SECP

SECURITIES AND EXCHANGE
COMMISSION OF PAKISTAN

INSURED PAKISTAN: POOL DYNAMICS

DEMYSTIFYING THE COMPLEXITIES AND DEVELOPING
COLLABORATIVE PROTECTION STRUCTURES

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COMMISSIONER'S MESSAGE

I am pleased to present a detailed report highlighting the pressing need for establishing specialised risk pools in Pakistan along with a myriad of potential opportunities it offers. Reflecting on the need for strong, consistent and systematic insurance pools within the country, this report highlights the current global and local insurance landscape, global insurance pool comparatives and success stories, and a comprehensive mechanism for setting up Insurance Pools in Pakistan. Originally launched at the International InsureImpact Conference in December 2023, feedback from the industry further adds perspective to strengthening the insurance pooling concerns.

The insurance risk pooling establishments are a global phenomenon used for coinsurance and reinsurance of special risks with standardized terms of participation for all stakeholders. Multiple examples of insurance pools can be found in comparable jurisdictions (discussed in the report) for specific risk classes such as general liability, fire and property damage, agriculture insurance, nuclear installations liability, terrorism insurance, aviation and transport risks, along with catastrophic risks, to name a few.

The pooling of risk and resources in a systematic manner enables the government, insurance industry and policyholders to collectively mitigate large risks that are too big to manage individually. Given its significance for the insurance market, the Regional Cooperation for Development (RCD) set up by Pakistan, Iran and Turkey founded the specific risk pools for each country in 1966 and then merged it to form regional reinsurance pool called ECO reinsurance pool in 1975, to be managed by Turkish Milli Re. The management of ECO reinsurance pool was shifted to PRCL in 1995, however this later on withered off in early 2000s. Both Iran and Turkey have established risk pools which are functional and successful, however, no risk pool could be materialised in Pakistan despite its persistent need.

Formation of insurance pool(s) in Pakistan is one of the objectives of the Insured Pakistan five-year strategic plan of the SECP launched in December 2023. A prospective blueprint for establishing an insurance risk-pooling mechanism within the domestic market is outlined, considering the market landscape and relevant regulatory framework. Multiple options for establishing an insurance pool are deliberated such as forming a separate entity under insurance regulatory framework or a market-based arrangement to form a consortium of insurance companies for specific risks with standardized coverage, participation and terms and conditions. An alternative approach would be to establish a statutory body under a special statute however this is an arduous process and can be considered at subsequent stages.

The domestic risk-pooling facility will enable access to coverage of specialised risks, cost efficiency, enhance domestic risk retention capacity, market growth, reduction in foreign exchange outflow, and closing of protection gap for specialised and essential risks. For materializing the idea of insurance pool, the key stakeholders need to accelerate the efforts in the form of centralised body or working group. The terms of risk coverage, selection of risks, partnerships, regulatory support, cost- sharing and operational management remain the prerequisite for the pool to work and sustain. The option of support from government or multi-lateral donor agencies may be explored at the inception level.

Collectively the SECP, and insurance industry, alongside other relevant authorities must evaluate the most feasible option and prioritize the development of a specialised risk pool for broadening the insurance safety net and optimizing reinsurance capacity in the country. It is pertinent to mention that responsibility to lead this initiative lies with the Finance Division and high-level ministerial ownership is required to change the approach of budgetary allocations and cash handouts to development of systematic risk mitigation mechanism through the formal insurance sector.

In the end, I would like to commend the efforts of the Insurance division, for the progress of the Insurance industry, with special thanks to the authors of this report, Mr Falak S. H. Soomro (Advisor Insurance), Mr Nasir Khan Yousufzai (Additional Joint Director) and Ms Sabahat Ul Ain (Additional Joint Director) for a comprehensive report on this important area.

Aamir Khan
Commissioner Insurance

EXECUTIVE SUMMARY

This study has been undertaken to highlight the need of creation of insurance pools in Pakistan amid rising climate change risks, dependence on national exchequer for risk financing and rehabilitation, lack of systematic and synergized approach for operating large-scale insurance schemes, inadequate capacity of insurance sector, and massive protection gaps leaving individuals and businesses vulnerable against multiple insurance risks.

Catastrophe events have become more frequent in the recent times (1-in-100 years event, rather than 1-in-250 years) which is also indicated by the World Bank as Pakistan being 5th most vulnerable country to the climate change. Despite being prone to significant risks in the context of climate change, major population uninsured, and the economic uncertainty, there is no national-level disaster risk insurance program in Pakistan. The insurance sector in Pakistan is not adequately equipped and capitalized to provide such large and catastrophic insurance coverages individually and/or collectively. The risk management role of the insurance sector is majorly dependent on reinsurance support from international markets amidst infinitesimal capacity size of the domestic insurance market coupled with decreasing value of Pakistani rupee. The major population of the country remains uninsured and exposed to significant insurance risks. The current national-level schemes of insurance protection offer lower protection and are operating under different controls in a fragmented manner.

The objectives of risk retention within the country, domestic insurance market development and closing the protection gaps particularly in agriculture, disaster, accidental and health risks can be achieved through formation of insurance pooling mechanisms within the country i.e. formation of (co)insurance pool and/or reinsurance pool. Globally, specialized risks are managed through industry-based insurance or reinsurance pools with standardized terms of participation for all stakeholders. By pooling the resources together, insurance companies, government and the wider stakeholders can collectively absorb large losses that are not tenable for an individual company. For instance, the Turkish Catastrophe Insurance Pool (TCIP) and Turkey Agriculture Insurance Pool (TARSIM) are examples of insurance pools for catastrophe and agriculture respectively, in Turkey at the national level. This offers insurance protection in a systematic manner to various uninsurable risks, benefitting the population, the insurance sector and the government resulting in increased insurance penetration in the market. Other examples include Moroccan Solidarity Fund for Catastrophe Fund formed for disaster risk coverage, Ghana Agricultural Insurance Pool (GAIP), Pacific Catastrophe Risk Assessment & Financing Initiative (PCRAFI) and others.

In Pakistan, the insurance schemes for multiple risks operate in silos without synergies on national and provincial level risk pooling mechanisms. The implementation issues in mandatory insurances further augment the protection gaps. The approach of cash disbursement to public under disaster relief programs by the government, instead of routing the risk through insurance systems contributes to the lack-lustre in insurance market growth and expansion of coverage.

The key objective for forming the insurance pool in the country is improved risk mitigation which has multi-pronged benefits for the general public, insurance industry, regulator and the government such as access to affordable insurance coverage for individuals and businesses, capacity development, better coverage and terms and conditions, competitive rates, resulting in closing of protection gaps and increase in insurance penetration, and reduction in fiscal deficit by reducing burden of disaster and other risks financing through budgetary allocations.

For insurance pool formation in Pakistan, multiple aspects need to be considered such as regulatory framework, legal structure of pool, participation terms, governance, and management of operations with adequate technical expertise. The risk selection, terms of risk coverage, partnerships and risk-sharing, regulatory support, cost-sharing and operational management remain the prerequisite for the pool to work and sustain.

As discussed in section E of this report, three options are explored for insurance pool formation. Initially, forming a consortium-based co-insurance pool may be considered for agriculture insurance, motor third party liability insurance or disaster risk insurance. The pool may be formed as a separate legal entity following the inclusion of regulatory provisions relating to insurance pool through amendments to the Insurance Ordinance, 2000 as deliberated in this report. High-level ministerial assent and support is prerequisite for such reforms. The detailed aspects of both the options are envisaged in the report. An alternate approach could be formation of pool as a statutory body, however, this option is less viable legally and administratively due to involvement of multiple stakeholders at the provincial and federal level.

The insurance pools offer different benefits and opportunities but the idea is coupled with a myriad of challenges and risks. While it can contribute significantly to enhancing resilience, reducing vulnerability, and promoting sustainable development, it brings along the challenges of complexity in designing insurance pool, divergence in stakeholders' priorities, data availability issues, dearth of technical experts for pool management, scarcity of capital and funding sources, and climate change implications. The risks of mispricing, financial instability and insolvency, the uncertainty amid evolving legal and regulatory environment also need to be addressed.

The role of Insurance Association of Pakistan (IAP) is crucial in creating engagement and building consensus among the stakeholders. The SECP's five-year strategic plan "Journey to an Insured Pakistan" emphasizes on improvement in the insurance landscape which can be leveraged through insurance pools formation. This certainly requires ownership at relevant ministries/ departments on federal and provincial levels. One approach to deal is formation of coordination and monitoring council for insurance development and subcommittees working under each objective of the five-year strategic plan.

SECP can act as a liaison office for technical engagements between different provincial and federal government departments and the insurance sector so as to proceed towards the creation of an insurance pool for specialized risks. The consensus of Ministry of Commerce and Ministry of Finance being the key decision-maker, is prerequisite. The complete action matrix has been deliberated in this report for the stakeholders to initiate and benefit from development of insurance pools in Pakistan.

A. THE NEED FOR INSURANCE POOLS

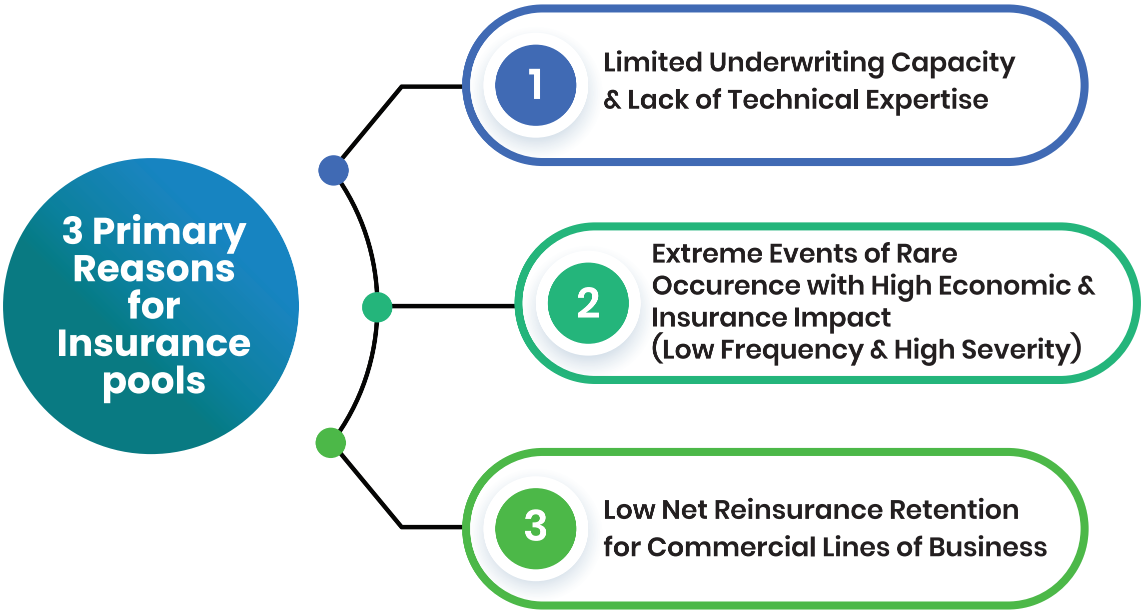
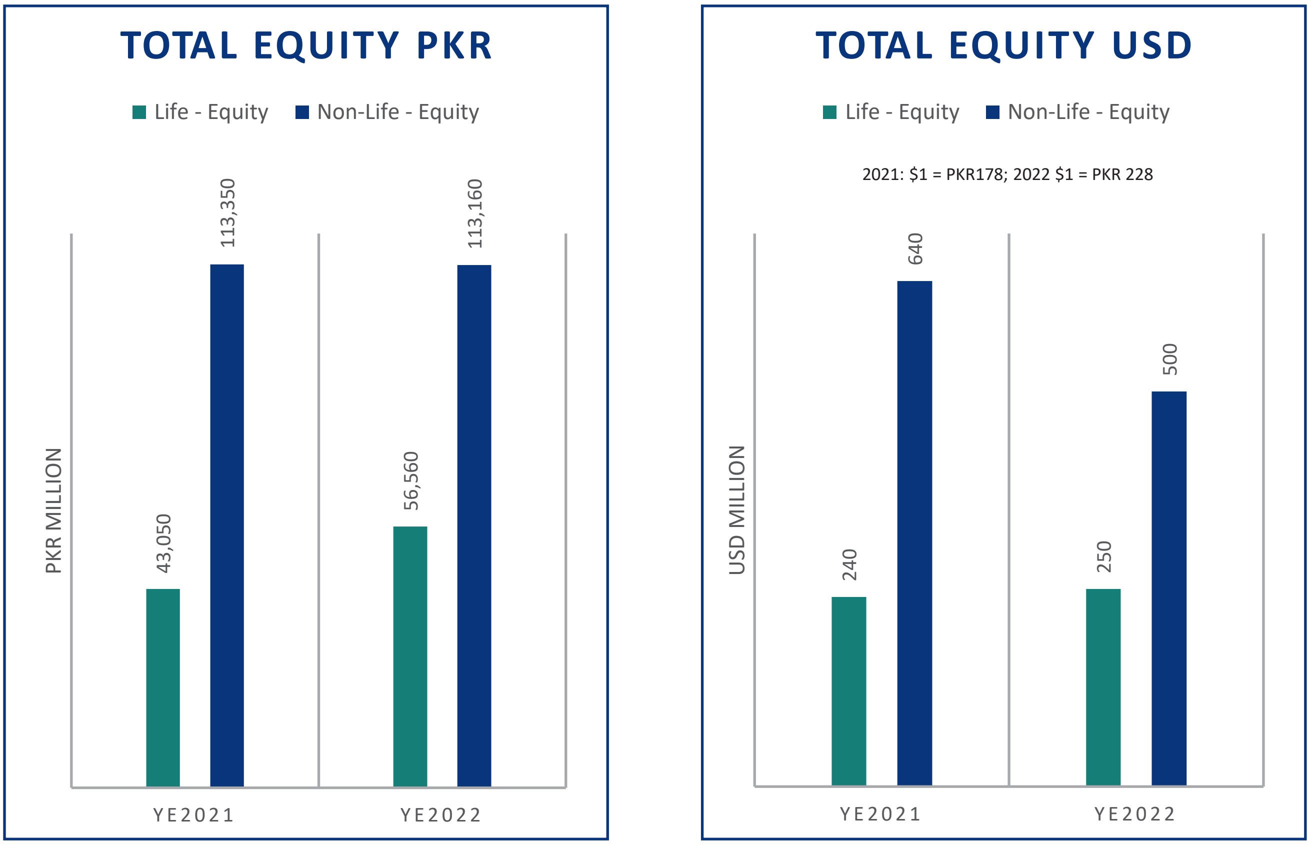


