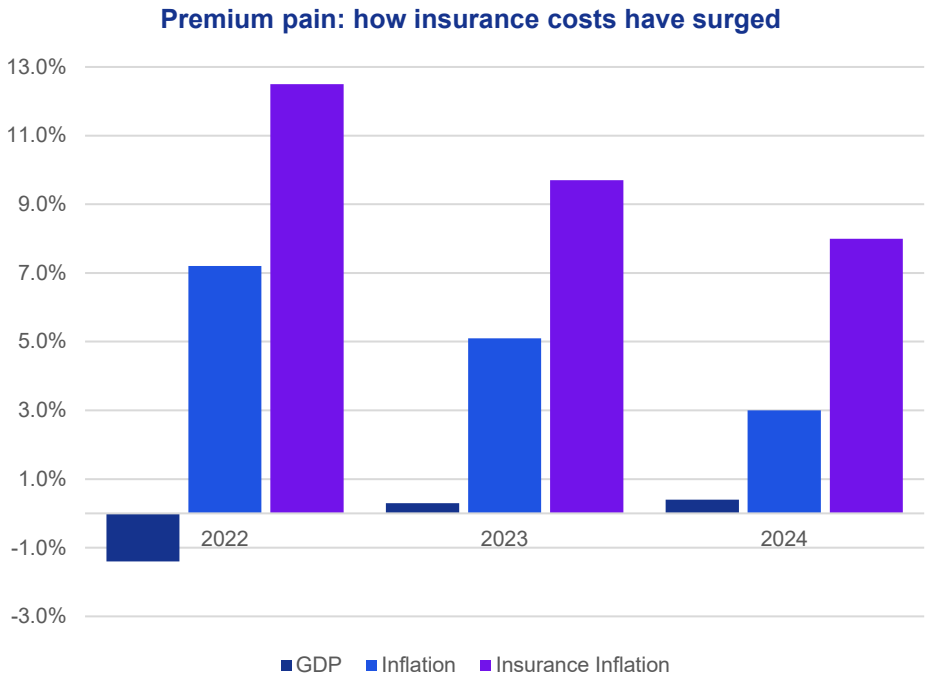
Cheng draws a comparison with the US, where wildfires in Los Angeles spread faster and further due to ageing infrastructure and underfunded emergency services. For both South Africa and the US, it is not just the natural hazard itself but the surrounding built environment that drives up losses. As infrastructure continues to deteriorate and exposure increases, insurers are left with few options - raise premiums, add more exclusions or pull back from high-risk areas entirely. This not only means that insurance cover is harder to access, especially in already vulnerable communities, but it also means that climate-related events are becoming systemic in nature, with the potential to destabilise both the insurance industry and the broader economy.

These challenges are further exacerbated by the high extent of wealth inequality in South Africa. As premiums rise and exclusions become more common, the most vulnerable citizens are left without adequate protection. This results in the insurance industry not being able to fulfil its social and economic role if the most vulnerable in our communities are being pushed out of the market.

Several large insurers have added exclusions for a national grid collapse, meaning damage caused by a full blackout may not be covered at all. Other insurers have tightened underwriting conditions around loadshedding-related claims, often requiring surge protectors or applying higher excesses, making recovery more restrictive for households already under pressure. When cover is provided, it is increasingly expensive.

[3] https://www.nrf.ac.za/wp-content/uploads/2025/06/Weather-related-disasters-in-South-Africa-from-1980-to-2023.pdf
[4] https://dailyinvestor.com/finance/92930/south-africa-heading-towards-a-serious-insurance-disaster/

Included below is a comparison of insurance premium increases for household content against GDP growth and CPI inflation[5]:



In the past three years, home insurance premiums have increased by an average of 10% per year. Compare this with the average GDP growth of 0.3% per year since 2020 and the average rate of inflation of 5% per year across the same period.

While the current response measures put in place by insurers may be seen as necessary to maintain the sustainability and profitability of the industry, there may be an alternative solution worth exploring to overcome these challenges.

[5] https://www.ebnet.co.za/why-your-short-term-insurance-premiums-are-skyrocketing/
https://iol.co.za/business/advice/2025-03-27-essential-tips-for-south-africans-facing-increasing-insurance-premiums/
https://www.clientsure.co.za/understanding-the-rising-costs-of-insurance-in-2024
https://data.worldbank.org/

Pooling as a potential solution

Several globally recognised alternative models are available for consideration, with these models addressing the incidence of systemic risks and consumer affordability.

One fitting option is pooling arrangements. A pooling arrangement allows a group of insurers, or reinsurers, to come together and share the burden of particularly large, complex or unusual risks. Pooling arrangements are used globally for risk types that traditional markets struggle to cover on their own, like nuclear energy, terrorism and cyber threats. It is also being increasingly used to manage risks from natural disasters. Pooling arrangements help when specialist expertise or high capital requirements make it difficult for any single insurer to provide insurance coverage alone, even with reinsurance market support.

