INTERNATIONAL MONETARY FUND

Implementing Risk-Based Solvency for Insurers—Lessons from Kenya, Mexico, and South Africa

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WP/24/240

2024
NOV

WORKING PAPER

 WP/24/240

IMF Working Paper
Monetary and Capital Markets Department

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Authorized for distribution by Jay Surti
November 2024

ABSTRACT: International standards and best practise supports the implementation of a risk-based solvency regime in the regulation and supervision of insurers. Several emerging market and developing economies are transitioning to such a solvency regime or planning to do so. This paper discusses Kenya, Mexico, and South Africa's journey to putting in place a risk-based solvency regime which had several common elements notwithstanding significantly different insurance sectors. The transition was a multi-year project requiring dedicated additional resources; restructuring of the regulator, including redesigning supervisory processes and tools and upgrading information technology systems; and significantly greater coordination between the regulator and the insurance industry.

RECOMMENDED CITATION: [Start Typing Here]

JEL Classification Numbers:	G22, G28
Keywords:	Insurance; Risk-based Solvency; Risk-based supervision
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WORKING PAPERS

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Introduction

Several countries are contemplating, have begun, are making progress, or have completed their journeys to a risk-based solvency (RBS) regime for their insurance sector and a risk-based approach to insurance supervision. Important benefits offered by RBS include quantitative requirements to enhance judgements about the financial soundness of insurers when supervisory authorities are assessing the risks of insurance companies, facilitating a more forward-looking approach to supervision that lends itself to a more proactive stance in identifying issues and determining solutions.

A key driver toward adoption of RBS regimes by insurance regulators comes from improved prospects for compliance with international standards after transition to RBS. While RBS adoption is not necessary to comply with the Insurance Core Principles (ICPs) of the International Association of Insurance Supervisors (IAIS), its proper implementation improves prospects for compliance, which provides a compelling incentive for jurisdictions to adopt it. The IAIS provides guidance in its ICPs for insurance regulators seeking to make the transition to a RBS regime and the risk-based supervisory approach.

Practical guidance that can assist in RBS implementation is much sought after by insurance regulators in emerging market and developing economies. The transition to an RBS regime is a significant, medium-to-long-term undertaking. It is a complex project and insurance regulators from emerging and developing economies face significant challenges in effectively designing a RBS regime that is fit-for-purpose for their markets. Shortages of resources, notably of necessary specialist expertise and appropriate information technology (IT) systems are at the core of difficulties facing these jurisdictions, as has been highlighted by the Financial Sector Assessment Program conducted by the IMF and the World Bank.

This paper discusses the approach taken by three countries with vastly different insurance sectors and financial market depth and scope—Kenya, Mexico, and South Africa—in completing their journey toward implementing their insurance RBS regimes. The motivation is to provide practical examples of approaches that have worked for these countries considering their specific context, highlighting, where evident, common factors that were important in ensuring completion of their journey to RBS. The purpose of the paper is, therefore, to provide detailed examples on which other countries, contemplating, embarking on, or into their own journeys toward RBS can draw on in order to overcome challenges and make headway.

RBS projects are likely to take a significant amount of time as demonstrated in Kenya (10 years), Mexico (9 years) and South Africa (9 years). Over this period, dedicated resources are necessary and a clear project plan with milestones and timelines need to be set out. It is therefore critical that there is buy-in from government and industry from the start and there is ongoing support for the project. Legislative changes usually need to occur toward the end of the project, so maintaining government support is vital. Implementation of RBS also requires substantial change of supervision. Consequently, being clear on the reasons for undertaking an RBS project and identifying and articulating objectives for the project are critical to the success of RBS implementation as amply evident in the success of the three countries studied by this paper. While insurance supervisors have much to learn from successful transitions to RBS by other countries, regarding both technical details and strategies to overcome practical challenges, it is important that they contextualize international experiences to their countries' environment and avoid a 'cut and paste' approach that may have unintended consequences. A key feature of all RBS implementation by Kenya, Mexico, and South Africa is that they did not take and attempt to implement 'off-the-shelf' an existing, advanced economy RBS regime. While they learnt from the available

experience and examples of advanced economy RBS regimes, building frameworks that were consistent with the broad structure and methodology of such frameworks, they also significantly tailored and simplified implementation in important ways.

Among the common factors that were identified in all three country cases as important to the successful transition to RBS include the following.

- First, a regulator transitioning to RBS without the implementation of a risk-based supervision approach is unlikely to achieve the objectives of the transition to RBS. The RBS regime focuses on an insurer's financial position, to ensure the salience of which, effective management of risks by the firm is vital. A risk-based supervision approach focuses on the assessment of the quality of the risk management practices employed by insurers.
- Second, change management is one of the most important issues to consider in the journey to RBS implementation. Supervisors need different skill sets, such as actuarial skills, to ensure the smooth implementation of RBS. As RBS implementation usually goes hand-in-hand with risk-based supervision, the relationship between regulators and insurers will change profoundly since risk-based supervision involves the application of professional judgement and moves away from compliance-based processes. Expert judgement will be needed to interpret results from RBS and to design and implement the necessary supervisory actions where issues are found.
- Third, consistent communication with the insurance industry is necessary during the RBS project as insurers need to adjust their expectations about interactions with their regulator. Hence, cultural change is not only an issue for regulators, but also for the industry who must recognize that the management of insurers are responsible for business decisions and the risks they entail. The limits and requirements around investments and premium pricing decisions previously imposed by regulators should be replaced with high level principles.
- Fourth, regulators' IT will likely need to be upgraded for RBS implementation. RBS requires significant amounts of regulatory data to be captured and analyzed. Early in the RBS project, data for calibration of the capital requirements will need to be acquired. Some of this will be publicly available but some data may also need to be provided by insurers. Regulators will need an adequate system to process and analyze this data. Regulators will have to invest in data warehouses and carefully design regulatory reporting templates to capture the necessary data without undue burden on insurers.

It is important to note that implementing an RBS regime is essentially a journey where the ultimate destination is elusive but there are important mileposts along the way. No RBS regime will be static over time and as the insurance market, capital markets, and the capacity of the regulator evolve it is expected that the RBS regime will also evolve and be reviewed. The case studies demonstrate reaching the very important waypoint of implementing the first iteration of RBS regimes, however if we look at what is in place in these countries in 10-, 20- or 30-years' time, it is likely that it will have evolved based on many lessons learned on the journey.

The paper is organized as follows. It begins with the next section which distinguishes RBS from the closely related concept of risk-based supervision. The subsequent three sections take up the detailed study of RBS implementation in Kenya, Mexico, and South Africa, covering the key elements of the insurance regulatory regimes and the organization of the authority prior to the journey to RBS and the changes entailed by RBS adoption. Three annexures provide additional technical details on the three pillars of the RBS regimes and regulatory reporting requirements after the transition.

RBS and Risk-Based Supervision

In insurance supervision, RBS and risk-based supervision are terms often used interchangeably, reflecting the fact that they have a symbiotic relationship and one being impossible to implement without the other, albeit they are distinct concepts even though often seen as one holistic system.

RBS is a comprehensive, formally structured approach to solvency regulation. An RBS regime includes both quantitative and qualitative elements. It provides a regulatory framework that sets out requirements that insurers maintain a capital adequacy level commensurate with their risk profiles, i.e., have enough financial resources to withstand severe but plausible financial stresses based on their risk profile. These quantitative requirements are supported by a regulatory framework for a sound corporate governance including an enterprise risk management system. For RBS to be successfully implemented, it requires a supervisory framework that is responsive to risks as they emerge and clearly provides oversight of the board and senior management of insurers in making decisions about business models to be pursued and therefore risks to which the insurer is exposed.[1] The risk-based supervision framework must be attentive to where the quantitative capital requirements are not fully reflective of the risks of a particular insurer due to unique features of business models or poor governance or risk management by the boards and senior management of an insurer. A regulator transitioning to Risk-Based Solvency (RBS) without the implementation of a Risk-Based Supervision approach will not achieve the objectives of the transition to RBS.

Risk-based supervision seeks to increase the effectiveness of supervision in resource constrained environments by increasing the efficiency of resource allocation and processes to improve supervisory outcomes. The key concept, as the name implies, is the allocation of resources to insurers that pose the greatest risk to supervisory objectives, and to issues within individual insurers that pose the greatest risk to supervisory objectives. Those supervisory objectives should focus on policyholder protection and ensuring financial stability. Taking financial risks is inherent to the business of insurance, so risk-based supervision does not seek to eliminate risks but to provide supervisors a framework and a toolkit to address those risks to their supervisory objectives in the most efficient and effective way.

Risk-based supervision includes a framework of legislative powers and supervisory practices based on clear objectives that includes a comprehensive supervisory toolkit of offsite supervision, onsite supervision, and an escalating set of corrective measures where necessary. Licensing, supervisory oversight of changes in control or significant influence along with supervisory oversight of transfers of portfolios as well as oversight of key transactions such as reinsurance are all elements of risk-based supervision. Effective implementation of supervisory practices within a risk-based supervision framework is also vital. An IMF paper[2] on the topic of good supervision focuses on banking supervision but many of the key lessons learned are equally applicable to insurance supervision.

[1] Emerging and maturing risk factors, such as climate change and protection gaps, technology, and threats to cybersecurity, have grown in prominence over the last few years and insurance supervisory authorities are increasing their understanding of associated challenges for their work and are responding to them. However, these risks have not yet been incorporated into risk-based solvency frameworks, with other tools being used to address them, and thus they are not covered in this paper.

[2] Adrian, Tobias, Moretti, Marina, Carvalho, Ana, Chon, Hee Kyong, Seal, Katharine, Melo, Fabiana, & Surti, Jay. (2023). Good Supervision: Lessons from the Field. IMF Working Paper No. 2023/181. International Monetary Fund.

This paper focuses on RBS but throughout the case studies, there are indications of how the supervisory framework had to evolve concurrently. This is indicative of the symbiotic relationship between the two concepts.

Implementing Risk-Based Solvency in Kenya

This section sets out the journey of Kenya's Insurance Regulatory Authority (IRA) in its transition to a RBS regime. It starts by laying out the context of the insurance sector in Kenya and subsequently discusses how the IRA managed and executed its journey, starting with the regulatory and supervisory approach before the transition to the RBS regime, key challenges, and milestones along the way, and lessons from the IRA's experience. Annex I contains additional information on what was implemented for the RBS regime and reporting templates that support its implementation.

Overview of the Insurance Industry in Kenya

Kenya was ranked fourth in Africa in terms of gross premium income in 2020 and third in 2019 (Table 1). Kenya was ranked 57th in terms of insurance penetration in the world. Table 1 contrasts insurance in Kenya with that of other African countries.

Table 1. Comparison of Selected African Insurance Markets (2020)

Country	Non-Life Premiums (USD in Billions)	Life Premiums (USD in Billions)	Total Premiums (USD in Billions)	Penetration rate [3](Percent)	Global Ranking
South Africa	7.38	33.26	40.64	13.7	4
Morocco	2.84	2.24	5.08	4.5	34
Kenya	1.22	0.98	2.20	2.2	57
Tunisia	0.69	0.21	0.90	2.3	55
Egypt	1.30	1.09	2.39	0.7	85

Source: Swiss Re Sigma 2020.

The insurance industry in Kenya has experienced moderate growth over the last nine years, albeit the annual growth rate has declined from 15 percent to only two percent between 2012 and 2020 (Table 2). The insurance market in Kenya recorded an average annual growth rate of 9.7 percent over the last nine years. The insurance industry was moderately impacted by the COVID-19 pandemic in terms of premiums written and investments returns. In 2020, the industry recorded $2.3 billion in gross premium (2019: $2.3 billion) translating to a nominal growth of 2.3 percent (-2.9 percent in real terms).

Non-life insurance business still dominates the industry accounting for about 60 percent of total premium written in Kenya according to 2020 IRA insurance statistics. The life insurance penetration has been stable over the last 10 years with an average penetration rate of 1 percent (2020: 0.95 percent). Non-life insurance penetration has been declining over the last nine years with the lowest rate in 2020 at 1.2 percent. The world average insurance penetration rate stood at 7.4 percent. The insurance density rate in Kenya was $47.87 in 2020.[4] Figure 1 shows the trend in the insurance penetration and insurance density rates from 2012 to 2020.

[3] Insurance penetration rate is the ratio of gross direct insurance premiums to Gross Domestic Product in a jurisdiction.

[4] Insurance density is a ratio of gross direct insurance premiums to total population.

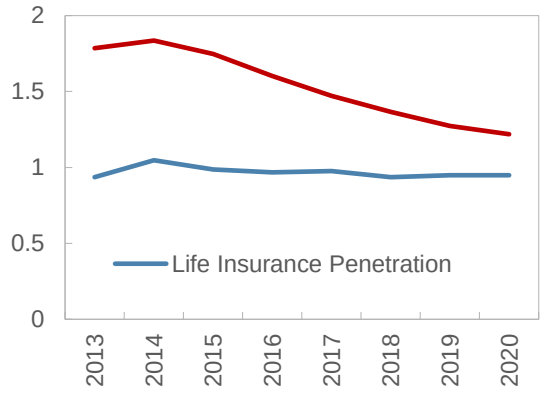
Table 2. Premium Growth Rate									
Year	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
Total Premiums (USD Billions)	1.12	1.29	1.56	1.73	1.95	2.08	2.15	2.28	2.33
Life Premiums (USD Billions)	0.37	0.44	0.57	0.62	0.74	0.83	0.87	0.97	1.02
Non-Life Premiums (USD Billions)	0.73	0.85	0.99	1.10	1.22	1.25	1.28	1.31	1.31
Growth rate (percent)		15.46	20.59	10.72	13.18	6.33	3.52	6.05	2.29
Source: IRA data.									

Figure 1. Insurance Penetration and Density

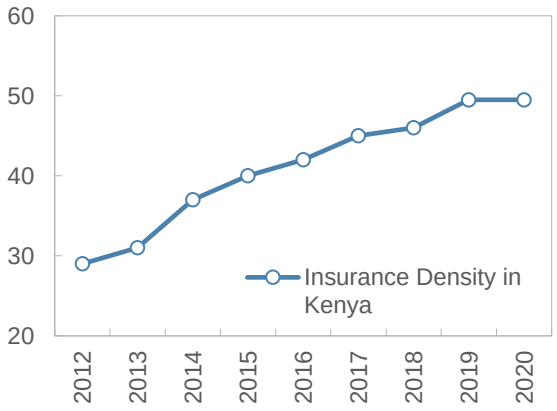
Insurance penetration has been declining for non-life insurance while…

Insurance density has been increasing suggesting increased awareness, economic growth, increased pricing, or market expansion to name a few

1. Insurance Penetration in Kenya (Percent)



2. Insurance Density in Kenya



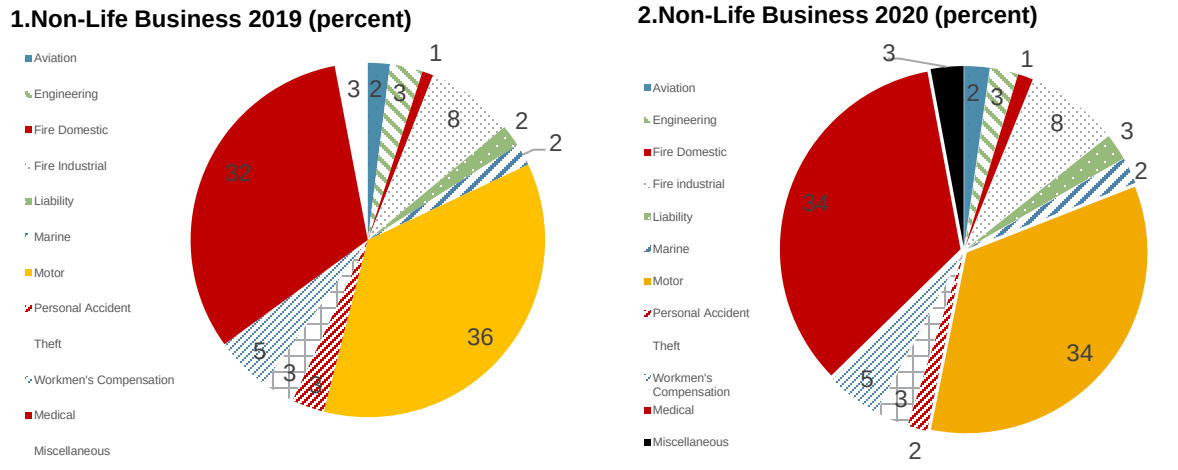
Sources: IRA data and author calculations.

The insurance industry asset base has been increasing over the last nine years (Table 3). The industry asset base increased by 8 percent to $7.7 billion in 2020 (2019: $7.1 billion). The asset base was largely composed of investments, (85.7 percent of total assets), that were, in turn, were mainly composed of government securities (67.1 percent). The insurance industry asset base compared to GDP has been on average 7 percent over the last 10 years. Table 3 shows the insurance industry asset base compared to GDP from the year 2012 to 2020.

Table 3. Asset Base Compared to GDP									
Year	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
Asset Base (USD Billions)	3.11	3.66	4.31	4.79	5.29	5.91	6.35	7.11	7.66
GDP (USD Billions)	42.61	47.45	54.02	62.84	75.94	84.83	93.40	102.56	107.53
Asset Base to GDP (percent)	7.3	7.7	8.0	7.6	7.0	7.0	6.8	6.9	7.1
Source: IRA data.									

There were 61 insurers and reinsurers licensed in Kenya in 2020. These comprised 33 underwriters conducting non-life insurance business, 19 conducting life insurance business, four composite firms conducting both life and non-life insurance business, three composite reinsurers and two reinsurers conducting non-life reinsurance business only. The industry has seven foreign majority owned non-life insurers and six foreign majority owned life insurers. Legislation requires that 33 percent of the shares of any insurer must be owned by Kenyan or east African citizens. Foreign insurers account for about 20 percent of the business written in Kenya. It is expected that the percentage of business written in Kenya by foreign companies will increase due to some acquisitions of local insurers by international companies. Insurance in Kenya is mainly sourced through agents, brokers or directly by insurers. In 2020, 37.7 percent of the total industry premium was sourced through insurance brokers, 37.1 percent through insurance agents and 25.2 percent directly. The industry has over 10,000 insurance agents, 204 brokers, 189 reinsurance brokers, 34 medical insurance providers and over 300 insurance service providers. In the non-life insurance sector Medical and Motor classes of business continue to be the largest classes of business (Figure 2). These two segments accounted for 34.4 percent and 34.1 percent of the premium income, respectively, in 2020.

Figure 2. Distribution of Premiums Per Class of Non-Life Business



Source: IRA data.

Kenyan non-life insurers continue to report high loss ratios (Table 4). Between 2016 and 2020, the loss ratios for the aggregate non-life insurance industry ranged between 61.5 percent and 64.2 percent which would appear to indicate that results are remarkably consistent. The individual lines of business written have a wide variation in loss ratios and certain lines of business contain a significant amount of additional volatility. Non-life insurers have traditionally relied on investment income to act as a cushion for their underwriting results. The investment income has been on average above 6 percent over the last five years. The benchmark interest rate of the Bank of Kenya has consistently been at or above 7 percent over this period.

Table 4. Loss Ratio of Non-life Business
(Percent)

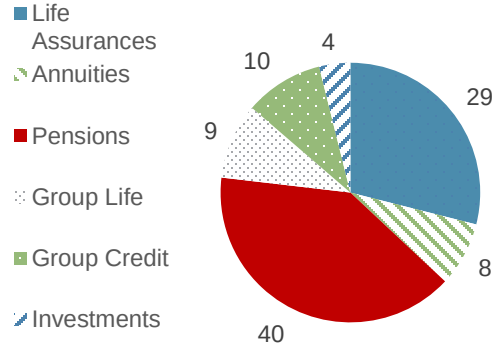
Year	2016	2017	2018	2019	2020
Non-Life Loss Ratio	62.7	61.5	62.5	64.2	63.6
Motor Loss Ratio	65.3	63.3	64.5	73.8	71.0
Medical Loss Ratio	75.6	72.6	75.6	74.1	70.3
Non-Life Combined Ratio	102.4	101.1	102.8	103.4	102.0

Non-Life Investment Income Ratio	5.8	7.8	6.3	8.4	7.8

Source: IRA data.

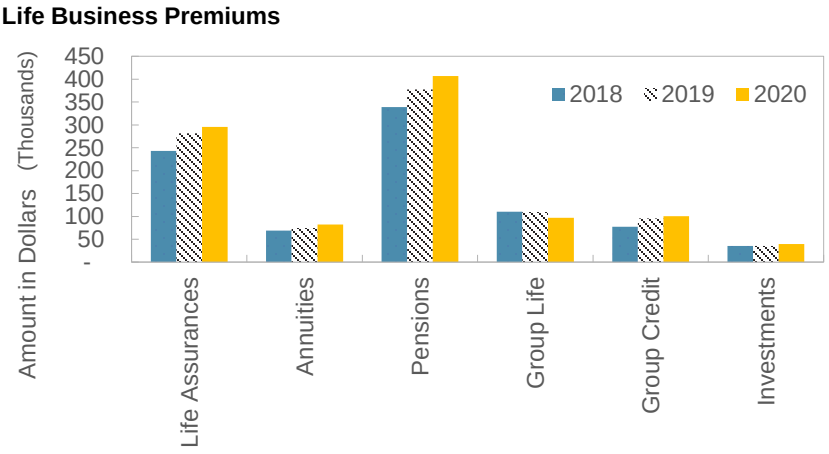
Life insurance business in Kenya comprises of life assurance, annuities, group life, group credit, investments, pensions, and permanent health (Figure 3). Pensions and Life Assurance contributes the largest share of premiums for life business, accounting for 40 percent and 29 percent respectively of premiums collected by life insurers in 2020 and also the fastest growing business segments. Pensions premium shown here is for the life insurer's share of the pensions market. Guaranteed business has reduced.

Figure 3. Premiums for Life Business



Source: IRA data.

Figure 4. Growth in Gross Premiums for Life Business Per Class of Business



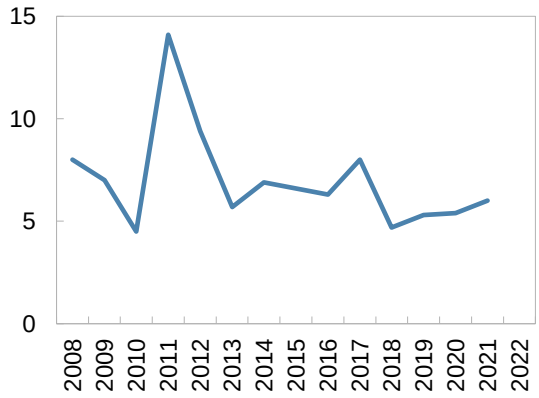
Source: IRA data.

Legislation requires mandatory reinsurance placements with locally licensed reinsurers. The Kenyan insurance sector has two reinsurers operating under regional charters. These two reinsurers receive mandatory cessions of 10 percent and 5 percent respectively of all Kenyan insurance business while the locally incorporated reinsurer receives mandatory cessions of 20 percent. The has enabled the reinsurers to secure a steady flow of

business helping them ring-fence their market share on the back of a highly competitive industry. The reinsurers are required to have retrocession arrangements in place, and these are mainly with the large international reinsurers.

The insurance industry's asset base has continued to grow over the last five years. Total assets as of end-2020 amounted to $7.7 billion, a growth of 8 percent from $7.1 billion reported in 2019. The average annual inflation rate in Kenya between 2013 and 2019 was 5 percent (Figure 5) compared to an average asset return of 7.2 percent which enabled companies to get a real return of 2.2 percent.

Figure 5. Annual Inflation Rate
(Percent)

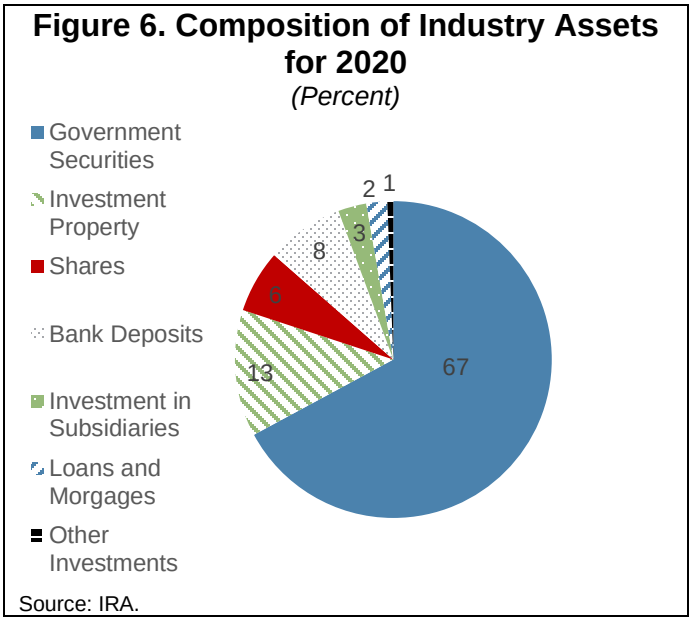


Source: Kenya National Bureau of Statistics (KNBS).

In 2020, total assets under life insurance business amounted to $5.1 billion (67 percent) while non-life insurance business had assets amounting to $2.5 billion (33 percent). The assets comprised of investments (85.7 percent), current assets (11.7 percent), fixed assets (1.5 percent) and intangibles (1.1 percent). Government securities remain the most preferred investment channel accounting for the largest share at 67.1 percent of the total investments (Table 5 and Figure 6).

Table 5. Composition of Assets
(USD bilions)

Year	2016	2017	2018	2019	2020
Government Securities	2.11	2.57	3.01	3.66	4.41
Investment Property	0.73	0.79	0.83	0.84	0.85
Shares	0.48	0.39	0.48	0.55	0.42
Bank Deposits	0.45	0.54	0.50	0.53	0.52
Investment in Subsidiaries	0.14	0.15	0.15	0.16	0.19
Loans and Mortgages	0.12	0.12	0.13	0.13	0.14
Other Investments	0.24	0.26	0.13	0.06	0.04



Prior to RBS

Regulation and Supervision

A compliance-based supervisory model has been in place in Kenya since 2006. The model was applied up to 2013 when Kenya's Insurance Act was amended. Prior to the amendments, the Insurance Act included statutory requirements to look at the financial health of a firm in terms of solvency, capital, and net worth. Insurance entities had to comply with a set of prudential rules generally written into the law or subordinated legislation. The IRA applied a one size fits all supervisory approach.

In terms of capital requirements, Kenya, had a flat nominal value plus a solvency margin (Table 6). The law required non-life insurers to hold minimum capital equivalent to $3 million and life insurers and reinsurers to hold a minimum capital equivalent to $1.5 million. The minimum capital approach did not distinguish between risk profiles, business mix, size, or scale of the insurer. The non-life insurers were required to have a solvency margin of $100,000 or 15 percent of the net written premiums during the last preceding financial year, whichever was greater. Life insurers were required to keep a margin of above $100,000 or 5 percent of Net Actuarial liabilities. The first threshold applied in Kenya was of a required capital amount, as a 'flat minimum capital' approach and the remaining thresholds were based on the size of the business. Table 1 reflects the capital requirements prior to RBS.

Table 6. Capital Requirements Prior to RBS

Category	Amounts in USD	
	Minimum Capital	Solvency Margin
Non-Life Insurer	3,000,000	100,000 or 15 percent of Net Written Premium
Life Insurer	1,500,000	100,000 or 5 percent of Net Actuarial Liabilities

Source: Author based on information from the IRA.

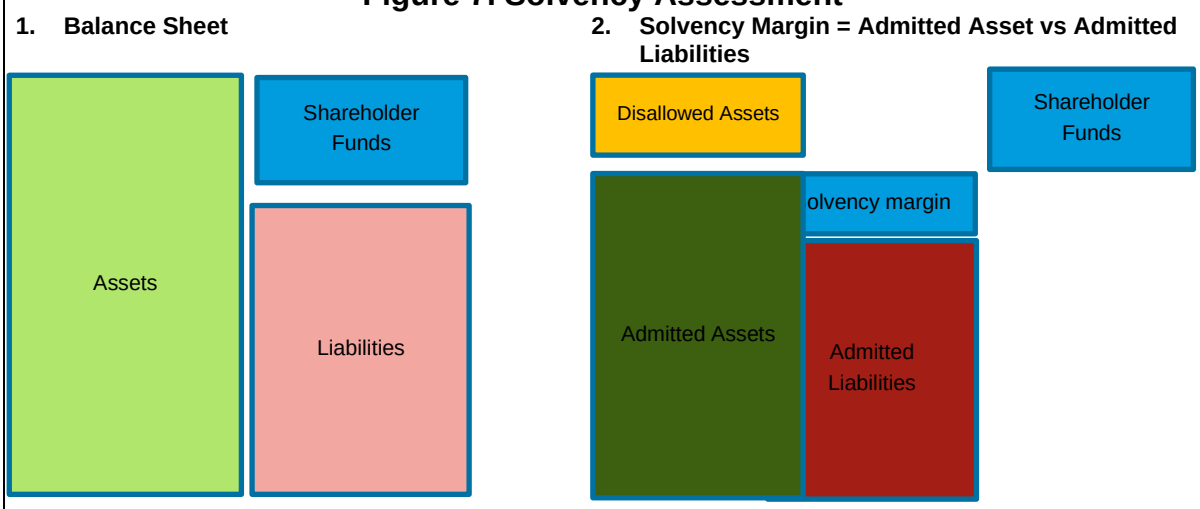
The Kenyan insurance law did not have capital requirements relating to market and credit risk. Capital requirements were based on the volume of business and its computation was a percentage of written premiums or actuarial liabilities. Instead, rules and restrictions aimed at managing market and credit risk were applied on the assets of insurers and on reinsurance counterparties. Restrictions on assets were in the form of haircuts and the ineligibility of certain assets that the regulator deemed unrealizable in the insurers' portfolios.

The actuarial liabilities were computed as prescribed by the IRA. The authority required all insurers to have their financial statements prepared on an annual basis in accordance with International Financial Reporting Standards (IFRS) and audited in accordance with the International Standards on Auditing (ISA). Insurance liabilities are generally recorded on an accrual basis, since they are recognized as soon as they are incurred, regardless of when they will be paid. Furthermore, insurance liabilities are required to be matched with the revenues they generate. Insurance firms were required to estimate future losses and set aside reserves to cover them meaning that the auditors were required to verify the quantum of policyholder reserves and benefits using generally accepted actuarial principles and conduct a liability adequacy test as required by the International Financial Reporting Standards (IFRS). The law required that the value placed on aggregate policyholder liabilities at any basis of valuation should not be less than it would have been if it had been calculated as prescribed by the IRA. The mortality rates, discount rates and margins to be used in calculating policyholder liabilities were prescribed by the IRA. The liabilities calculated were the present value of all prospective cash flows and reserves were floored at zero at the individual policy level. Negative reserves, where the value of the future premiums was higher than the value of the benefits to be paid out plus the expenses for a policyholder were also assumed to take a value of zero.

The solvency assessment of insurers also included adjustments to assets and liabilities (Figure 7). The concept of admitted assets and admitted liabilities was applied, i.e., adjustments were made to the assets and liabilities for purposes of solvency calculations. To arrive at the admitted assets amount, the regulator deducted goodwill and other intangibles, deferred tax assets, prepayments, fixed assets, computer equipment, inventory, and other assets that the regulator deemed fit. Admitted liabilities were composed of the balance-sheet liabilities and additional margins that the regulator would compute based on the off-balance sheet exposures.[5]

[5] Admitted liabilities are liabilities that are generally higher than the balance sheet total liabilities after adjusting for off balance sheet liabilities and additional margins. The term "Admitted Liabilities" does not mean that some liabilities will be excluded from solvency computation.

Figure 7. Solvency Assessment

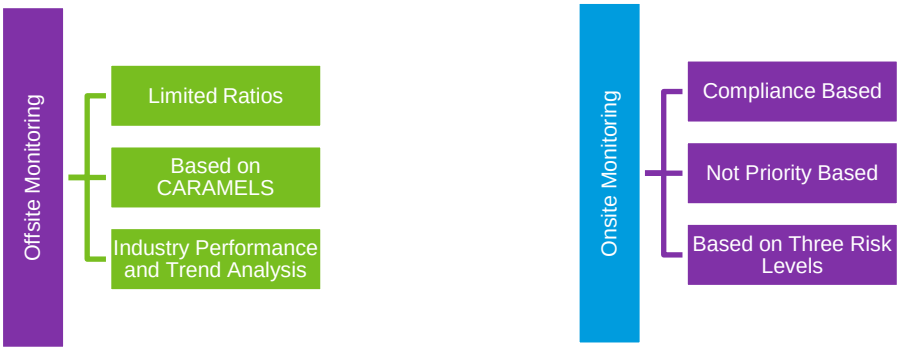


Source: Author based on information from the IRA.