Figure 1 - Needs for Insurance Pools

Climate change has been a bigger threat to Pakistan with recent floods in 2022, affecting 33 million people and submerging a third of the country. This disaster killed 1,700 people displacing 7.9 million people, and resulting in infrastructure damage and economic losses of USD 30 billion. Due to these recent events, the global reinsurance cycle is in the period of hardening where reinsurance markets are contracting, premium rates are increasing, underwriting and claims terms and conditions are tightening. Coupled with increasing value of US Dollar against Pakistani rupee, inflationary impacts and economic uncertainty, Pakistan faces significant insurance protection challenges to increase insurance coverages for its essential assets, the population and infrastructure.

The reinsurance analysis is generally developed on the capital size of the insurance companies and the industry as a whole. According to Insurance Industry Statistics 2022 Report published by the SECP, the total insurance industry Shareholders' Equity in dollarized terms has reduced over the year 2021-22 due to Dollar appreciation (YE2021: $1 = PKR 178 to YE2022: $1 = PKR 228, used for conversion below). Looking at industry shareholders' equity and assets sizes in dollarized terms – particularly for Non-Life business - reflect very small capital size against large sums insured (or exposure).

Figure 2 - Industry Equity (in PKR m and USD m)



The objectives of risk retention within the country, local insurance industry capacity development and improved risk management in the backdrop of climate change events can be achieved via formation of Insurance Pools by adopting international best practices. An insurance pool is a type of structure or arrangement that allows insurance companies to pool their resources to share risks. This can be helpful for insurance companies who want to offer coverage for a particular type of risk that they would not be able to cover on their own. There are two main types of insurance pools:

- **Coinsurance pools:** These pools are formed by a group of insurance companies who agree to share the insurance of a particular type of risk. Each insurance company contributes a portion of its capacity to the pool, and then the pool assumes the risk of the insured. Premiums and losses are allocated to each insurance company according to its share in the pool.

- **Reinsurance pools:** These pools are formed by a group of insurance companies who agree to reinsure each other's policies. This means that if one insurance company experiences a large loss, it can turn to the pool for reimbursement. Reinsurance pools can help insurance companies to manage their risk exposure and protect their capital.

In simple terms, an insurance pool is essentially a group of insurance companies and relevant organizations jointly participating, up to a certain proportion, in the insurance of a particular risk or class of business. The reasons why pools are common are:

(a) the number of parties to be insured are few and their risk behavior is largely unpredictable;

(b) the risk to be insured requires a capacity, which could not be provided by the means of its members, and;

(c) the risk in question presents some particular hazardous aspect, which would render coverage by traditional methods unfeasible.

According to a study conducted by Ernst&Young on Insurance Pools, there were a total of 45 Insurance and Reinsurance pools, 24 Insurance Pools and 20 Reinsurance Pools operational in 2014 within Europe only. These 89 pools operational in twenty different classes of business reflect that Pools arrangement are not only just appropriate for NatCat and Agriculture insurance businesses but also for other lines of business which are beyond insurance company's risk appetite.

In the aftermath of extreme natural and man-made catastrophe events (like tsunamis, earthquakes, forest wildfire, terrorist activities) in the recent times, many countries have developed their local collaborative arrangements to maintain insurance coverages and follow better risk management approaches. Similarly, it is the right time to ensure that collaborative efforts are initiated to protect essential assets of the country, the population and the infrastructure.

In Pakistan, significantly lower retention levels have been witnessed in the facultative reinsurance business when compared with the treaty reinsurance business, hence, distorting the overall industry retention levels. The issue of local risk retention can be addressed by effectively creating a pooling arrangement for the risks in which maximum foreign ceding is witnessed. Also, the pool arrangement can be beneficial for creating re-takaful capacity for the domestic market where the unavailability of adequate and suitable re-takaful coverage has been a lingering issue since the inception of takaful in Pakistan. A thorough analysis of industry retention levels over the period and underlying factors contributing thereto, will be given in the SECP study on the State of Reinsurance Market in Pakistan, to be published shortly.

B. BROAD-LEVEL OBJECTIVES

The overarching broad objectives of insurance pools are the betterment and protection of the respective economies from the risks for which the insurance pool is established. Governments, regulators, and the industry will achieve the following benefits:

Table 1 - Overarching Objectives

GOVERNMENT	REGULATOR	INDUSTRY	GENERAL PUBLIC
▪ Control on outflows of foreign exchange ▪ Reduction in fiscal deficit and strengthening of the economy ▪ Reliance on local capital and development of the economy ▪ Protection to masses	▪ Increase in insurance penetration ▪ Solvency and stability of insurance companies in local insurance industry ▪ Growth in the insurance market	▪ Direct access to masses ▪ Access to better terms and conditions, competitive rates, and less reliance on international markets and placements ▪ Availability of a wider scope of cover ▪ Image-building	▪ Insurance protection and awareness and sense of protection ▪ Easy access to insurance at lower and affordable rates ▪ Enhanced coverage and protection for the masses

The benefits of a well-designed insurance pool having the participation of both, public and private sector insurance companies can be summarized as follows:

- The pool can generate greater credibility and acceptability than the insurance products offered by individual insurance companies through the involvement of key public-private sector stakeholders.

- The pool could allow greater government control of specific risks such as agriculture insurance, particularly if it is supported by appropriate legal arrangements allowing necessary government role in key decisions such as checks and balances on services and the level of funding. It can generate consolidated data useful to guide the government to make policy decisions related to premium subsidies.

- The pool could help ensure broader coverage and more favourable insurance terms, including offering multiple perils and developing rate-making capacity for selected crops and livestock products, thus benefiting all the stakeholders involved i.e. the govt., the insurance companies and the farmers. It can also fill in the gap between the domestic and international reinsurance markets.

- A coinsurance pool enables risk pooling and risk aggregation, which increases risk retention capacities locally. Further, diversification of risk has the potential to reduce the cost of related reinsurance.

- Product design and provision of ongoing support can be much more efficient when a centralized pool gathers information and assesses the needs of the insured farmers.

Despite different designs and operational structures of pools (discussed in subsequent sections), the insurance pools share some common elements that contribute to their success:

1. **Target risk coverage:** pools are often designed to address specific risks such that collective management leads to diversification of the risks. An interesting example relates to agricultural producers, similar to the ones discussed above, covering droughts, floods, index-based livestock or pest infestation coverage. This targeted approach allows for more tailored insurance products and risk assessment methodologies.

2. **Data-driven risk assessment:** insurance pools mostly utilize different data-driven approaches such as satellite imagery, weather data from meteorology divisions, industry-collated data and information to prepare and assess the risks and their triggers for payouts. The data-driven approach reduces the reliance on subjective assessments and minimizes the potential for fraud or moral hazard.

3. **Technology-enabled solutions:** Insurance pools increasingly leverage technology to streamline operations, improve communications with policyholders and enhance risk assessment capabilities. This includes using mobile applications, web platforms and data analytics tools.

4. **Partnerships and collaborations:** Insurance pools often involve collaborations between insurance companies, reinsurance companies, governments and non-governmental organizations. These partnerships can bring together technical expertise, resources and access to larger markets, enabling the development and implementation of effective insurance solutions.

5. **Capacity Building and Awareness:** Successful insurance pools often invest in capacity building and awareness programs to educate the masses about insurance protections and coverage, the nature of insurance products, enhancing and building risk management and resilience practices, and the benefits of participation in the insurance pools.

C. OPPORTUNITIES, CHALLENGES & RISKS

The following table presents the Opportunities, Challenges & Risks of setting up an insurance pool. By addressing the challenges and seizing the opportunities, insurance pools can play a significant role in enhancing resilience, reducing vulnerability, and promoting sustainable development, thereby increasing insurance protection and coverage for the population of Pakistan.

Table 2 - Opportunities, Challenges & Risks

OPPORTUNITIES	CHALLENGES	RISKS
Risk Sharing Allow spreading of risks covering high-severity low-frequency events, encourages effective risk mitigation strategies through collective efforts, promoting safety measures, preparedness and resilience	**Complexity** Designing and operating insurance pools can be complex and requires strong expertise such as risk assessment, actuarial modelling and financial management	**Underwriting Risks** Mispricing insurance risk can lead to financial losses and eventual insolvency
Reduced Premiums Sharing risks across multiple insurance companies, premiums become more affordable and increase outreach	**Data Unavailability** Inaccurate, Incomplete and Inadequate data poses challenges to pricing and risk	**Operational Risk** Effective internal controls and risk management practices are necessary to manage fraud and errors. Strong governance structures and governance are essential
Public-Private Partnership Collaboration between government, private sector and development organizations to leverage and enhance resources through pools, fostering greater financial resilience.	**Governance Issues** Coordinating with different stakeholders with differing views and challenges	**Liquidity Risk** Maintaining sufficient liquid reserves and capital necessary to ensure the financial solvency of insurance pools and enhance credibility.
Technological Integration Collaboration between government, private sector and development organizations to leverage and enhance resources through pools, fostering greater financial resilience.	**Regulatory Uncertainty** The regulatory landscape is evolving, leading to potential uncertainties and compliance issues	**Market Risk** Investments in risky assets should be avoided to ensure the adequate risk-reward ratio is optimal

Debt Capital Market	Sustainability	Reputational Risk
Possibility of expanding debt capital via issuance of catastrophe bonds with insurance-linked triggers, providing diversification and enhancing risk financing and financial capacity	Can be challenging in the face of unpredictable disasters, and requires careful planning and management	Maintaining a positive reputation is imperative to safeguard policyholders' and insurance companies' participation whilst maintaining confidence in insurance pools. Transparency in operations is the key
Index-based Solutions	**Capacity Building**	**Regulatory Risk**
Payouts proxy to certain benchmarks such as rainfall levels, yields and/or livestock can improve fraud detection and accessibility with limited data experience	The dearth of technical professionals and retention issues need continuous training and education	Regulatory Risk Regulatory changes can impact the financial stability and operations of the pools
Micro-Insurance	**Limited Capital**	**Climate Change Transition**
Developing tailored insurance products for the masses to expand coverage and protection, considering resource-limited settings	Funding needs to ensure sufficient capital and reserves are built to cover potential losses	Changing dynamics due to climate affecting all facets of insurance pools, needing continuous risk modelling and repricing
Coverage Expansion & Financial Stability	**Reaching Marginalized Communities**	**Moral hazard & Anti-Selection**
Ability to scale the coverage to underserved populations to risk-prone populations. Provides better stability to the economy and stakeholders as a mechanism of risk transfer and reduces the financial burden on the government	Innovative solutions, approaches and partnerships are needed to reach out to marginalized communities in disaster-prone areas	This may increase due to less inclination to take precautionary measures. Insurance companies may purposely place bad business in the insurance pool, instead of total business.