> Pooling itself is not a new concept, but its application in the current context may be.

From the earliest days of community support in South Africa through stokvels and burial societies, to ancient merchant groups in China sharing the risks of lost cargo, the idea of pooling risk has always been central to how people protect themselves from life's uncertainties. The principle is simple: if only one person in a group suffers a loss now and then, the rest of the group can step in to help, knowing that they will receive the same support when it is their turn. Over time, these informal systems were the bedrock on which today's formal insurance industry was built.

There are isolated examples in the South African insurance industry where pooling was used to solve for catastrophe-related risks with government backing. One of the clearest examples was the formation of the South African Special Risks Insurance Association (now known as Sasria SOC Limited or Sasria) in 1979. Following the Soweto uprising in 1976 and the political unrest that ensued, private insurers began withdrawing riot and strike cover. The government stepped in to fill the gap by establishing Sasria, which remains the only insurer in the country offering cover for civil unrest. While it is established as an insurer, its mandatory cover structure shows some overlap into pooling concepts. Its importance was reaffirmed in 2021, when it paid out R32 billion in claims following the riots linked to the arrest of former president Jacob Zuma.

Pooling is also used by traditional insurers to solve for catastrophe-related risks. Research carried out by AXA[6] indicates that there are an estimated 451 pools worldwide, excluding smaller municipal pools from the US:

Insured peril	Africa	Americas	Asia	Europe	Oceania	Global**	Total
Agricultural pool	-	-	-	2	-	-	2
Drought	17	8	5	1	-	-	31
Earthquake	-	5	10	1	1	-	17
Environmental liability	-	-	-	3	-	-	3
Flood	3	8	12	2	1	-	26
Motor	-	-	2	2	-	-	4
Multi-peril	-	6	-	-	-	-	6
Natural catastrophe	15	31	21	13	1	3	84
Nuclear	2	7	4	14	1	-	28
Other*	38	57	60	35	1	-	191
Terrorism	3	2	4	10	1	-	20
Wind	-	28	6	5	-	-	39
Total	78	152	124	88	6	3	451

*Other perils include agricultural insurance, reinsurance, war, energy, medical, aviation, cargo, engineering, oil and gas exploration, micro-insurance, marine, loan guarantee, motor, employers' liability, disaster micro-insurance pools and pools for enterprises involved in hazardous activities.

**Global pools include Global Climate Insurance Pool (initiative put forward by Munich Climate Insurance Initiative (MCII)), Global Index Reinsurance Facility (GIRIF) managed by the World Bank and Global Centre for Disaster Protection funded by the Department for International Development (DFID).

[6] https://axaxl.com/-/media/axaxl/files/pdfs/campaign/reinsurance-outlook/downloads/rebranded-axa-xl-government-pools-report.pdf?sc_lang=en&hash=916BF269442F5335CA94CCBEB1667F03

Historically, the formation of insurance pools and disaster risk financing tools have typically been reactive. They were developed either in response to market failures or catastrophic events that exposed major protection gaps. During and after World War II, aviation war risk pools were created by governments to cover losses related to military conflict, which were considered uninsurable by private insurance markets. Again, governments played a leading role, sometimes directly backing these pools to ensure aviation continuity during periods of heightened geopolitical risk.

After the 9/11 attacks in 2001, terrorism became commercially uninsurable at scale, especially for large commercial property. This led to the formation or expansion of terrorism insurance pools in several countries. Examples include Pool Re in the UK, TRIA (Terrorism Risk Insurance Act) in the US established in 2002 and GAREAT (Gestion de l'Assurance et de la Réassurance des Risques Attentats et Actes de Terrorisme) established in France. These pools were often backed by state guarantees and designed to restore insurance market stability.

Natural catastrophe pools became more common in the late 1990s and 2000s. For example, Turkey established the Turkish Catastrophe Insurance Pool (TCIP) after the 1999 Izmit earthquake.

In parallel, with the rise of public or government-backed pools, the private market and multilateral institutions introduced more innovative tools. Catastrophe bonds emerged in the mid-1990s, allowing countries or insurers to transfer disaster risk to capital markets using pre-agreed parametric triggers. These became increasingly popular after major events like Hurricane Katrina (2005) and the Haiti Earthquake (2010).