The legislative requirements included very limited governance requirements. There was no specific requirement on risk management, albeit the IRA required approval of the appointment of senior management and the board of directors. The law requires senior management and directors to possess requisite academic and professional qualifications, work experience and fitness-and-propriety. This means that they should not have been convicted of an offence involving fraud or dishonesty and adjudicated bankrupt.

The supervisory review process included both onsite inspections and offsite monitoring (Figure 8). Different teams and different assessment processes were applied for onsite inspections and offsite monitoring. The approach, however, did not consider the interplay between the onsite and offsite monitoring processes as part of supervisory planning and assessment.

Figure 8. Supervisory Review Process



Source: Author based on information from the IRA.

In respect of offsite monitoring, the supervisory review process comprised of an assessment of financial ratios aligned to the CARAMELS rating system that was introduced in 2007.[6] The IRA received manual periodic

[6] CARAMELS is an acronym for Capital Adequacy, Assets Quality, Reinsurance, Actuarial Provisions, Management and Corporate Governance, Earnings, Liquidity, and Subsidiaries and related parties

returns on a quarterly and annual basis. The data was not centralized, and physical submission was made in four sets of files as it was to be distributed across the four departments in the IRA. Actuarial valuation reports were produced annually and only submitted by life insurers. There was no requirement in place for actuarial reports to be submitted to the IRA for non-life insurers. These regulatory returns were used to assess an insurer's solvency condition, compliance with laws and regulations, premium rates, dealing with intermediaries, and general operations of the insurer. Offsite monitoring was undertaken by the Financial Analysis team that focused on aggregating data and producing reports on performance and trends, compared with those figures of the wider industry. The analysis did not provide a comprehensive set of key ratios and benchmarks for the ratios. Furthermore, there was no early warning system or stress testing applied to the data.

For onsite inspections the supervisors assigned specific ratings for individual components based on judgement. Onsite monitoring focused on financial, operational and governance aspects of the companies. The regulator had a plan that focused on inspecting as many firms as possible. There was no priority accorded to firms that presented more risk to the industry as the outcome was based on the number of entities inspected. The rating scale was based on three levels: low risk, moderate risk, and high-risk categories and there was a tendency for supervisors to rank firms in the moderate risk category. Furthermore, the IRA did not assign ratings using a matrix of finite ranges as the overall risk was determined from the individual risk scores on financial, operational and governance aspects of the company.

The IRA's supervision department had four separate divisions that focused on providing oversight. The divisions were Compliance, Surveillance, Actuarial, and Financial Analysis. These divisions did not coordinate effectively since each division focused on its activities. For instance, the compliance division oversaw offsite assessments whilst the surveillance division oversaw onsite inspections. These divisions did not properly coordinate to effectively determine the risk posed by regulated entities.

The Regulator

Kenya applied a compliance-based approach wherein supervisory resources were equally distributed across all insurers regardless of their risk profile and size. The IRA is financed through a premium levy with the budget requiring approval from the Ministry of Finance. The IRA had, on average, 62 staff members between the years 2007 and 2010, composed of qualified insurance professionals, qualified accountants, and partly qualified actuarial professionals (Table 7).

While the IRA did not have qualified actuaries, five staff members were pursuing the United Kingdom (UK) actuarial professional certification. The industry also faced a lack of specialized skills, especially in the actuarial and risk management areas, to fully support the implementation of RBS. In 2011, the IRA established an actuarial scholarship scheme with the aim of increasing the pool of actuaries in the Kenyan market as it planned to shift to risk based supervision. The IRA sent the first cohort of five students to pursue master's degrees in actuarial management to the United Kingdom and also included their staff into the same program. As of 2021, Kenya had 65 actuaries with qualification from the United Kingdom Institute and Faculty of Actuaries (IFOA), reflecting the successful initiative and of the IRA of sending at least five students to the United Kingdom for training every year, a program that helped train 35 fully qualified actuaries. The Actuarial Society of Kenya (TASK), a member of the International Actuarial Association (IAA), was founded in 1993 and officially launched in 2005, and brings together qualified and trainee actuaries in professional, educational and research organizations with the aim of promoting the actuarial profession in Kenya and regional markets. TASK

has set up an Actuarial Academy which is a virtual program that offers mentorship and tutorials to support the actuarial education process.

Table 7. IRA Staff Qualifications	
University Graduates	**Number of Staff**
Masters' degree	10
Bachelors' degree	26
Postgraduate Diploma	5
ACII	10
Certified Public Accountants of Kenya (CPA(K))	5
Advanced Diploma in Insurance	3
Part Associateship of the Chartered Insurance Institute (ACII)	10
Part Actuarial	5
Chartered Institute of Arbitrators (CIArb)	3
Non-University Graduates	
Diploma	8
Certificates	13
Others	5
Source: IRA.	

The Journey to RBS

The Kenyan IRA started its 10-year transition to a Risk-Based Supervision in 2008 when it decided to undertake a comprehensive review of the insurance law. In 2010 the journey was formalized through the establishment of the RBS Steering Committee, the drafting of a high-level project timeline and the publication of a Roadmap.

Kenya undertook a comprehensive review of its Insurance Act in 2008 with a focus on overhauling the entire regulatory framework. They key item on the review agenda was the transformation of the regulatory framework from a compliance-based supervisory model to a risk-based supervisory model. The IRA had to realign its strategic plan in 2011 to establish a key project for shifting its supervisory approach from Compliance Based Supervision to Risk-Based Supervision. This project was supported and funded through the Financial and Legal Sector Technical Assistance Programme – Kenya (FLSTAP) and the World Bank.

The objective of the shift to Risk-Based Supervision was to provide a more effective process to monitor and assess the solvency of insurers on a continuing basis. Risk-Based Supervision enables the IRA to have a structured methodology designed to inspect, analyze, and monitor the financial condition as reported by insurers on statutory financial statements and to allow for the use of this methodology to establish a forward-looking view of the risk profile of insurers which was to guide the priority of resources applied to the supervision of individual insurers. The approach was to lead the IRA to the areas of greatest risk to an insurer. It was also felt that Risk-Based Supervision will enable the regulator to be more proactive and better positioned to identify and respond to a multitude of threats to an insurer's financial stability.

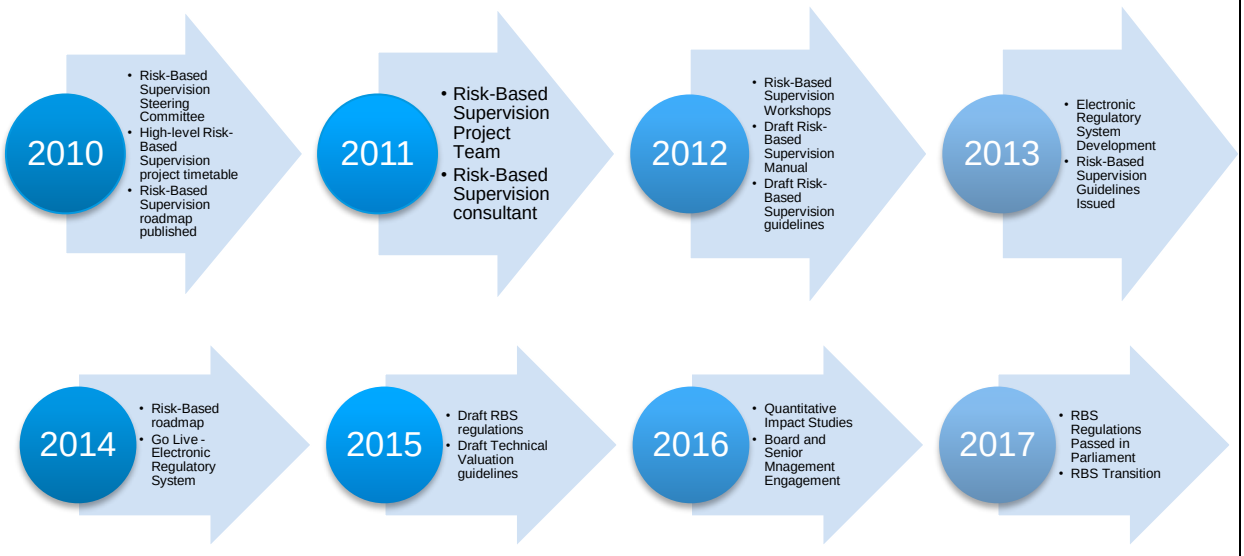
In deciding the appropriate Risk-Based Supervision model to be adopted by Kenya, the IRA drew on experiences from other jurisdictions, including the Australian Prudential Regulatory Authority (APRA), the Office of Superintendent of Financial Institutions (OSFI) in Canada, and the UK Financial Services Authority (FSA).

There were nine key components that the IRA targeted for a successful shift to risk-based supervision. First, training of staff and industry on risk-based supervision. Second, formation of a project team to develop and test evaluation tools such as a risk profiling model. Third, defining inputs and developing output reports. Fourth, developing an RBS requirement. Fifth, developing and implementing an early warning system. Sixth, developing reporting requirements for insurers and brokers. Seventh, acquisition of an electronic data reporting system for data collection and analysis. Eighth, a review of the existing regulations and guidelines. Ninth, the development of stress testing.

A dedicated project team was established for this journey. The project team was comprised of five people with a wide range of skills including actuarial, insurance, legal, accounting and information technology (IT). Three were experienced supervisors with over 10 years of experience and the other two were new employees. The IRA also appointed a consultant to assist in developing a Risk-Based Supervision framework. Among the key deliverables were Risk-Based Supervision manuals, models and training of staff and members of the insurance industry on Risk-Based Supervision.

It took Kenya seven years to develop and implement its Risk-Based Supervision approach which incorporated the development of an RBS regime (Figure 9).

Figure 9. Timeline of Risk-Based Supervision and RBS Project



Source: Author based on information from the IRA.

The journey was initiated with the establishment of risk-based supervision steering committee in 2010. The committee was required to set up the project timeline and roadmap. This was followed by the establishment of an implementation team in 2011 with the support of a consultant to develop RBS manual, RBS guidelines and assist on RBS trainings. The implementation team also designed and developed an electronic regulatory system in 2013. The initial guidelines were issued to the industry in 2013, with the electronic system going live in 2014. To complement the guidelines issued, the implementation team commenced work on the framework in 2015 and developed the draft regulations and technical valuation guidelines. The framework was tested for one

year by conducting a Quantitative Impact Assessment. The Board and Management of the insurance companies were also trained in the application of the new model. The framework was tabled and passed in parliament in 2017.

Transitioning to an RBS regime not only raised challenges at the IRA but also for the Kenyan insurance industry (Table 8).

Table 8. Challenges of Moving to RBS in Kenya

Adaptation of Models	**Lack of actuarial skills.** Both the regulator and the insurers were faced with this challenge. The IRA initiated a long-term scholarship program for development of actuarial skills in Kenya. **Capacity constraints.** A challenge facing both the regulator and the insurers. The capacity constraints were not only in limited resources but also in lack of skills and knowledge within existing resources. IRA decided to reorganize the departments and reallocate resources to where they were needed most. The Kenyan Regulator in deciding which model to adopt did an in-depth study of the different RBS regimes implemented in various jurisdictions. The IRA also developed capacity building programs for the insurance industry.
Reorganization of Regulator	**Lack of co-ordination** and silo approach led to reactive supervision. To enable successful implementation of Risk-Based Supervision, the IRA needed to make changes to its structure and job profiles of supervisory staff. The regulator was previously organized into three departments i.e. compliance, surveillance and financial analysis. These departments focused on offsite, onsite and data analysis respectively without coordination. These departments were reorganized into life insurance, non-life insurance and actuarial departments. At most four companies were allocated to each supervisor per department to conduct offsite, onsite and data analysis. **Lack of holistic view.** The silo approach applied to supervision within the four divisions led to supervisors lacking a holistic view of an insurer and its business model, risks and vulnerabilities.
Staff	**Resistance to change was a challenge.** This required dedicated focused change management initiatives. **The supervisory process also lacked complete underlying detailed processes.** The IRA did not have a technical manual for supervision and the new officers only relied on the knowledge of experienced officers The technical supervisory manual not only required the development of new detailed processes but also led to the identification of staff training needs. The IRA had to develop an RBS manual and arranged for internship programs for its staff with other developed regulatory authorities.
Data Collection	**Changes to IT infrastructures and data systems were required.** The RBS regime required new and more granular data.
Legal powers	**To successfully implement Risk-Based Supervision, the IRA needed appropriate legal powers.** The legislation lacked adequate enforcement or regulatory action powers. In particular the legislation lacked powers that would enable the IBA to institute legal action against the senior management or board of directors of an insurer due to

	mismanagement. This required changes to the legislation. The Parliamentary process can be protracted.
Source: Author based on information from the IRA.	

Key Lessons from the Project

Key lessons from the project include: the desirability of adapting available models of RBS and risk-based supervision, which facilitates building in flexibility that can be used to upgrade models as desirable; setting an adequate time-frame given the significant reorganization that is entailed for the regulatory authority; the need for significant upskilling and training for staff and the potential desirability of using international expertise to support these; identifying and closing data gaps; and create an operational framework for transition that carries the insurance industry along the challenging journey (Table 9).

Table 9. Challenges of Moving to RBS in Kenya

Adaptation of Models	**Look at the range of available models. C**onsult widely and adapt models carefully. The IRA considered the examples from Australia, Canada and the United Kingdom (Solvency II implementation in the UK). IRA held various consultative forums with the industry, professional bodies such as the Actuarial Society and Auditors Board and other regulators. **Built in flexibility to upgrade models and systems.** The IRA built a model in Excel that enabled its modification during the Quantitative Impact Assessment (QIA) stage. The Excel templates were standardized to enable the industry to submit data on a quarterly and annual basis.
Reorganization of Regulator	**Allow plenty of lead time and do not underestimate the amount of change required by the Authority.** Build any new administrative structures gradually and allow flexibility or time to adapt - The IRA took three years to conduct the necessary changes in supervision for adoption of the RBS model. The Authority has continued to encourage principles-based approaches over time as RBS process requires continuous change. **Start to move to a Risk-Based Supervision approach whilst the regulator has capacity. The IRA had to undertake a deliberate assignment of training its supervisory staff in preparation of the full implementation. The IRA had at least one staff member undertake an actuarial course in the United Kingdom alongside five students selected for scholarship.**
Staff	**Make sure training is provided for all staff.** The IRA developed a continuous training program to enable the staff to understand how the approach and models can be adapted in Kenya. The training was conducted every fortnight for at least one hour. **Use international expertise and ask for international training assistance.** The IRA also had support from international organizations such as the IMF and World Bank Group. Financial Sector Experts from the IMF and World Bank provided technical assistance on specific needs during the development of the model and drafting of various regulations.
Data Collection	**Make sure data collection is given proper place in the planning process when devising an RBS approach and consider rolling out the data collection process in stages.** The IRA had to review its previous data

	collection tools and undertake an overhaul of the tools. The IRA developed new data collection templates starting with the monthly returns, then they built the quarterly returns before developing the annual returns. **Make data submissions electronic where possible.** The IRA had to develop an electronic regulatory system (ERS), a supervisory technology platform that enabled the industry to submit granular data so that the regulator could analyse data, generate reports, and produce risk dashboards quickly and effectively.
Insurance industry	**Issue guidance notes explaining requirements of various stakeholders and standards expected of them.** The IRA developed guidance notes and guidelines to provide clarity on the regulations developed for effective implementation of RBS. **Take views on board and facilitate "buy-in" and explain the risk-based supervision process approach to all stakeholders.** The IRA had to organise various Board of Directors sensitization workshops to facilitate their buy in. The IRA also organised stakeholder forums. **Ensure good communication.** IRA established a communication strategy and a team to ensure that relevant information reached the stakeholders effectively.

What was Implemented

Kenya introduced its risk-based supervision regime in 2017, following the review of its insurance law to strengthen the regulatory and supervisory framework in line with RBS standards. The review process entailed improving its risk assessment approaches, industry governance, internal controls, and risk management requirements. RBS regulations and model development were largely completed internally by the IRA's technical staff. The Actuarial Society of Kenya provided input on the requirements in the drafting and model calibration process. The IRA also provided the insurance industry an opportunity to give comments and feedback on the draft requirements and timetable set for the implementation of RBS. Please see Annex I for the details on what was implemented.

Conclusions

One key lesson and success factor is collaboration and active and ongoing stakeholder consultation and industry engagement. The IRA conducted regular workshops with the insurance industry and worked closely with the local actuarial society throughout this process of change. There was the need for intensive and regular discussions with insurer senior management to explain the changes and the cultural change needed to incorporate and embed risk-based processes within their business. The changes also led to the increased need for technical experts such as actuaries and risk management experts within insurers.

There were also knock-on effects to other regulations like the valuation requirements for insurance technical provisions. The IRA had to work with various arms of government to ensure that the necessary legislation was passed. New guidelines for the valuation of technical provisions were developed as these interacted with the risk-based capital and solvency requirements.

The move towards a Risk-Based Supervision regime can take quite several years, from initial scoping to actual implementation and that includes a transition to RBS. The review process began in 2008, a project team was set up and started to work on the details in 2011 and the regime was fully implemented later in 2020.

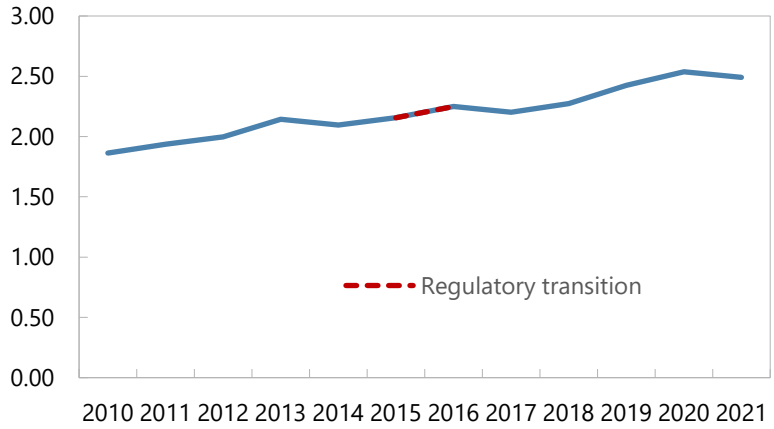
Implementing Risk-Based Solvency in Mexico

The introduction in April 2015 of the Ley de Instituciones de Seguros y de Fianzas (LISF), the insurance law in Mexico, concluded a 25-year process of strengthening insurance regulation with a goal of adopting a risk-based approach by the Comisión Nacional de Seguros y Fianzas (CNFS), Mexico's insurance regulatory authority. The process, based on international standards, began in 2007 with the preparation of the regulation that ended up embodied in the LISF. The relevant elements related to technical reserves, capital adequacy, and investment policy came into force on January 1, 2016. This section sets out the journey of the CNSF in its transition to the RBS regime. It begins by setting out the context by discussing the business scope and trends in financial performance of Mexico's insurance sector. It then provides some information on the regulatory and supervisory approach prior to the transition to RBS and subsequently discusses in detail how the CNSF managed and executed its journey to RBS. Annex II contains additional information on what was implemented for the RBS regime and other relevant information.

Overview of the Insurance Industry in Mexico

The insurance penetration rate in Mexico has increased steadily over the last decade (Figure 10).[7] Mexico's insurance penetration rate, while still below the Latin American and global averages of 3 percent and 6.8 percent respectively, rose to 2.5 percent by 2021, representing a 50 percent growth in asset under management to GDP to 7.6 percent (Figure 11).

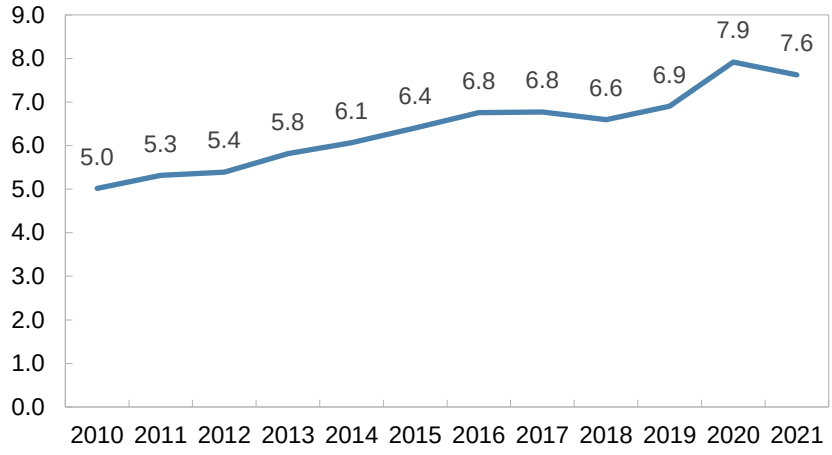
Figure 10. Insurance Penetration Rate in Mexico
(Percent)



Source: Author's calculations based on data from the CNSF and INEGI.

[7] Insurance penetration is calculated as the total amount of insurance direct premium divided by GDP.

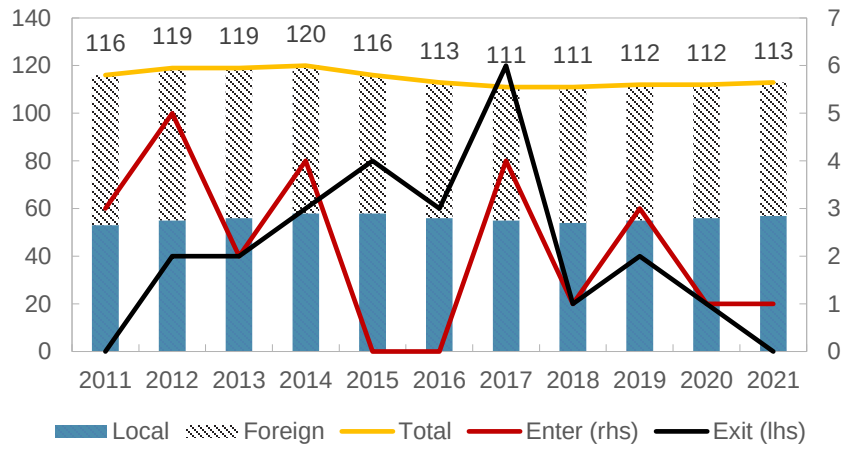
Figure 11. Assets of Insurance Industry vs GDP
(Percent)



Source: Author's calculations based on data from the CNSF and INEGI.

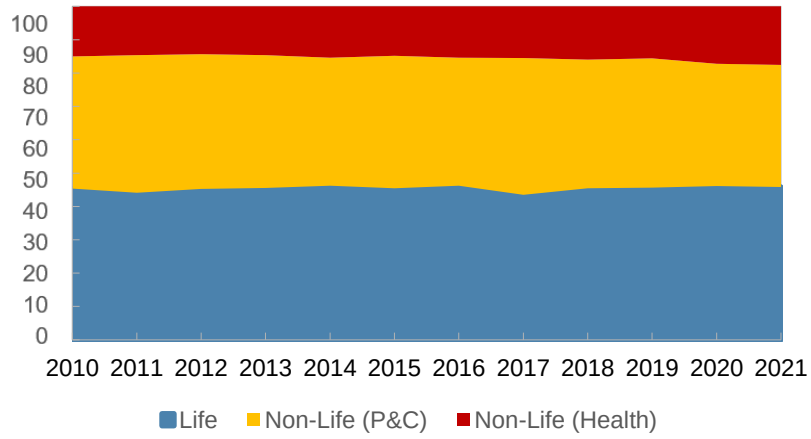
In 2021, there were 113 licensed insurers, of which 57 were locally owned and 56 were foreign owned (Figure 12). The mix between local and foreign capital has remained stable indicating that entry to the Mexican insurance market continues to be attractive to both domestic and foreign investors.

Figure 12. Number of Insurers in Mexico



The premium income split between life and non-life insurance business has been stable (Figure 13). Life insurance business increased from 44.9 percent in 2010 to 45.8 percent in 2021 in terms of total premium income for both sectors.

Figure 13. Life and Non-Life Composition
(Percentage of total premium)



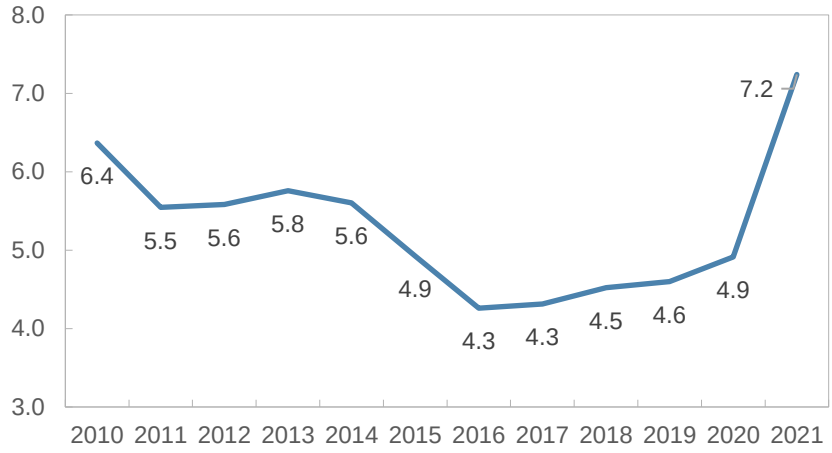
Source: Author's calculations based on data from the CNSF.

The life insurance business includes pension benefits related to social security. These benefits can only be provided by specialized firms which cannot offer other types of life insurance products. In 2021, these specialized firms contributed 7.2 percent to total premium income, a significant increase over prior years (Figure 14). The specialized life insurers are required to submit a bespoke inflation-linked annuity offering for each pension application.

The social security pension system in Mexico was reformed in 1997, for employees other than government employees and in 2007 for government employees. The social security pension fund benefits are now based on private contributions.[8] The benefits are paid based on each individual funds rules' and provided through these specialized life insurers. The changes only applied mandatorily to employees who began to contribute the year the changes came into effect. Most employees are still contributing as they have not yet reached retirement age.

[8] This model is like the one proposed in Chile at the beginning of the 1980s and replicated during the 1990s by several Latin American countries.

Figure 14. Social Security Pension Insurance
(Percentage of total premium)



Source: Author's calculations based on data from the CNSF.

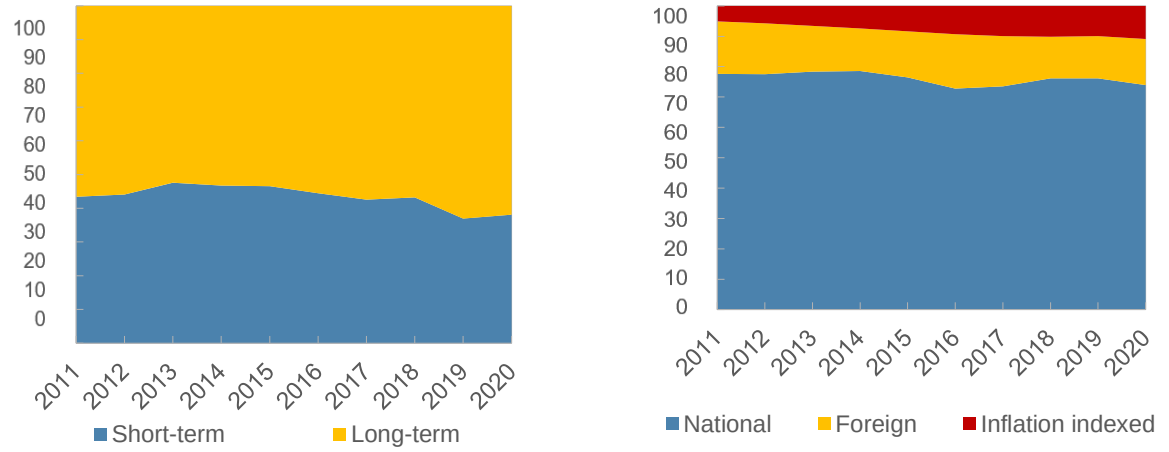
For life insurance business, other than pension insurance, there has been a move towards long-term contracts, which represented 61.9 percent of life insurance premium income for 2020 (Figure 15, left panel). An increase towards inflation linked products has been observed, albeit most of the life insurance business is still denominated in pesos, contributing 73.9 percent of the premium income in 2020 (Figure 15, right panel). Life insurance in foreign currency (15,2 percent of premium income in 2020) is made up almost entirely of benefits denominated in USD, which is seen as safe in terms of protecting value. The incentive to allocate savings to survival insurance products allow that people to save in USD is strong because since the 1980s, people in Mexico have not been allowed to have bank accounts in USD.[9] Inflation-indexed products, accounting for 10.9 percent of premium income in 2020, take the Unidad de Inversion (UDI, Inflation indexed valuation unit) as a reference, in such a way that they operate as if they were denominated in UDI, where both premiums and benefits are valued in UDI.[10] A variety of life insurance products are underwritten and includes mortality and survival or savings benefits. The variety applies to both short- and long-term policies, as well as for those denominated in pesos, foreign currency and indexed to inflation.

[9] In Mexico, only people who live on the northern border or companies can have bank accounts in U.S. dollars.

[10] UDIs are units of value that BANXICO updates daily based on inflation. These are used to resolve all types of operations that are indexed to inflation. The value of the UDI began to be calculated on April 4, 1995, when its initial value was equal to 1 peso. On December 31, 2021, the value of the UDI was 7.11 pesos.

Figure 15. Life Composition by Term and Currency

(Percentage of total life premium)

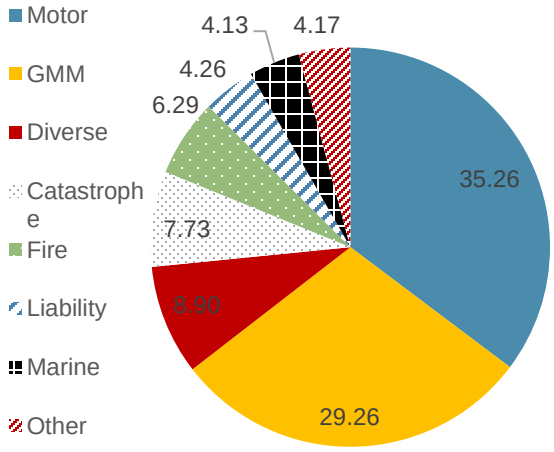


Source: Author's own calculations based on data from the CNSF.

For non-life products, based on 2020 premiums the largest contributor is the motor class of business followed by large expenses health insurance (GMM, Figure 16).

Figure 16. Non-Life Composition in 2020

(Percentage of total non-life premium)

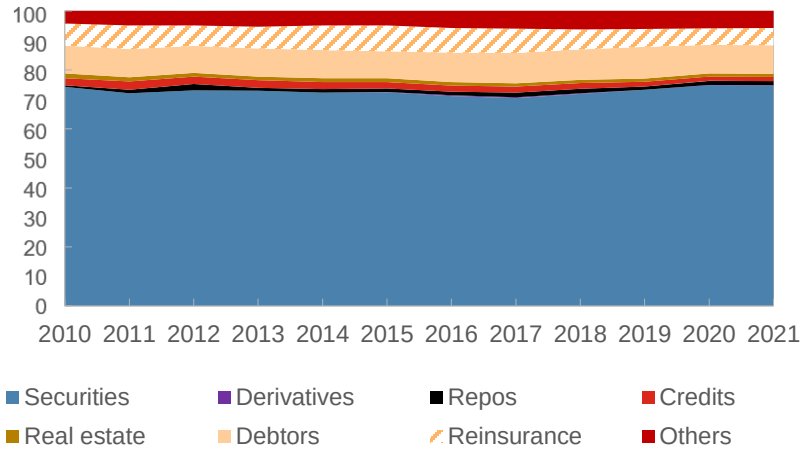


Source: Author's own calculations based on data from the CNSF.

Insurers' assets have been dominated by securities since 2010, followed by loans, which are mainly composed of premium debtors and reinsurance recoverables (Figure 17).[11] In 2021, 74.7 percent of assets were securities, 9.7 percent were premium debtors and 5.9 percent corresponded to reinsurance recoverables.