Furthermore, there are many areas to consider to ensure the success of insurance pools. Few challenges are elaborated as follows:

- **Divergence in Stakeholder Interests:** The major stakeholders of the Insurance pool are insurance companies and they may have interests and strategic goals to boost their business therefore, their interest in the Insurance pool may be only to get the benefit of pooling those businesses which are not suitable for them to take-up individually, while other stakeholders like pool administrator, government departments or regulator might have divergent concerns which may be hard to align. It is important to ensure that diversified risks be parked in the pool , which eventually protects the industry.

- **Key stakeholders' cohesive efforts:** Though the insurance companies are major stakeholders, interests of multiple parties are directly dependent on insurance being the primary risk mitigation mechanism for the government, corporate entities and the general public. The Ministry of Commerce and Ministry of Finance need to assume responsibility as power-hub and create urgency for this initiative within and outside the Ministry. The Ministry of National Food Security & Research and provincial counterparts must share their priorities and role in formation of the agri-insurance pool. The SECP, being the insurance regulator, needs to share its wisdom on technical and regulatory issues relating to insurance pool formation and operationalization. All stakeholders on the government end, need to work jointly for insurance pool formation, however, understanding the need and value proposition of this solution is a prerequisite.

- **Creating awareness in the Insurance sector and other stakeholders:** Selling the idea of creating the insurance pool for the industry and their participation in the insurance pool is not an easy one. In this regard, regular workshops, seminars and talks with all stakeholders should be arranged emphasizing that the Insurance pool will be beneficial for the industry and market and ultimately will bring competitiveness and protection for the uninsured assets which will benefit the economy and the business community alongside the government of Pakistan. For instance, agri-insurance protecting the farmers and producers of the agri-products will ultimately fulfil the food items requirement of the country, ensure national food security and contribute to the GDP of the Country.

- **Coverages for non-relevant perils:** Within the Insurance pool it might be a significant challenge to administer it in a way that non-relevant perils are not parked in the Insurance pool risks. Non-relevant perils which are not within the industry's memorandum of agreement (MOA) need to be filtered out to ensure that only mandated risks are covered. For instance, agriculture insurance should only cover agriculture-related risks as discussed in SECP's Crop and Livestock Insurance and natural disaster risks should be dealt with separately.

- **Insufficient take-up:** The pool may take insufficient risks in terms of volume, which may result in the wipe-out of its assets in case of huge claims. It is therefore imperative to maintain sufficient interest within the pool from the well-diversified portfolio or make the participation mandatory for all insurance companies underwriting the specialised risks for which, the pool is formed.

- **Monopolistic regime:** When a pool acts as the sole underwriter of any risk like agriculture or natural catastrophe disaster, this may lead to a lack of competition in the market. Also, this could limit the range of products and services offered by the monopoly pool underwriter. It can restrict the range of perils insured and also restrict the regions where these insurance risk (mentioned above) is offered and/or the type of farmer/entity/assets insured, and also lead to a lack of competitiveness in premium rates charged by the pool. It may be considered that the pooling structure be protected from the relevant competitive pressures through the issuance of appropriate regulation.

- **Insufficient Capital:** The Insurance Pool may face the big challenge of its capital need for assets acquisition and management of running of the pool. The insurance companies participating in the Insurance pool may have constraints of injecting the capital into the pool because the capital injection from the shareholders of the insurance companies requires strategic decision and involvement of many factors.

Funds are required to manage and run the Insurance pool, the participation of all the insurance companies in the proportion of their size, business and market reach, the funds may be provided by the funding agencies and the government, if desired. The acceptance of the existing insurance companies of Pakistan to the Insurance pool is also a challenge and if the regulator steps in the insurance companies may participate and market the pool.

- **Non-collaborative efforts:** In the case of pool insurance, the efforts of all insurance companies concerning risk mitigation, and the collaboration of all stakeholders external to the insurance sector is a very huge task as compared with the collaboration of all relevant persons and departments within an individual insurance company.

D. JURISDICTIONAL COMPARISON & POSSIBILITIES FOR PAKISTAN

GLOBAL CASE STUDIES

The case studies reflected in this section are in addition to the international examples given in Appendix II which cover the agriculture, disaster and catastrophe and nuclear risks but are only touched briefly. All these studies give an indication of how Pakistan can leverage consolidated and efficient operation of insurance risk transfer through pools.

TURKISH CATASTROPHE INSURANCE POOL

The Turkish Catastrophe Insurance Pool (TCIP) was set up to offer affordable insurance to property owners with aim to reduce the Turkish government's fiscal exposure by accumulating funds for future disasters, distributing portions of risk within the country, and transferring other portions to international reinsurance and capital markets.

TCIP operates as a non-profit organization with the status of a public legal entity, primarily funded through premiums. The TCIP operates through a public-private partnership (PPP/3P) in which, private insurers distribute the compulsory insurance on behalf of TCIP while the claims and post sales operations are handled by operational manager (pool manager), under approval and supervision of TCIP Board of Directors. The TCIP is overseen by the Turkish Undersecretariat of the Treasury, while a private insurance company acts as the operational manager (pool manager).
TCIP relies on both risk retention and reinsurance. The TCIP retains the first US$80 million of losses through its reserves, initially supplemented by a US$100 million World Bank contingent loan facility, and transfers excess losses to the international reinsurance markets.

TCIP covers 10.9 million homes across Turkey against earthquake risks, about 54.7% of housing stock, according to Atlas, an insurance magazine 2023 article[1]. There is differential pricing applicable under this scheme according to seven different earthquake zones within Turkey and construction type (i.e. reinforced concrete and other construction), according to TCIP website on the next page. The premium is then determined by applying area covered in m2 multiplied by tariff according to construction type an earthquake zone location.

[1] https://www.atlas-mag.net/en/category/menu-tags/divers/earthquake-in-turkey-ranking-of-affected-regions-according-to-the-insurance-rate

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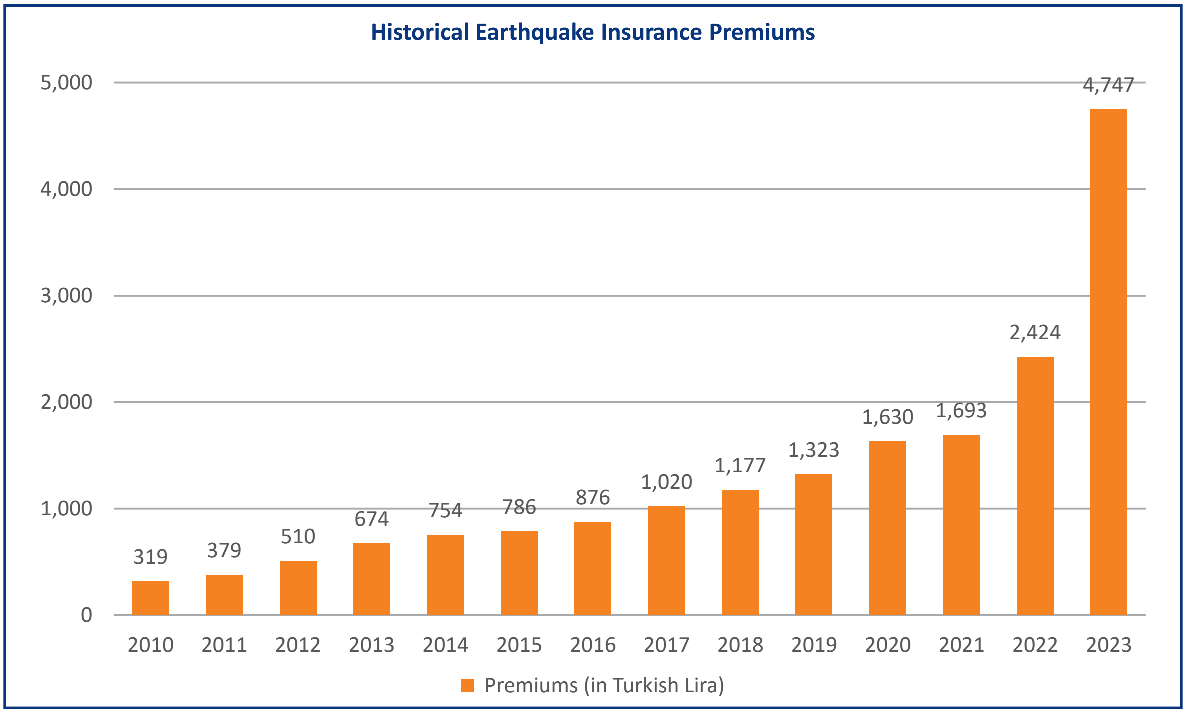
Table 3 - TCIP Tariff Rates per 1000 Turkish Lira

Risk Zones		1st	2nd	3rd	4th	5th	6th	7th
Construction Type	Reinforced Concrete	2.33	2.07	1.76	1.65	1.24	0.88	0.60
	Others	4.10	3.51	3.08	2.88	2.31	1.54	0.99

The premiums development from 2010 onwards is reflected in the chart below. The early 2023 earthquakes resulted in large pay-outs to policyholders in Turkey, amounting to TK 34,500 claims paid out from the TCIP in year 2023 only. This has resulted in substantial increase in premium rates to ensure sustainability of insurance protection to masses on the earthquake fault lines in Turkey.

Figure 3 - Historical Premium of Turkey Earthquake Insurance[3]



[2] https://www.dask.gov.tr/en/tariffs-and-premiums

[3] https://www.statista.com/statistics/1401655/turkey-earthquake-insurance-premiums/

Table 4 - TCIP Premiums and Claims in 2022-2023

millions	Turkish Lira		USD	
	2022	2023	2022	2023
Premiums (A)	2,424	4,747	129	161
Claims (B)	165	34,500	9	1,160
Loss Ration (B/A)	**7%**	**727%**	**7%**	**722%**

TURKEY AGRICULTURE INSURANCE POOL (TARSIM)

The Turkey Agriculture Insurance Pool (TARSIM) was established under the Agricultural Insurance Law No. 5363, enacted in 2005 which outlines the framework for agricultural insurance in Turkey. The law states that the agriculture insurance pool, formed as separate legal entity, is authorized to make insurance, reinsurance and retrocession for the agriculture risks and all insurance companies are mandatorily required to cede agricultural risks to the pool. TARSIM is governed by a board of directors comprising of representatives from the Ministry of Agriculture and Forestry, the Ministry of Treasury and Finance, and private insurance companies.