Around the world pooling arrangements are being used to manage climate-related disasters and provide quick payouts through parametric insurance. Coverage purchased for immediate disaster response, particularly from the World Bank, is triggered by the scale of natural catastrophe disasters and is generally provided in the form of parametric insurance coverage. The proceeds from claims are used to facilitate catastrophe incident response and recovery efforts. Insurance cover designed with parametric insurance principles is therefore not necessarily indemnity-based (an inherent downside of parametric insurance design) as the payout trigger is not grounded on the actual losses or damage incurred on any one specific insurable event. Rather, payout is based on the occurrence of a specific weather-related peril threshold with specified severity and distribution of the total claim payouts on a specified formulaic basis. Consequently, claim payouts are not based on the actual assessed damage for each receiver of claims proceeds.

The key objective of parametric insurance is immediate payment of funds when it is needed most without complicated or time-consuming claims assessment processes.

Other examples of such insurance pools are:

Caribbean Catastrophe Risk Insurance Facility Segregated Portfolio Company (CCRIF SPC)

The CCRIF SPC is a segregated portfolio company registered in the Cayman Islands. It was formed in 2007 following Hurricane Ivan to provide rapid liquidity to Caribbean governments after major disasters. The CCRIF SPC allows each participating government to maintain a separate risk portfolio, insulating members from each other's losses. The CCRIF SPC currently has 23 member countries (nineteen from the Caribbean and four from Central America). It provides parametric insurance against tropical cyclones, earthquakes and excess rainfall, and has expanded into fisheries and crop coverage. As of 2024, the CCRIF SPC made over USD250 million in payouts and retains a capital base supplemented by donor grants and reinsurance. It covers a combined exposure in the billions of USD, offering critical liquidity to small island states post-disaster.

African Risk Capacity (ARC)

Launched in 2012 as a specialised agency of the African Union, ARC consists of sovereign member states and operates through a financial affiliate, the ARC Insurance Company Limited, a mutual insurer based in Bermuda. ARC provides parametric drought, flood and tropical cyclone cover to African nations, tailored to food security and disaster response. It has 38 African Union member states as signatories, with ten to fifteen countries participating in the insurance pool annually. ARC has paid out more than USD130 million since inception and helps protect over 50 million vulnerable people. Its exposure is managed via internal reserves and reinsurance partnerships with global markets.

These pools allow countries to share risks and access rapid payouts after disasters, strengthening long-term financial resilience in regions highly exposed to natural hazards.

Can the insurance industry pool by itself?

The immediate thought might be that pooling only works if government takes the lead. This is, however, not always the case.

South Africa already has a private insurance market pooling arrangement: the South African Nuclear Pool (SANP). As the name suggests, the SANP was designed with nuclear insurance needs in mind. This need arose in the early 1970s for the South African Nuclear Energy Corporation (NECSA) as nuclear operator of the Pelindaba nuclear power plant and related nuclear reactors. There was a critical need for government to find financial coverage for nuclear-related liabilities for Pelindaba. At the time, before the enactment of South Africa's nuclear regulatory laws, the underwriting requirement was simply for operators to maintain “adequate security” with no specified coverage limits. Insurance cover was fulfilled exclusively by foreign underwriters and pooling arrangements in the first decade or so.

Over time, with the Koeberg nuclear power plant built in the 1980s (today under Eskom) and with the evolution of nuclear regulatory laws, the need arose for a domestic South African insurance pooling arrangement. The general or non-life insurance industry came together and formed what is today known as SANP. Since formation of the SANP, the British Nuclear Pool (later rebranded as the Nuclear Risk Insurers (NRI)), provided immense support for the establishment of the SANP, with a close relationship maintained over the years. Extensive support from other UK market players, including Lloyds syndicates, continue to be provided to SANP. The SANP has grown and today works as an unincorporated association, basically a group of local insurers that pool together under an agreement (rather than a separate company) to provide cover for these critical facilities. However, its members contribute a small percentage of the overall capacity with the large majority of cover provided by foreign nuclear pools.

SANP is supported by the South African Nuclear Pool Administrators (SANPA). SANPA is a legally incorporated entity and represents SANP members in managing nuclear risk insurance cover on the full value chain. SANPA is therefore a key market player that facilitates coverage requests from nuclear power operators, who reach out through their brokers, and efficiently coordinates transactions and relationships both within SANP and with international insurance pools to satisfy the requirements of the nuclear operator policyholders. This role is particularly vital due to the co-insurance approach used in these insurance placements within pooling arrangements.

[7] *Source: https://axaxl.com/-/media/axaxl/files/pdfs/campaign/reinsurance-outlook/downloads/rebranded-axa-xl-government-pools-report.pdf?sc_lang=en&hash=916BF269442F5335CA94CCBEB1667F03*

Additionally, participants from foreign pools entrust SANPA with some of their administrative duties and to coordinate with SANP. In its administrative capacity, SANPA provides intermediary services crucial to both SANP’s members and foreign pool participants, which includes the collection of premiums and handling of claims. The latter is important to ensure one single party acts on behalf of stakeholders in appointing claims assessors should a claim emerge. SANPA also liaises with lead underwriters and specialist engineers and participates in onsite visits of nuclear power plants, preventing the need for individual insurers having to carry out individual underwriting risk assessments.