[11] Securities refers to bonds and equity.

Figure 17. Assets Composition by Type
(Percentage of total assets)



Source: Author's own calculations based on data from the CNSF.

Investments in government securities contributed the lion's share of the sector's securities investment portfolio, representing 63.9 percent of the total (Figure 18, left panel). Equity investments represented 17.7 percent of securities. Securities in local currency represented 42.5 percent of total securities, followed by inflation indexed securities with 39.1 percent and the remaining 18.4 percent corresponded to foreign currency denominated securities (Figure 18, right panel). [12,13] According to information published by Banco de México (BANXICO, Mexican Central Bank),[14] 83.6 percent of the securities held by insurers were long dated.[15] In terms of yield 92 percent of the securities had a fixed rate and only 8 percent were variable rates.

The high proportion of fixed-income investments is reflective of insurers' risk appetite and liability profiles, as well as the safety of, the characteristics of the government debt with more than half fixed rated and the yield on government debt. The regulation has historically had limits on the use of certain types of assets to cover technical provisions and the solvency capital requirement (SCR), however, these limits have always been above the value observed in the companies' portfolios. The companies, in their role as institutional investors, operate under low-risk criteria so that their investments prudently back the technical provisions.

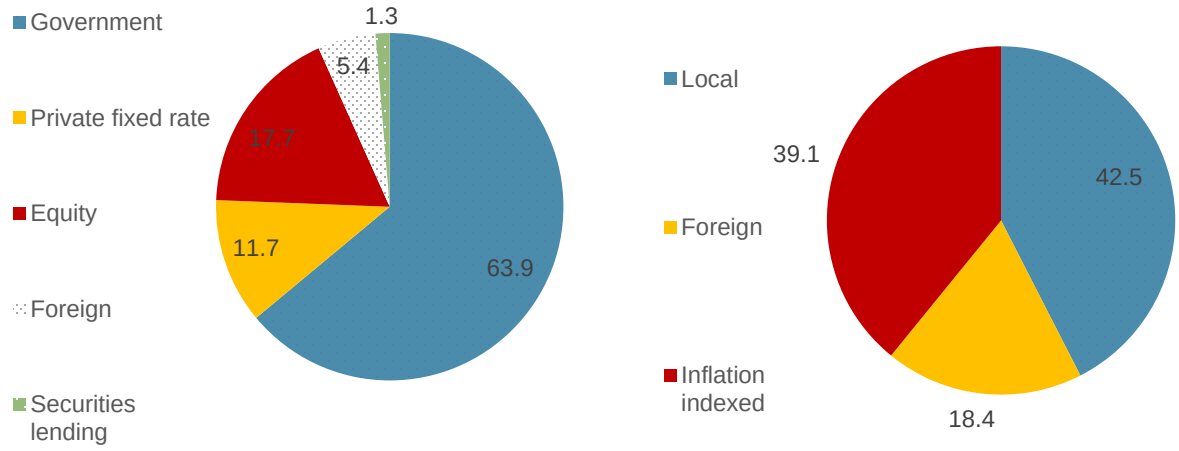
[12] Inflation-indexed securities operate using the UDI as a reference, that is, they operate as if the UDI were a currency and, therefore, the nominal value and coupons are expressed in UDI.

[13] Almost all of these investments correspond to securities denominated in U.S. dollars.

[14] https://www.banxico.org.mx/SieInternet/defaultEnglish.do

[15] The information available in BANXICO only includes those securities issued in Mexico. A significant part of the securities held by insurers denominated in foreign currency are issued abroad, including by the Mexican Federal Government (UMS securities). The percentages presented do not include these securities, but this author estimates that these percentages are also representative for investments denominated in foreign currency.

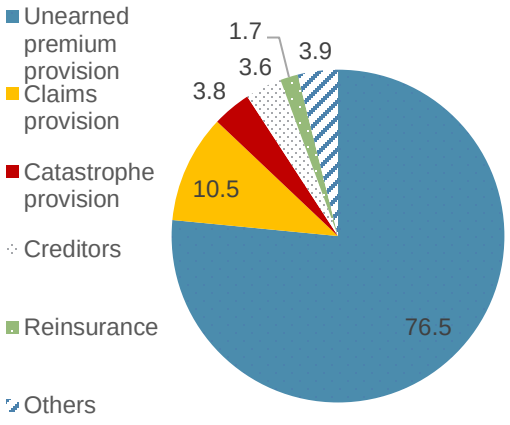
Figure 18. Securities Composition by Type and Currency in 2021
(Percent)



Source: Author's own calculations based on data from the CNSF.

The largest portion of the non-life insurers' liabilities is the unearned premium provision (76.5 percent in 2021) followed by the claims provision (10.5 percent in 2021). Catastrophe or special provisions represented 3.8 percent of the total insurance liabilities (Figure 19). Mexican regulation recognizes the catastrophe risk as a line of business (LOB).

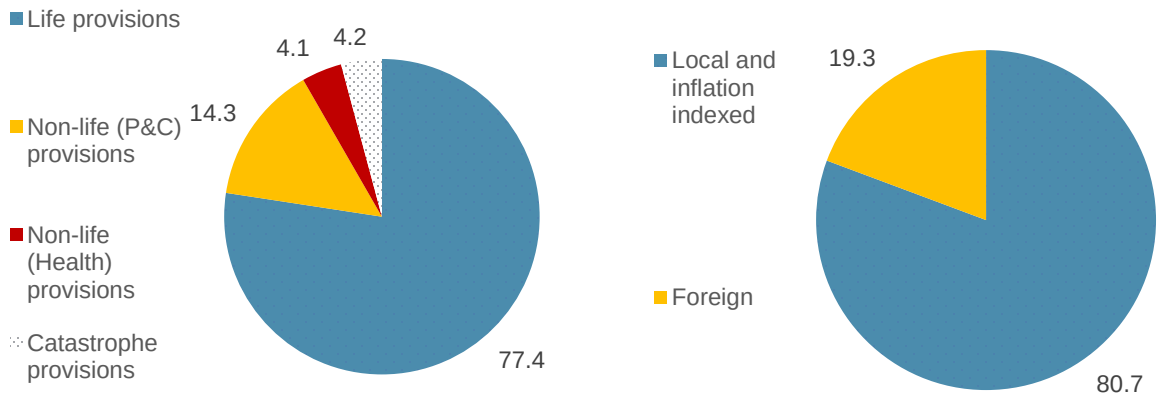
Figure 19. Liabilities Composition by Type in 2021
(Percent)



Source: Author's own calculations based on data from the CNSF.

In 2021, more than 75 percent of technical provisions consisted of life provisions, with non-life provisions making up most of the remainder (18. 4 percent) and catastrophe provisions having the small remaining share (Figure 20). The high proportion of life provisions is due to the long duration nature of these products and also explains the preference of the insurers for long-term fixed rate securities.

Figure 20. Technical Provisions Composition by Type and Currency in 2021
(Percent)



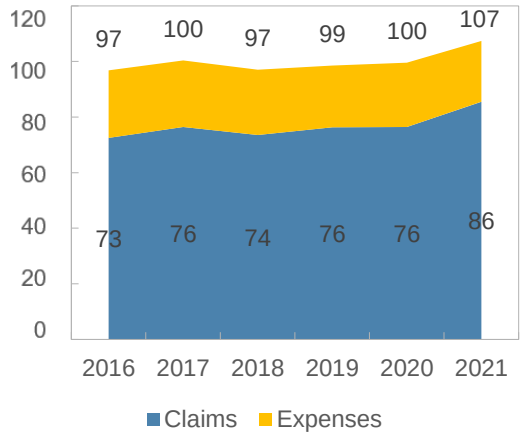
Source: Author's own calculations based on data from the CNSF.

The increase in claims derived from the COVID-19 pandemic caused the combined loss ratio of the total market to be 107 percent in 2021, while the average from 2016 to 2020 had been 98 percent (Figure 21).[16] The claims ratio reached 86 percent in 2021 while the average from 2016 to 2020 had been 75 percent. For life insurance, without considering pension insurance, an increase in the claims ratio was observed in 2020 and 2021, reaching 91 percent and 97 percent, respectively, against the average of 76 percent observed from 2016 to 2019 (Figure 22).[17] For non-life health insurance, the claims ratio showed a significant increase in 2021, with a ratio of 77 percent, compared to the average of 69 percent from 2016 to 2020. For the years 2020 and 2021, the non-life P&C claims ratio offset life and non-life health increases, with ratios of 51 percent and 55 percent, respectively, against an average of 61 percent from 2016 to 2019.

[16] The combined loss ratio is defined as the sum of the claims ratio and the expenses ratio. The claims ratio is calculated as the net claims divided by the net premium earned. The expense ratio is calculated as the sum of the acquisition ratio plus the operation ratio. The acquisition ratio is calculated as the net acquisition expense divided by the net premium and the operation ratio as the operation expense divided by the direct premium written.

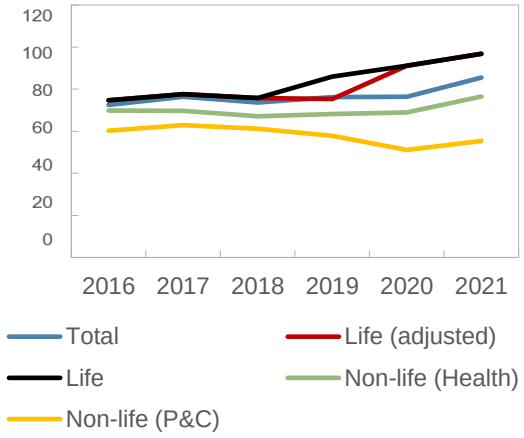
[17] In 2018, the federal government canceled the Individualized Separation Insurance that allowed state workers to save a part of their income, which was doubled by the government, and was collected when the employee stopped working for the government. The cancellation allowed workers to withdraw the fund they had saved as part of this insurance. The indicated percentage is calculated removing the effect of this insurance. Source: CNSF, *Panorama Analítico del Sector de Seguros y Fianzas 4T 2021*.

Figure 21. Combined, Claims, and Expenses Ratio
(Percent)



Source: CNSF.

Figure 22. Claims Ratio per Insurance Operation
(Percent)

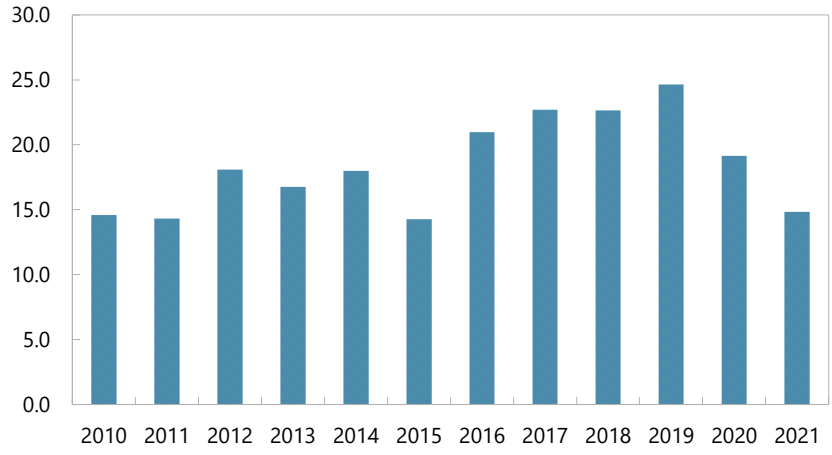


Source: CNSF.
Note: The adjusted claims ratio is calculated by removing the effect of the Individualized Separation Insurance. Source: Panorama Analítico del Sector de Seguros y Fianzas 4T 2021, published by CNSF.

The sector's solvency position is strong and aggregate profits rose steadily since 2013 until the pandemic (Figure 23). Profitability has benefited from the entry into force of the LISF, which removed prudential margins in technical provisions. In 2020 and 2021, the ROE of the industry was dented significantly by the COVID-19 pandemic, albeit the solvency position of the insurance sector continued to show strength with a solvency ratio of 300 percent by the end of 2021.[18]

[18] Source: *Panorama Analítico del Sector de Seguros y Fianzas 4T 2021*, published by CNSF.

Figure 23. ROE of Insurance Industry in Mexico
(Percent)



Source: Author's own calculations based on data from the CNSF.

Prior to RBS

Regulation and Supervision

The CNSF was established in 1990. Over the next 25 years, it continuously strengthened its regulatory framework, culminating in the implementation of the LISF in 2015 (Table 10).[19] This process was facilitated by the powers of the regulator to propose changes to the legislation and its powers to issue secondary or subordinated legislation to support changes to the primary legislation.[20] Prior to 2015, Mexico already had many elements of risk-based insurance regulation, reflecting their gradual adoption over the preceding 25 years (Annex II).

Table 10. Main Aspects of the Regulation Prior to the LISF

Concept	Since[21]	Description
Technical provisions	2004	Calculation with sufficiency methods and actuarial standards. Calculation of gross provisions, reinsurance recoverable recorded as assets. Consider unearned premium and claims provisions for all LOB and special provisions for particular cases.
Special technical provisions.	2002	Provisions to cover deviations. These are part of the liabilities. • Catastrophe provisions per LOBs (e.g., earthquake, hurricane) cover losses derived from the occurrence of catastrophes. • Special provisions for social security pension insurance cover losses arising from mortality or investment issues.

[19] Before the introduction of the LISF, the insurance sector was regulated by the Ley General de Instituciones y Sociedades Mutualistas de Seguros (LGISMS, Repealed insurance law in Mexico), issued in 1935. The surety sector was regulated by the Ley Federal de Instituciones de Fianzas (LFIF, Repealed surety law in Mexico), issued in 1950.

[20] The power to make changes to the law rests with the legislature, however, the CNSF had the opportunity to submit to it proposals for regulatory strengthening in insurance laws.

[21] The indicated date considers the year from which there was a regulatory structure similar to the one observed before the entry into force of the LISF. This does not mean that elements related to the characteristics described have not previously existed, nor that there have been subsequent changes.

		• Built up gradually by allocating a portion of earned premiums and investment income. There is a legal maximum associated with the respective capital charge: underwriting risk and ALM risk for pensions and PML for catastrophe LOB. • They are deducted from the respective capital charge to calculate the SCR.
SCR.	2006	Incorporation in its calculation of the underwriting, catastrophe, market, concentration, counterparty, and mismatch between assets and liabilities for long-term obligations risks. • The capital charge for underwriting risk, except for catastrophe LOBs, is calculated based on risk factors differentiated by LOBs, considering reinsurance, which is weighted by credit quality and concentration. For catastrophe LOBs, it is calculated based on a Probable Maximum Loss (PML). • Capital charge for investments calculated based on risk factors by type of asset and credit quality, applied to each of the investments. • Assets and Liabilities Management (ALM) capital charge for long-term obligations is calculated based on the projection of assets and liabilities for Pension insurance and long-term life contracts.
Assets that cover technical provisions	1993	Investment rules with limits by asset class and counterparty. Asset liquidity-based limits for each type of technical provisions.
Assets that cover SCR.	1993	Investment rules with limits by asset class and counterparty. These limits were broader than those considered for the coverage of technical provisions.
Board.	2002	Responsibility for the management of the company. Fit and proper criteria. Constitution of the board with at least 25 percent of board members independent.
Regulatory compliance officer.	2002	Responsible for monitoring compliance with external and internal regulations. Precedent of internal control, compliance, and audit functions.
Risk management.	2002	Risk management system defined by the board and monitored by the risk committee. Focused on credit, legal, liquidity, market, and operational risks.
Solvency evaluation exercises.	2004	Annual projection exercises prepared by the companies, with a horizon of three to five years, to assess their solvency and stability in the face of stress scenarios and establish mitigation measures and action plans.
Independent actuaries and auditors.	2002	The financial statements and the technical provisions must be audited by an external auditor, accounting and actuarial, respectively. Auditors must be certified by the college of the profession.
Publication of financial statements.	Before 1990	Companies must publish their audited financial statements in a national newspaper and in the Official Gazette of the Federation. This obligation is adopted in accordance with International Financial Reporting Standards.

Publication of notes to financial statement.	2006	As part of the disclosure of the financial statements, the notes must be included. Along with these, detailed information must be disclosed regarding: • Administration, corporate governance policies and risk management. • Insurance and reinsurance strategies. • Asset Management. • Performance, solvency margin and coverage of regulatory requirements.
Sources: Ley General de Instituciones y Sociedades Mutualistas de Seguros (LGISMS) and Circular Única de Seguros (CUS).		

Since 1997, the CNSF began to apply risk-based supervision which continues to evolve and mature. The main objective of the CNSF's risk-based supervision approach is the early detection of risks relevant to the solvency and stability of insurers, as well as the efficient allocation of supervisory resources. The risk-based supervision approach of the CNSF is based on several elements, including the determination of the risk profile (five-point scale) of each of the supervised insurers; the use of relevant indicators and ratios related to solvency, financial, underwriting and reinsurance performance; desk analyses and onsite inspections related to quantitative elements, corporate governance and risk management, and disclosure of information; information from third parties, e.g., external auditors' reports; and market intelligence.[22]

In 2006, the CNSF began requesting detailed data from insurers on their underwriting and claims. The granular data, which was provided annually, covered a number of key dimensions. First, information by LOB and split between group and individual policies. Second, on new and in-force policies, detailed data was provided on the term, type of risks insured, premiums payable, sums insured, and details on the distribution channels. Third, for claims, detailed data was requested around the date of the insured event, payments made including adjustments and expenses relating to the claims, nature of the insurance risk, cause, and place of occurrence, among others.

The granular data collected by the CNSF facilitated in-depth analysis and a better understanding of risks. It also encouraged insurers to obtain better and more information related to risks underwritten and claims received. The CNSF was also able to improve the quality of the information provided through its analyses and supervision as well as superior reconciliation with other sources of available information, such as financial statements.

Since 1990, the CNSF has organized an annual international seminar on "Insurance and Sureties" in which national and international experts speak on topics that it considers important for the insurance industry and its policyholders. This seminar has allowed the CNSF to communicate to its stakeholders, the direction in which it planned to take regulation, and, at the same time, to strengthen its knowledge on these topics by learning from international experiences.[23]

The Regulator

[22] With the entry into force of the LISF, the CNSF's supervision scheme continued to be strengthened by including the revision of the elements that were incorporated as part of the new regulation.

[23] Since 2019, the seminar has not been held due to budget constraints.

The CNSF, founded in 1990, is a part of the Secretaría de Hacienda y Crédito Público (SHCP), Mexico's Ministry of Finance. The highest decision-making body of the CNSF is the Governing Board, which is made up of the President and the Vice Presidents of the CNSF, as well as representatives of the SHCP; BANXICO; Comisión Nacional Bancaria y de Valores (CNBV, the Mexican banking supervisory authority); Comisión Nacional de Ahorro para el Retiro (CONSAR, the Mexican supervisor of private pensions funds); and two independent members. All members of the Governing Body have voting rights.

The CNSF budget is determined by the federation treasury, which is an administrative unit of the SHCP. Insurers pay supervision fees to the federation treasury, which in turn determines the CNSF's budget.

The LGISMS and the Ley Federal de Instituciones de Fianzas (LFIF) empowered the CNSF to issue certain subordinated legislation. Subordinated legislation covering technical provisions, SCR or investments were issued by the SHCP with the opinion of the CNSF.[24] Although these regulatory projects were mainly prepared by the CNSF, they had to be formally published by the SHCP.

The CNSF is headed by a President supported by four Vice-Presidents. Vice-Presidents represent the four divisions, i.e., the Institutional Operation Division (responsible for supervision); the Sector Analysis and Studies Division (responsible for analysis, studies, and development); the Legal Division; and the Planning and Information Technologies Division (responsible for administration and IT). The Institutional Operation Division is the largest in the CNSF and consists of specialized departments in the actuarial, finance and reinsurance areas. The actuarial department is in charge of supervising matters related to insurance underwriting, technical provisions and capital requirements, and its staff is almost entirely actuaries. The finance department is in charge of supervising matters relating to financial statements, investments, corporate governance, and capital requirements and its staff is a mix of business administrators and actuaries. The reinsurance department is responsible for analyzing reinsurance contracts and its staff is also mostly actuaries. The Legal Division is responsible for the CNSF's legal and litigation matters. Besides these responsibilities, it also provides legal opinions regarding aspects related to insurance regulation. The staff is almost exclusively lawyers. The Sector Analysis and Studies Division has responsibility for carrying out economic, financial, and actuarial studies on insurance matters. This area is the most involved in dealing with the CNSF's participation in international affairs. With the implementation of the LISF, the function of developing and updating the standard formula for calculating the SCR and approving internal models was added to this division. The staff consists mainly of economists and actuaries. The Planning and IT Division was established with the implementation of the LISF.[25] Its staff consists of business administrators, lawyers, system administrators, among others.

Changes to the structure of the CNSF were needed upon the implementation of the LISF. The responsibilities of each division and their internal processes and procedures were updated to make them consistent with the changes made to the regulation. The changes also culminated in the creation of two new areas. First, is the General Directorate of Risk Analysis, responsible for the maintenance and update of the general formula for the SCR and the review and approval of internal models. This area was deemed necessary given the level of specialization required for this topic. Second, is the Planning and IT division, to ensure a more structured approach to the internal operations of the CNSF. This Division was a merger of the administrative and

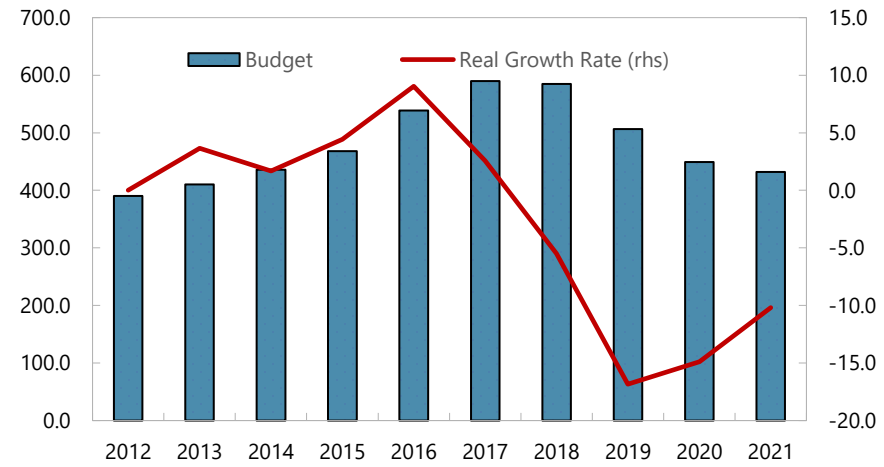
[24] An important change in the LISF with respect to previous laws is that it provides the CNSF with the necessary powers to carry out the complete supervision process: issuance of secondary regulation, authorization of new companies, supervision and revocation of companies.

[25] Earlier, the Planning Division was a directorate reporting the President. The Information Technology Division was a directorate of the Sector Analysis and Studies Division.

information technology areas. Additionally, this freed the president of the CNSF from directly supervising the work of the administrative area, responsible for the management of human, financial and material resources, which was moved to the vice president. This change was not considered essential for the new regulation, but it contributed to a better operation of the CNSF.

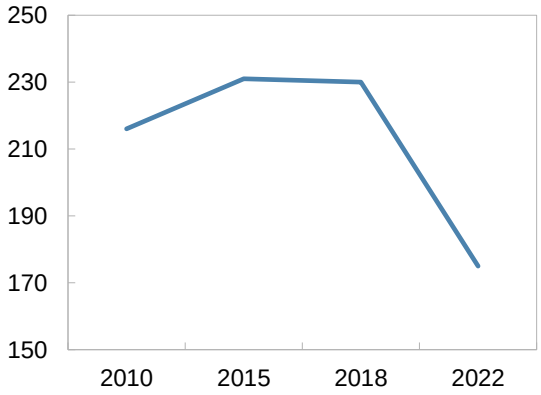
The budget and staff headcount of the CNSF decreased starting 2018, reversing the earlier trend increase (Figures 24 and 25) The decrease observed in both items is due to the Federal Government policy emphasizing efficiency and budgetary savings.

Figure 24. Evolution of CNSF's Budget
(Current millions of pesos, percent (rhs))



Source: Author's calculations based on information from the CNSF.

Figure 25. Evolution of Number of Permanent Employees of CNSF



Source: Author's calculations based on information from the CNSF.

The CNSF's dependence on other departments of the government, such as the Presidency of the Republic and the SHCP, has been a challenge for the regulator's ability to make the changes it needed for the implementation of its RBS regime. While the fees paid to the Treasury by insurers were sufficient to finance the

CNSF's structural modifications, the regulator was still required to negotiate and convince different government participants of the importance and necessity of these changes and led to some compromises having to be made.

The Journey to RBS

The main drivers of the transition to the full RBS regime that came into force in 2015 was the desire of the Mexican government for a regulatory framework that strengthened the solvency and soundness of insurers in order to support policyholder interests, thereby better securing both, prospects for the insurance sector and economic well-being. An additional driver for the CNSF was to promote regulatory change by enhancing and improving the framework. Within this broad goal, three specific objectives were covered. First, quantitative regulatory requirements that were more efficient and precise, such as the calculation of provisions based on best practices; eliminating excessive margins of prudence; and strengthening the calculation of the SCR through greater sensitivity to the risk profile of each insurer. Second, strengthening the management of companies by improving their corporate governance and risk management systems. Third, increasing the confidence of domestic and foreign investors by having a regulation with greater adherence to international standards.

The journey towards risk-based regulation can be divided into three main stages (Table 11). In stage I (1990-2007), there was a gradual strengthening of regulation. In stage II, the LISF and its secondary regulation, the Circular Única de Seguros y Fianzas (CUSF) were elaborated (2007-2013). Stage III covered the period of the formal process of implementing the LISF and the revision of the CUSF (2013-2016).

Table 11. General Description of the Characteristics of the Regulation at Different Stages

Concept	Initial Regulatory Scheme	Pre-LISF Solvency Regime	LISF Solvency Regime
Underwriting risk	SCR	SCR and risk management	SCR and risk management
Financial risk	Not explicitly addressed	SCR and risk management	SCR and risk management
Counterparty risk	Not considered	SCR and risk management	SCR and risk management
ALM risk	Not explicitly addressed	SCR and risk management	SCR and risk management
Operational risk	Not explicitly addressed	Risk management	SCR and risk management
Risk modelling in SCR	Risk factors	Risk factors	Stochastic models26
Risk aggregation in SCR	Not considered	Sum of risk factors	Stochastic models27

[26] Stochastic models are used for underwriting, market, and credit risks. Operational risk is measured based on the EIOPA general formula. The liquidity risk is addressed with the investment policy of the entities and the regulatory limits for the investment of technical provisions. For pension insurance, the SCR is calculated using risk factors. For more details, see Annexure 4 "Pillar I – before and after implementation".

[27] Aggregation using stochastic models is given for underwriting, market and credit risks. The capital charge for operational risk, pension insurance and catastrophe LOBs are aggregated by a simple sum. For more details, see Annex II "Pillar I—before and after implementation".

Risk measure	Not explicitly considered	VAR 97.5 percent for one year horizon	VAR 99.5 percent for one year horizon
Internal models for SCR	Not considered	Not considered	Allowed28
Stress testing	Not considered	Risk management	Risk management
Technical provisions	Unearned premium	Sufficiency methods	BEL + Risk margin
Investments	Quantitative limits	Quantitative limits	Investment policy and quantitative limits
Corporate governance	Not considered	Regulated	Regulated
Public disclosure	Not considered	Regulated	Regulated
Source: Author's version based on information from the CNSF.			

The regulatory strengthening stage was characterized by a series of gradual changes that allowed for a move towards risk-based regulation (Table 12).

Table 12. Incorporations to the Regulation Prior to the LISF

Year	Description
1990	• Adoption of a solvency margin scheme like that used in the European Community (Solvency I). • Elimination of barriers to market entry. • Elimination of control of fees and commissions. • Flexibility in the investment regime. • Creation of a specialized regulatory body (CNSF)
1993	• Opening of the market for foreign companies. • Elimination of mandatory government investments as part of the investment regime. • Creation of the first version of the statistical systems of the insurance sector.
1996	• Participation of the insurance sector in the country's social security schemes. Pension insurance derived from social security laws.
1997	• Regulation of reinsurance operations based on credit quality. • Incorporation of technical elements in the determination of technical provisions and SCR of surety operations. • First version of the CNSF's risk-based supervision system.
1999	• Regulation of earthquake insurance based on models for estimating risk premiums and PML.
2000	• Incorporation of health insurance to the regulated scope of insurance operations.
2002	• Incorporation of regulations on corporate governance (regulatory compliance officer, independent board members, strengthening of fit & proper requirements). • Adjustments to the solvency regime (1): quality and concentration in the use of reinsurance.
2004	• Adoption of actuarial practice standards. • Incorporation of the sufficiency regime of technical provisions. • Adjustments to the solvency regime (2): capital charge for mismatch risk between assets and liabilities for long-term contracts. • Introduction of solvency self-assessment prepared by the companies through projection exercises under stress scenarios.

[28] The use of partial or total internal models is allowed, subject to the approval of the CNSF, with the exception of pension insurance and catastrophes LOB for which the use of internal models is not allowed.

2006	• Incorporation to the regulation of best international practices in matters of information disclosure based on the ICPs and their implementation in the European regulations. • Solvency regime adjustment (3): counterparty credit risk linked to investment instruments.
2007	• Regulation of hurricane and hydrometeorological risks insurance based on models for estimating risk premiums and PML. • Start of the adjustment process to the statistical systems from the creation of databases with detailed information on insurance operations (underwriting and claims).
Source: The insurances and surety sectors: perspective and prospective presented in the 24 International Seminar of Insurance and Sureties (2014) by the President of CNSF.	

The updating the LISF and the CUSF was carried out in two phases. The first phase was the rewriting, updating and amendments to the LISF (2006–2010) whilst the second phase involved the development of the subordinated or secondary legislation the CUSF (2010–2013). This second stage included the development of a project plan sponsored by covered reference frameworks for risk-based regulation and secondary regulations. The plan was included in the strategic plan of the CNSF and was sponsored by the President of the CNSF who, along with the Vice-Presidents and General Directors, was responsible for preparing the LISF and the CUSF. The support of senior management guaranteed that the necessary resources were made available. The high-level deliverables of the project plan were two-fold. First, at the LISF, the main milestones were the review of the reference frameworks, the selection of the reference framework as the basis of the regulation, the review of the current regulation against the reference framework, and the elaboration of the regulation draft. Second, at the CUSF, the main milestones were the review of the current secondary regulation against the LISF draft.

In developing the required text of the LISF and CUSF drafts, the chapters were assigned by area of expertise within the CNSF. Clear timelines were established for each task and updated as needed from time to time. The progress and status of the project was reviewed weekly by the Executive Committee of the CNSF.[29]

The transition to a RBS regime took into consideration global standards as well as projects in some advanced jurisdictions. First, the Insurance Core Principles produced by the International Association of Insurance Supervisors (IAIS) were considered. Second, the European Solvency II project, the United States Solvency Modernization Initiative and the Swiss Solvency Test were also considered. The EU Solvency II framework was chosen as the main reference framework for the risk-based regulation for three main reasons. It was considered suitable for the insurance market in Mexico. As the Solvency II framework is designed to be applied in several countries, it was considered that it had enough flexibility to be adapted to the Mexican case. Additionally, the possibility of obtaining regulatory equivalence with Solvency II represented an additional potential incentive for foreign companies to invest.[30] Most elements of the Solvency II framework were incorporated with three material deviations that were related to valuation basis, pension insurance, and catastrophe insurance. The same valuation basis is used for financial reporting purposes and solvency purposes. As mentioned above, the social security pension system in Mexico was reformed in 1997 and became a private contribution system.[31] This is not a system found in EU member countries. As for catastrophe

[29] The personal assistant to the President of CNSF was assigned as project manager.

[30] On July 5, 2015, Mexico, among other countries, obtained the temporary equivalence of solvency with EIOPA Solvency II, for 10 years.

[31] This model is similar to the one proposed in Chile at the beginning of the 1980s and replicated during the 1990s by several Latin American countries.

risk, the regulation requires the catastrophe provisions to form part of the liabilities which can be deducted from the capital charge for catastrophe LOB.[32] The implementation of the LISF resulted in minor changes to the quantitative requirements for both the catastrophe provisions and pension insurance.[33]

The LISF, the primary legislation, contains the principles and powers whilst the CUSF, the secondary legislation, contains the technical details. The LISF covers the principles and powers on authorization; operations allowed for companies; obligations of the board and functions of corporate governance and risk management; the type and valuation of technical provisions, such as Best Estimate of Liabilities (BEL) plus Risk Margin (RM); the objective, measure, horizon and confidence level of the SCR; investment policy and reinsurance contracting; prohibitions for companies; financial statements and information disclosure; preventive and corrective measures by the regulator; organization and operation of the CNSF; and sanctions and offenses; among others.