The pool is managed by pool management company (PMC) which is responsible for underwriting, reinsurance, claims management, financial oversight, risk management, technology management, regulatory compliance and all aspects of operations. By efficiently handling these responsibilities, the PMC ensures that TARSIM provides reliable and comprehensive insurance coverage to Turkey's agricultural sector. When a loss occurs, TARSIM employs a systematic process for claims assessment and payment. This involves field assessments by experts to verify the extent of the damage and determine the compensation amount. TARSIM also uses advanced technologies and comprehensive data collection methods to assess risks, set premiums, and manage claims. This includes satellite imagery, weather data, and historical yield data to accurately underwrite policies and respond to claims.

The government provides substantial subsidies for insurance premiums. The premium subsidy that is provided by the government varies on the basis of products, risks, regions and the scales of operations and is determined by the President on a yearly basis. These subsidies can cover a significant portion of the premium cost, making insurance more affordable for farmers. The table below provides the statistics from the Annual Report 2022[4] of Turkish Agriculture Insurance Pool (TARSIM) for all lines of business:

Table 5 - TARSIM Agriculture Insurance Overview 2019-2022

Year	Number of Policies (m)	Sum Insured (TKY m)	Premiums Total (TKY m)	Premium Subsidy (TKY m)	Paid Loss (TKY m)	Loss Ratios
	A	*B*	*C*	*D*	*E*	*=E/C*
2019	2.088	55,166	2,447	1,275	1,227	50.1%
2020	2.236	83,146	3,199	1,659	1,393	43.5%
2021	2.518	124,397	4,678	2,474	2,554	54.6%
2022	3.078	296,150	9,006	4,823	3,393	37.7%

Another look at the figures below reflect how the pool is maintaining its sustainability on the aggregate level and developing its strength year-on-year by improvements in premiums sizes and eventually lowering the average rate across the board due to increasing number of policies/values of sum insured and better claims experience through risk management.

[4] https://www.tarsim.gov.tr/dergi/faaliyet-raporlari/ar-2022 page 18-21

Table 6 - TARSIM Key Performance Indicators 2019-2022

Year	Average Sum Insured	Average Premium	Average Premium Subsidy	Average Rate	Average Loss Per Policy
	=B/A	=C/A	=D/A	=C/B	=E/A
2019	26,422	1,172	611	**4.4%**	588
2020	37,191	1,431	742	**3.8%**	623
2021	49,409	1,858	983	**3.8%**	1,015
2022	96,218	2,926	1,567	**3.0%**	1,102

The above indicates that the increasing the coverage improves the base and protects the insurance business from running into deficit. The pricing and product soundness certainly add value resulting in proper management of the pool, reflecting adequacy by building sustainable reserves following surpluses having accounted for underwriting and operational expenses.

MOROCCAN SOLIDARITY FUND FOR CATASTROPHE EVENTS (FSEC)

Fonds de solidarité contre les événements catastrophiques (FSEC), was formed as a separate legal entity under disaster insurance law of the Morocco in 2016. The fund is governed by a board of directors that includes representatives from various government ministries, the insurance sector, and other relevant stakeholders. The administrative structure includes various committees responsible for risk assessment, fund allocation, and claims management.

This parametric insurance product covers the likelihood of a predefined event, providing a predetermined pay-out upon its occurrence when predefined thresholds are triggered. The Fund covers Earthquake, Flood, Windstorm and Landslide perils and provides coverage to the uninsured and most vulnerable of households. The trigger is any earthquake event with a magnitude (Mw) equal to or greater than 4.5, a Modified Mercalli Intensity scale (MMI) equal to or greater than 5.0 in any commune, and an epicentre within a defined geographical region in Morocco.

The management of fund is supported by Gallagher Re (reinsurance experts and brokers) through arrangement of suitable reinsurance cover, risk modelling, technical support, capacity building and reinsurance claims management. The FSEC is funded by the Moroccan government, levies on premium and multi-lateral donor organizations.

In 2023, the parametric insurance pool (FSEC) managed by "Gallagher Re" disbursed USD 275 million in insurance claim pay outs under its earthquake insurance policy for a total parametric loss of USD 395m according to RI limit, following the 6.8 magnitude earthquake that struck the Al-Haouz region on September 8, 2023. The earthquake insurance policy has been renewed to provide similar level of cover for 2024.

PAKISTAN INSURANCE MARKET CHALLENGES & POOLING OPPORTUNITIES

Pakistan's insurance industry faces myriad of challenges and limitations. These challenges and issues are multifaceted; some are macro-level issues and some are industry-specific. To address some of these issues, it is imperative that a holistic and concrete efforts be taken to address those challenges through the adoption of Insurance Pools systems also.

Table 7 – Pakistan Insurance Market Issues

Demand Side Issues	■ Low Per Capita Income: Majority unable to afford insurance. ■ Priority Expenses: Population with low household incomes prioritize necessities over insurance premiums. ■ Low Awareness and Understanding: Complex nature of insurance products, compounded by low financial literacy. ■ Cultural and Religious Factors: Reluctance in insurance purchases despite availability of shariah-compliant "takaful" products. ■ Trust Issues: Perception of dishonesty and slow claims settlement by insurance companies, leading to trust issues among prospective policyholders
Supply Side Issues	■ Lack of Feasible Products: Specialized areas like agriculture and health insurance, and enforcement of compulsory insurances such as motor third-party liability and group life insurance for workers. ■ Under-developed Distribution Channels: Limited evolution compared to other markets, with underutilization of online platforms and aggregator websites. ■ Limited Rural Accessibility: Market unable to reach rural and suburban areas effectively. ■ Sales Practices: Lack of control over sales practices, inconsistent standards for sales agents' qualifications.
Government and Regulatory Issues	■ Strengthening Framework: SECP has proposed revisions in the Insurance Ordinance, 2000 to enhance market regulation, policyholder protection, and market stability. The proposed amendments are under review and approval at the respective government levels, expedited through the Finance Division. ■ Alignment with international standards: SECP is steering adoption of IFRS 17 and risk-based supervisory framework, promotion of technology usage, and enhancement of insurance awareness. ■ Lack of enforcement of compulsory insurances: Issue due to fragmented mandate with different government bodies such as labor departments for compulsory group life insurance and excise and taxation departments for motor third party liability insurance at federal and provincial level. ■ Cash handouts by the Government instead of routing through Insurance Industry: In some instances, the Government conducts the risk financing through handouts/ disbursements to the public, instead of using regulated insurance companies e.g. flood relief handouts, earthquake handouts etc.

Currently, different subsidized schemes, providing relief to the masses using insurance, are being run which are administered by the Federal and Provincial governments through their attached departments and institutions. There are also multiple arrangements focused on different risk categories, coverages and mandates. The table below lists these arrangements, their key features, and the engaged organizations and entities responsible for managing them.

Table 8 - Existing Pakistan Schemes & Programs

#	Program	Type	Broad Features/Coverage	Responsible Entities
1	***Crop Loan Insurance Scheme (CLIS)****	Insurance scheme	Mandatory scheme for production loans on all major crops	■ Administered by the SBP and funded by the Govt. of Pak (Ministry of Finance)
2	***Livestock Insurance Scheme for Borrowers****	Insurance scheme	Mandatory coverage for all livestock loans up to Rs.5 million	■ Administered by the SBP and funded by the Govt. of Pak (Ministry of Finance)
3	***Punjab Fasal Beema Program****	Insurance scheme	Area yield index insurance for loanee and non-loanee farmers in Punjab.	■ Administered by the Agriculture Dept., Govt. of Punjab.
4	***Sehat Sahulat Program (SSP)***	Insurance scheme	Government-funded national-level health insurance scheme, working in Punjab, Khyber Pakhtunkhwa, Islamabad Capital Territory, Gilgit Baltistan, Azad Jammu and Kashmir and Tharparkar district of Sindh.	■ Ministry of National Health Services, and provincial health departments in respective provinces
5	***Insurance of Public Property i.e. Govt. Property***	Statutory Requirement	Statutory monopoly of National Insurance Company Limited (NICL) in insuring the public property.	■ NICL provides the insurance cover ■ Premium borne by relevant govt. entity.
6	***National Disaster Risk Management Fund (NDRMF)***	Handouts via budgetary allocation through Section 42 Company	Established through Asian Development Bank (ADB) funding of $200M for disaster risk reduction and disaster risk financing in Pakistan, NDRMF is mandated with the development of the National Catastrophic Model and Disaster Risk Financing Strategy, which may include insurance	■ The Ministry of Climate Change is the executing agency for NDRMF and Board of Directors of NDRMF is responsible for management

* For details on agriculture insurance schemes, please refer to the SECP publication on "Securing Livelihoods: A Comprehensive Look at Crop & Livestock insurance in Pakistan"

STRUCTURAL PROBLEMS ARISING OUT OF STATE-OWNED INSURANCE COMPANIES STATUTORY PRIVILEGES

The implications of statutory privileges of state-owned insurance companies need to be assessed in the context of pool operation and the objective with which, the pool is established. For instance, the PRCL has first right of refusal for all reinsurance risks, which will not be useful if pool is formed for specialised risks like energy, or power risks. Likewise, the NICL has statutory monopoly for insurance of all properties of public sector. However, the specialised risks in the public sector may not be suitable for NICL in terms of its risk appetite and capacity.

A market-based agreement needs to be made by the insurance companies with PRCL and NICL for voluntary refusal towards risks which are beyond their capacity or expertise. PRCL, being the state-owned reinsurer can take-on the responsibility of pool management, in the likes of terrorism pool management by the GIC in India. Furthermore, challenges and issues considered in SECP's report – Securing Livelihoods: A Comprehensive Look at Crop and Livestock Insurance in Pakistan shall need to be addressed.

E. ESTABLISHMENT OF INSURANCE POOLS

OVERVIEW

The insurance pool needs to be set up in Pakistan to create an alternative for the Insurance companies to park their risks which are left uninsured or transferred to the international market. Given that the need of forming an insurance pool is well-established, the following points need to be considered to ensure that the pool operates effectively and achieves the intended objectives:

(a) The nature and complexity of the risks to be ceded to the pool need to be specified to ensure that the payouts are made for perils covered by the underwriter. Otherwise, the cover-all strategy would compromise the pool objectives of mandated risk perils and segments.

(b) Active participation by all stakeholders such as government organizations, global support agencies including the World Bank and Asian Development Bank, local and foreign insurance companies, relevant LEAs and industry experts is a prerequisite.

(c) The regulatory environment should promote a conducive level-playing field to keep the interests of all stakeholders aligned such as mandatory ceding to the pool, standardized pricing, cost-sharing basis etc.

(d) Costs of setting up and maintaining the insurance pool and the benefits and downside risks should be managed systematically and regularly. The pool members would be liable to cover insurance claims costs, other associated liabilities and expenses arising from the pool, subject to its participation on a joint and several liability bases, but will benefit from any profit and/or other efficiency-related benefits.

The parties involved in the insurance pool arrangement are reflected through the flowchart on the next page. For pool management, the following aspects need to be considered, however there can be many other organization structures that can develop based on the stakeholders' involvements.

- **Governance:** An insurance pool must have a clear governance structure that outlines the roles and responsibilities of the participants. This could include a board of directors, an executive/ management committee, and a pool manager.

- **Pool Manager:** The Pool Manager can be the technical expert or an insurance brokerage firm appointed by the higher-level stakeholders and the members of the pools. An expert firm is expected to develop technical expertise from international markets, utilize reinsurance markets to reduce the volatility in insurance experience, and benefit from diversification, premium rates efficiency, and the reduced reinsurance risk of default.