What is evident from the above is that SANP and SANPA already provide a workable model for pooling arrangements in South Africa. SANPA is well positioned to provide similar solutions to the South African market should domestic insurers organise themselves to coordinate coverage for other risk types.

The South African Insurance Association (SAIA) also plays an important role as the general insurance industry body. SAIA has been supporting SANPA and SANP in promoting the affairs of the South African nuclear pooling regime since inception, and similarly can play a leading role in helping shape other pooling arrangements by encouraging its members to consider similar alternative market solutions.

However, the SANP and SANPA initiative is South Africa’s only formalised proactive pooling arrangement in place. As an industry, perhaps it is time to come together again to proactively solve for natural disasters and climate change.

Considerations for making a pool successful

There are many factors that contribute to successful pooling arrangements[7], which we explore below:

Financial viability and sustainability

Pooling arrangements can be an effective way to provide cover for catastrophe-type risks that are generally uninsurable. However, to remain sustainable, these arrangements need to charge a premium that fairly reflects the underlying risk. This is challenging for emerging risks, where there is little historical claims data, losses are often severe and to an extent unprecedented, and expert judgement from specialist underwriters is critical to ensuring appropriate pricing.

In traditional insurance, this gap is often bridged by adding post-loss surcharges or raising premiums after an event. For pooling arrangements, however, this is not realistic due to the nature of the claims being covered. Take a hurricane, for example, where communities may be displaced and unable to pay premiums in the aftermath. Instead, a more practical approach is to build a diversified funding base. This can include pre-loss premiums, retained earnings, capital reserves, contingent debt, traditional reinsurance, self-insurance funds and financial instruments like derivatives and catastrophe bonds, where each of these factors will assist in ensuring the continued viability and sustainability of the pooling arrangement.

Local private market collaboration

For pooling arrangements to function effectively and sustainably, collaboration with the private insurance market is essential. Leveraging the operational capabilities of local insurers, particularly for distribution, policy issuance and claims handling ensures pools are rooted in existing infrastructure and can respond quickly after loss events. Using insurers' in-house claims teams allows for scalable and immediate deployment post-disaster without the delays or costs of hiring external adjusters.

Importantly, pools should complement and not compete with the private market by stepping in only where risks are too severe, uninsurable or unaffordable. This partnership approach ensures pools are additive to market capacity and focused on the protection gap. Risk should be appropriately shared: policyholders and ceding companies must retain some exposure to incentivise mitigation measures and ensure the pool is used for extreme loss events. At the same time, pools should transfer risk to the broader private market through tools like reinsurance or catastrophe bonds.

Enabling legislation through government collaboration

Premium income from low frequency, high severity, single peril and single geographical risks (e.g. nuclear risks) builds up distributable reserves quickly and may appear to be profitable by virtue of nothing happening in the catastrophe market. It is, therefore, important for pools to build up these reserves over long periods of time and in periods where no such catastrophe events occur. As a result, there is a risk that short-term political or regulatory interventions may hinder the ability of the pooling arrangement to effectively achieve this.

It therefore follows that in order to function effectively, pools often require specialist regulatory dispensations that acknowledge their unique risk profile and structure. At the same time, regulators need confidence that, when a major event does occur, all participating insurers will honor their commitments and claims will be paid in full.

There is no specific regulation in place in South Africa which governs pooling arrangements, as is the case in other jurisdictions. This regulatory uncertainty is not conducive to market growth for nuclear risk insurance or the creation of an enabling environment for foreign pools and/or foreign underwriters. The only exception is Lloyds for which there is a regulated regime in South Africa, but they too do not contribute substantially to the underwriting capacity on South African domestic nuclear power plants.

The extent of regulatory uncertainty for foreign market players is an important contributor as to why pooling arrangements in South Africa may not have gained traction. However, the success of the SANP and SANPA model is proof that this shortcoming should not prevent us from working on a solution.

A call for pooling

Pooling is not a one-size-fits-all solution. It is, however, a critical component to the broader strategy needed to address growing climate risks and widen insurance affordability gaps. With the reduction in risk appetite of private insurance companies over high-risk areas, pooling offers a potential solution to sustain and broaden coverage where traditional insurance models fall short.

Realising this potential may require greater legal clarity and targeted regulatory reforms to support accelerated participation and coordination. By enabling shared risk, expertise and resources across public and private sectors, both domestically and globally, pooling structures can assist with maintaining essential protection.

The SANP has demonstrated that this model works and is sustainable. What is important is the collaboration of the South African insurance market to explore and implement similar models before the protection gap becomes unmanageable.