The LISF bill was drafted by the CNSF, with the first draft was ready in 2007, followed by consultations with all stakeholders between 2007 and 2010. The consultation process included other regulators, representative associations of insurance and surety companies, insurance agents, claims adjusters, reinsurance intermediaries and professionals (accountants and actuaries). Each chapter of the bill was covered and the consultation was done first with other regulators and then with the representative associations. Clear and appropriate objectives, together with the incorporation of international standards and best practices formed the basis of the draft Bill and simplified the justification and negotiation with stakeholders. Additionally, the clarity and importance of the objectives allowed the CNSF to identify those elements that could be modified or eliminated and those that should be preserved. The LISF project was an initiative by the CNSF and there was no certainty regarding the approval and implementation timeframe of the draft legislation. No definitive deadline could be attached, adding complexity to the discussions and negotiations with the stakeholders since they could not be attached a specific structure for different topics, which eased the corresponding process for the secondary regulation as discussed below.

In 2010, the LISF development process was completed with a draft agreed upon by all stakeholders. The CNSF carried out the process of presenting and explaining the Bill to both houses of the legislative branch. The Bill was finally formally presented to the legislative branch in 2012 as a law initiative by the Presidency of the Republic. On December 13, 2012, and February 28, 2013, the law was approved by the legislative chambers. It was officially published on April 4, 2013, with a phase-in period of two years ending on April 4, 2015. The two-year transition period allowed the formal implementation process to take place in an orderly manner and with legal certainty for all participants.

During 2010 to 2013, the CNSF worked intensely to prepare a first draft of the CUSF. This first draft was presented at the beginning of the formal LISF implementation process (stage III) that began in 2013. This workload, in addition to existing tasks, required an important effort by the CNSF staff. The main actions carried out during this period were: (a) the drafting of the CUSF, incorporating necessary changes from the previous regulations and reviewing those regulations for which no change was identified; (b) the development of preliminary versions of the statutory models of technical provisions and the general formula of the SCR. To

[32] This requirement was needed as there is limited funding/ support available in case of the risk materializing. For example, in other countries, compensation consortiums are formed to cover this type of risk.

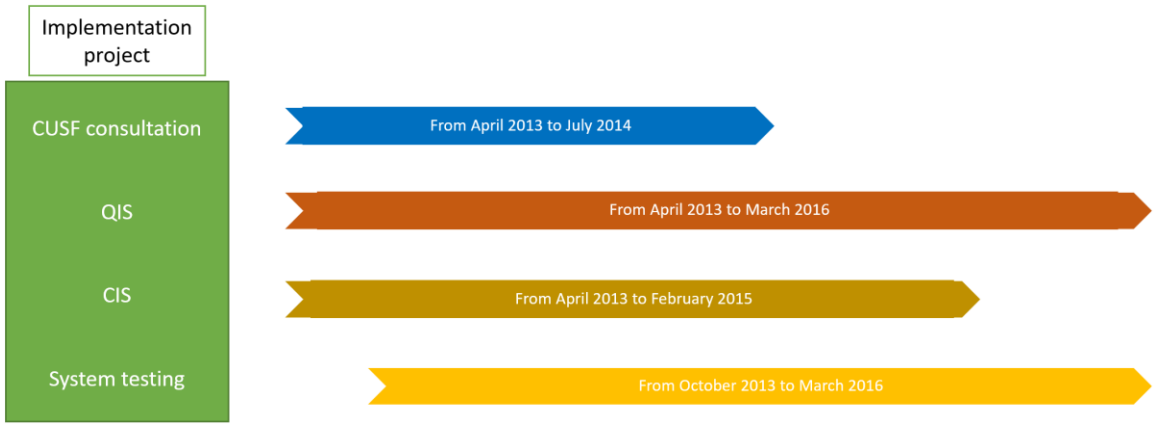
[33] For a brief description, see Table 1 in section “Prior to RBS – Regulation and Supervision”; for more details, see Annexure 4 “Pillar I – before and after implementation”.

calculate the SCR, the CNSF developed an information technology system which was used during the implementation process and was a precursor to the SCR Calculation System (SCRCS), a system currently used for the same purpose; (c) building of specialized capacity regarding the new regulatory elements for all staff; (d) the adaptation of IT systems of the CNSF required for receiving and sending information derived from changes in regulation; (e) (internal) preparation of preliminary quantitative impact analysis; (f) the design of the formal implementation process; and (g) presentation and discussion with stakeholders on the preliminary proposals for secondary regulation.

The two-year transitional period also allowed for impact studies on the quantitative and qualitative elements of the new regulation to be performed. In particular, it allowed for testing the impact of the proposals in the CUSF, i.e., technical provisions, valuation of assets, capital requirements, and solvency impact. Results from these impact studies were also used to adjust the secondary regulations where needed**.** One of the main concerns of the insurance industry was the impact of an RBS regime on the solvency position. As the LISF was developed and finalized before the CUSF, insurers were unable to estimate the impact of the standardized SCR formula. This uncertainty did result in an increase in the number of QIS originally planned, from three to five, and led to the postponement of the effective date of the quantitative elements of the regulation until January 1, 2016.

The implementation process of the LISF formally began in March 2013 (Figure 26). The CNSF prepared a guidance document that explained in detail each of the phases of the project and a schedule with the dates of their completion.[34] This guide was shared with all stakeholders with the goal of providing clarity to them.

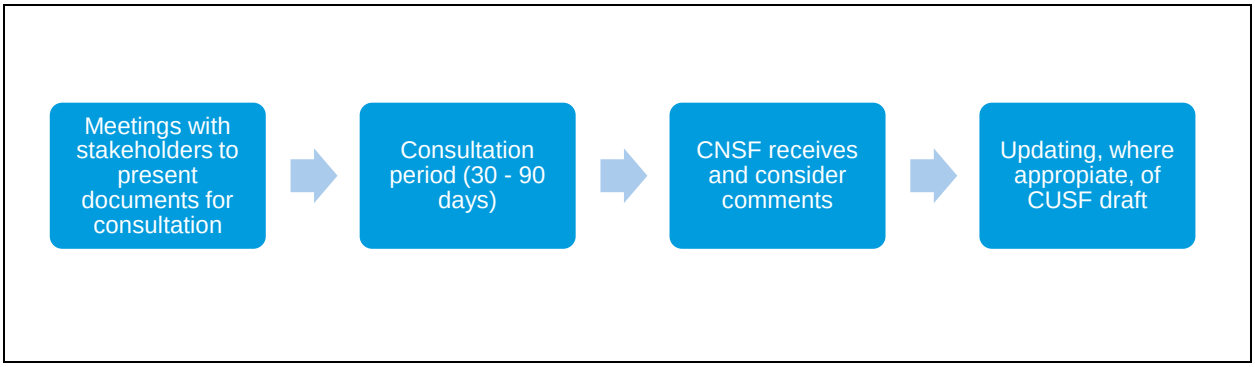
Figure 26. General Outline of the Implementation Process



Source: Own elaboration.

For the CUSF consultation process, the CNSF divided the chapters into common themes. Consultations on chapters relevant to the quantitative elements were conducted at the same time as the QIS were carried out. Chapters related to corporate governance and disclosure of information had two consultation periods. A four-step process was followed for each consultation (text chart).

[34] CUSF consultation, QIS, Qualitative Impact Studies (self-assessment of compliance with Governance Requirements (CIS) and System testing.



In assisting the insurance industry in calculating the SCR based on a standard formula, the CNSF developed the SCRCS. This is a computer system used during the various QIS and the basis of the system currently used for the same purpose. The SCR is calculated as the Value-at-Risk (VaR) with a confidence level of 99.5 percent on the change in own funds over a one-year horizon.[35] This calculation is carried out within the SCRCS through a Monte Carlo simulation method, with 100000 scenarios. The simulation projects the company's balance sheet (e.g., technical provisions, reinsurance recoverables, and investments) in the event of the realization of different risks (e.g., underwriting, market, counterparty, and concentration), considering their interdependence and recognizing mitigation mechanisms (e.g., reinsurance contracts and derivatives) and the matching of assets and liabilities. Four characteristics of the SCRCS, observed during the elaboration of the QIS, are valid to date. First, the models and methodologies on which the SCRCS code is based are published in the CUSF. However, the risk parameters used in these models are not available in the CUSF as they are only found within the SCRCS. Second, the code and parameters are available to other authorities, insurers, and representative associations. Third, to calculate the SCR, firms only have to enter their balance sheet information according to the SCRCS data manuals since the SCRCS already contains the models and parameters. Fourth, as part of the QIS, the CNSF prepared and distributed reports related to the parameter calibration data and methodology to stakeholders.

The QIS' main objective was to evaluate and validate the regulations proposed in the CUSF and to assess the impact on companies. This QIS tested the impact on technical provisions (internal and statutory methodologies), SCR, technical provisions coverage, and SCR coverage with Admissible Own Funds (AOF). A number of steps were followed in each study. A first step was the presentation of the most recent version of the CUSF, technical provisions methodologies and their parameters, and the SCRCS. Next, separate meetings were held with members of the Board and the Chief Executive Officers (CEO) of insurance firms and with technical specialists at the firms. The idea behind separate meetings was for each group to obtain a better understanding of the topic in accordance with their responsibilities. The meetings with directors also sought to increase the commitment of senior management of insurers to the project. The third step was a period of elaboration and delivery of information by the firms. The information delivery process was used to test the systems of the CNSF and the companies. The fourth step, carried out during the preparation period, was the support provided by the CNSF to individual insurance firms when requested by them to help prepare for the impact exercises, e.g., on calculations or results interpretation. The next step was the analysis of results and preparation of report by the CNSF. A final step, if applicable, was a modification to the CUSF draft.

[35] The capital charge for catastrophic LOBs and the capital charge for underwriting and ALM risks of pension insurers operate under a different methodology. For more details, see Section "What was implemented - Pillar I" and Annexure 4 "Pillar I – before and after implementation".

The outcomes of the three QIS necessitated a postponement of the effective date of the quantitative elements of the LISF until January 1, 2016. This was necessitated due to the complexities associated with adequate calibration of the parameters of the SCR and with generation of adequate information required by the SCRCS by the insurers. It also led to two additional QIS exercises during 2015, plus a mandatory test carried out during the first quarter of 2016 based on figures at the end of 2015. The conclusion of the third QIS was planned for June 2014, nine months before the entry into force of the LISF, to allow for additional adjustments needed to the proposals. However, after the third QIS, it was estimated that this time was insufficient to guarantee the quality of the quantitative elements due to a few key factors. A first reason was that prior to the first QIS exercise, insurers did not have access to the SCRCS or the parameters used. The insurers were unable to estimate the possible impact on the SCR or evaluate the methodologies or risk parameters of the new regulation. It was only upon completion of the first QIS that the insurers were able to provide proper feedback on the risk measurement considered for the general formula of the SCR. A second factor was that in order to make an accurate assessment of underwriting risks, the SCRCS require underwriting information at the policy or the insured unit level. During the first QIS exercise the focus was on the quality of the data provided rather than on evaluating the impact. A third reason was that the focus of the first two QIS exercises was on adjusting methodologies and parameters and to improve the quality of information, rather than to measure impact. Therefore, having only the third QIS with reliable results, it was considered necessary to carry out additional exercises that could give greater certainty about the adequacy of the results. This decision was also viewed favorably by the industry.

The insurance industry requested more time to finish fine-tuning its methodologies for calculating technical provisions, evaluating the impact on its financial statements, and adapting its information technology systems. This was the second reason why it was decided to postpone the entry into force of the quantitative elements until 2016. This also allowed the impact on the financial statements to occur at the beginning of the year, which avoided having a financial year with two different valuation methodologies.

Some requirements did not change with respect to the previous regulation. The technical provisions, including catastrophe provisions, and capital charges of the catastrophe LOBs remained the same. The valuation basis, the technical provisions, valuation methodologies, and the capital charges of the underwriting risk and ALM risk for pension companies did not change. For pension companies, the changes derived from the new regulation focused on strengthening corporate governance, risk management, and transparency and disclosure of information. Additionally, for insurance, pensions and catastrophe LOB, internal models for SCR are not allowed. For unearned premium provisions, internal models are not allowed for catastrophe LOB. The main reason why adaptations were not made for this type of insurance was that the methodologies of the previous regime were considered sufficiently robust, especially with additional security mechanisms to protect the solvency of insurers against this type of particularly sensitive risk for society.[36] Finally, there were the reasons that were previously indicated regarding the EIOPA reference framework and this type of insurance in Mexico.

The main objective of the Qualitative Impact Studies in the self-assessment of compliance of Corporate Governance CIS exercises were to evaluate and validate the regulatory impact proposed in the CUSF. This required an examination of the impact on the insurers organizational structures, their operations and the

[36] Special technical provisions, capital charges without considering diversification between risks, PML for catastrophe LOB, underwriting and ALM capital charge for pension insurance. For more details, see Annexure 4 “Pillar I – before and after implementation”.

information technology systems relating to the implementation of the elements of corporate governance and information disclosure. The CIS exercise also assisted in identifying compliance gaps involving the boards and senior management for them to prepare action plans to address the gaps observed. In total, three CIS exercises and two follow-up exercises were prepared prior to the effective date of the LISF. The steps performed in each study were akin to those of the QIS. The evaluation was carried out through a compliance survey designed by the CNSF with the following characteristics: (a) the CNSF developed an IT system that was shared with the participants through which they responded to the compliance survey. This system guaranteed consistency and allowed the responses given to be analyzed more easily by the CNSF; (b) to respond to the survey, the President of the Board and the CEO were asked to be involved in order to improve the quality of the information provided and to secure the commitment of senior management; (c) in each section of the survey, the degree of compliance with each of the obligations was considered and the regulations for each topic were evaluated by the CNSF; (d) for the evaluation, a fixed scale of five values was given, ranging from basic compliance to complete compliance. For each element, there were guidelines so that the firms could identify the degree of compliance according to the CNSF criteria; (e) where non-compliance was found, the reasons therefor and an action plan with deadlines for compliance were requested. This enabled both, the firms and the CNSF to monitor progress throughout the three CIS and the two follow-up exercises, which contributed to better compliance once the regulation came into force.

The factors driving the regulatory change can be differentiated into those that were external versus those that were internal to the insurance sector. The key external factors were favorable economic conditions in Mexico and alignment of the desired change in regulation with the strategic objectives of national policy. On the first of these, stable economic growth performance post-2000 supported the parallel secular growth in the insurance sector, whereas on the second, the change in regulation sought to foster competition and innovation within the sector, aligning Mexico with international best practices, allowing LISF to have the necessary support within the legislative branch. These external drivers were complemented by several factors specific to the insurance sector, including: (a) a gradual and continuous strengthening of regulation over 25 years, which allowed the LISF to not represent a radical change for both, the CNSF and insurers; (b) the strength and technical capacity of the regulator was an important factor—the governing body and staff of the CNSF had extensive experience of more than 20 years within the regulatory body and the CNSF had active and continuous participation in international organizations, allowing it to have a clear understanding of trends, objectives and principles in global best regulatory practices;[37] (c) the industry was supportive of the regulatory change, understanding its benefits and having the financial and technical capacity to adapt to it—with the 2008 global financial crisis of 2008, the industry recognized that it was necessary to carry out more in-depth risk management and so agreed with the general principles behind the proposed regulatory change; (d) besides support of the firms, the coordination, preparation and strength of the representative associations of the insurance and surety sectors was central—it was through the coordination of the Asociación Mexicana de Instituciones de Seguros and the Asociación Mexicana de Instituciones de Garantías that the insurance and surety industries prepared themselves for the regulatory change by carrying out their own impact studies, comparative analysis of the regulatory proposal against the one in place, gap analysis, development of analytical tools, and continuous training, thereby allowing the industry to contribute significantly to the improvement of the regulation project; (e) successful adaptation of international principles and reference models to the Mexican sector—despite being a risk-based regulation, the proposal contains many prescriptive elements and is very detailed in the compliance

[37] Mexico was part of the founding countries of the IAIS, the president of the CNSF was president of the IAIS, member of the executive committee and representative of the IAIS for the Financial Stability Forum; two presidents of the CNSF were presidents of the Insurance and Private Pensions Committee of the OECD.

of various obligations. This allowed for adoption by different types and sizes of companies; (f) the generation of detailed statistics of the insurance sector—the introduction in 2006 of detailed data collection of underwriting and claims allowed for the necessary information to be available to calibrate the different risk models and encouraged companies to develop more detailed processes for managing their information, leading to the sector having the right type of information to run more accurate risk models; and (g) legal certainty and structure of the formal implementation process and open and continuous communication with the industry. The transition period for the effective date of the LISF made it possible to propose an orderly and transparent implementation process. This process included the formal communication mechanisms with the stakeholders, but also always kept an open communication channel.

The LISF required enhanced risk management at insurers. This represented an important challenge for the sector and particularly for those insurers that did not use risk management as a central part of their business strategy. The main challenges identified are listed below and are still valid to this date.[38] The first challenge was to define a firm's risk appetite. A firm's risk management system is developed on the basis of defining its risk appetite. An adequate definition requires the understanding of short-, medium- and long-term objectives and the identification of potential deviations therefrom. This required management skills that were not in abundant supply. A second challenge was understanding the benefits of risk-based management. Risk management implies the adoption of a greater number of lines of defense. The cost-benefit analysis of implementing such a system is not easy to do due to the lack of relevant information and the need for a clear and precise definition of risk appetite. Furthermore, these benefits are often of a long-term nature, which can act against their adoption when they are odds with short-term objectives. A third challenge is to internalize risk management as a central process of the firm's business strategy. The regulation contains many rules related to risk management by firms; however, it is possible for firms to comply with these rules without such process fundamentally transforming their management. The final challenge is to change the risk management culture within the entire organization, in a way that adequately impacts all the firm's operations. For risk management to be effective, it must operate at all levels of the company and not only in the areas specialized in the subject. The objectives of certain areas can go against risk management principles if risk appetite is not defined.

For the regulator, the maturation of its risk-based supervision approach following the implementation of the LISF represents an important challenge and should be understood as a continuous process. As noted above, the CNSF adopted a risk-based supervision approach when the LISF became effective. Successful implementation of the LISF, however, requires that the risk-based supervision approach reach a certain degree of maturity. In this context, some elements represented challenges of which a few are valid to this date. First, the adaptation the strategic vision of supervision. The new regulation increased the number of obligations by the firms, so it is essential to recognize a strategic objective of the supervision process. Supervisors need to transition from a compliance-based approach to carrying out deeper analysis. Second, is the need for systems development. The CNSF developed many systems that allowed it to process a significant amount of information automatically including producing a series of reports. These types of developments continue to date, more important now, at a time of tight budgets. Third, to prevent supervision from operating under a compliance-based supervision approach whilst having risk-based regulation. The biggest challenge is building capacity amongst the supervisors to support the new regulatory framework. Supervisors need to move away from only focusing on compliance when it comes to the governance regulatory requirements and be able to assess the effectiveness of the governance structures. At the beginning it was necessary to monitor compliance, but it needs to mature to a level where the effectiveness assessment is the focus of supervision.

[38] These challenges do not apply to all companies but represent situations that are observed in the market.

Fourth, to develop supervisors with knowledge and skills in multiple disciplines (economics, accounting, finance, actuarial and legal) and with a complete picture of the full set of requirements. Risk-based supervision requires a deeper understanding of the business and performance of companies and a proper assessment of the potential risks. Supervisors are required to be able to understand the multiple stages and levels that make up the operations of companies, regardless of whether each of them is an expert in specific matters. In the CNSF, complexity is introduced form the structure of specialized supervision by divisions with different skill sets in different divisions (financial, actuarial, reinsurance, risks). Additionally, staff with these skill sets usually require higher salaries, so budget limitations complicate their retention.

Key Lessons Learnt

The regulatory change adopted through the LISF allows for a sufficiently robust framework to strengthen the solvency and soundness of insurers in Mexico that can promote the efficient and orderly growth of the insurance market. In general, it meets the objectives of strengthening the solvency and soundness of insurers that pursue the 3 pillars of regulation through the following features: a more precise calculation of the technical provisions with respect to the obligations they protect; determination of the SCR based on the risk profile of each insurer; investment policy defined according to the profile of obligations and risk appetite of each insurer; strengthening of corporate governance through a clear definition of its structure, roles and responsibilities, as well as the clear establishment of lines of defense; strengthening of risk management through the establishment of a comprehensive risk management system accompanied by evaluation and impact exercises for stress scenarios; improvements in the disclosure of information and market discipline through the expansion of the level of published information as well as the evaluation of financial strength by third parties; and strengthening the skills and knowledge of all participants in the insurance sector.

Technical provisions are calculated as the sum of the best estimate plus the risk margin based on internal methodologies of each company for each LOB. This results in the following advantages: a more precise calculation consistent with the risks of each of the obligations backed by technical provisions; it makes insurers more resource efficient by preventing technical provisions from having excessive confidence margins; the robustness of the calculation is achieved by separating the calculation by homogeneous risks, the use of own and market statistics as necessary, periodic performance of back testing and stress tests, calculation carried out under international standards of actuarial practice, certified by a certified actuary, under the responsibility of the actuarial function, audited and certified by an external actuary and under supervision of the CNSF; and finally, it promotes the development of the actuarial, financial, statistical and information technology capacities of the companies, required for the adequate determination of the methods and calculations.

The regulation considers that in extraordinary situations, insurers may use the statutory method, developed by the CNSF, to calculate technical provisions. The existence of this method, as well as the parameters it uses, allowed many insurers to develop their technical provisions methodologies based on the statutory method.

The calculation of the SCR by means of the standard formula is carried out with a scenario simulation process (Monte Carlo method) whose objective is to determine the resources necessary to cover the obligations over a one-year time horizon with a confidence level of 99.5 percent calculated on the total balance sheet of the firms. For this, the CNSF developed the SCRCS, which contains the parameters and methodologies of the standard formula and requires inputs on the components of the firms' balance-sheets from which it performs the calculations. This results in the following two advantages. First, the efficient use of capital resources by

simultaneously considering the occurrence of risks, their mitigation strategies, and the benefits for the compensation between risks. Second, the SCRCS allows a calculation based on the risk profile of each firm, on which the firms must only generate inputs based on their underwriting, reinsurance, and investment information. This allows companies without the ability to generate robust risk calculation methodologies to benefit from an efficient use of their capital resources.

The calculation of the SCR using a Monte Carlo methodology that is carried out by the SCRCS makes it difficult for the different participants in the sector (regulators and companies) to have a deep understanding of the results. This can complicate its use as a tool for the risk management of the insurers. There are many firms that have made important developments in the understanding and use of SCRCS, thereby strengthening their technical capabilities and risk management, and some of them have developed preliminary versions of internal models based on this. However, this is not the common situation in the market.

The determination of the SCR based on the risk profile of the insurers, incentivized better risk management, and consequently led to an improvement in the solvency strength of the firms. The more precise assessment of market, underwriting and counterparty risks incentivized an improvement in the match between assets and liabilities and in reinsurance strategies, which strengthened the solvency position of the entities.

Since the risk models are integrated into the SCRCS, for several companies there are no incentives to develop their own methodologies since they only need to operate the SCRCS system correctly to calculate their SCR. In other words, since the assumptions, methodologies, and balance sheet projection criteria are already programmed into the SCRCS, companies do not have to develop any of these. SCR formulas that are based on scenario analysis, as in the case of Solvency II in the EU, require companies to develop methodologies to calculate the balance sheet impacts derived from the occurrence of specific risk scenarios. The latter contributes to the development of risk management, which does not occur in the Mexican case when calculating the SCR with the SCRCS.

The regulation requires the establishment of a corporate governance structure based on best practices. This created a better order and professionalization of the boards and, in general, of the corporate governance systems of the companies. However, it is recognized that this fundamental element of the RBS regime is still maturing and thus the regulation is kept at the higher level to allow flexibility and maturity of the best practices around the corporate governance.

The structure of corporate governance, risk management and internal control set out in the regulation implies a significant initial investment for a new participant in the insurance industry. In the licensing process, the license applications must have all the positions required by the regulation ready, for which there is no explicit proportionality in the regulation, in terms of obligations. The proportionality is observed in the complexity and size of the corporate governance and risk management structure, consistent with the complexity and size of the operation of each entity. This can discourage the participation of new players, even more so, in these times where there has been an important digital transformation in the financial world through fintech companies.

Market discipline, obtained through increased transparency and publication of information, was strengthened by allowing the different companies to have access to better information on competitors, from which they could improve their products for the benefit of policyholders. However, the type of information that is published is beyond the understanding of the general public and insurance consumers which could contribute to market discipline if they have access to more comprehensible information. For example, there is no obligation in the

insurance contracts to disclosure of the components of the insurance premium, breaking it down into risk and costs components.[39] This is an extremely complex issue due to the important dependence for the distribution of insurance that the industry has on the agents, which allows them to influence this point of transparency.[40]

The formal implementation process of the LISF started in 2013 with its publication and ended in 2016 with the entry into force of all its components within the regulation. The initial plan needed to postpone the effective date of the quantitative elements of the new regulation until the beginning of 2016, from the original date of April 2015. There are valid issues to be considered when deciding on a transition period for both the regulator and the industry, such as: the overload on financial resources of the insurers during periods of transformation encourages them not to be continued for a long period. Keeping systems operating on two solvency calculation frameworks is very costly; the human resources involved in the transformation processes are usually those that are already operating in the sector. Therefore, additional work can create challenges in their performance, while knowledge and skills acquired, and new reporting requirements and availability of data helped to improve their performance; using a longer implementation time period with a less intensive process can lead to less attention from the participants; while, on the other hand, a longer time could allow for better analysis of the results, reduce the stress of all the participants and carry out exercises in parallel that guarantee the appropriateness of the regulatory obligations.

Both the insurance sector and CNSF had to increase their financial, actuarial, accounting, legal and risk management knowledge and skills. The importance of the quantitative and qualitative elements of the regulation in the operation and results of the companies, require that the experts in each subject have general knowledge about many other elements in such a way that they can clearly understand the companies. At the CNSF, these skills were obtained as a result of the research and development required to modernize the regulation and through training programs given to all its personnel regarding the skills required for the new regulation.

Conclusions and Advice

The process of modernizing the insurance regulation in Mexico occurred with clear objectives, conducive conditions, and a transparent plan for implementation. The main objective was to generate a regulatory framework that strengthen the solvency and soundness of insurers and that would accompany the potential growth expected due to the macroeconomic conditions in Mexico, giving it greater solidity, efficiency, and order. The economic stability, the technical capacity of the regulator, the financial and technical strength of the sector made it possible to design a regulation that met the proposed objective. Therefore, some general recommendations for other jurisdictions heading down the path of RBS are set out below.

Reasons and Objectives

The identification of the reasons for adopting a risk-based regulation regime, as well as the clarity of the objectives it pursues, are a fundamental starting point for the regulatory project. This starting point allows a clearer approach to all the participants and stakeholders in the sector. Having clear objectives helps getting

[39] This is something that is observed in the services of banks or pension funds that are obliged to break down the components of the price of their services.

[40] Regarding the distribution channel, the percentage that agents represent with respect to the total written premium has remained stable at 54 percent to 57 percent from 2014 to 2021.

buy-in for a regulatory change project. In addition, it allows the establishment of key indicators that help evaluate the results it generates. Finally, it is important that the authorities (legislative branch, regulator, etc.) consider that the proposed objectives may not be completely aligned with those of the industry or a part of it. In this case, the validity of the reasons and objectives becomes essential to have sufficient and solid arguments to make the necessary changes.

Existing Conditions

The adoption of RBS in each jurisdiction depends on the characteristics of that jurisdiction. The ICP preconditions, principles, standards, and guidelines allow any authority to establish a general outline for its regulatory framework. However, the specific design of the regulatory framework must be prepared based on jurisdictional characteristics. Regulatory frameworks in other jurisdictions could be a starting point, but it is important to understand the different circumstances between the model jurisdictions and own jurisdiction, taking care to adapt them tailored to the objectives, needs and characteristics of each jurisdiction.

In the case of the Mexican regulation, the sensitivity to the risk of certain types of insurance and the diversity of the operating and technical capacity of the companies, gave rise to some adaptations. The treatment of the LOB of catastrophe risks considers the valuation of provisions through a statutory model which is also used to calculate the capital charge based on a PML. Internal models are not allowed for this capital charge. The constitution of catastrophe provisions is required to cover losses derived from catastrophes. For social security pension insurance, the previous model is maintained, which calculates technical reserves with regulatory interest rates and demographic tables with prudential surcharges. The use of internal models for the SCR is not allowed for this type of insurance business. Special provisions are calculated to cover deviations due to mortality or investment issues.

Adaption of the method to calculate technical provisions and the SCR and of the valuation basis were necessary. There was a development of a statutory methodology for technical provisions and its parameters on which a significant number of companies' provisions valuation methodologies are based. SCRCS is an information technology system that creates a common calculation methodology for the SCR but also prevents companies from using their own balance sheet projection methodologies and disincentivizes the development of those internal systems. So, there are benefits and issues with this approach. There is also simplification in general purpose financial reporting by aligning financial statements with the valuation basis used for solvency purposes, that is, investments valued at market and technical provisions as BEL plus RM.

Detailed secondary regulation for corporate governance was deemed necessary to establish clear guidance on the regulatory minimum. The detailed regulation is a principal guide for the design of companies’ corporate governance systems and the supervisory system for the supervisor.

Procedure and Methodology

It is very important to maintain a close dialogue between the regulator and the industry that allows for the discussion, debates, and the transition to strengthen the regulation. The regulator must have the ability to listen to the requests, reasons, and arguments of the industry, to improve regulation based on them, or clearly point out the reason for a refusal. One of the solvency pillars of risk-based supervision is self-governance. For its substantive adoption and not only compliance, but it is also essential to maintain continuous and open communication between the regulator and the industry.

The adoption of risk-based regulation requires the use of significant resources for all participants. To allow adequate planning for all stakeholders, it is important for the regulator to define and share clear and transparent planning for the adoption of this type of project. For this, two stages with different qualities are identified: the analysis and development stages and the formal stage of implementation. In the analysis and development stages, the regulator is in a process of analysis and development of regulatory projects based on international principles, reference frameworks, etc. At this stage, it is beneficial to maintain a process of communication with the industry about the direction or concerns of the regulator. For example, in the Mexican case, since its creation, the CNSF has annually organized the International Seminar on Insurance and Sureties, in which experts from all over the world were invited to speak on issues that the CNSF believed was appropriate to promote or address. In the formal stage of implementation, once the risk-based regulation adoption project is formally established, it is important to generate a well-structured plan, with objectives, deadlines, and methodologies to communicate to all stakeholders.

The change from a compliance-based regulation to a risk-based regulation usually requires a long process, so it must be understood to be a long-term project. In this regard, two aspects should be considered: a gradual process of transformation and continuity of supervisory resources and staff. An effective risk-based regulation usually requires a gradual adaptation process due to the change in culture, capacities, and information that it requires. Therefore, a gradual process of transformation can contribute to better adoption. Even if a significant leap is made, the regulator can gradually adapt the regulatory elements, making them gradually more precise and robust. This can also be observed with tolerance and regulatory forbearance from the regulator in the first years of adoption, which allows the companies to adapt to the new requirements. This is particularly relevant in the case of corporate governance and risk management. The continuity of the regulator with respect to resources and staff allows the development of the skills and experience necessary for risk-based regulation since this requires a more comprehensive understanding of the risk profiles of the companies.

The regulatory framework must be adapted to local market conditions and the capacities of the participants. Given that risk management is a fundamental pillar for risk-based regulation, it is very important that the models and measurements are useful for decision making. In this sense, it is very important to maintain a healthy balance between precision and simplicity of the models according to the characteristics of the participants. This is particularly clear in the case of SCR models, where the standard formula can contribute to sound management and the possibility of internal models will allow more precise measurement by more sophisticated companies. Regarding technical provisions, it is recommended that the regulator generate statutory methodologies, which serve as a starting point for internal methodologies of the companies.