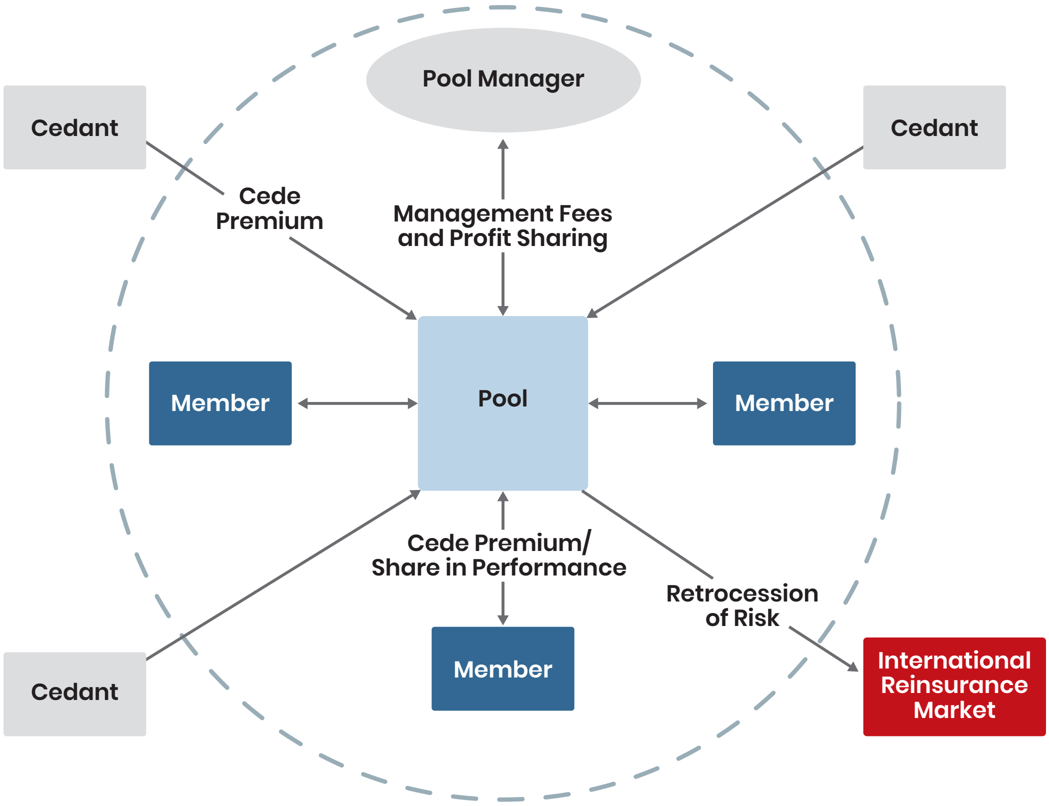
- **Members of the Pools:** The insurance companies can enter a reciprocal participation agreement with each other and can cede business into the pool while accepting reciprocal coverage from all members. The members could be liable to cover all claims costs and other associated liabilities arising from the pool, which may be subject to individual limits, but they will benefit from any profit distribution generated by the pool.

- **Risk assessment:** The pool, through pool manager/ technical expert, must conduct a thorough risk assessment to identify the risks that will be covered and to set premium rates. This may involve using historical data, actuarial models, and expert opinion.

- **Reinsurance:** The pool may purchase reinsurance from other insurance companies to protect itself from large losses and to reduce volatility in its profile, particularly if it is exposed to high severity risks or operates in the catastrophe prone regions. This can help to ensure that the pool has the financial resources to pay out claims even in the event of a major disaster.

- **Transparency:** The pool must be transparent about its operations and its financial performance. This will help to build trust among participants and to attract new members.

Figure 4 - Insurance Pools Flowchart and Participants Interaction



LEGAL STRUCTURE OPTIONS AND POOL GOVERNANCE

Insurance pools are formed to improve the risk mitigation mechanisms, enhance capacity and increase access for coverage of special risks through risk pooling and diversification. As this is a market development initiative and priority area under the SECP five-year strategic plan, the SECP's policy team has undertaken a detailed review of regulatory landscape and has come to an understanding that the insurance pools can be formed under the existing framework.

A feasible way to achieve this is to form a consortium-based insurance pool for specialized risks, formed through market-based agreement and backed by statutory notification issued by the SECP under the general powers under the SECP Act, 1997 (Section 20(4) and multiple clauses thereof). Through this notification, mandatory participation and specified terms, conditions and practices can be notified for the insurance pool operations.

The pool may also be established as a separate legal entity following the inclusion of regulatory provisions through amendments to the Insurance Ordinance, 2000. As draft amendments to the Insurance Ordinance, 2000 are under review, the Insurance Division must ensure that the regulatory provisions relating to insurance pools are incorporated. These should cover enabling provisions, governance and operational requirements, regulatory submissions, and enforcement measures for the insurance pools established in Pakistan.

An alternate approach to form insurance pool is enactment of separate statute by the Government for establishment and governance of insurance pool, as a statutory body. This approach was also adopted by countries like Turkey and Morocco as they introduced special laws for formation of Insurance Pools. For example, Turkey enacted a special law (Agricultural Insurance Law No. 5363) to form TARSIM and Decree No. 587 was promulgated for compulsory earthquake insurance for TCIP formation in Turkey. As for Morocco, disaster insurance law (known as Law No. 110-114) enacted to set up the Solidarity Fund Against Catastrophic Events (FSEC). However, due to fragmented ownership of subject of insurance and other areas like disaster risk financing and rehabilitation, agriculture, health and others, this option is legally and administratively cumbersome.

The option to form pool as a separate legal entity and forming a consortium-based pool are elaborated here. A synopsis of various aspects in case of pool as separate entity and consortium-based pool is given in table:

Table 9 – Synopsis of Pool as Separate Entity and Pool as a Consortium

	Pool as separate entity	Consortium-based pool
Enabling regulatory provisions	Pool may be formed as separate entity following changes to the Insurance Ordinance, 2000 are made to 1. Add enabling provisions for formation of insurance pools; 2. Add provisions relating to licensing, governance, operations, enforcements and others 3. Make appropriate changes to regulatory requirements not applicable for pools	General powers under SECP Act, 1997, Section 40B to issue circular/ directive/ guidelines can be invoked to require mandatory cession and participation through consortium-based pool

	Pool as separate entity	Consortium-based pool
Legal structure	Company limited by shares/ SPV/ Section 42 Company	A legally-binding participation agreement of all pool members and the technical/ pool manager
Participation	Through shareholding / sponsorship to be made mandatory by the SECP and relevant ministries	Through participation agreement to be made mandatory by the SECP and relevant ministries
Governance	Board of Directors to be nominated by the member companies	Management committee comprising of participating companies' representatives
Management	CEO, CFO, COO, Heads of respective Departments	A field expert entity to be appointed as pool manager/ administrator for overseeing pool activities and operations
Finance & investments	Separate department to manage financial reporting, financial stability, solvency, budgeting, investments etc.	Due to absence of separate legal entity, the financial management is not required per se, except the service fees for technical services obtained
Actuarial, Reinsurance and Risk Management	Separate department to manage actuarial and reinsurance work	The pool manager to assess and arrange the suitable reinsurance cover as per actuarial expertise
Underwriting	Separate department with adequate human resource to manage underwriting	The pool manager to devise and recommend the terms relating to underwriting and pricing, on basis of which, all participating companies will underwrite the relevant risks
Claims	Separate department with adequate human resource to manage the claims	The pool manager to manage claims through reinsurers, jointly with the participating companies
Legal and Compliance	Separate department to ensure compliance and liaise with the regulator	The management committee will deliberate and decide on legal and compliance matters

CONSORTIUM-BASED POOL

Enabling Regulatory provisions: General powers under SECP Act, 1997, Section 40B read with Section 20(4) (l) & (u) thereof, may be used to issue circular/ directive/ guidelines requiring mandatory cession, participation, underwriting and terms and conditions through consortium-based pool.

Participation: Participation in the pool may be made mandatory for all insurance companies who underwrite the specialised risk for which the pool is being formalised. The legal and regulatory support for mandatory participation may be provided by the SECP under the section 40B of the SECP Act, 1997 read with 20(4)(l) & (u) thereof.

Terms of Participation: The insurance companies may become members of the pool by signing the participation agreement which would envisage, among others, the adherence to standardized pricing of risks, coverage terms, reinsurance arrangements, and other aspects. The cost-sharing aspect may also be covered under this agreement which may include members' deposit/ commitment of funds. The risk being shared between the members on a joint and several basis also needs to be specified in the participation agreement.

Governance: The governance of the pool can be vested with a management committee comprising representatives of all members, which may appoint a pool manager for the day-to-day management of pool operations. The management committee may form separate technical committees for specific functions such as underwriting, reinsurance, claims etc.

Pool Manager: The pool manager may be a broker or a private (re)insurance company specialising in specific risks and has technical and human resource capacity to manage the consortium-based underwriting of risks (co-insurance), adequate reinsurance arrangements jointly on behalf of all participants in a particular risk, assess the claim pay-outs through loss adjusters and reinsurance companies and settlement of claims and reinsurance recoveries, along with ancillary tasks such as reporting and returns filing as per legal/ regulatory framework. The pool manager will operate under the guidance of technical committees on specific functional areas.

Pricing, Underwriting & Reinsurance: The pricing of specific risks needs to be standardized for all participants, to be finalised by the technical committee and approved by the management committee representing all pool members. The SOPs need to be developed for offering and acceptance of risks, and reinsurance thereof on behalf of all participants in the co-insurance arrangement.

POOL AS SEPARATE ENTITY

Enabling regulatory provisions: As per policy team's review there is no specific bar on launching of insurance pool in the current regulatory framework. The enabling provisions can be added in the Insurance Ordinance, 2000 and further requirements can be introduced through the subordinate legislation. As draft amendments to the Insurance Ordinance, 2000 are under review, the Insurance Division must ensure that the provisions relating to enabling powers, licensing, governance, operations, and enforcement are added to the draft amendments and submitted to the relevant Ministry.

However, such amendment would not be required if the Government of Pakistan promulgates a specific legislation for formation of insurance pool for specific risks, in the likes of Turkey, Morocco and other international examples. The pool may then operate as a statutory entity with mandate to insure specified risks with standard terms and conditions. However, this option is legally and administrative cumbersome and hence, less feasible in comparison to the other options of forming pool as consortium-based arrangement or pool as separate entity.

Governance: The pool will be governed by the board of directors comprising of representatives of insurance companies, as agreed by all the participants of the pool. Participating members from non-life insurance companies operating in Pakistan can nominate their representatives on the board of directors/ governing body. The Board may form technical committee, investment committee for overseeing the specific areas.

Management: The pool management is responsible for the day-to-day oversight and operations of the pool including stakeholder liaison, regulatory compliance, risk management, financial activities and investment management, underwriting risks and policy issuance, setting premiums and managing risks through reinsurance, and vetting and settling claims, etc.
The pool should be headed by the CEO, CFO, chief operating officer (COO) and Chief Risk Officer (CRO), in addition to the following functions:

Finance & Investments: The pool's finance department is responsible for the pool's financial reporting and budgeting. The finance department will also track the pool's solvency and ensure that it meets all regulatory requirements.
The pool's investment department is responsible for managing the pool's investments. The investment department will invest the pool's reserves in a variety of assets, such as stocks, bonds, and real estate.

Actuarial, Reinsurance & Risk Management Control: In most international insurance companies, the actuarial, reinsurance and risk management functions are closely knitted to provide sound strategic planning and management to the senior management. Therefore, aligning the actuarial work within the pool is imperative to ensure sustainable insurance and enterprise risk management covering all areas of work of the companies. This naturally ties well due to integration of actuarial control cycle within the framework of risk management cycle of the company.

The pool's actuarial department shall be responsible for setting premiums and reserves. The actuarial department will also develop pricing models and analyze loss experience, including the need for sanctioning or outsourcing catastrophe modelling requirements. This shall help in ensuring the systematic control of the pricing for the risks to avoid any anti-competitive and competitive pressures and to keep the insurance pools sustainable in the long run once the funding requirement is phased out.

Keeping reinsurance independent from the underwriting functions, allows integration of reinsurance arrangements from the strategic view rather than being the disposal of the underwriter and as a result provides independence as well. This may be new practice in Pakistan but has strongly progressed in regional countries. As a result, reinsurance can be brought under the Actuarial department and risks of the pool need to be mitigated via reinsurance arrangements with globally sound and well-credit-rated reinsurance companies or by direct placement through the London Insurance market. This can be done either through per-life, per-event, individual or aggregate reinsurance, and/or stop loss arrangements according to risks written. The purpose is to protect the pool from being completely burnt up and to bring global technical expertise and reinsurance support locally.