The capacities required by the regulator and the industry should be developed on an ongoing basis. Company staff will have specialist skills but should also understand other important aspects of the operation of companies and so they should have knowledge of multiple topics. It is recommended that general training be given to all staff on each of the topics. Additionally, avoiding working in silos and fostering cooperation between specialized areas allows knowledge to spread throughout companies.

Data is a fundamental resource to be able to develop knowledge of risk drivers and the level of risk inherent in the insurance market. In this sense, it is essential that the regulation promotes, or even obliges, the proper management of data. Data management is becoming more important given the pace of change created by digital transformation of company operations and markets in which they operate.

Implementing Risk-Based Solvency in South Africa

As early as 2009, the then Financial Services Board (FSB) and the South African insurance industry embarked on the Solvency Assessment and Management (SAM) project.[41] The focus was establishing a RBS regime for the prudential regulation of both life and non-life insurers (including reinsurers) in South Africa. This section sets out the journey of the FSB in its transition to an RBS regime. It will provide context for the FSB's journey to RBS by providing some information on the insurance sector in South Africa and the pre-transition regulatory framework before detailing the management and execution by the FSB of its transition to RBS. Annex III contains additional discussion on what was implemented for the RBS regime and other information relevant to the transition.

Overview of the Insurance Sector in South Africa

The South African insurance industry is well-established and has a long history both in terms of offering services to the South African community, being comprehensively supervised and regulated. Some insurers have been operating since the 19th century and are still offering products today. The regulatory framework has been reviewed and updated as the industry evolved and matured similar to how the international insurance community has changed its views on insurance risks and appropriate regulatory frameworks.

The insurance penetration rate is at the high end for an emerging market, at 13 percent for life and 3 percent for non-life business. This is driven by the large private pension fund industry together with the significant number of funeral policies underwritten. Traditional life products are mainly taken up by a small number of the South African population. The take up of funeral policies is however widespread throughout the population reflective of cultural importance that is linked to bury one's loved ones with dignity. At the end of March 2022, South Africa had about 160 insurers split almost equally between life and non-life insurers (including reinsurers and microinsurers). These insurers have combined assets of about R4 trillion or $270 billion, with the life industry making up the bulk at 92 percent or R3.6 trillion or $248 billion, about 65 percent of GDP.[42]

Insurers are owned predominantly by local shareholders and often part of an insurance group or a financial conglomerate. A smaller number of insurers have direct ownership by foreign holding companies, often insurers in developed markets. The introduction of branches of foreign reinsurers by the new insurance framework has been well received with two foreign reinsurers opting to use the branch structure. The insurance sector is diverse not only in terms of business models but also in terms of specialization and operations. The South African insurance sector includes captive insurers (4) and cell captive insurers (11) as well as microinsurers (10).[43] For microinsurers the new insurance framework recognised that a simpler regime with lower costs can increase the transformation of the insurance sector and open an avenue for insurers to

[41] South Africa adopted a Twin peaks model of regulation on 1 April 2018. The insurance prudential staff of the FSB was transferred to the Prudential Authority within the South African Reserve Bank.

[42] Exchange rate of R14.6038 for March 2022.

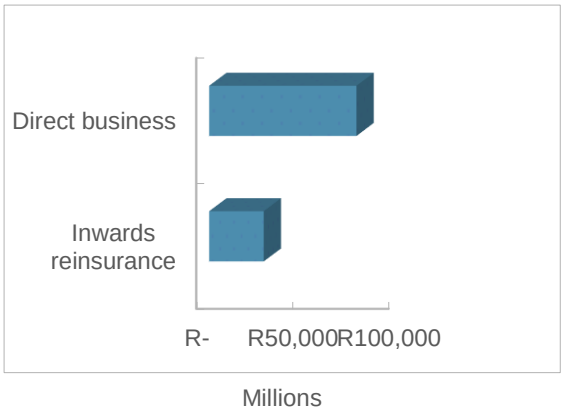
[43] Captives represent insurers that only underwrite the risks of the group of companies the captive belongs to. Cell captives are a type of insurer that only does business through cell structures, which are contractual arrangements where each cell is owned by different parties and each cell is administratively but not legally ring-fenced from other insurance business conducted in the insurer's other cells.

address the affordability of insurance products. The insurance industry is well-represented and supported by various industry bodies. This includes the Association for Saving and Investment South Africa (ASISA) for the life industry, the South African Insurance Association (SAIA) for the non-life industry, the Actuarial Society of South Africa (ASSA) for actuaries and many more representing intermediaries, insurers, professionals, and other stakeholders.

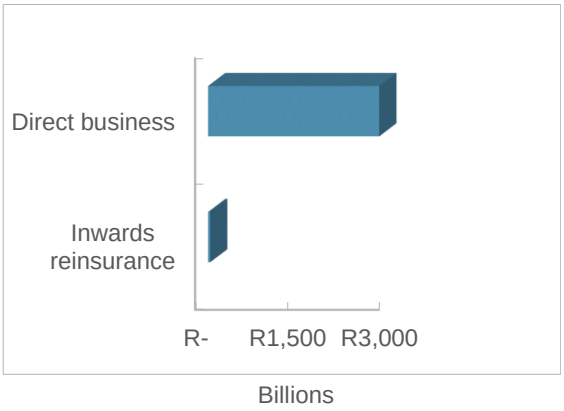
Insurance is conducted mostly as direct business, with a few direct insurers writing inwards reinsurance business (Figure 27).[44] Professional reinsurers are also active in the market and together with the direct insurers are used for effective risk management and risk mitigation, more so in the non-life sector than the life sector. Though non-life insurers offer a broad range of services, indicative of a mature market, the bulk of the business, as measured by the share of gross technical and written premiums, is property and motor insurance (Figure 28).

Figure 27. Industry Aggregate Non-life and Life Gross Technical Provisions for 2021

1. Non-Life Gross Technical Provisions



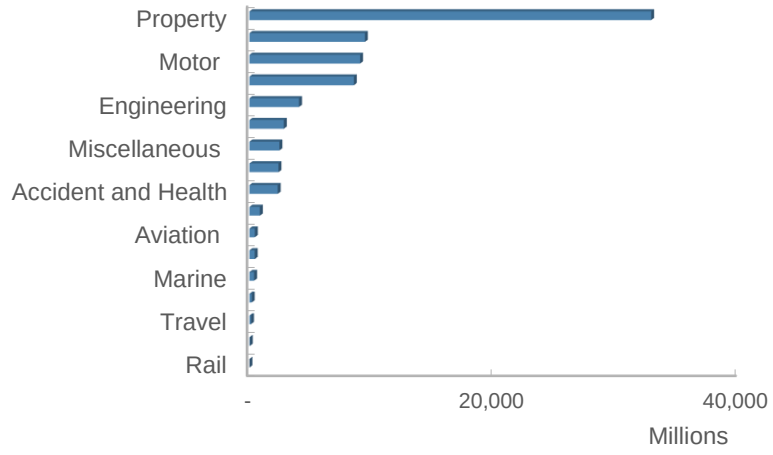
2. Life Gross Technical Provisions



Source: Prudential Authority.

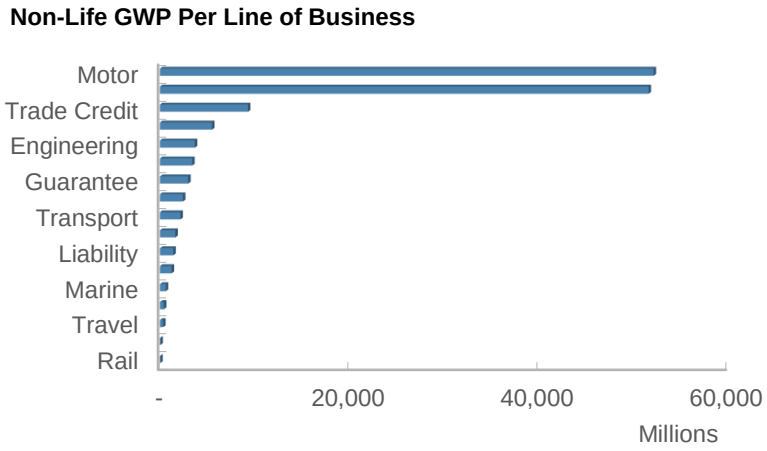
[44] Direct business means insurance business conducted directly with the public through various distribution channels.

Figure 28(a). Industry Aggregate Non-Life Gross Technical Provisions Per Line of Business for 2021



Source: PA.

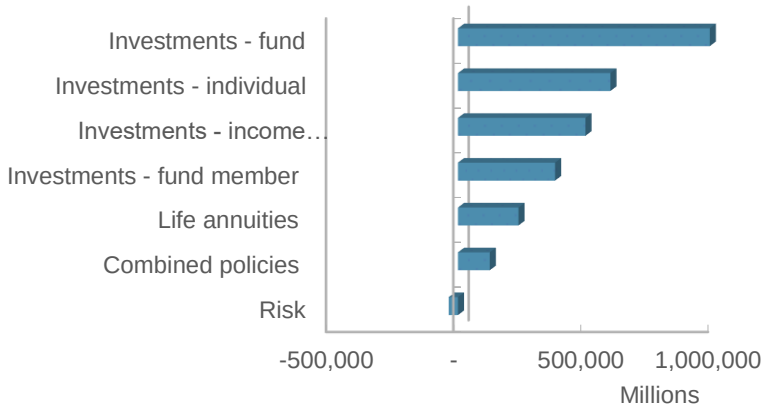
Figure 28(b). Industry Aggregate Non-Life Gross Written Premium for 2021



Source: PA.

For life insurers, investment lines of business accounts for most of the total technical provisions (Figure 29a). It is important to note that risk products, and combined products to a lesser extent, typically have negative technical provisions due to the workings of the discounted cash flow model and the recognition of future profits as an asset. Investment business is for various reasons, including tax benefits and a significant private pension fund sector, a large part of the life insurance business. The investment business is not a large driver of profits or risk, since a big portion of this business is liabilities where the policyholder bears the investment risk, i.e., unit linked or linked products. The insurer usually carries mainly operational risk for these products. On the other hand, an analysis of the components of the annualized premium income (API) is clearly indicative of the importance of risk products in the market (Figure 29b).

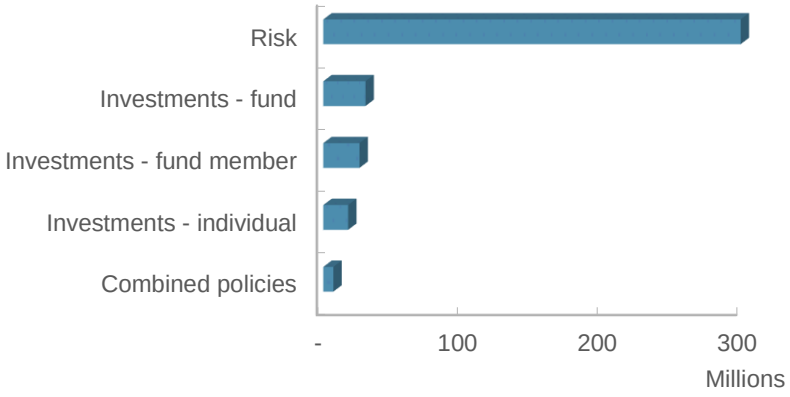
Figure 29(a). Industry Aggregate Life Gross Technical Provisions Per Line of Business for 2021



Source: PA.

Figure 29(b). Industry Aggregate Life Annualized Premium Income for 2021

Life API Per Line of Business

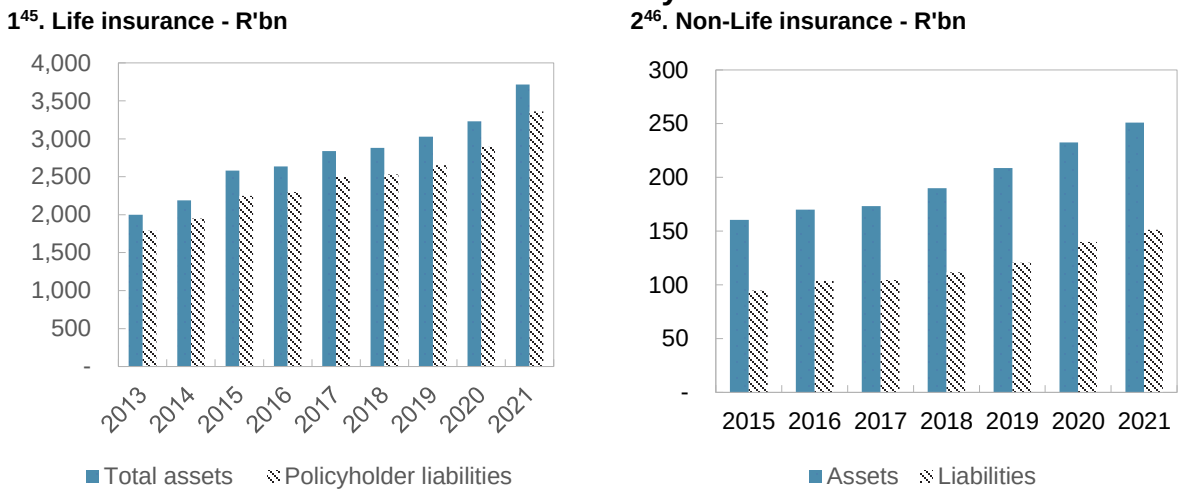


Source: PA.

Both the life and non-life insurance sectors have shown a steady increase in both assets and policyholder liabilities over the years without a notable change in this trend after the implementation of SAM (Figure 30). The steady increase is due to growth in asset value, positive inflows from recurring and single premiums for life insurers and underwriting profit for non-life insurers. There are significant differences in the asset allocation of the different sub-sectors (Figure 31(a)). Life companies allocate the lion's share of their portfolios to markets through investment funds and to a lesser extent through direct equity investments, with low direct investments in corporate and government bonds and a small share of liquidity on call (through cash and deposits). In contrast, non-life companies keep large liquid asset holdings and distribute their investment portfolio evenly across direct holdings of securities and indirect holdings via funds. Composites invest most of their portfolios into government bonds, cash, and deposits. Life companies' funds investments are made through collective investment schemes (CIS). The CIS industry, of which life insurers are one group of investors, has enjoyed an increasing trend in assets for both retail and institutional investors over the period (Figure 31(b)). These CIS, in

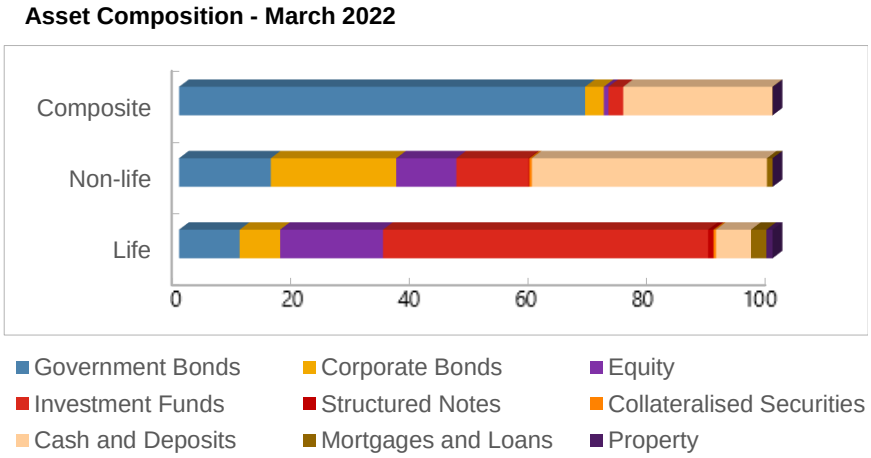
turn, have diversified investment portfolios with around 45 percent in equities markets, 20 percent across debt and money market funds, and 28 percent in asset allocation funds (Figure 31(c)).

Figure 30. Total Assets and Policyholder Liabilities for the Life Insurance Industry



Source: PA.

Figure 31(a). Asset Composition Insurance Sub-Sectors
(Percent)

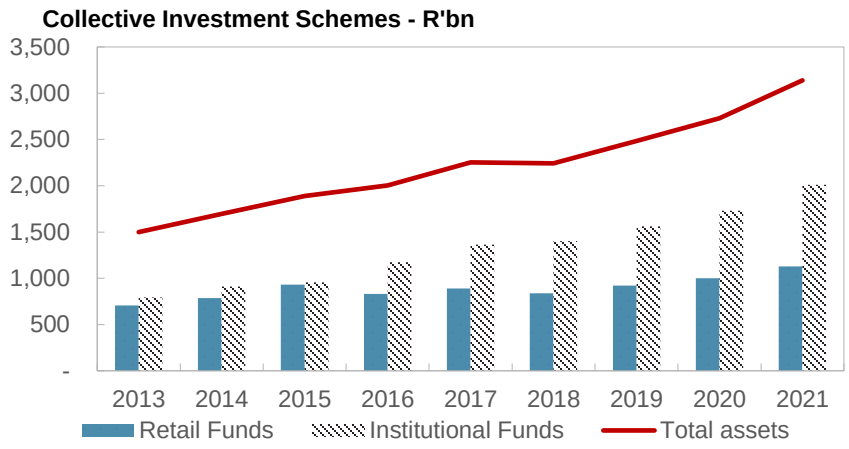


Source: PA.

[45] ASISA industry statistics reports, https://www.asisa.org.za/statistics/.

[46] Information for supervisory purposes submitted to the regulator.

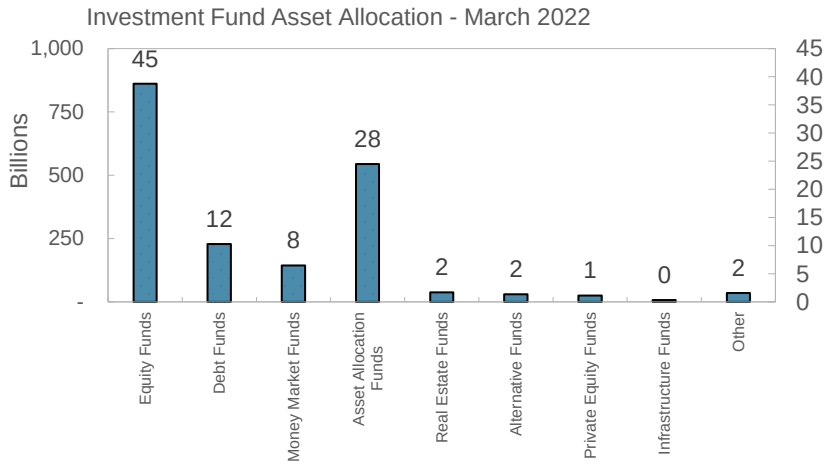
Figure 31(b). Total Assets for Collective Investment Schemes[47]



Source: PA.

Figure 31(c). Asset Allocation for Life Insurers' Investment Funds

(Percent, rhs)



Source: PA.

Prior to RBS

Regulation and Supervision

Insurance regulation and supervision in South Africa went through several changes over the last few decades. The Insurance Act of 1943 was repealed and replaced by the Long-term Insurance Act, 1998 (LTIA) and the Short-term Insurance Act, 1998 (STIA). This change transitioned the life insurers into an initial RBS regime for

[47] ASISA industry statistics reports, https://www.asisa.org.za/statistics/

some of the major risk factors. The 1998 legal framework also introduced a new layer of regulatory instruments, called Board Notices. It gave the FSB more powers and flexibility in changing existing, and introducing new requirements, where such requirements would typically be of a technical nature. These new powers were also used to transition the non-life insurance sector into an interim risk-based regime and allowed for the introduction of more prescribed governance requirements.

Insurance Regulation

Before the transition to an RBS regime, the South African legal framework consisted of three layers. First, the LTIA and STIA—the primary legislation enacted by parliament. Second, regulations issued in consequence of LTIA and STIA—subordinated legislation enacted by the Minister of Finance. Third, board notices issued under the LTIA and STIA—these notices were also subordinated legislation as the LTIA and STIA gave the regulator the powers to prescribe requirements by issuing such notices signed by the Chief Executive Officer. This form of subordinated legislation was used to prescribe requirements of a technical nature like solvency and governance requirements.

The regime also followed the three-pillar structure with Pillar I for solvency requirements, Pillar II for governance and Pillar III for reporting and disclosures.

Pillar I requirements for the life sector covered a limited range of risks relative to a one-year survival probability. Known as the statutory valuation method (SVM), the risks considered were lapse, mortality, morbidity, expense, and investment. The SVM had conservatism built into it by allowing for prescribed additional margins and discretionary reserves in the valuation method. The SVM also required that negative technical liabilities be zeroised. All assets backing policyholders' liabilities and assets reserved for the capital requirements were considered in the valuation and the calculation of capital requirements.

Pillar I requirements for the non-life sector were initially based on a regime akin to Solvency I. It was calculated as an amount equal to the greater of R5 million or 15 percent of premium income during a set twelve-month period. While the development work of the RBS regime continued, an interim risk-based factor regime for the non-life insurance sector was effective starting January 1, 2012. The requirements were set out in Board Notice 169 of 2011 and prescribed rules for the calculation of the value of assets, liabilities, and capital adequacy requirement for short-term insurers.[48] This Board Notice prescribed requirements to value assets and liabilities and to calculate capital adequacy. In particular, the interim regime prescribed: some limitations on assets for group undertakings; risk-based methodologies for calculating unearned premium and "Incurred But Not Reported" (IBNR) reserves which comprised of the 365th method and a factor-based method, respectively;[49] and a more risk-based approach to calculate capital requirements where the total capital requirement consisted of "Basic Solvency Capital Requirements" (BSCR) and Operational Risk capital requirements: (a) the BSCR included a factor-based approach to calculating capital for insurance risk, market risk and credit risk; and (b) the Operational Risk capital requirement was calculated by applying factors to premiums and liabilities. Initially there were limited Pillar II requirements. In the LTIA and STIA the only governance requirements were that an insurer must have adequate organisation or management necessary for carrying on the business concerned, and insurers were required to appoint fit and proper individuals as directors, managing executives

[48] https://www.fsca.co.za/Notices/Board%20Notice%20169%20of%202011.pdf

[49] The 365th method assumes the risk under a policy is spread evenly across the lifetime of the policy. Thus, the unearned premium reserve is calculated on a pro-rata basis based on the unexpired risk period under a policy at a particular valuation date.

and a public officer, and to notify the regulator of such appointments. In the life sector insurers were required to appoint a statutory actuary which required the regulator's approval. In the case of a non-life insurer, the regulator could require a non-life insurer to appoint a statutory actuary with the regulator's approval. Insurers were required to appoint an audit committee with specific membership requirements. Furthermore, appointment of an external auditor was also required with the regulator's approval. To modernise governance and risk management matters, the regulator introduced an interim framework whilst developing the comprehensive set of requirements that were to be implemented as part of SAM. These interim requirements were set out in Board Notice 158 of 2014 (Governance and Risk Management Framework for Insurers), included an overall governance framework, a composition of the governance and structure of the board of directors, a risk management, and an internal control system, which included the establishment of control functions.[50]

For Pillar III considerations, the LTIA and STIA prescribed the returns that were to be submitted to the regulator. The regulatory returns did not contain a lot of granular data and were focused on summarised information that could inform the simplistic capital requirement framework as well as regulatory compliance in some cases. There were no formal public disclosure requirements, instead prescribing that some of the regulatory information be made available to anybody making such a request to the regulator and paying a fee. Listed insurers were required to publish their annual financial statements as a listing requirement. The annual financial statements did not include statutory information, although many listed insurers included such information.

Insurance Supervision

An insurance focused risk-based supervisory approach, referred to as the Prudential Risk-Based Supervisory Framework for Insurers (PRSFI), was introduced in 2010 focusing only on prudential matters. The PRSFI applied to all insurers and was an evolving supervisory framework that continuously updated insurers' risk assessments. The objective of the PRSFI was to provide an effective process for the assessment of insurers' financial soundness by evaluating an insurer's risk profile, its risk management processes and practices, its financial position, and its compliance with legislation.

There were eight key elements of the PRSFI. Risk focused supervision; reliance on oversight risk management control functions, including the work of internal audit; reliance on the work done by third parties like external auditors and statutory actuaries; producing regulatory risk ratings for each insurer; communication of findings and requests to insurers in a confidential, clear and timely manner; linking the level and frequency of supervisory scrutiny depended on the insurer's risk rating so that well managed insurers would require less supervision; promoting appropriate regulatory action in line with the risk profile of an insurer; and facilitating the development of benchmarks that informed best industry practices for dealing with various risk levels.

The key implications of the PRSFI for the supervisory resources and supervisory approach included: (a) a requirement for supervisors to apply sound judgment in identifying and evaluating the risks insurers were exposed to; (b) staff performing risk assessments had to understand the risks and obtain detailed knowledge of the insurer's structure, organisation, and business; and (c) to ensure support by specialists with detailed industry knowledge and expertise in particular types of risks or risk management functions.

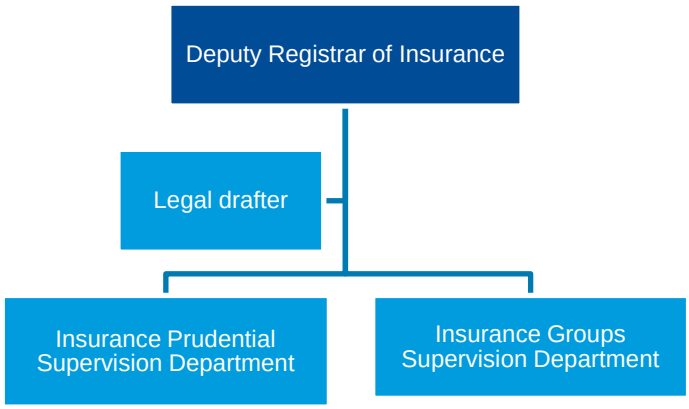
[50] https://www.fsca.co.za/Notices/Board%20Notice%20158%20of%202014%20-%20Governance%20and%20Risk%20Management%20Framework%20for%20Insurers.pdf. Control functions refer to the internal audit, compliance, risk management and actuarial functions.

As input into the risk assessments, the regulator mainly used offsite and onsite analysis as supervisory tools, particularly the following three tools. First, regular reporting, comprising four quarterly submissions and a comprehensive annual submission with reporting dates linked to the insurers' financial year-ends. The information submitted was the balance sheet, capital requirements, and supporting detail. Second, offsite analysis, using regular reporting submissions, the supervision teams would check for compliance with rules. They would also use other published information to form a holistic view of the insurer's financial soundness i.e., rating agency reports. Third, onsite visits, confirming, on a practical level, the understanding of the significant activities the insurers were involved in and to ascertain how well the insurers managed these activities and the risks that such activities exposed them to. The onsite visits were also used as a confirmation of the risk rating assigned to an insurer based on the offsite analyses.

Regulator

The organisational structure of the regulator's main staff responsible for the prudential supervision of insurers is shown in Figure 32. The Legal Drafting team was composed of one person (the Drafter) who was the Head of the Regulatory Framework Department, responsible for the development of all legislation. This person was an advocate with vast experience in legal drafting and insurance matters. The Insurance Prudential Department was responsible for the supervision of small-to-medium sized insurers and reinsurers. The twenty-five staff members of this department were all graduates specialising in financial management or accountancy. The Insurance Groups Supervision Department was responsible for the supervision, both on a solo, and group supervision basis, of the larger life and non-life insurers and the groups they operated within as well as the group supervision of all other insurance groups. Although there were no insurance group supervision requirements in the legislation, group supervision was conducted on a moral-suasion basis. The nineteen member staff in this department were all graduates specialising in financial management or accountancy. These teams were supported by the Actuarial Department which had eleven staff members and reported to the Chief Actuary.

Figure 32. Regulator's Organogram for Prudential Supervision before Risk-Based Regime



Source: IMF staff.

Challenges

South Africa was not fully compliant with the Insurance Core Principles (ICPs) of the International Association of Insurance Supervisors (IAIS). The legislation was compliance focused and prohibited supervisors from fully implementing the risk-based supervision approach it was developing. The main challenges were: (a) the rules-based nature of the prevailing legislation made it challenging to apply proportionality or to apply discretion; (b) limited available information made it hard to comprehensively understand the specific risks each insurer was exposed to; (c) limited legislated Pillar II requirements led to challenges for supervisors in assessing the effectiveness of insurers' governance arrangements. Furthermore, the ultimate responsibility for the financial soundness of an insurer was placed with the statutory actuary (where one was appointed) and not with the board of directors; (d) limited legal powers to increase supervision. e.g., implementing group supervision had to be done on a moral suasion basis; (e) no specific and detailed audit and disclosure requirements were in place; (f) the existence of an unlevel playing field in the reinsurance market; (g) the legal framework did not support financial inclusion and transformation in the sector; and (h) the larger, locally owned insurance groups found it challenging and costly to expand into developed markets due to a non-equivalent regime or a regime that was not mutually recognised.

Journey to RBS

The main driver of embarking on this journey was to align the South African insurance regulatory regime with international insurance standards as reflected in the ICPs of the IAIS. The previous major overhaul of legislation was completed in 1998 and it was found that the legislation did not keep up with the changes and developments in the insurance industry.

The desire to move to a risk-based capital regime had many intended benefits that were assessed to justify the cost in resources for the regulator and the industry. First, a quantification of the risks using methods that more accurately reflected the sensitivity of an insurer to a risk so that two similar insurers could have different capital risk charges if the risk mitigation methods each employed were different. Second, enhancing good risk management behaviour and practices. Third, improving the quality and availability of data to the industry and of the data submitted to the FSB. Fourth, increasing the granularity of data collected. Fifth, allowing for a better analysis of systemic risk. Sixth, developing a consistent and robust process for the assessment of significant owners across the financial sector. Seventh, reducing regulatory arbitrage due to the application of different approaches in the banking sector versus the insurance sector. Eighth, making the Board of Directors of an insurer or an insurance group ultimately responsible for the oversight over the insurer or insurance group, respectively. Ninth, serving the need for better capital management including for capital linked to the business profile and strategy of an insurer. Tenth, and finally, serving the need to enhance the governance framework for insurers, particularly the roles and responsibilities of the control functions and key persons.

The FSB also sought to address certain observed market practices through the new legislation. These included: the desirability of a level playing field for both domestic and foreign reinsurers; the introduction of a microinsurance regulatory framework to support financial inclusion and transformation of the insurance sector; the desirability of a clear differentiation between life and non-life businesses; dedicated requirements for insurers operating as a cell captive; and conversion of insurance licences to remove dormant business classes, reassess the governance structures, re-evaluate the financial projections under the new regime, reconsider existing regulatory approvals, and consider new regulatory approvals.

As more South African insurance groups expanded into the African continent and further afield, exposure to the global insurance industry and its cycle increased. By implementing a risk-based regime aligned to international best practices, the South African insurance groups would benefit from comparability with global peers, and it would allow for mutual recognition by international authorities of the South African regulatory and supervisory regime.

Specific pressure from the insurance industry was for the regime to move away from a tick-box rule-based exercise to a regime that better reflected the South African insurance industry. The introduction of a RBS regime was seen to achieve closer alignment between the regulatory basis and the economic basis insurers used to manage their businesses.

Project Scope

The regulator embarked on this journey by initiating a project called SAM and appointing additional dedicated resources to the project team. These additional appointments were needed to execute the project plan which was recognised to be complex, time-consuming, and requiring significant resourcing support.

SAM was based on international developments vis-à-vis capital adequacy, risk governance, and risk disclosure regimes implemented or being developed across the world in the leading jurisdictions. It shares the same broad features as these jurisdictions, i.e., principle-based regulation based on an economic balance sheet and utilising the same three pillar structure.

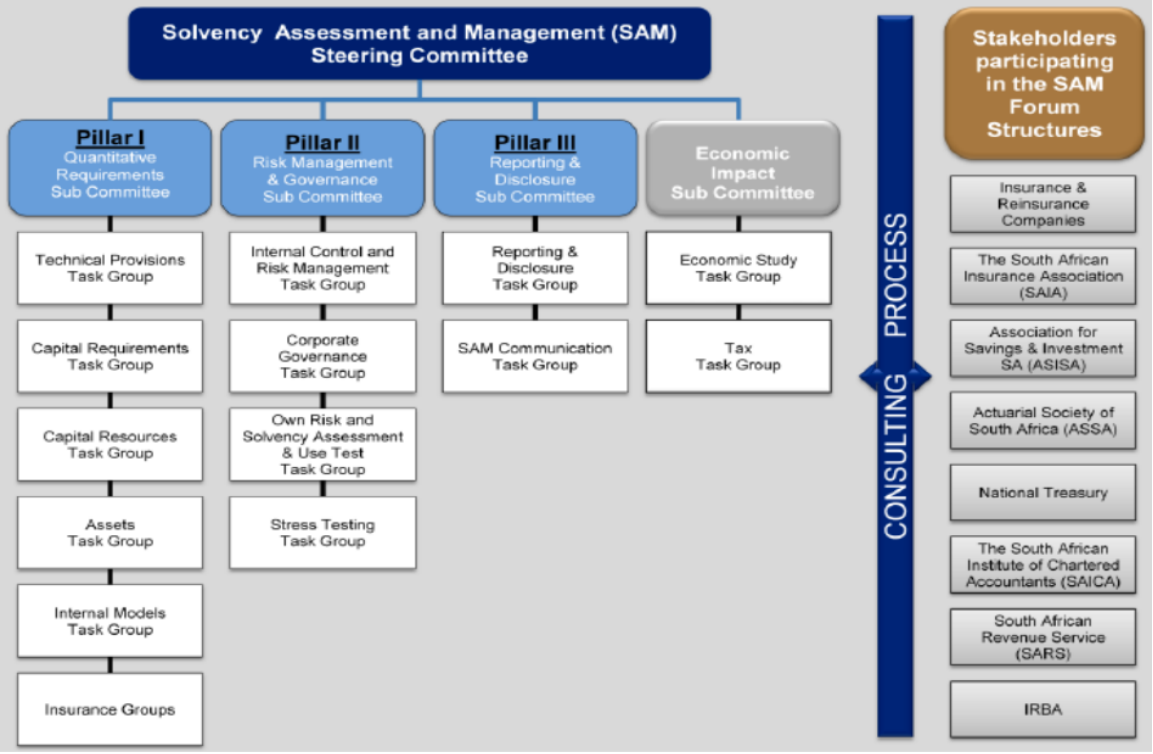
The primary purpose of the SAM regime is the protection of policyholders and beneficiaries. Additional objectives are to: align capital requirements with the underlying risks of the insurer; develop a proportionate, risk-based approach to supervision with appropriate treatment of both small and large insurers, including internationally active insurance groups; provide incentives for insurers to adopt more sophisticated risk monitoring and risk management tools, which includes developing full and partial internal capital models; and promote financial stability.

Project Organization

The regulator added a SAM unit to the existing organisational structure to act as a project team dedicated to the development of SAM and the management of the project. The team had about five staff members with actuarial skills, a project manager supported by an administrative assistant providing all management and other support required. This team was the first point of contact for the industry and the liaison between the regulator and the industry. Governance structures were put in place to manage the SAM project (Figure 33).

The intention was for an inclusive consultation process with the insurance industry, allowing as many insurers as possible to participate. To address capacity constraints, each insurer and other stakeholders had to nominate a SAM coordinator to maintain direct access to the SAM structures. Through the SAM Coordinator, each stakeholder had access to documents and minutes of all committees and task groups. The onus was on insurers to take part in these structures, evaluate the likely impact of the regime on their business, understand what preparations were required, and use these forums to voice concerns.

Figure 33. SAM Governance Structure



To further enhance participation, several different membership types were set up to manage the governance of the project while still retaining a relative streamlined structure (Annex 3). The other stakeholders were also invited to nominate representatives to serve on the SAM Steering Committee (text table).

Structure	Chair	Membership	Regulator
Steering Committee	Regulator	Larger insurers and stakeholders	Provide steer
Subcommittees	Regulator	Insurers and stakeholders	Provide steer
Task groups	Industry	Insurers and stakeholders	Observe

The Steering Committee was the highest level of authority for the project and the only decision maker with all other fora required to make recommendations. The regulator drafted the Terms of Reference (TOR) and nominated the chair and vice-chair from its ranks. The total members of the Steering Committee were 63. Members consisted of representation from insurers, mainly the larger insurance groups; insurance industry associations; the South African Reserve Bank (the Banking Supervision Department and the Financial Stability Department); the South African Revenue Services; the Independent Regulatory Board of Auditors; the South African Institute for Charter Accounts; the Actuarial Society of South Africa; and the National Treasury. Three subcommittees of the Steering Committee were set up to represent the three pillars of the regime. The Steering Committee drafted and ratified the TOR for each subcommittee and the regulator nominated the chair and vice-chair from its ranks, who then invited members from the industry.

The subcommittees in turn created various task groups to consider the major themes relevant for that subcommittee and drafted each task group's TOR (Annex III). A nomination process was followed for selecting

the chair and vice-chair, after which each task group invited members from industry. The regulator, who had a standing invitation for all meetings, was not a member, and performed the secretariat role for all the meetings of the Steering Committee, subcommittees, and task groups, overseeing agenda setting and minutes taking.

The task groups had discretion to set up working groups that followed an informal structure and were tasked with addressing a specific matter and tabling proposals for consideration by its task group. The task groups, often via their working groups, had to document their discussions, views and suggestions using the Discussion Document template (Annex 3). This template guided the task groups to work using a consistent format and exploring similar avenues for information and guidance, like other existing regimes, whilst keeping to the over-arching goals of, amongst others, suggestions that are risk-based and relevant for South Africa.

The Discussion Documents were subject to a governance framework through the SAM structures where the title of each indicated its status and progress. There were four types of reports, including: (a) Discussion Documents, that were under development and still being discussed in the working group and task group; (b) Final Discussion Documents, that had been accepted by the task group overseeing the working group with no outstanding issues and deemed ready for further consultation;[51] (c) Position Papers, that were approved by the Steering Committee, published for public consultation and were open for inputs; and (d) Final Position Papers, where no further public comments were pending and that had been accepted by the Steering Committee as final and complete. Only these documents were considered in the drafting of legislation.

Position Papers were informed not only by the Solvency II text and the IAIS's ICPs, but also by the following five criteria. First, three QIS to test Pillar I proposals. Second, a Pillar II readiness review plus a follow-up study. Third, an economic impact study. Fourth, a linked insurance and expenses thematic review. Fifth, a reinsurance regulatory review.

The regulator, as the final drafter of legislation, added two documents to the SAM project, namely the Steer document and the Phase II document. These documents explained the reasons why the recommendations made by the Steering Committee from the work done by the SAM structures were not incorporated into legislation. The Steer document elaborated the issues on which the regulator was not in agreement with the recommendations. As the final authority and as the drafter of the legislation, the regulator reserved the right to reject or amend any recommendation made by the Steering Committee, typically for policy issues and sometimes when the SAM Structures, through its deliberations, could not reach consensus.

The Phase II document listed the recommendations that could not be incorporated into the draft legislation in time for the parliamentary processes. Some of these issues were still in dispute or required more research and deliberation before a final decision could be made. These issues were typically less material or could potentially only affect a few insurers and it was not deemed beneficial to hold back the implementation of the rest of the recommendations.

The regulator also applied the QIS approach to collect and analyse data to test the Pillar I proposals. Each QIS using specific technical specifications and a tailored submission template, culminated in a report setting out the QIS results in anonymised aggregate form. The regulator launched three QISs to establish the South African technical specifications that were the main input for what became legislation. QIS1 represented the very first numbers produced for South African insurers, which helped to identify the main potential direction and impact

[51] These documents were subjected to consultation within the broader SAM structures after the relevant Steering sub-committee approved it for consultation.

of the project. The QIS1 exercise was based on the QIS4 exercise conducted in the context of Solvency II in the European Union (EU). The technical specifications were the QIS4 technical specifications of EIOPA's Solvency II project and a submission template based on the same project. QIS1 helped to allay some fears and simultaneously to embed commitment for further development. For QIS2, the SAM structures analysed the results from QIS1 and suggested amendments, deletions, and additions. After considering these suggestions, the regulator drafted new technical specifications, with commensurate changes to the submission template. QIS2 represents the first version of technical specifications addressing the South African industry, market, and demographics. QIS3 represented the close-to-final version of the technical specifications and incorporated most of the suggestions from the SAM structures after completing the QIS analysis.

The Steering Committee launched two parallel runs to ensure robust implementation. The launches of two parallel runs were made feasible by the delay in the finalization of the primary legislation on which the subordinate legislation. Since the development of the new regime was nearly complete, it was an opportune time to start a new testing phase—initially, a light parallel run (LPR), and after a year, a comprehensive parallel run (CPR). The main purpose was for the industry to report the SAM data more regularly whilst still complying with the reporting requirements of the prevailing legislation, although during the CPR, the regulator substantially reduced the information required for regulatory reporting. Almost all the insurers and some of the larger insurance groups were asked to participate in the LPR. This parallel run required insurers to use the technical specifications of the last QIS, but not any of the alternatives for which a regulatory application would be required. It was designed to start moving insurers from a QIS environment to a business-as-usual process environment a first step to operationalise the calculation and the reporting as required. The required reporting, using simplified templates, mostly required aggregated information. This was helpful to give input for the final templates which were still in development and in consultation with industry. The CPR was mandatory for all insurers and participation was extended to those insurance groups that were already subject to group supervision. The aim of the CPR was two-fold: providing insurers with a period in which to prepare for SAM implementation, and to allow successive fine-tuning of the SAM Technical Specifications. The ongoing calibration culminated in a final version of regulations as set out in the Financial Soundness Standards. The transition from the LPR to the CPR focused on requiring insurers and insurance groups to a position where most of the SAM requirements were met. Specifically, insurers had to adhere fully to the requirements of the SAM Technical Specifications and to report quarterly and annually as required by the submission requirements using the prescribed reporting templates.

Timeframe

The complexity of the various workstreams necessitated more time for deliberation and development than what was originally envisaged. The authorities and industry needed to understand the principles, consider the various regimes and models, and then decide how to craft recommendations that would fit the South African insurance industry. The project formally commenced in January 2010 and was only concluded with the enactment of the legislation on July 1, 2018. As detailed below, there were several reasons for the nine-year span.

Human resource constraints at both the regulator and the industry were a key factor. Most of the experts actively participating in the work did so while performing their day-to-day jobs. Although the regulator had a dedicated project team, other senior staff members' participation was constrained by other work. The industry had similar constraints, but the contribution of these experts was too valuable to dismiss in favour of a quicker project completion.

A second important factor was that South Africa was concurrently developing and implementing a Twin Peaks regulatory architecture. This required a change to the primary legislation as it needed to follow the overarching financial sector legislation. Parliamentary processes to finalise the primary legislation took much longer than envisaged mostly due to non-project related matters.

The delay in EU Solvency II final implementation delayed the final determination of what the South African RBS regime should look like. This was because the EU Solvency II was an important regime used as a basis for the SAM development work. It was felt that the late developments and finalisations of the Solvency II framework were too valuable to not consider for the South African context.

Reconsideration of Existing Models

South Africa's RBS regime took the EU's Solvency II regime as a starting point. An overarching principle of the RBS regime was that it should meet the requirements of a third country equivalence assessment, as established by the EU. However, this principle was subject to the approach that the South African regime must be adapted to reflect domestic circumstances. A mapping or comparison of prevailing South African legislation to the Solvency II text was conducted. This was an important first step to contextualise the goal of a risk-based regime and breaking the workload of the project into smaller blocks or tasks that was more digestible. The various SAM task groups were requested to also research and consider other regimes for matters relevant and appropriate for South African insurers and insurance groups. The regimes typically considered were those of Australia (APRA), Canada (OSFI), Switzerland (FINMA), and certain elements of the pre-Solvency II regime of the United Kingdom (PRA). The Basel IV accord was also considered for those risks and governance frameworks that are similar to those of the banking industry. The above approach allowed for more comprehensive and appropriate recommendations. It avoided the pitfall of adopting a pre-cooked regime without gaining a full understanding of its strengths and weaknesses.

Key Milestones

Multi-year projects have numerous deliverables and many interim deadlines that make up the total project and the work that goes into completing such projects. The legislation was enacted in 2017 but was only implemented with effect from July 1, 2018. The time between enactment and implementation gave both the regulator and the industry to get ready for going live. This included the regulator developing the necessary processes and systems. The main interim deliverables were: (a) the writing of and consultation on the more than 117 Position Papers published for industry comment; (b) the introduction of LPR and CPR before implementation; (c) legislative development and consultation, a process that started by using the 117 discussion documents and position papers to develop the necessary legal framework that went through various rounds of informal consultation, and eventually, a formal consultation process; and three QIS and two Qualitative impact studies and follow-ups.

Challenges in Moving from Compliance-based Supervision

The industry as a major stakeholder had several challenges. First, project *investment, i.e.,* the commitment of the industry in its participation extended to the allocation of vast resources in terms of both time and money in the development of the project and the required data and systems. Second, data, because the risk-based regime required more data, at a more granular level, and the availability of such data and its quality was a big challenge for the industry. This challenge reduced over time as the industry adjusted its systems and

processes. Third, while automating process was a key operational imperative, it could only commence once development of the SAM specifications started to settle. The development of systems and processes were needed to relieve critical staff and resources for business purposes. Fourth, the complexity of the work, the dual reporting required during the CPR and the ongoing development and analysis of the SAM project, put the onus on appropriately skilled staff, a corresponding strain on human resources and the allocation of the scarce pool of such skills. There was a lot of dependence on consultants, which in turn strained this resource, although it was offset by the sharing of learnt knowledge and gained insight. Fifth, there was a parallel need to upskill the *Board of Directors* as more responsibility was laid on the Boards of insurers by the new risk-based regime, necessitating numerous trainings and workshops to understand their role and the workings of the new regime. Sixth, the greater judgment required for continuous compliance with a principles-based regime was a challenge for the industry as business decisions became more complex and took longer to settle when considering the impact they may have on the risk-based regime. Seventh, greater regulatory intrusiveness following from the regulator's signal that a risk-based regime entailed it being a more pro-active and pre-emptive authority, evidenced by it requiring more data more often and asking questions not asked before.

The regulator initiated and drove the transition to a risk-based regime but was not immune to the challenges of completing the journey. First, was the challenge of resource constraints, given that the market had a shortage of appropriately skilled and qualified persons and the regulator found it difficult to attract and retain such staff. The need to continue non-project work and industry commitments, including international commitments, added to this constraint. Second, was to ensure effective change management vis-à-vis existing staff—non-project staff were challenged in learning about the new regime. This was, in important part, due to the business-as-usual limitations on resources. Third, understanding the business models of insurers. Fourth, vast amounts of data were collected through the three QIS and the LPR and CPR exercises. It was a challenge managing this data and effectively analysing it so that the useful recommendations could be derived for the new legislation. Fifth, was to ensure consistency in application—a risk-based supervisory model requires more judgement with fewer rules and supervisory formulae, thereby allowing for tailored supervision. However, it also poses a challenge to achieve consistent supervisory actions for different insurers in the same position or even repeat situations for the same insurer. Consistency was made more difficult when applying the principle of proportionality as the same supervisory action might not be appropriate for different insurers. Sixth, was the lack of supervisory guidance notes, which are invaluable in ensuring learning from others and from the past in order to inform supervisory action. The lack of guidance notes was a challenge as each situation required thinking through and applying the regime from a first principles basis. Seventh, a risk-based regime relies more on judgement, and the capacity to apply it is built up over time with internal collaboration. This was a challenge for the regulator considering the resource constraints. Finally, the absence of a proper technical solution to help in supervision was a challenge as it put more strain on staff doing things than a SupTech solution would have.

Key Takeaways from the Project

Instrumental to the success of the project were a few factors like a clear and detailed project plan, the SAM structures, regular communication with all stakeholders, the parallel runs, and consultations. The SAM structures helped to establish and provide a single point of reference. This gave structure, allowed for a central point for all project and library documentation, and removed confusion that would have emanated from multiple versions or communications. The regulator performed the role of secretariat for all the SAM structures ensuring consistency ensuring consistency in meeting administration. This dedicated role also made the meetings more efficient by removing the non-technical burden from the experts.

The decision to require that stakeholders participate in subcommittees and task groups through the nomination of SAM coordinators ensured buy-in from the industry and created a co-ownership culture. The SAM coordinators were responsible for ensuring their companies had sufficient representation across committees and task groups. They were also the official conduit of an insurer for the dissemination of information about the project.

The regulator and the industry realised that a changing skill set were needed to ensure the success of the SAM project. The regulator had to allocate appropriately skilled staff to the SAM structures to provide the necessary guidance and input.

Regular communication was made to all stakeholders in the form of information letters, annual updates, regular newsletters on the status and progress of the project. This ensured that stakeholders were well-informed and engaged and that contradictions, misunderstandings and omissions were identified quicker and received attention in a timelier manner.

The learnings from the parallel runs were very valuable since they required both the regulator and the industry to improve readiness for the new framework. The runs also helped to up-skill staff and decision-makers at both the regulator and industry as more regular results and comparators assisted in understanding the new regime's output and requirements. A further benefit of this was that it was deemed unnecessary for transitional plans in moving to the new regime. The CPR was seen as a non-official transition period with a growing understanding by all the stakeholders of the SAM numbers and how to apply them in the business and in supervision. Lastly, the impact of the final development refinements of the regime could be assessed without the need for separate submissions.

The two parallel runs showed the amount of work it takes to transition to regular reporting and that adherence is often achieved gradually. The gradual improvement in the quality of reporting helped to highlight issues which could be immediately addressed. Regular reporting gave the regulator the opportunity to track industry trends and for insurers such reporting formed the basis of what the solvency numbers would be under the new regime. Refinements could easily be worked in and gave the industry and the regulator an opportunity to progressively observe the refinements' impacts that assisted in making final recommendations for drafting legislation.

For Pillar II requirements, the FSB required insurers to commence the ORSA process by submitting what was called a mock ORSA. This was to be a first attempt describing the process and results so that insurers could familiarise their boards, senior management and other staff about its requirements and benefits. The benefit extended to the FSB as well in that for the first time it received a document of this type.
The elaborate consultative approach the FSB adopted throughout the project was invaluable. It also gave the FSB an opportunity to explain its decisions and views and showing where and why it changed its positions due to industry's input.

The FSB also learnt of how things could have been done differently. The FSB could have done with more capacity to manage the data and analysis thereof. Broader involvement of different teams would have provided the exposure needed to the new regime—the development was too exclusive to the project team and did not benefit from insights of other teams. The transition from developmental status to operational status also

resulted in a loss of institutional knowledge and the reasoning for policy decisions that made subsequent discussions difficult.

Time and its management are vital. The workload was more than expected and, in hindsight, even by using conservative estimates, the original implementation dates were overly optimistic and had to be extended several times. This process also involved other parties external to the project whose work programs were out of the control of the FSB and had a significant impact on the timelines. These implementation date extensions strained project resources and commitments from both industry and the regulator.

Project expectation management became quite important to keep all the stakeholders engaged. The project secretariat and chairs of the various committees played a vital role in ensuring the ongoing success of the project. An approach that worked well, was to let things run their course and to allow matters to mature in their own time.

Conclusion and Advice

On buy in. It is vital to get industry buy-in. The project is too big and resources too scarce to try and do it alone. It is equally critical to not exclusively rely on consultants, although they usually have a big part to play. Indeed, industry buy-in is reflected in participation by non-consultants. Creating reporting and working structures like task groups, working groups, steering committees with sub-committees that are populated by the right persons is important as is technical work done in groups by persons other than those making more formal and strategic decisions informed by technical teams' work. It is important that the regulator set-up a dedicated project team with technical and project admin people. Finally, top management buy-in and participation is mission critical.

On how and where to start. One should start with something that exists, like an Insurance Capital Standard (ICS) or Solvency 2 or SAM, and then customize to local conditions, products, market features. Keeping things as simple as possible and only as complicated as necessary makes for a highly effective approach.

On templates. Reporting templates should be designed to be focused and value adding. They should not be overly burdensome and their use (i.e. types of analysis and reports it could feed) should match their design. Moreover, spending time on setting the context behind the data elements that will be collected and making sure a lot of time is spent on improving the data quality of those elements that will be collected is important. This ensures consistency by defining the data elements as far as necessary and design appropriate data validations on the data elements as part of the design.

On documents and documentation. This should include the reasoning and context behind the requirements and should also include exactly the processes, methodologies, and data (including details of source, types, etc) used for any calibration.

Finally, transitioning to an RBS regime is an iterative process that requires communication, consultation, testing, review, amending, and repetition.

Annex I. Kenya—Selected Details of RBS Implementation

What was Implemented?

Pillar 1

The RBS regulations were published in 2017 with an intended two-year transition period, for planned implementation in 2019. However, the effective date was changed to June 30, 2020 to allow the insurers more time to raise additional capital to meet the new solvency requirements because of the impact of COVID 19 pandemic.

RBS implemented in Kenya requires a total balance sheet approach that recognizes the interdependence between assets, liabilities, regulatory capital requirements and capital resources in the assessment of solvency of an insurer. The insurance law requires that insurers use a market consistent approach to valuation, where all assets are valued at the amount for which they could be exchanged between knowledgeable and willing parties in an arms' length transaction; and all liabilities are valued at the amount for which they could be transferred or settled between knowledgeable and willing parties in an arms' length transaction.

The Kenyan insurance law requires that financial statements be prepared in accordance with International Financial Reporting Standards (IFRS). The IRA issued a circular in 2019 on implementation of IFRS 9. All insurers were required to fully adopt, implement, and comply with IFRS 9 and all provisions under the Expected Credit Loss (ECL) model for all the outstanding premiums and other receivables as at the end of the year 2019. The Actuarial Society of Kenya has also issued a guidance note on IFRS 9. The IRA is currently working on the implementation process of IFRS 17 whereby they have been training the industry and their staff. IRA has also insured a circular on IFRS 17 that will ensure a harmonized approach in the implementation of the standard. The circular focuses on the level of aggregation, determination of discount rates and risk adjustment. On the level of aggregation, IRA requires insurers to create portfolios based on the classes and sub classes of insurance business as defined in the Insurance Act that insurer underwrites. The regulator allows the insurer to use either the bottom up or top-down approaches when determining the discount rates, however they are required to provide a justification for the choice and details of the inputs into the computation of the discount rate. IRA has recommended that insurers should adopt at least 75 percent confidence level for risk adjustment.

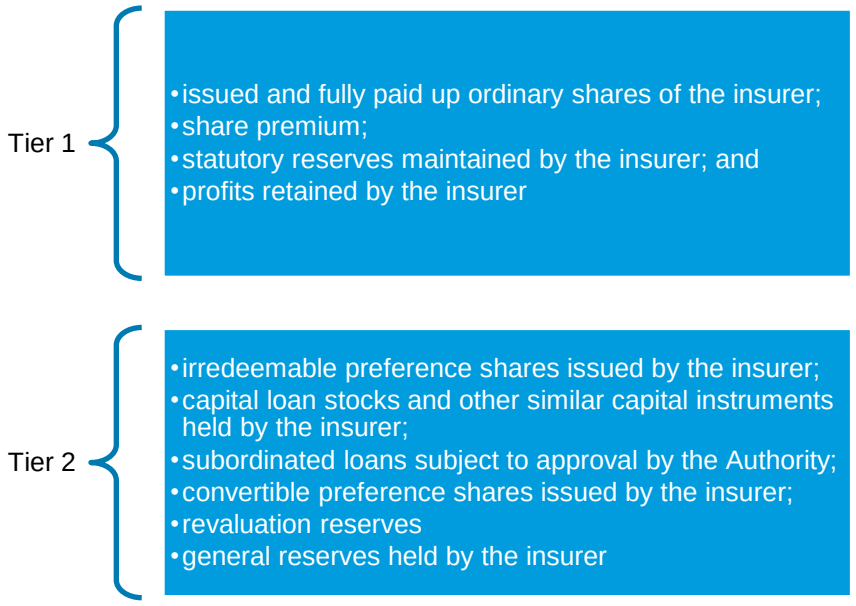
Capital requirements set in Kenya are based on the potential adverse changes in qualifying capital resources resulting from unexpected changes, events, or other manifestations of the specified risks**.** RBS provides a holistic approach to risk management allowing a proper recognition of risk and flexibility where different risk levels are aligned to business strategies. This has provided the insurers with incentives to adopt appropriate risk management infrastructure and prudent practices have been adopted.

Insurers are required to hold 200 percent of a prescribed capital requirement (PCR). 200 percent is the level of capital above which the regulator will not impose any financial sanctions on the insurer. The law, in Section 41(1) of the Insurance Act in Kenya, also requires insurers to always hold a minimum capital adequacy ratio (CAR) of at least 100 percent. This means that the regulator has to impose the financial sanctions in accordance with the law and clause 18(1) of the Capital Adequacy Guidelines. The law in Section 41(3)

stipulates that an insurer failing to comply with the requirements of this section shall be deemed to be unable to pay its debts within the meaning of section 123 (liquidation of an insurer). In Kenya an insurer that fails to comply with the requirements of subsection 41 (1), (2) or (3) is taken to be unable to pay its debts within the meaning of Insolvency Act.

The Kenyan model determines the capital resources and the quality of capital instruments necessary to meet the RBS requirements (Figure 1). The capital resources are qualified based on the loss absorbency, subordination, availability, permanence, and absence of both encumbrances and mandatory servicing costs. The capital resources that do not meet the qualification criteria can be excluded, deducted, or adjusted using a specified limit. The capital resources in Kenya are ranked in two tiers i.e., Tier 1 and Tier 2. Figure 9 sets out the balance sheet accounts and instruments that meet the criteria in the 2 tiers.

Figure 1. Qualifying Capital Resources in Kenya



RBS in Kenya deducts the following items from the capital resources during the computation of capital adequacy. The items include:

- goodwill and other intangible assets in the name of or held by the insurer.
- deferred tax assets of the insurer.
- assets pledged to support the credit activities obtained by an insurer or for other purposes.
- assets over their concentration limits.
- all credit facilities granted by an insurer and secured by the insurer's own shares.
- prepayments made by the insurer.
- the fixed assets of the insurer.
- receivables from other insurers.
- inventory; and
- other assets held or owned by the insurer as may be determined by the IRA.

RBS adopted in Kenya considers the key categories of risk for capital requirement purposes. The risks include insurance, market, credit and operational. Kenya uses a deterministic approach to the capital requirement. In the deterministic approach, the model applies both the factor-based approach and stress approach. Table 1 below shows the categories of risk and approach adopted based on discussion between the industry and the IRA. The factor-based approach is the method to calculate capital requirements based on the specified factor and a value of the balance sheet or income statement. Stress-based approach is the method to calculate the capital requirements based on the difference between the cash flows before and after stress scenario.

Kenya adopted readily available information such as loss ratios, combined ratio, asset performance data to compute the risk charges due to the challenges related to lack of data granularity, market liquidity and capacity. For instance, where the stress approach is used, the projections of the stressed cash flows should be conducted at the same level of granularity as the pre-stress cash flows to ensure consistency in the pre-stress and post-stress cash flows.

The factor-based approach used for premium risk and claims risk is a set percentage of the exposure measure. The factors are determined by computing the Tail Value at Risk (TVaR) at a confidence interval of 95 percent over one year time horizon of loss ratios using 10 years data.

Table 1. Components of Capital Requirement in RBS in Kenya

Categories of Risk	Key risk	Approach
Insurance Risk	Mortality risk/Longevity risk	Stress-based approach
	Morbidity/disability risk	Stress-based approach
	Expense risk	Stress-based approach
	Lapse risk	Stress-based approach
	Premium risk	Factor-based approach
	Claim reserve risk	Factor-based approach
Market Risk	Interest rate risk	Stress-based approach
	Equity risk	Factor-based approach
	Property risk	Factor-based approach
	Currency risk	Factor-based approach
	Concentration risk	Factor-based approach
Credit Risk		Factor-based approach
Operational Risk		Factor-based approach

Mortality and longevity risks are more appropriately captured by a stress approach, where the value of the assets and the liabilities after a specified stress reflect the impact of these risks on the net assets of the insurer. The factor-based approach is not appropriate for mortality and longevity risks because the risk of many products is not proportional to their amount on the balance sheet. Therefore, the IRA proposed a simple stress whereby the best estimate liability of mortality risk is increased and decreased by specified stress scenario depending on the insurance product under consideration. The mortality rate is increased for risk products and decreased for annuities in the model.

The stress-based approach used to calculate the risk charge for several of the insurance risks required the IRA to rely on the actuarial functions of insurers to conduct the calculation. This posed significant challenges at the initial phase as the projections of the stressed cash flows were not conducted at the same level of granularity among the products, as the result the projections of post-stress cash flows lacked consistency.

The lapse risk charge addresses the uncertainty in lapses beyond the central estimate assumed in the insurance liabilities arising from policyholder options to either partially or wholly, terminate, surrender, reduce, or increase insurance coverage. The lapse risk charge is calculated based on the increase in insurance liabilities after being subject to higher and lower lapses. The IRA requires insurers to shock the lapse rates up and down at a specific percentage.

Expense risk is the risk of adverse change in expenses due to unexpected changes in the level of management expenses, increases in expenses associated with paying claims and additional expenses due to higher-than-expected inflation compared with those assumed in insurance liabilities. The expense risk charge in the Kenyan model is calculated by applying an upward shock to the expense assumptions. The IRA requires insurers to apply the percentage shock on the expenses.

For Market risk, the IRA considers direct impact on the value of balance sheet items for equity, real estate and currency exposures. The interest rate risk charge is a prescribed stress approach using specified up and down interest rate stress scenarios with the most significant impact on the insurer's net assets[1] taken as the interest rate risk capital. For credit risk, the IRA considers direct impact on the value of balance sheet items for loans, reinsurance assets and receivables. Default or movement in credit standing of issuers of securities, counterparties, or other debtors to whom the insurer is exposed. The factor-based approach used for credit risk is a set percentage of the value of the balance sheet item. The factors are determined by computing the Tail Value at Risk (TVaR) at a confidence interval of 95 percent over one year time horizon of default rates using 10 years data. Operational risk is computed as a proportion of the Market, Insurance and Credit risk or the volume of premiums.

To incorporate the diversification effects among the major risks, the Kenyan model uses square root approach to aggregate risk charges. Capital requirements in Kenya incorporate diversification among major risk components with a simple formula. The risk-based capital of an insurer in Kenya is calculated as the square root of the sum of the squares of capital required for insurance risk, market risk and credit risk with an addition of capital required for operational risk. There is no diversification recognition between operational risk and other risks. The formula is illustrated below.

$$\sqrt{insurance\,risk^2 + market\,risk^2 + credit\,risk^2} + \text{Capital required for operational risk}$$

Pillar 2

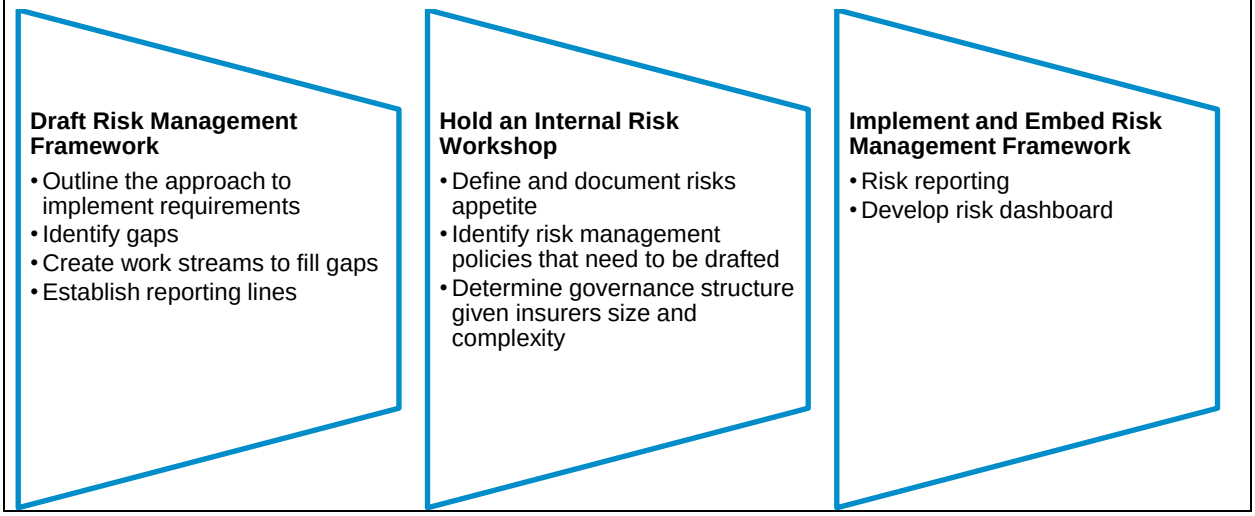
Kenya has been in the forefront on improving the governance and risk management requirements in the region. Every insurer is required to have authorized control functions for risk management, compliance, actuarial and internal audit. These functions are required to be independent and free from senior management's influence and should directly report to the board and its sub-committees. Most of the current corporate governance provisions in Kenya are based on a strong regulatory compliance component. The structure of the regulation allows for identification of the clear separation of the authority of the three main powers of the organization: ownership, management, and administration. Similarly, the description of the functions that constitute the three

[1] Net assets refer to assets less liabilities.

lines of defense of the company (internal audit, control functions (risk and compliance) and senior management) are separated within the structure of the regulation.