Underwriting: The pool's underwriting department will be responsible for evaluating risks and determining whether to accept them or otherwise. The underwriting department will consider the applicant's credit history, financial condition, and the type of risk being insured per underwriting guidelines issued by the Board and the management.

Claims: The pool's claims department is responsible for vetting and processing claims. The claims department will investigate claims to ensure that they are valid, create adequate provisioning for outstanding and other reserves and subsequently settle the claims to participants/policyholders.

Legal: The pool's legal department is responsible for providing legal advice to the pool and its managers. The legal department will also review contracts and other legal documents.

Compliance: The pool's compliance department is responsible for ensuring that the pool complies with all applicable laws and regulations. The compliance department will also monitor the pool's activities to identify and mitigate risks.

POOL FUNDING

One of the prerequisites for the formation of a pool is the funding arrangement for the pool. Different sources through which initial funding, i.e. seed money, can be raised through:

1. include government and multi-lateral donor funding (full, partial via subsidies, through grants/loans),
2. (re)insurance company(s) premiums estimated and contributed by the insurance companies,
3. levy from insurance companies, or
4. Federal Insurance Fee earned from insurance companies,
5. Capital raised through capital markets via equity or bond subscriptions,

The funding needs can be determined from the capital planning and pricing exercises to be conducted by the entity (either Company or Consortium pool manager) with the help of reinsurance brokers. The basis and extent of pricing depends on the nature, type and size of risks under coverage. Adequate pricing is imperative for sustainability, risk management and meeting financial obligations. The adequacy of price, reserves, investment income and profits are dependent on future pay-outs as claims and underwriting and management expenses. From the perspective of the insurance pool, long-term low-risk investments are suitable as efficient financial management is crucial to ensure its sustainability.

The pool may work as for-profit entity and the profits of the pool may be used for building reserves and enhancing pool capacity to underwrite and (re)insure risks. This model allows the pool to function as a sustainable business by reinvesting profits to strengthen its financial base. This approach ensures that the pool can grow its ability to take on more and larger risks over time, enhancing its stability and reliability as an insurer or reinsurer. Also, it minimizes the chances of external funding or borrowing needs from the Government, or any other entity per se and enables commercially viable and sustainable operations. Once adequate reserves have been developed then the pool may start offering dividends back to its shareholders/participants at a defined level of profitability to ensure solvency is maintained.

F. RECOMMENDATIONS & WAY FORWARD

REGULATORY REVIEW AND COMPARATIVES

An enabling legal and regulatory framework plays a critical role in governing the development of all types of insurance in emerging contexts. Several essential elements should be guaranteed by the regulator to ensure the stability, fairness, transparency, and inclusive growth of the Insurance sector,

The comparison of the regulatory frameworks of Turkey, Spain, and Kenya from Appendix II – Global Case Studies reveals commonalities and distinctions in their approach to governing insurance pools, given in table 5 below:

Table 10 - Commonalities Distinctions & Best Practices

Commonalities

- All three countries mandate adequate solvency and reserve requirements for insurance pools to ensure their ability to meet obligations to policyholders.
- All three countries emphasize sound governance and risk management practices for pools to maintain financial stability and operational transparency.
- All three countries require transparent disclosure of financial information and product details to safeguard policyholders' interests.

Distinctions

- Turkey's regulatory framework places a strong emphasis on consumer protection, requiring pools to provide clear and accessible information to policyholders.
- Spain's regulatory framework aligns with Solvency II principles, emphasizing risk-based capital requirements and stress testing for insurance pools.
- Kenya's regulatory framework focuses on promoting financial inclusion, encouraging the development of microinsurance products tailored to the needs of smallholder farmers.

Best Practices

- Establish clear and comprehensive solvency requirements based on risk assessments and actuarial principles.
  Mandate robust governance and risk management frameworks for pools, including clear roles and responsibilities, internal controls, and regular risk assessments.
- Promote transparency and disclosure of financial information and product details to ensure informed decision-making by policyholders.
- Encourage the development of innovative insurance products tailored to the specific risks faced by farmers in different regions and agricultural sectors.
- Foster collaboration between insurance companies, reinsurance companies, governments, and non-governmental organizations to expand the reach of insurance pools and promote financial inclusion.

Effective regulation of insurance pools is essential to safeguard the interests of policyholders, maintain market stability, and promote the sustainable growth of this innovative insurance mechanism. The following key aspects of Insurance pools need to be addressed in the regulatory framework:

1. **Governance & Risk Management:** Insurance pools should adopt sound governance practices and implement robust risk management frameworks. This includes establishing clear roles and responsibilities for pool managers, directors, and other stakeholders; implementing effective internal controls; and conducting regular risk assessments and stress testing.

2. **Consumer Protection:** Regulatory frameworks should incorporate consumer protection measures to safeguard policyholders' interests. This includes ensuring that insurance products are adequately priced and appropriately marketed, that policy terms and conditions are clear and understandable, and that complaint resolution mechanisms are in place.

3. **Transparency & Disclosure:** Insurance pools should adhere to transparency and disclosure requirements to ensure that policyholders and other stakeholders have access to relevant information. This includes providing clear and accessible product information, regularly disclosing financial statements, and maintaining open communication channels.

4. **Licensing & Solvency Requirements:** Insurance pools may be subject to licensing and solvency requirements similar to those applied to traditional insurance companies. This ensures that pools have the necessary financial resources to meet their obligations to policyholders and maintain their operations in the face of adverse events.

5. **Reserve Adequacy & Financial Stability:** Insurance pools should maintain adequate reserves to cover potential losses and ensure the timely payment of claims. Regulatory authorities should establish clear reserve adequacy requirements based on risk assessments and actuarial principles.

RECOMMENDATIONS & ACTION MATRIX

The prerequisite for the insurance pool formation is recognition of urgency of need and creating a value proposition for all stakeholders. Awareness sessions should be held among the Insurance Industry and other stakeholders jointly with the regulator. A framework and action plan for coordinated efforts should be developed with all stakeholders like Insurance companies, government departments, and association of insurance companies and/or reinsurers. The continuous engagement with all stakeholders is required between ministries, government departments, regulatory bodies, SECP and SBP, local and foreign reinsurance companies, and government programs like BISP and SSP so as to bring the attention towards idea of creating an Insurance pool.

The government can make more efficient use of resources and enhancing capacity within the local insurance industry by converting the existing CLIS scheme into a broad-based co-insurance pool structure. Subsequently, its scope can be enhanced to transform it into a disaster risk insurance pool providing national-level disaster risk insurance for crop, livestock, disasters, and microinsurance. The pool formation may be considered for implementation of motor third-party liability insurance, and flood/ disaster support handouts made by the government whenever a disaster strikes. Following are the key areas that need to be considered.

- Involvement of multi-lateral bodies to launch insurance sector development plan of which, pool is integral part.
- Federal government should notify a council that includes Finance and Commerce Ministers for monitoring and facilitating the five-year strategic plan "Journey to an Insured Pakistan". Council should include relevant provincial departments, FBR, SECP and SBP.
- The Finance Division should work with SBP and SECP to launch market-based interventions for agriculture insurance, health insurance, catastrophe risks, and other climate change risks in the pool structure instead of current budgetary allocations to PSDP.

The table 11 illustrates the actionable items and relevant stakeholders responsible to proceed with development of Insurance Pools system in Pakistan:

Table 11 - Action Matrix

#	Action Item	Responsible Stakeholders	Timelines
01	Development of Insurance Pool committee comprising of industry stakeholders	Securities & Exchange Commission of Pakistan (SECP) Insurance Association of Pakistan (IAP)	Short term
02	Regulatory provisions to be added to amendments to Insurance Ordinance, 2000 covering the enabling powers, licensing, governance, operations and enforcement measures in relation to the insurance pool	SECP Ministry of Commerce	Short term
03	Committee to finalize the pool formation considering the following ▪ The necessary perils/ risks to consider for pool formation e.g. Agriculture insurance and Disaster insurance ▪ Agreement on legal structure and consideration of suitable funding approaches ▪ Responsibility of risk assessment and modelling for underwriting and product pricing and development ▪ Responsibility of pool operations ▪ Required regulatory support for mandatory cession and participation in the pool	The insurance pool committee Pakistan Society of Actuaries	Medium term

04	Consultation on Pool Creation and developing consensus for optimal option ■ National Disaster Risk Management Fund (NDRMF) ■ National Disaster Management Authority (NDMA) ■ Ministries of Climate Change and; ■ Ministry of National Food Security & Research to plan for development of unified pool system ■ Ministries of Finance & Commerce	Relevant Federal & Provincial Ministries including Finance, Commerce, Climate Change, National Food Security & Research NDRMF & NDMA SECP & IAP	Medium term – parallel with 02 above
05	Engagement and agreement with industry expert [(re)insurance company/ broker/ consultant] for acting as insurance pool manager, providing technical support for pool operations and placement of reinsurance business to international reinsurance market	The insurance pool committee (based on point 1 of the table)	Medium term
06	Coordination with Ministries of Finance & Commerce and Multilateral development organization such as Asian Development Bank, World Bank and United Nations Development Program and other relevant bodies in finalizing the funding options, as needed for risk pool e.g. Agriculture and Catastrophe risks	Relevant ministries SECP IAP Multi-lateral bodies	Long term

Since in Pakistan, the Insurance Association of Pakistan (IAP) is the leading representative body of all insurance companies, therefore, it is suggested that the IAP may take the initiative to create consensus among the insurance industry stakeholders and SECP stands to support the IAP to initiate discussions with relevant government bodies such as NDRMF, Ministry of Finance, Ministry of Commerce, Ministry of National Food Security & Research and provincial counterparts so as to proceed towards the creation of an insurance pool for specialized risks given the needs, issues, challenges and opportunities highlighted in this report. The consensus of Ministry of Commerce and Ministry of Finance alongside provincial finance departments, being the key decision-maker, is a prerequisite.

The pool system is not only applicable for agriculture and disaster risk insurance but also applicable for other risks such as large-size projects within the oil and energy sector such as power plants, transmissions lines, aviation and large marine coverages, liability-business such as environmental risks including nuclear, can be managed through joint efforts within the insurance pools systems, benefiting the retention of risks and expansion of insurance industry in Pakistan. A pool may also be considered for creating re-takaful capacity in the Pakistan market, which has been struggling to obtain adequate and reasonable re-takaful coverage since the inception of the takaful market in Pakistan. Incentivizing the participation of insurance companies in the pool by the government in the form of tax benefits can prove as a catalyst in the process of pool formation, eventually leading to improved risk transfer and financial management for the public and private sector.

APPENDIX I – OVERVIEW OF GLOBAL & REGIONAL INSURANCE MARKETS

Globally the insurance industry plays a significant role in the protection and well-being of both, the nation's population and the economy. It acts as a guardian, providing support to policyholders in the face of adversities such as accidents and damages, mortality and morbidity, liability protection and malpractices.

According to the Swiss Re Sigma 2023 report, the overall global insurance premiums stood at USD 6,782 billion in 2022 and USD 6,765 billion in 2021. The image below provides the split of the premiums by global Life and Non-Life insurance premiums for 2022 and 2021, with the full market-wise statistics provided below in table below.