The IRA also requires insurers to have a risk management framework, including risk appetite statement, which must be approved by the board. The law requires the companies to have a functional and well-resourced risk management function that is effective and capable of assisting the insurer to identify, assess, monitor, mitigate and report on its key risks in a timely way; and promote and sustain a sound risk culture. Figure 2 shows the implementation strategy used by insurers in Kenya.

Figure 2. Process to Implement Effective Risk Management in Kenyan Insurers



One of the key requirements introduced in actuarial function guidelines was the Financial Condition Report (FCR), which is like a simplified ORSA under Solvency II. The FCR is produced annually and signed off by the appointed actuary. The signing by the actuary is a key difference from ORSA which is a management responsibility. The quality of FCR reports is still improving and is subject to detailed review by the IRA. The IRA required the FCR to be signed off by the appointed actuary for independence. Management teams and boards are starting to engage with the FCR; however, the exercise remains mostly for compliance. Most insurers do not currently have the underlying processes to develop a quality FCR, but this is likely to improve over time. Figure 3 summaries the specific requirements of FCR in Kenya.

The changes in the governance and risk management requirements have significantly improved the risk management and governance process across the industry**.** Insurer boards and senior management are now seen as more active in properly managing key risks and have greater risk awareness than before. The improved regulations have led to significant challenges for some insurers where the cost of doing business has increased significantly to establish additional control functions.

Figures 3. Requirements for Financial Condition Reports in Kenya

Data Requirements

- The Appointed Actuary must advise the insurer of the data, information and reports that are needed,and staff and relevant professionals with whom the Actuary will need to consult, in order to prepare the FCR.

Business Overview

- An FCR must include general background information in respect of the corporate structure and operations of the insurer.
- Information about the future plans of the insurer should be provided in the Business plan.

Recent Experience

- An FCR must identify and comment upon significant features or trends in the insurer's recent experience. Insurers are required to consider the trend over a period of at least three previous years. The assessment must consider premiums, claims, expenses, commissions, investment return, and profits/losses, including any abnormal features.

Liability Valuation

- An FCR must include an assessment of the adequacy of past estimates of insurance liabilities (including both outstanding claims and premiums liabilities) against the subsequent actual claims experience.

Asset and Liability Management

- An FCR must assess the insurer's approach to asset and liability management. Issues arising from the use of that approach, having regard to the insurer's liability profile and liquidity needs must be subject to comment by the appointed actuary.

Capital Management & Capital Adequacy

- An FCR must outline the insurer's strategy for setting and monitoring capital resources and comment on the insurer's capacity to continue to meet the Minimum Capital Requirement and its capital targets over the next three years. This assessment should include quantitative stress and scenario testing.

Premium Adequacy

- An FCR must outline the insurer's approach to premium adequacy, including underwriting practices, expense assumptions and allocations, any targets for profit margins and capital growth.

Reinsurance Arrangements

- An FCR must make reference to the insurer's Reinsurance Management Strategy (REMS) and Comment on any issues arising from the use of the specified reinsurance strategy and arrangements, having regard to the insurer's liability profile.

Risk Management

- FCR should outline the adequacy of the risk management framework of the insurer and any issues arising from the use of the RMS, including the systems and processes the insurer has in place to implement its strategy and manage risk.

Pillar 3

The Pillar 3 reporting requirements distinguished between qualitative reporting and quantitative reporting. The qualitative reporting includes the Financial Condition Report (FCR). The FCR is a confidential report to the IRA. The quantitative reporting includes the technical provisions, capital adequacy reports and statutory returns on

financial data. Statutory returns provide a detailed breakdown of the insurer's assets, liabilities, income, and expenses. The disclosed report such as the technical provision report provide the valuation results and assumptions used. The regulator requires qualitative and quantitative reports to be submitted on an annual and quarterly basis The regulator also requires the companies to publish their statement of financial position and income statement annually in at least two national newspapers of wide circulation. The companies are also required to disclose their loss ratio, combined ratio, expense ratio and capital adequacy ratio annually in the national newspapers.

Kenya has implemented a robust system called the Electronic Regulatory System (ERS) that is used to collect both qualitative and quantitative data. ERS is a web-based application that allows companies to submit all regulatory requirements and requests. The system enables financial data collection, financial data analysis, regulatory requests and approval, licensing, and onsite inspections.

The quantitative reporting templates (QRTs), the FCR and the technical provision or actuarial reports are reported privately to the regulator. The regulator also produces industry statistics on a quarterly and annual basis. The statistics are posted on the regulator website. The qualitative Pillar 3 reporting and disclosure requirements that provide an additional commentary over and above the numbers are not published publicly in Kenya.

Risk-Based Solvency Reporting Template for Non-Life Insurers

Capital Form 1

Total Capital Available

Company:

Reporting Period:

All amounts in KES	Line	General Business [B]
Tier-1 Capital		
Fully paid-up ordinary shares	10	
Share Premiums	11	
Statutory Reserves	12	
Retained profits/(accumulated losses)	13	
Total Amount	15	-
Tier-2 Capital		
Irredeemable preference shares	16	
Capital loan stocks or similar instruments	17	
Subordinated loans	18	
Convertible preference shares	19	
Revaluation reserves	20	
Available-for-sale reserves	21	
General reserves	22	
Total Amount	23	-
Deductions		
Goodwill & other intangible assets	24	
Deferred tax income/(expenses) and deferred tax assets	25	
Assets pledged to support credit facilities obtained by an insure	26	
Credit facilities granted against an insurer's own shares	28	
Other Fixed Assets [1]	29	
Assets with over concentration limits	30	
Total Amount	31	-
Total Capital Available	**32**	-

[1] Includes Computer equipments, Office Equipments , Motor Vehicles and Furniture and Fittings.

Capital Form 2

Claims Reserves - Insurance Risk Charge

Company:

Reporting Period:

Class of Business	Line	Risk Charge	Best Estimate of Claim Reserve	Risk Margin	Claim Reserve	Capital Charge
		RC	[A]	[B]	[C]=A+B	[D]=C*RC
Aviation	10	**29.0%**			-	-
Engineering	11	**4.0%**			-	-
Fire Domestic	12	**2.0%**			-	-
Fire Industrial	13	**6.0%**			-	-
Liability	14	**9.0%**			-	-
Marine	15	**8.0%**			-	-
Motor Private	16					
Property damage	17	**5.0%**			-	-
Liability	18	**12.0%**			-	-
Motor Commercial	19					
Property damage	20	**3.0%**			-	-
Liability	21	**13.0%**			-	-
Motor Commercial-PSV	22					
Property damage	23	**3.0%**			-	-
Liability	24	**14.0%**			-	-
Personal Accident	25	**9.0%**			-	-
Theft	26	**4.0%**			-	-
Workmens' Compensation	27	**19.0%**			-	-
Medical	28	**13.0%**			-	-
Miscellaneous	29	**6.0%**			-	-
Total	30		-	-	-	-

Catastrophe Risk Charge	31	**2.0%**		-

Capital Form 3

Premium Reserves - Insurance Risk Charge

Company:

Reporting Period:

Class of Business	Line	Risk Charge	Best Estimate of UPR	Best Estimate of URR	Risk Margin	Premium Reserve	Capital Charge
		RC	[A]	[B]	[C]	[D]=A+B+C	[E]=D*RC
Aviation	10	39.0%				-	-
Engineering	11	8.0%				-	-
Fire Domestic	12	3.0%				-	-
Fire Industrial	13	9.0%				-	-
Liability	14	9.0%				-	-
Marine	15	7.0%				-	-
Motor Private	16						
Property damage	17	5.0%				-	-
Liability	18	12.0%				-	-
Motor Commercial	19						
Property damage	20	3.0%				-	-
Liability	21	13.0%				-	-
Motor Commercial-PSV	22						
Property damage	23	3.0%				-	-
Liability	24	14.0%				-	-
Personal Accident	25	6.0%				-	-
Theft	26	4.0%				-	-
Workmens' Compensation	27	18.0%				-	-
Medical	28	15.0%				-	-
Miscellaneous	29	8.0%				-	-
Total	30		-	-	-	-	-

UPR - Unearned Premium Reserve
URR - Unexpired Risk Reserve

Currency Risk

Types of currency		Net On Balance Sheet Position 1/	Net Forward Position 2/	Net Long Position	Net Short Position
Total Position				-	-
				Exposure	-
				Currency risk ch	8.0%
				Capital Charge	-

Note:

1 - equivalent value of all foreign currency assets less all foreign currency liabilities in a particular foreign currency.

2 - equivalent value of all amounts to be received less the value of all amounts to be paid under unsettled spot transactions, forward foreign exchange transactions, including currency futures, the principal on currency swaps position and interest rate transactions such as futures, swaps etc. denominated in a foreign currency.

Market Risk Charge[3]	-

Notes

[3] Square root of the sum of squares of the capital required for Equity Risk,Property Risks,Interest Rate Risk plus Currency Risk

Capital Form 5
Credit Risk Charge
Company:
Reporting Period:

Insurance Regulatory Authority
IRA

All amounts in KES	Line	Total exposure [A]	Risk charge [B]	Capital charge [C]
Securities				
Kenyan Government Bonds	10		0.0%	-
Kenyan Government Treasury Bills	11		0.0%	-
Foreign Government Bonds	12		5.0%	-
Local Authorities Bonds	13		12.0%	-
Corporations and other organisations bonds	14		12.0%	-
Term Deposits and Cash				
Term Deposits	10		0.0%	-
Cash and Cash Balances	11		0.0%	-
Debt Obligations				
Policy loans	15		0.0%	-
Secured Loans- Corporations and other organisations	16		10.0%	-
Secured Loans-Staff and Individuals	17		30.0%	-
Investment in Subsidiaries,Associates and Joint Ventures	18		40.0%	-
Mortgages	19		30.0%	-
Unsecured Loans	20		100.0%	-
Secured Loans to related parties	21		100.0%	-
Credit exposures to (re)insurers with the following rating categories:				
Category 1 - Reinsurers with rated above A-	22		1.5%	-
Category 2 - Reinsurers with rated above BBB	23		10.0%	-
Category 3 - Reinsurers with rated below BBB	24		35.0%	-
Category 4 - Reinsurers Unrated	25		100.0%	-
Category 5 - Reinsurers licenced under the Insurance Act	26		2.5%	-
Other Assets				
Premium Receivables - amount outstanding for	28			
Less than 30 days	29		30.0%	-
Over 30 days	30		100.0%	-
Credit Risk Charge				-

Capital Form 6
Operational Risk Charge
Company:
Reporting Period:

Insurance Regulatory Authority
IRA

Risk	Line	General Business [B]
Credit risk capital charges	10	-
Market risk capital charges	11	-
Insurance risk capital charges	12	-
Basic Operational Risk Charge[1]	13	-
Basic Operational Risk Charge[2]	14	-
Prior Year Gross Earned Premium	15	-
Prior Year Net Earned Premium	16	-
Operational Risk Charge	19	-

Notes
[1] 30% of the square root of the sum of squares of the capital required for Insurance, Market and Credit risk

Capital Form 7
Capital Required
Company:
Reporting Period:

Risk	Line	General Business [B]
Credit risk capital charges	10	-
Market risk capital charges	11	-
Insurance risk capital charges	12	-
Operational risk capital charges	13	-
Risk Based Capital[1]	19	-

Notes
[1] Square root of the sum of squares of the capital required for Insurance, Market and Credit risk plus the Operational Risk

Capital Form 8
Capital Adequacy Ratio
Company:
Reporting Period:

Capital	Line	General Business [B]
Tier-1 Capital	10	-
Tier-2 Capital	11	-
Deductions	12	-
Total Capital Available (TCA)	13	-
Absolute Amount Minimum[1]	14	-
Volume of Business Minimum[2]	15	-
Risk Based Capital Minimum	16	-
Minimum Required Capital	17	-
Capital Adequacy Ratio	18	

Annex II. Mexico—Selected Details of RBS Implementation

What was Implemented?

Pillar 1

The quantitative requirements of the LISF and CUSF cover valuation, the calculation of the SCR and determination of admissible own funds (AOF) according to quality. The determination of technical provisions is required to be calculated by companies as the sum of BEL and RM. The calculation of the SCR is based on a VAR measure of change in own funds over a one-year time horizon with a confidence of 99.5 percent. SCR must be covered by AOF divided into three levels according to quality. Each company's must have its own investment policy, approved by the board and consistent with the nature, duration, and currency of its obligations and in line with its risk appetite.

As previously indicated, the SCRCS is an information technology system developed by the CNSF that companies use to calculate the SCR based on the standard formula. The SCRCS is an autonomous system that does not require licensing for companies. This system is shared only with other government authorities, with insurers and with their representative associations. This is distributed through the official distribution systems of the CNSF, which operate on the Internet.

The SCRCS contains in its programming code the risk methodologies that are defined in the regulation. The code is available to the entities to which the SCRCS is shared, so that they can carry out the analyzes they require or use it as part of their risk management processes or as the basis of an internal model.
The parameters used by the SCRCS to calculate the SCR are generated and updated by the CNSF. The risk parameters remain constant for long periods of time to provide stability and temporal consistency to the risk measurement of the SCR. During the first three years of implementation, these had no changes so that the companies could finish adapting to the new SCR. In 2019, the CNSF made a comprehensive review of the risk parameters that resulted in adjustments to risk parameters. This adjustment was made in coordination with the industry. The level parameters are adjusted monthly, the frequency indicated by the LISF for the calculation of the SCR and are shared by the CNSF with stakeholders.

To calculate the SCR, companies must enter into the system the details of their investments, policies, provisions and reinsurance contracts, among others, through which the SCRCS generates 100,000 simulations of the projected balance sheet in a year. The SCR is calculated as the VAR at 99.5 percent of the difference between the own funds projected for one year minus the own funds observed on the reporting date.

The underwriting and claims databases and the historical data of the financial market made it possible to calibrate the SCR's parameters for the most important components of the companies' balance sheets. In particular:

- The underwriting and claims databases collected by the CNSF since 2007, allowed for an adequate calibration of the parameters of the standard formula for modeling underwriting risks.
- For the calibration of the market risk parameters, reliable data was available for government interest rates, exchange rates and financial indices with more than 10 years of daily information.

- For the calibration of spread risk, there was no historical information on interest rate curves by credit rating for the Mexican market. So, these parameters were calculated using the EIOPA Solvency II parameters.
- For credit risks, the transition matrices developed by the credit agencies were used.
- For operational risk, there was no information, so the EIOPA Solvency II formula and parameters were used.

The valuation basis for financial statements and solvency are the same in that the investments are valued at market and the technical reserves as BEL plus RM. This methodology generates significant volatility in the financial performance of insurers, particularly for companies with a high percentage of technical provisions from long-term life products. To prevent this variation from inappropriately affecting the company's income statement, a valuation like Fair Value through Other Comprehensive Income as set out in IFRS 9 and IFRS 17 is made. This produced the following.

- Maintain a single balance sheet and prevent companies from being affected due to temporary variations in interest rates.
- An operational complexity by doing a double calculation of the technical provisions of long-term products: one with respect to the interest rates observed at the time of the valuation and another with respect to the interest rates observed at the time of the issuance of the policy.
- Greater attention from boards and senior management to the balance sheet. Traditionally, their attention was focused on the income statement.

To allow companies to update and adjust their technical provisions methodologies, a 24-month period was established to gradually phase in the impact on the valuation of technical provisions**.** This temporary agreement was only valid if the impact represented a decrease in the value of the technical provisions.[2] There were two main rules:

- The recognition had to be done in a uniform way, that is, one twenty-fourth each month.
- Companies could decide at any point in that period that they wanted to do full impact recognition.

The adoption of the regulation brought a benefit to the industry that represented an increase in its capital of 25.4 billion pesos between December 2015 and March 2016 (Table 2). This impact was mainly due to the calculation of technical provisions with a market consistent valuation and without excessive prudential margins, as well as the market valuation of the investments. The SCR went from 55.5 billion pesos in December 2015 to 62.4 billion pesos in March 2016. Therefore, the regulation opened an important space in the capital of companies to allow a better development of the sector and improve the conditions to promote a higher penetration and improve product offerings for policyholders.

[2] Additionally, a period of five years was established for those companies that sold private annuity products, other than those of social security, to fully reflect the new requirements in technical provisions in case the impact represented an increase. These types of products are very rare in the market and only one company was affected by including this exception. Pension companies do not fall into this exception since their products come from social security. For them, the new regulation brought minimal changes in quantitative terms.

Table 2. Quantitative Impact of LISF Implementation *(Current billion pesos)*			
	December 2015	**March 2016**	**Difference**
Asset	1188.8	1245.8	56.9
Liabilities	1029.5	1061.0	31.5
Capital	159.3	184.4	25.4
SCR	55.5	62.4	6.9
Source: CNSF.			

In March 2016, the impact on technical provisions due to the application of the valuation methodologies of the new regulation was a gross decrease of 14.8 billion pesos.[3] The net impact, when also considering the impact on reinsurance recoverable, represented a decrease of 10 billion pesos compared to the previous regulation. A part of this decrease was compensated within the regulation with the increase of 6.9 billion pesos in the SCR.

This situation was expected for the new regulation, where the technical provisions went from a sufficiency valuation with prudential margins to a valuation of fulfillment of obligations under expected conditions (BEL plus RM). The SCR was transformed into a requirement whose objective is to cover potential unexpected losses within the balance. In other words, the objective of each of these components is transformed and, therefore, part of those prudential margins, originally considered within the technical reserves, are transferred to the SCR.

Part of the reason that the decrease on technical provisions was not greater was due to the high percentage of long-term provisions and the fact that the level of market rates were low similar to those that were used in the previous regulation.[4] For example, in March 2016[5] the nominal rate was 3.8 percent for 28-day term and 6 percent for 10-year term against the regulatory valuation rate[6] of 5 percent.

The regulatory efficiency has not compromised the solvency and stability of the sector. The industry on average has maintained solid solvency margins, closing 2021 with a solvency margin of 300 percent. This is a good result given the volatility observed in the Mexican financial market since 2018 and the increase in claims derived from the COVID pandemic.

Pillar 2

The corporate governance and risk management requirements of the LISF and CUSF have introduced significant strengthening of corporate governance and risk management requirements. The changes included a clear definition of the obligations and constitution of the board, in charge of defining the corporate governance system. The changes introduced requirements for specific functions and objectives of board committees. The changes also required the establishment of the functions of risk management, internal control, internal audit and actuarial. There are requirements for outsourcing that require compliance with companies' obligations

[3] This amount corresponds to what the companies reported in March 2016 as the amount to be gradually recognized in the following 24 months derived from the impact of the valuation methodologies for technical reserves and recoverable reinsurance of the new regulation.

[4] The prudential valuation rates of the previous regulation were low compared to those observed in the market on the date they were established. For example, in December 2004 the nominal rate was 8.5 percent for a 28-day term and 9.7 percent for 10-year term. However, this was no longer the case around the years in which the LISF was implemented.

[5] Source: BANXICO.

[6] In the previous regulation, long-term provisions were calculated using a fixed interest rate for all maturities. For further details, see Table 3 of Annexure 4.

when contracting third parties. Perhaps most significantly there is a requirement to establish an Enterprise Risk Management (ERM) system and implementation of the Own Risk and Solvency Assessment (ORSA).

The secondary regulation of corporate governance, contained in the CUSF, is made up of an extensive series of obligations for each of its components that allows companies to have clear guidance on the regulatory minimum necessary. This guide allows companies and the supervisor to have clarity about what is required by regulation. It is important that both go beyond compliance with each of the obligations, seeking that they meet their objectives in such a way that they generate the expected benefit for which they were designed.

Pillar 3

The disclosure and transparency of information requirements of the LISF and CUSF have improved disclosures about solvency. Advances have occurred through the requirement to disclose a report on solvency and financial condition (RSFC) with qualitative and quantitative information about the business and disclosure of the insurer's credit rating given by a rating agency. Former requirements regarding disclosure of financial statements and notes to the financial statements remained largely unchanged.

Before and After Implementation

Pillar 1

This sub-section of the annex includes details regarding general characteristics related to Pillar I that were observed in the regulation before and after the implementation process (Tables 3 and 4).

Table 3. Quantitative Requirements Prior to LISF

Concept	Description
Technical provisions.	For all LOB, except for catastrophe LOB. • Gross valuation of provisions. Participation in the risk of proportional reinsurance contracts is valued separately and recorded in assets. Its valuation is consistent with the valuation of the liability. • Separation into homogeneous risks, considering at least division by LOB. • Methodology registered by the companies developed under actuarial practices standards. • Valuation certified by a certified actuary.
Unearned premium provisions.	For all LOB, except for catastrophe LOB. • Calculated based on a sufficiency factor, determined from the expected value of future obligations. • Expected future value based on claims history. • The valuation must be at least the amount of the sufficient provision. • Aggregation of unpaid expenses to the non-occurred claims provision.
Unearned premium reserves for long-term contracts.	In addition to what is indicated for unearned premium provisions: • Sufficiency value calculated as present value of future flows. • Use of decrement tables with security surcharges.

	• Interest rate of 5 percent for local, 3.5 percent for indexed to inflation and 4 percent for foreign denominated contracts7. • In case of having surrender values, the provisions should be higher than these.
Claims reserves.	Divided in Reported but not settled claims provisions (RBNS) and Incurred but not reported claims provisions (IBNR).
IBNR.	Calculated based on the development of claims by date of occurrence and payment date (e.g., triangular methods).
Catastrophe provisions.	For all catastrophe LOB: [8] • Constituted cumulatively with a percentage of the earned premium retained. • Maximum value given by the PML of the LOB. This PML is used to calculate the SCR. • Used for the payment of catastrophe claims. • These provisions form part of the liabilities and are deducted from the capital charge for catastrophe LOB. For catastrophe LOB the unearned premium provision is calculated as the risk premium calculated using the same methodology with which the PML is determined.
Special reserves for pension insurance.	For social security pension insurance, in addition to the unearned premium and claims provisions, special technical provisions are set up for the purpose of covering losses arising from deviations in mortality or investment returns.
SCR.	The SCR is calculated as the sum of the capital charges per LOB plus the capital charge for investments and for the mismatch between assets and liabilities for long-term obligations. The specific requirements are: • For capital charges per LOB, an additional factor is considered in each case based on the risk covered by reinsurance, which considers the concentration and quality based on credit ratings of reinsurance counterparties. • Except for capital charges for catastrophe risks, a risk tolerance of 97.5 percent was sought in each case. The risk factors used in each case were calculated by the CNSF. • Except for capital charges for catastrophe risks, the capital charges for each LOB are calculated considering the retention risk (net of reinsurance), where the retention factor may not be less than the market average.
Capital charge for LOB.	For all LOB, except for catastrophe LOB the capital charge calculation was based on: • For short-term insurance is calculated as the maximum between a premium-based requirement and a claim-based requirement. • For long-term insurance is calculated as a factor applied to the value at risk (total sums insured less unearned premium provisions).
Capital charge for catastrophe LOB.	For all catastrophe LOB the calculation of the capital charge was based on: • Calculated as the PML of the LOB.

[7] When these rates were established, they were low compared to the market, so they represented an additional margin of prudence. By 2015, this was no longer the case, for example, the one-year government rate at the end of the year was 3.68 percent.

[8] In Mexico, insurance for earthquake, hydrometeorological risks, agriculture, housing credit and financial guarantee are considered as catastrophic LOB.

	• For earthquake and hydrometeorological risks, the PML are calculated based on a return period of 1500 years. • Based on models and systems developed by experts in the field.
ALM capital charge.	This capital charge was for long-term insurance and the calculation was based on: • Separate calculation by currency (local, foreign and inflation indexed). • Projection of total amounts of assets and liabilities based on interest rates. Technical rates were considered in the valuation of provisions for liabilities and the rates observed in the securities for assets. • Calculated as the present value of projections in which the assets were insufficient to cover the liabilities. • Projection up to a maximum term for which there were available government bonds (typically 30 years).
Capital charge for investments.	This capital charge was calculated based on risk factors by type of asset and credit quality, applied to each of the investments.
Investments.	Valuation sourced from information external to companies: • Fixed-income instruments valued at market or held to maturity. • Variable income instruments valued at market. • Valuation of real estate is made by a property appraiser.
Investments for technical provisions.	The coverage of technical provisions calculated over their net value (technical provisions minus reinsurance recoverable). • The coverage must be given separately for each currency (local, foreign, and inflation-indexed). • There are limits by type of instrument and by counterparty, except for government investments that can cover all the technical provisions. • For each type of provision, a minimum limit is established which must be covered by liquid instruments (short-term investments, highly traded shares or investments that operate with a market maker).
Investments for SCR.	• In addition to the assets that can cover technical provisions, lower quality types of assets are allowed, such as equipment, unsecured loans or establishment expenses. • Similar to the case of technical provisions, there are limits by type of instrument and by counterparty, but these are more flexible.
Sources: LGISMS and CUS.	

Table 4. Quantitative Requirements of LISF and CUSF

Concept	Description
Technical provisions.	For all technical provisions of all LOBs, except for catastrophe LOB and pensions insurers. • Technical provisions calculated as BEL plus RM. • BEL calculated as the present value of expected future cash flows. • RM calculated as the cost of capital relative to the SCR necessary to cover the insurance obligations throughout their term. The cost of capital is set at 10 percent. • Separation into homogeneous risks, considering at least division by LOB. • Methodology by the companies developed under international actuarial practices standards. • Valuation certified by a certified actuary.

Catastrophe provisions.	No material changes with respect to the previous regulation.
SCR.	Calculation with general formula or with partial or total internal models under authorization of the CNSF. For the calculation with the general formula: • Calculated monthly using the SCRCS. • Risk parameters with discretionary revisions. To date, only one update of these parameters has been given. • Inputs of the companies that represent the detail of the underwriting, the reinsurance strategies and the investments.
SCR for traditional insurers.	Calculated as the sum of Capital requirement for technical and financial risk of insurance (CRTFRI), Capital requirement for risk based on PML (CRPML), Capital requirement for other counterparty risks (CROCR) and Capital requirement for operational risks (CROR). Between these requirements, no diversification is considered.
CRTFRI	Calculated as the VAR with a confidence of 99.5 percent on the change in own funds over a one-year time horizon. • Calculated considering the total balance sheet of the company. Mainly on technical provisions, reinsurance recoverable and investments. The risk models are applied to the BEL. This assumption considers that the projected obligations require a risk margin similar to that at the time of valuation. • Consideration of underwriting, market, mismatch between assets and liabilities, credit, counterparty and concentration risks. • Modeling of the interdependence between risks and recognition of mitigation measures (mainly through reinsurance contracts and derivatives). • Methodology based on the simulation of 100,000 scenarios, simultaneously identifying the impact on the company's balance sheet when risks occur.
CRPML.	No material changes with respect to the previous regulation. The use of internal models for this requirement is not allowed.
CROCR.	Used for credit products traditionally issued by banks. Based on banking regulation, issued by the CNBV, to avoid regulatory arbitrage.
CROR.	Capital requirement for operational risk. • Based on the EIOPA Solvency II formula, using the same components and parameters. • Calculation based on the volume of operations (premiums and technical provisions) and the growth observed in the last year.
Pensions companies.	No material changes with respect to the previous regulation for technical provisions. Securities can be valued as held to maturity. For the SCR, the methodology of the previous regulation continues to be used, adding the CROR. The use of internal models for SCR for pensions insurance is not allowed.
AOF	Rules for determining AOF based on quality and suitability, divided into three levels. • Level 1 must represent at least 50 percent of the SCR. • Level 2 must represent at most 50 percent of the SCR. • Level 3 must represent at most 15 percent of the SCR.

Investments.	Based on the investment policy of the company
Investments valuation.	Valuation sourced from information external to companies: • Fixed-income instruments valued at market. The pension companies are the only ones that can continue valuing as held to maturity. • Variable income instruments valued at market. • Valuation of real estate is made by a property appraiser.
Investments for technical provisions.	The coverage of technical provisions is calculated over the net value (technical reserves minus reinsurance recoverable). • There are limits by type of instrument and by counterparty, except for government investments that can cover all the technical provisions. These limits were relaxed with respect to the previous regulation. • For each type of provision, a minimum limit is established which must be covered by liquid instruments (short-term investments, highly traded shares or investments that operate with a market maker). These limits did not change with respect to the previous regulation.
Sources: LISF and CUSF.	

Pillar 2

Table 5 presents the general characteristics related to Pillar II that were observed before and after the implementation process.

Table 5. Corporate Governance and Risk Management Requirements after and before LISF

Concept	Prior to LISF	LISF
Board	Responsible for the management of the company. Their main obligations are: • Definition and approval of policies, regulations, strategic objectives and evaluation mechanisms in terms of underwriting, investments, risk management, marketing. • Constitution of committees to assist in the work of the Board: investment, reinsurance and risk committees.	Responsible for the corporate governance system. Minor changes with respect to the previous regulation.
Board. Constitution	Requirements consistent with those of the financial system. • Members between 5 and 15. • At least, 25 percent must be independent. Criteria are established to determine independence. • Fit & Proper criteria for appointment.	No material changes with respect to the previous regulation.

Fit & Proper	Criteria on technical knowledge and propriety. .	No material changes with respect to the previous regulation.
Corporate governance system	Not explicitly stated.	• Responsibility of the board. • The board must ensure sound and prudent management. • The corporate governance system must be designed according to the nature and complexity of the company. • Transparent and well-defined structure. • Functions of risk management, internal control, internal audit and actuarial • Policies and procedures for contracting services with third parties.
Risk management	Set of objectives, policies, procedures and actions that are implemented to manage risk. • Definition of limits on risk exposure. • Clear definition of roles and responsibilities for risk management. • Identify, measure, monitor, limit, control, report and disclose risks. • Focused on credit, legal, liquidity, market and operational risks. • Reviewed, at least annually, by an independent expert.	ERM system that considers the following: • Policies, strategies, and processes that allow risk management (identify, monitor, measure, control, mitigate and report). • Identification, categorization and risk limits (underwriting, market, mismatch, liquidity, credit, concentration and operational). • Preparation of ORSA.
Internal control	In charge of the regulatory compliance, responsible for monitoring compliance with external and internal regulations. Precedent of internal control and compliance functions.	Consists of operational, administrative, and accounting procedures, an internal control framework, adequate information mechanisms and a permanent verification function.
Internal audit	As part of the functions of the regulatory compliance officer.	Specific, objective, and independent area of the operational functions, in charge of reviewing: • Appropriate application of policies and rules of the board. • Regulatory compliance. • Assessing if internal control is adequate.
Actuarial	Not explicitly considered.	In charge of the design and technical feasibility of products as well as the

		calculation and valuation of technical provisions. • Support in risk modeling and calculation of the SCR. • Operate under standards of actuarial practice.
Contracting services with third parties	Not explicitly considered.	Policies and procedures to guarantee compliance with their obligations when contracting third parties. • The services that can be contracted with third parties are related to: underwriting, customer service, risk management, asset management, actuarial, information systems and technology. • Those related to risk, assets and actuarial management can only be complementary or supportive. • Services cannot be contracted with third parties for internal control and internal audit.
Committees	Objectives, obligations, and rules for the constitution of committees that strengthen compliance with the regulation in their respective areas: risk, investments, and reinsurance.	Objectives, obligations, and rules for the constitution of committees that strengthen compliance with the corporate governance system in their respective areas: audit, investments, reinsurance, underwriting and communication and control.
ORSA	Not considered.	Prepared at least annually, reviewed and approved by the board. Must contain: • Compliance level of the operational areas of the ERM system. • Analysis of overall solvency needs considering risk profile and tolerance limits. Based on the dynamic solvency test. • Compliance with requirements regarding investments, technical provisions, reinsurance, and SCR. • Degree to which the risk profile does not correspond to the assumptions used to calculate the SCR. • Proposal for measures to address deficiencies in the ERM system.

Dynamic solvency test	On an annual basis, the companies carried out the dynamic solvency test to assess their solvency based on various prospective stress scenarios. • Identification of risks that affect solvency and establishment of mitigation measures and corrective actions. • Projection of financial statements and solvency margins in a horizon of three to five years. • Statutory and own risk scenarios.	No material changes with respect to the previous regulation.
External auditor	The financial statements, technical provisions and dynamic solvency test must be audited and certified by an external auditor. • The auditor must be certified by the college of the profession. • Establishment of conditions to guarantee independence and rotation, at least, every 5 years	No material changes with respect to the previous regulation.
Sources: LGISMS, CUS, LISF and CUSF.		

Pillar 3

Table 6 presents the general characteristics related to Pillar III that were observed before and after the implementation process.

Table 6. Disclosure and Transparency Requirements after and before LISF

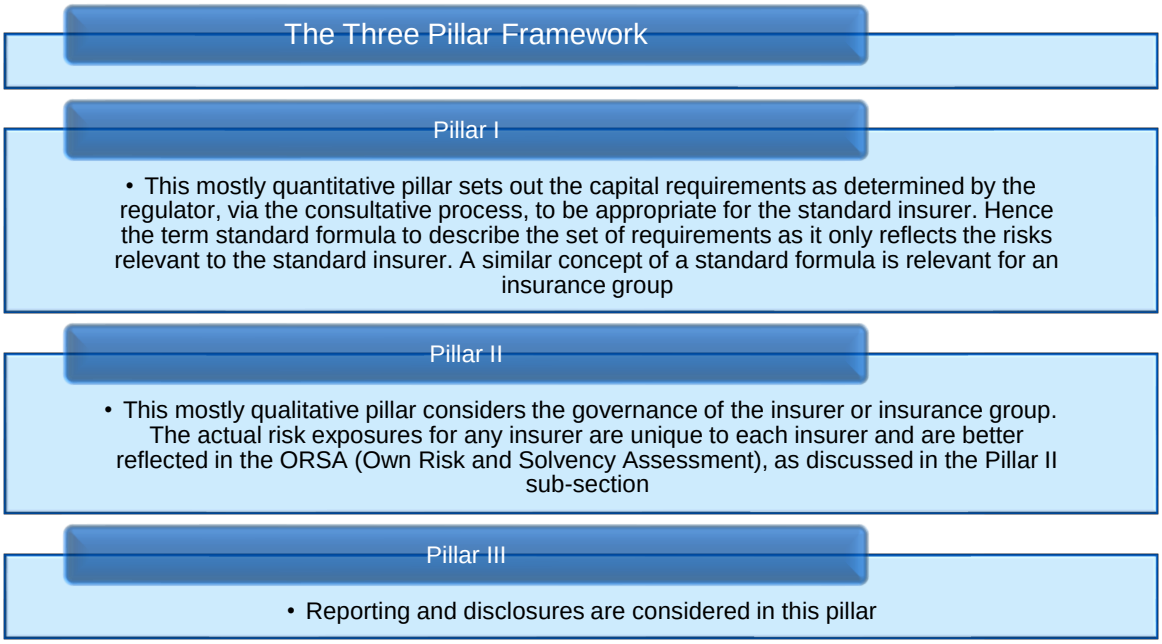
Concept	Prior to LISF	LISF
Financial statements.	Companies must publish their audited financial statements in a national newspaper and in the Official Gazette of the Federation. This obligation is adopted in accordance with international financial reporting standards.	No material changes with respect to the previous regulation.
Disclosure.	As part of the disclosure of the financial statements, the notes to the financial statements must be included. Along with these, detailed information must be disclosed regarding: • Administration, corporate governance policies and risk management. • Insurance and reinsurance strategies. • Asset Management.	Through the RSFC, which is an annual report that sets out information related to • Qualitative issues including the business conditions and performance; corporate governance; risk profile; solvency assessment; and capital management. • Quantitative reporting including technical provisions; investments; SCR and AOF; claims; reinsurance; and performance.

	• Performance, solvency margin and coverage of regulatory requirements.	
Credit rating.	Not considered.	Credit rating granted by a rating agency authorized by the CNBV.
External auditor.	The report prepared by the external auditor regarding the financial statements must be disclosed.	No material changes with respect to the previous regulation.
Sources: LGISMS, CUS, LISF and CUSF.		

Annex III. South Africa—Selected Details of RBS Implementation

What was Implemented?

The FSB decided to adopt the three-pillar framework used in many parts of the world for financial institution regulation. This framework is well-known, which assisted in its easier adoption, and is robust as it encompasses everything that a framework should have. Its familiarity also assisted in the training of staff and using known resources in the development of the framework for South African industry characteristics.
The three pillars[9] can be described as follows with specific interpretation as considered useful by the FSB:

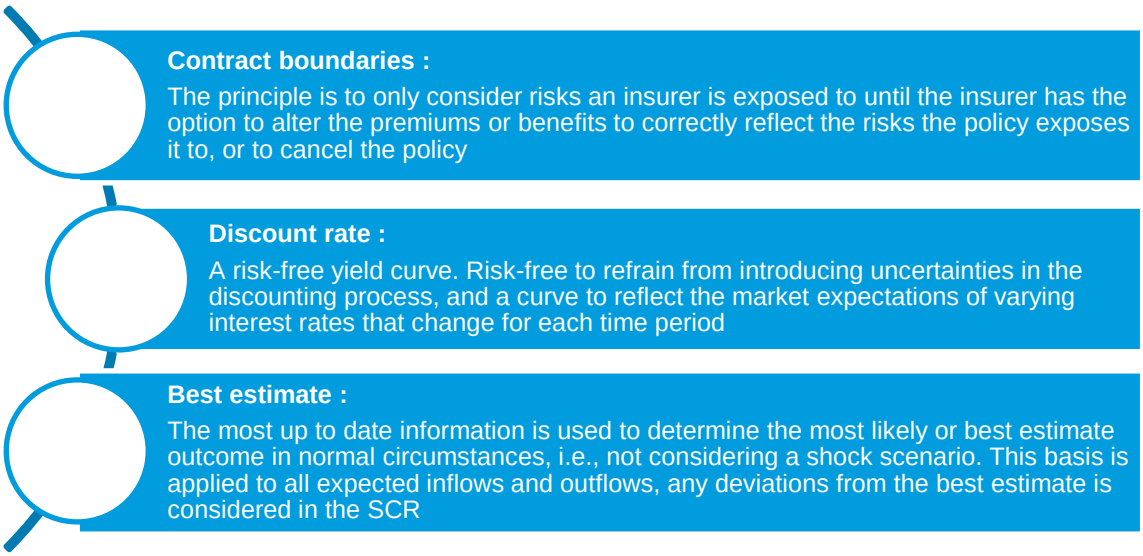


Pillar 1

The SAM regime uses an economic balance sheet approach and starts with a valuation of assets and liabilities using the International Financial Reporting Standard's (IFRS) principles and methods. For the assets certain recognition limitations for prudential purposes like intangible assets or for investments in financial institution subsidiaries are applied. These deductions are deviations from IFRS and are used to present a regulatory balance sheet for prudential supervision purposes. Liabilities other than technical provisions use IFRS.

[9] Link to the Pillar I and the Pillar II Standards on the SARB website: click here and then click on the 1 July 2018 set of Standards tab. Financial Soundness and the Governance and Operational standards address the Pillar I and Pillar II matters, respectively. Link to the Pillar III Standards on the SARB website: click here.

Technical provisions are the largest deviation from IFRS where the SAM regime describes the principles that an insurer needs to follow to determine this value. These principles address the main themes of contract boundaries, the discount rate and the best estimate assumption basis.



The discount rate reflects the risk-free yield curve derived from the yields on government bonds and are published by the regulator**.** This is to ensure all insurers use the same rate and to relieve insurers, especially smaller insurers, from the duplicative calculation burden.

Own Funds

Also known as capital resources, the qualifying available capital represents the assets that can be used for the purposes of protecting policyholders' interest. The capital resources need to adhere to the key criteria for quality of capital, which are loss absorbency, subordination, sufficient duration, free from requirements and incentives to redeem, free from mandatory costs and free from encumbrances.

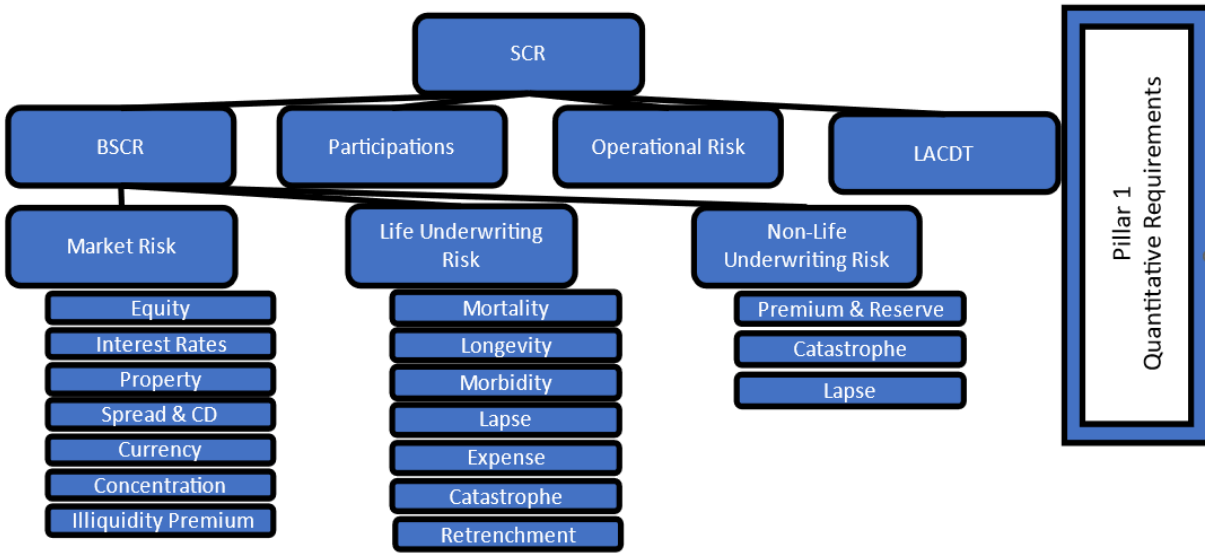
Own funds determination commences with assets less liabilities with adjustments described below.

- Foreseeable dividends are deducted from retained earnings and therefore own funds are reduced to better reflect the capital position as the solvency is expressed as the own funds required to sustain the SCR over a one-year period.
- Subordinated liabilities are added to own funds as the subordination provides a level of protection to the policyholders.
- Further deductions including intangible assets, non-linked investments in insurer's holding company, cash and deposits held at a bank in the same financial conglomerate, and limits imposed on the recognition of investments in financial and credit institutions.
- Own funds are then further tiered to allow for a better reflection of the quality of own funds available to back the SCR.

Solvency Capital Requirements

The Solvency Capital Requirements (SCR) represents the capital requirements for solvency with some level of confidence over a set period. The usual 99.5 percent confidence interval over a one-year period was selected for SAM for the open nature of the South African economy and markets, the maturity of the insurance industry, the high likelihood of solvency it promotes and its comparability with international best practice. The SCR also acknowledges that the best estimate assumptions do not always materialise as assumed and thus applies the principle that every assumption used to calculate the balance sheet, should be considered for treatment in the SCR. Figure 4 sets out the SCR structure adopted for SAM.

Figure 4. The SCR Structures



Source: FSB.

The main components of SCR are the Basic SCR (BSCR), Participation Risk, Operational Risk and Loss absorbency capacity of deferred tax (LACDT), which are briefly described below.

- *BSCR* – the aggregation of the sub-modules Market Risk, Life Underwriting Risk and Non-life Underwriting Risk using a correlation matrix.
- *Participation Risk* – SCR for same-sector insurance participations is calculated in this module rather than the Market Risk sub-module to reflect the lack of diversification benefits due to the presumption that the risks of these participations are likely to be highly correlated with the overall risk of the insurer.
- *Operational Risk* – is the risk of loss arising from inadequate or failed internal processes, people, and systems, or from external events.
- *LACDT* – loss absorbency capacity of deferred taxes allows for the loss-absorbing capacity that may arise under the stresses involved in the calculation of the SCR, since the valuation basis of technical provisions is likely to be different to the basis on which insurers are taxed. This difference means that deferred tax assets and liabilities are created on an insurer's balance sheet, which may be available to absorb losses for the stresses considered under the calculation of the SCR. A benefit of using this adjustment was that

the impact on taxes could be ignored when calculating the capital requirements in each of the modules, simplifying the already complex calculations.

The sub-modules, i.e., Market Risk, Life Underwriting Risk and Non-life Underwriting Risk consider the specific risks as depicted in Figure 1 above. These risks use a combination of mostly stress scenarios and a few factor-based formulae to estimate the change in the insurer's balance sheet if such a risk were to happen. The difference in the balance sheet before and after this application is considered the appropriate SCR for each risk. Each risk was calibrated to the 99.5 percent confidence level. The aggregation of the risks used correlation matrices.

Calibration

The principles used when approaching calibration were reasonability, consistency, and data-based derivation. An overlay of simplicity rather than complexity to guard against spurious accuracy was also employed.

- *Reasonability* – calculations must be reasonable for the materiality of the risk, such that the calculations do not require more resources than what the benefit could be. It includes that calibration must be relevant for South African industry but compare well in relation to the jurisdiction's position compared with other jurisdictions.
- *Consistency* – the set of calibrations must be internally consistent, meaning the calibration of one risk must, when compared to another risk's calibration, be consistent aka make sense.
- *Data-based derivation* – where available and possible, the calibration must be based on data that is relevant to South Africa, with a recentness bias.

Available data was used to derive distribution functions to inform what the 99.5 percent percentile**.** Sufficient data was very rarely available and expert judgement was applied to derive functions that was reasonable. Using the reasonability principle and comparing South African markets to other markets, helped steer this calibration.

The reliance on expert judgement underscores the need for industry buy-in as the experts often resided in industry**.** It is however important to ensure that the industries participation remains impartial as to their own firm's needs but focusing on a regime that works for the industry.

Pillar 2

The regulator developed a system of governance standards, as set out in the Governance and Operational Prudential Standards (GOI), The GOIs focus on the following primary areas:

- Governance.
- Risk management and internal controls.
- Fitness and propriety of key persons responsible for critical functions and activities within an insurer's business, and significant owners.
- Oversight of outsourcing arrangements.

The governance requirements build on and complement the requirements for good governance as set out in the Companies Act, 2008**.** These strong governance requirements include, but are not limited to:

- Clear assignment of roles and responsibilities, including documentation, monitoring, and accountability for delegations.

- Clarity around decision making, including ensuring that decision makers have the necessary powers and information to support their responsibilities, and appropriate accountability for the decisions they make.
- Incentive arrangements that support sound and prudent decision making.
- Well-documented policies and procedures that establish how the business should operate.
- Clear and reliable mechanisms for escalating breaches of internal policies and procedures to senior management and the board of directors, and breaches of the Governance and Operational Prudential Standards to the regulator.
- Clear protocols to ensure all regulatory matters are properly prioritised and communicated consistently and accurately to the regulator.

To be effective, strong governance arrangements need to be supported by the insurer's corporate culture, which reflects the commonly held beliefs and values of the individuals who carry out the business of the insurer. Effective culture is closely aligned with the objectives and values of the insurer, as defined, and implemented by the insurer's board of directors. To support this the regulator also issued a Guidance to insurers.

Good governance starts with the board of directors and senior management. GOI 2 (Governance of Insurers). This standard establishes minimum requirements for the structure and operation of an insurer's board of directors and how roles and responsibilities should be allocated between the board and senior management. Governance of the risk management system is addressed in GOI 3 (Risk Management and Internal Controls).

The regulator's approach to regulating risk management by insurers as set out in GOI 3 (Risk Management and Internal Controls for Insurers), has four main components:

- *Risk strategy* – An insurer's board of directors is required to establish an enterprise-wide risk strategy **for** the insurer. The risk strategy should set out the types of risks that the insurer is willing to retain in implementing its business plan / business objectives, and the way in which it will manage those risks. A key component of the risk strategy is the insurer's board-approved risk appetite statement, which sets out the overall level of risk the insurer is prepared to accept and the articulation of that overall limit into granular risk limits on different material risk categories, activities, and business units, where appropriate.
- *Risk management* – An insurer is required to implement a risk management system that enables it to identify, assess, monitor, report, and mitigate the material risks to which it is exposed.
- *Internal controls* – An insurer is required to implement an effective system of internal controls to ensure that the strategies, policies, and processes approved by the board of directors are in fact in place, observed, and effective in assisting the board of directors and senior management in fulfilling their respective responsibilities for oversight and management of the insurer.
- *Control functions* – To provide appropriate governance over the risk management system and system of internal controls, an insurer is required to establish a risk governance structure including at least the following control functions: a risk management function, a compliance function, an internal audit function, and an actuarial function.

A key component of the governance and risk management requirements for insurers requires that an insurer conduct a forward-looking, risk-based Own Risk Solvency Assessment (ORSA). The objectives of the ORSA are to assess:

- The resilience of an insurer's solvency across a range of possible scenarios.

- The overall solvency needs of the insurer considering its specific risk profile, approved risk appetite and business strategy.
- Compliance, on a continuous basis, with financial soundness requirements.
- The significance with which the risk profile of the insurer deviates from the implied risk profile underlying the financial soundness requirements as set out in Pillar I.

Outsourcing is specifically addressed in Pillar II as it is a source of material risk and is described as an arrangement an insurer has with another person or entity to perform a specific function. The main principle applicable to outsourcing, is that the insurer retains responsibility for all regulatory obligations, regardless of whether an activity or function is outsourced. Therefore, the outsource arrangement must provide the regulator with the same visibility over regulated activities as it has with the insurer. It also means the insurer must have appropriate oversight of the person or entity providing the outsourced activities. GOI 5 (Outsourcing by Insurers) sets down three general sets of standards for outsourcing by insurers, namely:

- Circumstances in which an insurer may not outsource a function or activity, such as operational soundness or ability to monitor its compliance with its legal and regulatory obligations.
- Circumstances in which an insurer must notify the regulator before entering an outsource arrangement for a material activity.
- Matters that must be considered in any outsource arrangement, including avoiding conflicts of interest, the fitness and propriety of the person who performs the outsourced activity, and contractual considerations.

Pillar 3

Pillar III is an important part of a risk-based regime as it provides the regulator and other **stakeholders** with the information needed to assess how well a financial institution is doing with regards to Pillar I and Pillar II.

The regulator, together with stakeholders from industry, developed a quantitative and a qualitative reporting template for annual regulatory submissions**.** A reduced version of the annual quantitative reporting template was also developed for quarterly regulatory submissions. These reporting templates contain:

- Summary of solvency position.
- Balance sheet information.
- Income and Outgo information.
- Premium and policy movements.
- Detailed information on assets.
- Detailed information on technical liabilities.
- Detailed information on capital requirements.
- Detailed information on own funds.
- Detailed information on reinsurance.

Different reporting templates were designed for branches of foreign reinsurers, Lloyd's of London (Lloyd's), microinsurers and insurance groups to cater for the nuances in regulatory requirements that apply to these types of entities. The FSB also developed reporting templates that accommodate different application and notification forms. This was done to collect the relevant and necessary information required to assess applications and notifications made by supervised entities in a consistent manner.

In addition to the reporting templates, financial entities are also required to submit a free-form ORSA report annually to the FSB/PA. The requirements of what needs to be included in this report are set out in legislation and cover areas needed to assess entities' strategies, business plans and risk profiles. This includes providing an understanding of how entities have embedded a sound risk management and governance process and how this process is used in decision-making processes within the entity.

To provide assurance that the templates are completed correctly, and that the information provided is accurate, the PA requires sign-off by senior officials within an entity. Additional independent assurance is provided through auditing requirements where entities are expected to audit parts of the information contained within the regulatory reporting templates.

The regulator is developing a prudential standard containing the information expected to be publicly disclosed to external stakeholders.

Microinsurance

In a developing country like South Africa, many people remain excluded from formal financial services. The National Treasury of South Africa prioritised financial inclusion as an important objective in the sector's reform, particularly for the insurance industry. Three features of the insurance market stood out as needing policy address.

- **Promoting better access** – affordable insurance products meeting the risks that people face.
- **Improving matching** – consumers need better matching of the products they buy with their insurance needs.
- **Consumer protection** – strengthening the legislative framework as policies are sold through funeral parlours, which may not be licensed for this business and thus not in the ambit of regulatory and supervisory oversight, which could leave consumers vulnerable to abuse.

The goal is to promote sustained economic growth and development, and to do so South Africa needs a stable financial services sector that is accessible to all. The microinsurance policy framework is aligned to this goal and intends to achieve it through the following objectives:

- Extend access of a variety of formal insurance products appropriate to the needs of low-income households, thereby supporting financial inclusion.
- Facilitate formalised insurance provision by currently informal providers, and in the process promote the formation of regulated and well-capitalised insurance providers and small business development.
- Lower barriers to entry, which should encourage broader participation in the market and promote competition amongst providers.
- Enhance consumer protection within this market segment through appropriate prudential and business conduct regulation, improved enforcement of regulatory transgressions, and consumer education interventions targeted at understanding insurance and its associated risks and benefits.
- Facilitate effective supervision and enforcement, supporting the integrity of the insurance market as a whole.

To give effect to this new policy, SAM introduced into legislation a new type of insurance licence, i.e., a microinsurer. This type of insurer can write life and non-life business on one licence also known as a composite licence, which insurers other than professional reinsurers are not allowed to do.

The microinsurance framework as explained below, is not fully risk-based but the benefit of financial inclusion is deemed to outweigh the accepted higher risk of failure and insolvency. The simplified approach for product lines, capital requirements and technical provisions individually and together as a whole, aim to reduce barriers to entry by fewer, simpler, and less expensive calculations.

Microinsurers can only write microinsurance business, which are the product lines given in the table below**.** Life insurance can only be offered to individuals and non-life products are not permitted for commercial policies. These product lines are the same in nature as those written by other insurers, but for microinsurers certain sum assured limits apply and the term of the contract must be 12 months or less.

Type	Product line
Life insurance	Risk
	Proportional treaty and facultative reinsurance
Non-life insurance	Motor
	Property
	Legal expense
	Accident and health
	Agriculture
	Consumer credit
	Proportional treaty and facultative reinsurance

The reduced product lines and simplifying product rules are complemented with simplified capital requirements. The capital requirements require only a factor-based minimum capital requirement (MCR) of 15 percent of premiums written in a 12-month period. The lack of a risk-based framework for market risk is offset by asset limitations requiring only investments in cash and near-cash assets and adding asset-spreading requirements where investment exceeding 25 percent at a financial institution is disregarded.

Simpler calculations for the valuation of technical provisions complete the simpler microinsurance framework. Four types of reserves are required as set out below:

- *Unearned premium reserve* – aggregate gross premiums multiplied with a factor representing the outstanding policy period.
- *Outstanding claims reserve* – an estimate of claim amounts reported but not yet settled.
- Incurred but not reported reserve – 7 percent of the premiums received in 12-month net of reinsurance; and
- *Unexpired risk reserve* – an estimate of the shortfall of the unearned premium reserve.

More affordable products could potentially be marketed at the previously under-serviced segment of the market as well as allowing smaller enterprises to enter the insurance market via this route. Larger and existing market participants are expected to also enjoy this opportunity, which is encouraged as this would develop and expand the market to the benefit of the policyholders. It is also envisaged that microinsurers, as they grow and become more adept with insurance matters.

Membership of the SAM Structures

The key functions of the membership were broken down into:

Chairperson
The member appointed to chair the meeting. The chairperson is responsible for ensuring that each meeting progresses the debate and that the members conduct themselves appropriately. The chairperson is expected to adopt a neutral stance to the debate and rely on the principal member to voice his/her organization's views where possible. The chairperson is guided by the terms of reference which set out the objectives of the committee.

Secretariat
The role of the secretariat is to facilitate meetings, keep appropriate records and encourage adequate representation. The secretariat will also project manage the SAM project and ensure that all stakeholders are able to participate through the dedicated website portal.

Principal Member
The principal member is the official spokesperson for the organization represented, and as such is expected to attend all meetings.

Alternate Member
The alternate member is expected to represent the organization in the principal member's absence.

Additional Members
These members attend the meetings at the invitation of the chairperson and may be specialists in a particular field that would assist the committee, subcommittee, or task group.

SAM Coordinator
Each insurance company is required to submit the contact details of an individual responsible for coordinating SAM information within the company. The SAM Coordinator should ensure that the company has sufficient representation and access for their needs. The SAM Coordinator is the official portal into an insurance company for the dissemination of information on the SAM project. SAM Coordinators do not attend meetings unless in another capacity.

Correspondent Members
These members do not attend the meetings, however due to their involvement within the organization's SAM program, they are provided access to the SAM website.

Other Members
This category was created for secretarial and support staff. These members are not expected to attend meetings.

Table 7. Themes for SAM Structures

Position Paper Number	Title
12	High-level principles of information to be received by the supervisory authority
14	Solvency and Financial Condition Report: Undertakings using an approved internal model
15	Structure of the Regulatory Return
16	Single group-wide Regulatory Return

17	Report to Supervisors – Undertaking's reporting and disclosure policy
19	Level of harmonization and quantum of data
21	Process of Reporting and Disclosure
22	Mandating an External Audit
23	Supervisory enquiries
24	Information on contracts and from external experts
25	Own Funds – Supervisory Approval of Ancillary Own Funds
26	Classification and Eligibility of Own Funds
27	Group Own Funds
28	Treatment of Expected Profits included in future Cash Flows as a Capital Resource
30	Counterparty default adjustment for reinsurance contracts and SPV's
30a	Errata (v 3) to Position Paper 30 (v 5) Counterparty default adjustments to recoverable from reinsurance contracts and SPV's
32	Methods and approaches to best estimate liabilities
33	Regulatory Balance Sheet (Article 51 (1) (d)) Detailed content of SFCR and RTS
34	Own Risk and Solvency Assessment
34	Errata to Position Paper 34 (v 7)
35	Use Test
36	Contents of SFCR and RSR: Capital Management
37	Risk Margin
39	Assets and Liabilities other than technical provisions
39a	Errata to Position Paper 39 (v 8) – Assets and liabilities other than technical provisions
39b	Second Errata to Position Paper 39 (v 8) Assets and liabilities other than technical provisions
41	Contract boundaries
42	Calculation of technical provisions as a whole
43	Internal Models: Validation
44	Concentration Risk
45	Currency Risk
46	Illiquidity Premium Risk
47	Equity Risk
48	SCR Standard Formula - Aggregation
49	SFCR &RSR Executive summary, Business and Performance
51	Detail contents of SFCR and RSR: System of Governance
52	Solvency Financial Condition Report (SFCR) and Report to Supervisor (RSR) Detailed Requirements – Risk Profile
54	Internal Models: Model Governance
55	Internal Models: Statistical Quality and Calibration

56	Internal Models: Documentation and Data Requirements
57	Partial Internal Models
58	SCR Structure – Credit and Counterparty Default Risk
59	Life SCR – Lapse Risk
61	SCR Standard Formula: Operational Risk
62	Life SCR – Catastrophe Risk (for Mortality and Morbidity)
63	Life SCR – Expense Risk
64	Life SCR – Longevity Risk
65	Life SCR – Disability-Morbidity Risk
66	Life SCR – Mortality Risk
64, 65 and 66	Errata to Position Papers 64 (v 4), 65 (v 4) and 66 (v 4) – Allowance for future Management Actions in SCR Simplifications
65a	Errata (v 1) to Final Position Paper 65 (v 4) – Disability-Morbidity Risk
67	Life SCR – Revision Risk
68	SCR – Simplifications for First Party insurance Structures
70	Property Risk
71	System of Governance
73	Treatment of new business in SCR
74	Minimum Capital Requirement (MCR)
74a	Errata (v 4) to Final Position Paper 74 (v 4) – Minimum Capital Requirement (MCR)
75	Treatment of risk-mitigation techniques in the SCR
76	Loss Absorbing Capacity of Technical Provisions
77	Removal of Health SCR Module in SAM
83	The Role of the Statutory Actuary
85	Treatment of relevant operations (in “non-equivalent” jurisdictions), of SA parents under the final measures to regulate the solvency of Insurance Groups (“Groups”)
88	Macro-Prudential Stress Testing
89	Calculation of SCR on total balance sheet
92	Assessment of Group Solvency
93	Group Governance
94	Interest Rate Risk
96	General Stress Testing Guidance for Insurers
97	Group Considerations for Stress Testing
102	Life SCR – Structure and Correlations
103	The Treatment of New Business in Internal Models
105	Market Risk SCR - Structure & Correlations
105a	Errata to Position Paper 105 (v 3) Market Risk Structure & Correlations

106	Implied Volatility Risk
107	Own Risk and Solvency Assessment - Further Guidance
108	Life SCR – Retrenchment Risk
62a & 108a	Errata to Final Position Papers 62 (v 5) and 108 (v 4) Simplifications for Short Contract Boundaries
109	Solvency Capital Requirement structure
112	Loss-absorbing capacity of deferred taxes
113	The calculation of tax in technical provisions
114	Simplifications

Discussion Document Template

Solvency Assessment and Management: Pillar [X] - Sub Committee

[XXX] Task Group

Discussion Document [X]

Title of document

EXPLANATORY NOTE:

Template: This template is intended to provide guidance on the format and structure of the discussion documents to facilitate the preparation of discussion documents in a uniform and consistent manner.

Discussion documents: Subsequent to making primary legislative proposals, the task groups are expected to prepare technical discussion documents that will inform the drafting of secondary legislative proposals. The discussion documents will be reviewed by the SAM governance structures (Sub-Committees and Steering Committee) and by the FSB internal SAM committee. Once the discussion papers have been reviewed (and revised if necessary), the discussion documents will be made simultaneously available to industry for comment and to the drafter to draft the secondary legislative proposals.

Timelines: It is intended that draft discussion documents should be completed by mmm yyyy. This deadline is particularly important for the Pillar I task groups as their inputs are critical to the development of the SA QIS 1. However, the deadline for certain discussion documents, or certain aspects of discussion documents, may be extended with the agreement of the relevant Sub-Committee and Steering Committee.

IAIS material: The IAIS ICPs, standards and guidance documents will be made available on the SAM website.

EXECUTIVE SUMMARY

1. INTRODUCTION AND PURPOSE

Outline the purpose of the document.

2. INTERNATIONAL STANDARDS: IAIS ICPs

Outline the relevant IAIS ICP.

[IAIS is the international standards setting body for insurance supervisors. The FSB as a member of the IAIS aims to adhere to these standards].

3. EU DIRECTIVE ON SOLVENCY II: PRINCIPLES (LEVEL 1)

Outline the relevant Solvency II Level 1 principles.

This section should also explain how the relevant Solvency II Level 1 principles were incorporated into input for SAM primary legislation as well as any adaptations (if any).

4. MAPPING ANY PRINCIPLE (LEVEL 1) DIFFERENCES BETWEEN IAIS ICP & EU DIRECTIVE

Explain differences, if any, between the IAIS ICP and Solvency II Level 1 principles.

5. STANDARDS AND GUIDANCE (LEVELS 2 & 3)

This section should explore the options available, in terms of different approaches to achieving the same principles/outcomes outlined above.

Guidance on various approaches can be found in:

5.1 IAIS standards and guidance papers

5.2 CEIOPS CPs (consultation papers)

5.3 Other relevant jurisdictions (e.g. OSFI, APRA)

[It is not expected that all jurisdictions should be considered, only those that are particularly relevant in the South African context].

5.4 Mapping of differences between above approaches (Level 2 and 3)

6. ASSESSMENT OF AVAILABLE APPROACHES GIVEN THE SOUTH AFRICAN CONTEXT

6.1 Discussion of inherent advantages and disadvantages of each approach

Consider matters such as proportionality and efficiency (including cost & resources implications), flexibility, SA's unique circumstances (e.g. skills shortage) and any other appropriate matters.

6.2 Impact of the approaches on EU 3rd country equivalence

6.3 Comparison of the approaches with the prevailing legislative framework

6.4 Conclusions on preferred approach

7. RECOMMENDATION

It is important that the recommendation take into account the issue of proportionality.

It is proposed that the recommendation be split into essential requirements (recommendations on minimum requirements that should apply to all insurers) and advanced requirements (recommendations that should apply to larger, more complex insurance groups).

PUBLICATIONS