Figure 5 - Global Total Premiums Summary for Life and Non-Life Insurance

Life & Health	Global Insurance	Non-Life Insurance
2022: 2.81 trillion USD	2022: 6.78 trillion USD	2022: 3.97 trillion USD
2021: 2.94 trillion USD	2021: 6.76 trillion	2021: 3.82 trillion USD

Table 12 - Sigma Re 2023 Report Top 20 and Rest of the World Premiums by Economy

Ranking by 2022	Market	2021 USD b	2022 USD b	Proportion 2021	Proportion 2022	(+)/(-)
1	US	2,725	2,960	40.3%	43.6%	3.4%
2	China	696	698	10.3%	10.3%	0.0%
3	UK	374	363	5.5%	5.4%	-0.2%
4	Japan	398	338	5.9%	5.0%	-0.9%
5	France	293	261	4.3%	3.8%	-0.5%
6	Germany	272	242	4.0%	3.6%	-0.5%
7	South Korea	193	183	2.9%	2.7%	-0.2%
8	Canada	166	171	2.5%	2.5%	0.1%
9	Italy	192	160	2.8%	2.4%	-0.5%
10	India	123	131	1.8%	1.9%	0.1%
11	Taiwan	113	86	1.7%	1.3%	-0.4%
12	Netherlands	92	84	1.4%	1.2%	-0.1%
13	Brazil	63	76	0.9%	1.1%	0.2%
14	Australia	72	72	1.1%	1.1%	0.0%
15	Hong Kong	73	69	1.1%	1.0%	-0.1%
16	Spain	73	68	1.1%	1.0%	-0.1%
17	Switzerland	58	56	0.9%	0.8%	0.0%
18	Sweden	59	54	0.9%	0.8%	-0.1%
19	Singapore	45	47	0.7%	0.7%	0.0%
20	South Africa	50	46	0.7%	0.7%	-0.1%
	Top 20 markets	**6,130**	**6,165**	**90.6%**	**90.9%**	**0.3%**
	Rest of the World	635	617	9.4%	9.1%	-0.3%
	World	**6,765**	**6,782**	**100.0%**	**100.0%**	**0.0%**

From the same study, comparing the regional insurance markets with Pakistan market provides a snapshot of the Life and Non-Life industries and their trend over the past two years 2021-2022 are showing in the charts below with full statistics of the regional comparative markets are provided in subsequent table:

Figure 6 - Total Premiums and Population by Country

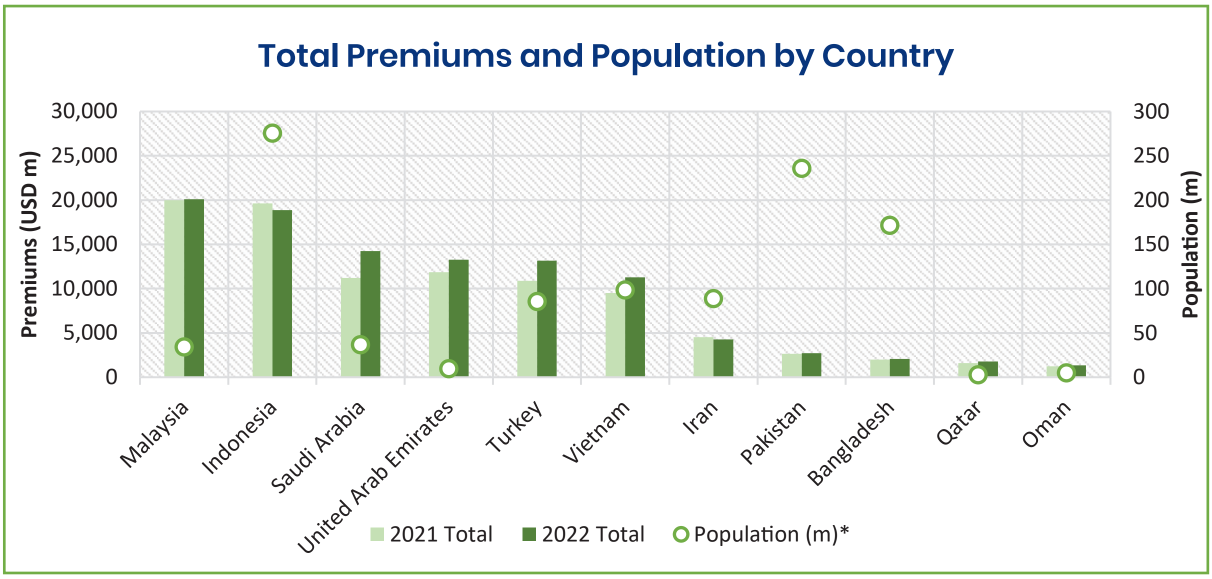


Figure 7 - Life Premiums and Population by Country

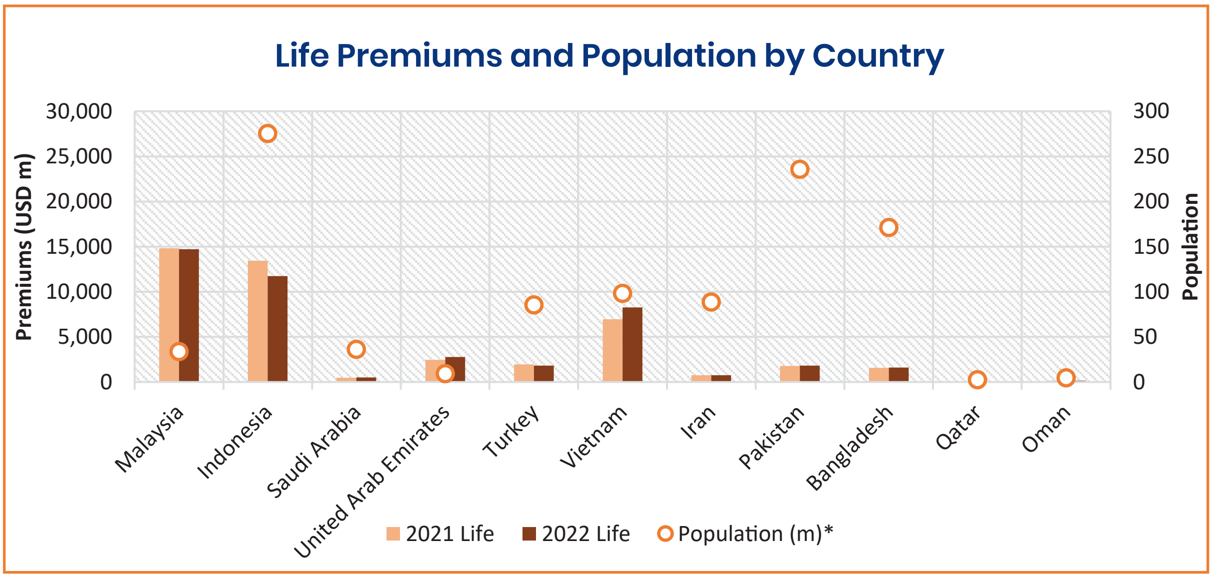
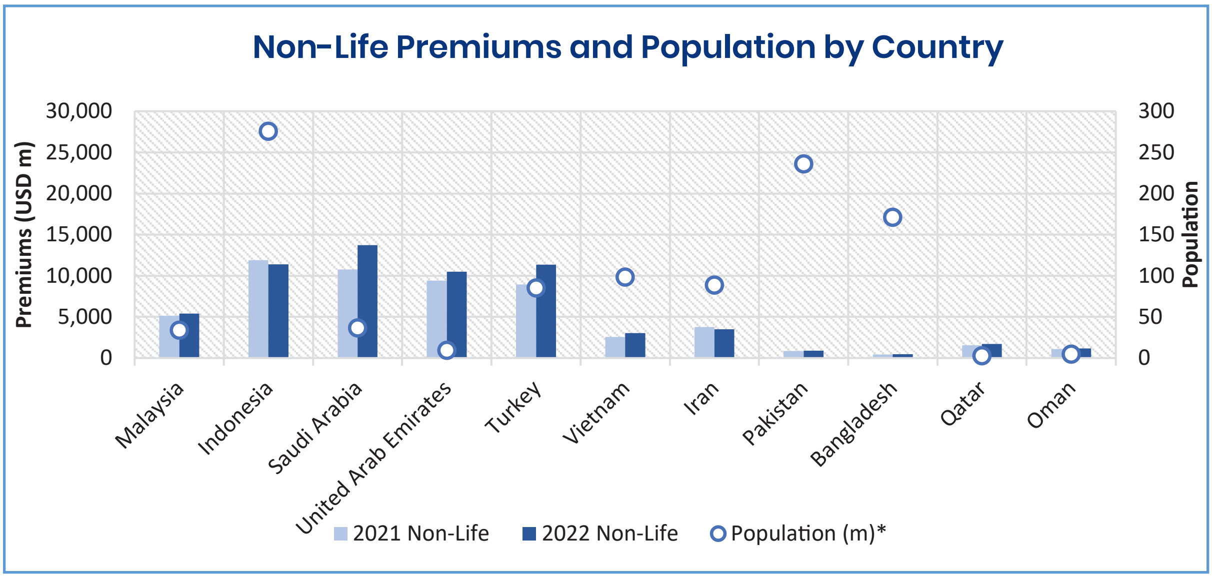


Figure 8 - Non-Life Premiums and Population by Country



Despite the high number of companies compared to regional markets, insignificant penetration levels have been observed historically over the past four-five years, with recent penetration standing at 0.89% and insurance density (or insurance premium per person) being PKR 2,778 only (in today's terms it is merely circa USD 10). In contrast, the global insurance penetration has been in the range of 7%-7.5% and comparable markets like India and Vietnam have insurance penetration of around 3.76% and 2.24% respectively, reflecting a substantial opportunity to reach out to the masses and achieve its potential in line with similar markets.

Table below presents the relevant information in table format.

Table 13 - Pakistan and Regional Markets Population and Premiums by Life and Non-Life Industry

Market	Population (m)	2021 total	2022 total	% Δ	2021 Life	2022 Life	% Δ	2021 Non-Life	2022 Non-Life	% Δ
Saudi Arabia	36.4	11,208	14,228	26.9%	455	500	10%	10,757	13,729	28%
United Arab Emirates	9.4	11,865	13,255	11.7%	2,442	2,758	13%	9,416	10,497	11%
Turkey	85.3	10,895	13,172	20.9%	1,955	1,820	-7%	8,941	11,352	27%
Iran	88.5	4,524	4,257	-5.9%	760	739	-3%	3,764	3,518	-7%
Qatar	2.7	1,606	1,762	9.7%	45	49	9%	1,561	1,713	10%
Oman	4.6	1,248	1,344	7.7%	149	161	8%	1,099	1,183	8%
Malaysia	33.9	19,977	20,115	0.7%	14,828	14,707	-1%	5,149	5,408	5%
Indonesia	275.5	19,610	18,870	-3.8%	13,437	11,751	-13%	11,903	11,397	-4%
Bangladesh	171.2	1,990	2,061	3.6%	1,554	1,604	3%	436	457	5%
Vietnam	98.2	9,526	11,286	18.5%	6,946	8,258	19%	2,580	3,028	17%
Pakistan	**235.8**	**2,657**	**2,721**	**2.4%**	**1,786**	**1,829**	**2%**	**871**	**892**	**2%**

* https://databankfiles.worldbank.org/public/ddpext_download/POP.pdf

APPENDIX II – GLOBAL INSURANCE POOLS EVALUATION

GLOBAL CASE STUDIES

Successful real-life cases of insurance pools demonstrate the feasibility and effectiveness of this approach:

AGRICULTURE

- **The Turkish Agricultural Insurance Pool**
  The Turkish Agricultural Insurance Pool (TARSIM – Tarim Sigotalari Havuzu) was established in 1961 to provide subsidized Insurance coverage for crops against various natural disasters. The pool is mandatory for all farmers growing designated crops and is funded by contributions from the government, farmers and insurance companies. Currently, it provides Crop insurance, Village-based Drought Yield insurance, Greenhouse insurance, Cattle insurance, Sheep and Goats insurance, Poultry Insurance, Aquaculture Insurance and Bee Hives (Apiculture) Insurance.

- **The Spanish Agriculture Insurance Consortium**
  Commonly known as Agroseguro, The Spanish Agriculture Insurance Consortium was established in 1980 to provide subsidized insurance coverage for a wide range of agricultural risks, including droughts, floods, hailstorms and fires. The pool is mandatory for certain crops and is funded by contributions from the government and farmers. It is a non-profit association composed of 17 Spanish insurance companies and the pool is governed by a board of directors and managed by a general manager.

- **The Kenya Agriculture Insurance Pool**
  The Kenya Agricultural Insurance Pool (KAIP) was established in 2009 to provide index-based insurance coverage for smallholder farmers against droughts and livestock diseases. The pool is voluntary and is funded by premiums paid by farmers and by contributions from the government and donors. KAIP has been a successful model for index-based insurance in Africa. The pool has reached over 1 million farmers and has paid out over $100 million in claims. KAIP's success has helped to spur the development of index-based insurance programs in other African countries.

- **Ghana Agriculture Insurance Pool**
  Ghana has a long history of using insurance pools to support agriculture. The Ghana Agricultural Insurance Pool (GAIP) was established in 1974 to provide subsidized insurance coverage for a range of crops against droughts, floods, and other natural disasters. The pool is mandatory for certain crops and is funded by contributions from the government, farmers, and insurance companies. In recent years, Ghana has also developed several index-based insurance products for agriculture. These products use triggers such as rainfall levels or livestock mortality rates to automatically trigger payouts when losses occur. Index-based insurance products are particularly well-suited for smallholder farmers, as they are less expensive and less complex than traditional insurance products.

DISASTER RISK & CATASTROPHE

- **Caribbean Catastrophe Risk Insurance Facility (CCRIF SPC)**

  The Caribbean Catastrophe Risk Insurance Facility (CCRIF SPC) is a regional insurance pool that provides parametric insurance coverage to Caribbean governments against hurricane and earthquake risks. CCRIF SPC was established in 2007 and is headquartered in Barbados. CCRIF SPC offers its member governments a variety of insurance products, including:

  - Country Catastrophe Excess Risk Layer (CCRIF SPC CCRXL): This product provides coverage for hurricane and earthquake risks on a country-wide basis.
  - Tropical Cyclone Excess Risk Layer (CCRIF SPC TCXL): This product provides coverage for hurricane risks on a sub-national basis.
  - Earthquake Excess Risk Layer (CCRIF SPC EQRXL): This product provides coverage for earthquake risks on a sub-national basis.

  CCRIF SPC's insurance products are parametric, which means that payouts are triggered by objective data, such as wind speed or earthquake magnitude. This makes the products less susceptible to fraud and moral hazard than traditional insurance products.
  CCRIF SPC has been successful in providing financial protection to its member governments in the event of natural disasters. In 2017, the pool paid out over $190 million in claims to its member governments after Hurricane Irma and Hurricane Maria.

- **Pacific Catastrophe Risk Assessment & Financing Initiative (PCRAFI)**

  The Pacific Catastrophe Risk Assessment & Financing Initiative (PCRAFI) is a regional initiative that aims to improve the resilience of Pacific Island countries to natural disasters. PCRAFI provides support for several activities, including:
  PCRAFI is a valuable resource for Pacific Island countries as they work to manage their natural disaster risk. The initiative has helped to raise awareness of the importance of risk management and has provided support for the development of several risk-transfer mechanisms.

- **African Risk Capacity (ARC)**

  The African Risk Capacity (ARC) is a specialized institution of the African Union that provides sovereign parametric insurance to African governments against drought risk. ARC was established in 2014 and is headquartered in Pretoria, South Africa.
  ARC's insurance products are based on objective, verifiable data, such as rainfall indices. This makes them less susceptible to fraud and moral hazard than traditional insurance products.
  ARC has been successful in paying out claims to its member governments in the event of droughts. In 2016, the pool paid out $30 million to Malawi after a severe drought.
  ARC is a valuable tool for African governments as they work to manage their drought risk. The pool has helped to improve food security and has provided financial protection to governments in the event of droughts.

- **Philippine City Disaster Insurance Pool**

Led by the Philippine Department of Finance with technical assistance from the Asian Development Bank, it is a parametric insurance pool intending to provide rapid post-disaster financing for early recovery in a cost-efficient manner and is structured to ensure that city governments can afford premiums (via flexibility in choosing their cover). The government had provided the initial pool capital, expected to be obtained through a sovereign loan from ADB. Pay-outs are financed through a combination of pool capital, initially established with seed capital, and reinsurance protection procured from domestic and international markets. This capital was supplemented by retained profits in years of low disaster losses.

The pool is managed by the Government Service Insurance System (GSIS), which is a government sector entity to provide social security benefits to government employees, including insurance. The GSIS oversees operations, policy issuance, premium collection, and claims processing of the PCDIP. The private insurers assist the PCDIP in policy issuance, underwiring, reinsurance and claim management, in coordination with the GSIS. The PCDIP parametric cover is facilitated through a risk pooling arrangement, reducing premiums by collectively purchasing insurance through a single platform.

- Cities will purchase insurance cover based on their preferred hazard types, pay-out frequency, and available premium funding.
- Premiums will be determined by each city's individual risk level, without subsidy from other participating cities.
- Unused annual transfers from cities' quick response funds to special trust funds could finance premiums, potentially improving cost-effectiveness compared to current practices.
- Utilizing part of these resources for PCDIP premiums would enhance post-disaster funding available to cities affected by typhoons and earthquakes eligible for insurance pay-outs.

The annual premium size is around 1 million Philippine Peso, on the premium price of 1.35 of expected loss.

NUCLEAR RISK

- **The Nuclear Liability Insurance Pool (NLIP)**

The Nuclear Liability Insurance Pool (NLIP) is a mutual insurance pool that provides coverage for nuclear liability risks to its member insurance companies. The NLIP was established in 1976 and is headquartered in London. The NLIP provides coverage for a variety of nuclear liability risks, including:

  - Bodily injury and property damage: The NLIP provides coverage for bodily injury and property damage caused by a nuclear incident.
  - Cleanup costs: The NLIP provides coverage for the costs of cleaning up a nuclear incident.
  - Economic damage: The NLIP provides coverage for economic damage caused by a nuclear incident, such as lost business income and lost tourism revenue.

The NLIP is a valuable resource for its member insurance companies, as it provides them with a pool of capital to cover nuclear liability risks. This can help to protect insurance companies from insolvency in the event of a major nuclear incident.

- **The Mutual Atomic Energy Liability Underwriters (MAELU)**

  The Mutual Atomic Energy Liability Underwriters (MAELU) is a mutual insurance pool that provides coverage for nuclear liability risks to its member insurance companies. MAELU was established in 1957 and is headquartered in New York City.

  MAELU provides coverage for a variety of nuclear liability risks, including:

  - Bodily injury and property damage: MAELU provides coverage for bodily injury and property damage caused by a nuclear incident.
  - Cleanup costs: MAELU provides coverage for the costs of cleaning up a nuclear incident.
  - Economic damage: MAELU provides coverage for economic damage caused by a nuclear incident, such as lost business income and lost tourism revenue.

MAELU is a valuable resource for its member insurance companies, as it provides them with a pool of capital to cover nuclear liability risks. This can help to protect insurance companies from insolvency in the event of a major nuclear incident.

References used for Global Case Studies reflected in Section D:

Table 14 - Table of References for Case Studies

The Philippine City Disaster Insurance Pool (PCDIP)
https://www.adb.org/sites/default/files/publication/479966/philippine-city-disaster-insurance-pool-rationale-design.pdf https://www.unisdr.org/files/68265_682308philippinesdrmstatusreport.pdf https://www.worldbank.org/en/results/2024/04/18/from-disasters-to-opportunities-building-a-resilient-future-in-morocco

The Ghana Agricultural Insurance Programme (GAIP)
https://unfccc.int/files/adaptation/cancun_adaptation_framework/loss_and_damage/application/pdf/giz_2.pdf http://www.e-agriculture.gov.gh/index.php/agric-finance/ghana-agricultural-insurance-programme#:~:text=The%20Ghana%20Agricultural%20Insurance%20Programme,other%20risks%20to%20agricultural%20production. http://www.journalresearchijf.com/wp-content/uploads/Agricultural-Insurance-in-Ghana-An-Examination-of-Concepts-Structure-and-Challenges-PP-01-08.pdf

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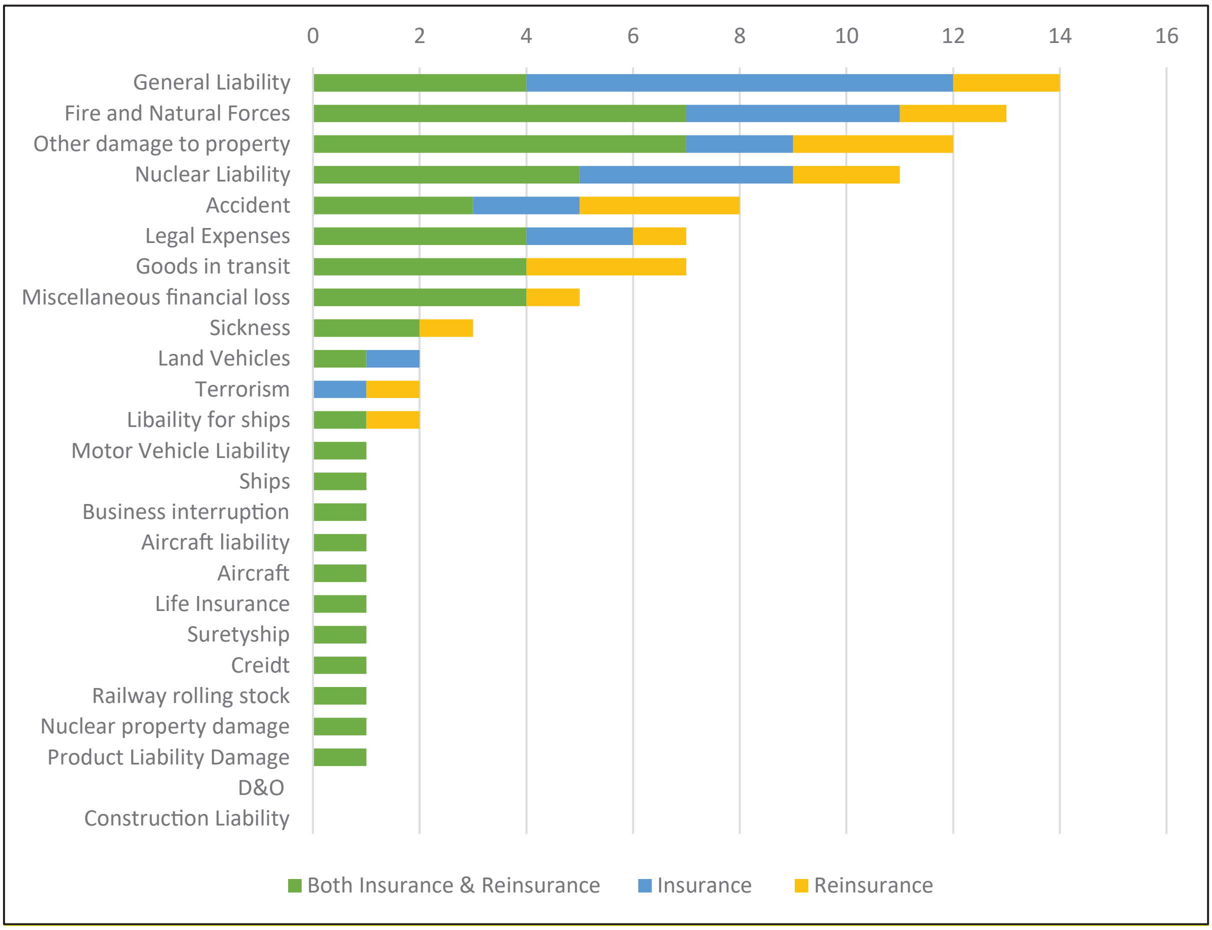
The Moroccan Solidarity Fund for Catastrophic Events (FSEC)
https://www.ajg.com/gallagherre/news-and-insights/2023/march/better-modelling-better-structure-better-outcomes/ https://blogs.worldbank.org/en/arabvoices/morocco-mobilizing-financial-sector-improved-resilience-against-disasters-and-climate

EY 2014 STATISTICS ON INSURANCE POOLS

According to the EY 2014 Study on Insurance Pools in the European Union, pools frequently cover more than one class of insurance. The largest number of risks that are written in the pool are general liability, fire, property damage, nuclear liability and accident. Detailed illustration of classes for which pools are used by insurance companies and reinsurance companies or both:

Figure 9 - Number of Pools by Risk Classes in Europe – EY2014 Statistics



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