

International Reinsurance Landscape Overview for U.S. Life & Annuities

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International Reinsurance

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International Reinsurance

Jurisdiction Landscape for U.S. Life & Annuities

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Section 1. Executive Summary

1.1 OVERVIEW

The use of international reinsurance, often referred to as offshore reinsurance, has significantly increased over the last few years.

While initiated largely by private equity players, the use of international reinsurance has since been driven by insurers and reinsurers (“(re)insurers”) seeking a combination of pricing competitiveness and alignment of reserving and capital frameworks to internal business management and risk practices.

U.S. insurance companies are increasingly looking to international jurisdictions to find reinsurance solutions that will improve their competitive advantage, provide policyholder protection and align to how they manage the business (e.g., managing the business on an economic basis). International reinsurance, if managed properly, is one of the tools that can help the insurance industry address the protection gap¹.

The following international jurisdictions are covered in this study:

- Bahamas
- Barbados
- Bermuda
- Cayman Islands
- Gibraltar
- Guernsey
- Hong Kong
- Ireland
- Isle of Man
- Jersey
- Luxembourg
- Malta
- Puerto Rico
- Singapore

Among international jurisdictions, Bermuda has experienced the fastest growth in the volume of transactions over the last few years with many U.S. insurers establishing a foothold on the island through an affiliate or sidecar.

The Cayman Islands has also gained interest in recent years and has witnessed an increase in license applications and transactions. There are also many other jurisdictions used by U.S. and international (re)insurers, each with unique considerations.

1.2 OBJECTIVES AND CONTENT

1.2.1 STUDY OBJECTIVES

The growing significance of international reinsurance is attracting considerable attention within the insurance sector; however, there remains ongoing uncertainty and misunderstanding regarding its characteristics and associated risks.

¹ Ernst & Young Global Limited. (2025). EY 2025 Global Insurance Outlook. EY.com. https://www.ey.com/en_us/insurance/ey-global-insurance-outlook

The objective of this paper is to provide the insurance industry with a resource that centralizes information about various jurisdictions that a U.S. insurer could consider when establishing an international reinsurance arrangement.

The authors hope that information provided by their research will help demystify how international reinsurance works by outlining important considerations why U.S. insurers seek such reinsurance and by providing an overview of a wide range of jurisdictions and the reserving and capital frameworks they use. The information provided in this research reflects current market and regulations. Readers should exercise caution when referencing this paper, as conditions may evolve over time. Additionally, the descriptions of markets and regulations are not intended to be exhaustive.

International reinsurance can be an important tool for U.S. insurers in increasing their competitiveness, managing risk more actively, supporting entering new markets, accessing international capital, offering innovative products and managing their balance sheets strategically.

1.2.2 CONTENT OVERVIEW

The research paper is structured in three key sections:

Section	Content overview
Section 2: Considerations for U.S. (re)insurers	<ul style="list-style-type: none"> Explores key considerations for any (re)insurer looking to establish a presence or get exposure to an international jurisdiction including: <ul style="list-style-type: none"> Definitions and considerations for affiliate, sidecar and third-party transactions An overview of NAIC qualified and reciprocal jurisdictions, Solvency II Equivalency and key benefits Asset management Tax implications and considerations Insurance Capital Standards Product-specific considerations and trends
Section 3: International jurisdiction overview	<ul style="list-style-type: none"> Covers various international jurisdictions, including those commonly used by U.S. (re)insurers but also others that could be of interest to U.S. (re)insurers (e.g. if actively used by insurers in other parts of the world) Provides key information on each jurisdiction, such as status with the U.S., footprint, tax status and general licensing process Shares perspectives of regulators and industry bodies from across the jurisdictions gathered through an outreach by the researchers.
Section 4: Reserving and capital frameworks	<ul style="list-style-type: none"> Provides an overview of reserving and capital frameworks across the jurisdictions Illustrates by application of the frameworks to common insurance products.

Section 2. Considerations for U.S. (Re)insurers

2.1 OVERVIEW

This section explores important considerations for U.S. (re)insurers looking to leverage international reinsurance. The key considerations include:

- [Section 2.2 Internal Affiliate, Sidecar and Third-Party Reinsurance](#), discusses three common structures for U.S. insurers to access international jurisdictions.
- [Section 2.3 Qualified and Reciprocal Jurisdictions and Solvency II Equivalency](#), defines the designation of NAIC qualified and reciprocal jurisdictions, Solvency II Equivalency, and associated implications.
- [Section 2.4 Asset management](#), explains the use of internal and external asset managers.
- [Section 2.5 Overview of reinsurance deal structures](#), outlines the typical deal structures observed in the market; coinsurance, coinsurance with funds withheld (Co-FWH) and modified coinsurance (ModCo).
- [Section 2.6 Tax considerations](#), provides tax considerations in the use of international reinsurance, including considerations whether to elect U.S. taxpayer (953(d)) status.
- [Section 2.7 Insurance Capital Standards \(ICS\)](#), summarizes the potential impact of ICS on the use of international reinsurance.
- [Section 2.8 Product-specific considerations and trends](#), gives some U.S. product-specific considerations and trends in relation to international reinsurance.
- [Section 2.9 Actuarial Guideline LV \(AG55\)](#), provides an overview of the recently adopted AG55 and discusses impacts on reinsurance transactions.

2.2 INTERNAL AFFILIATES, SIDECARs AND THIRD-PARTIES

2.2.1 OVERVIEW

This section describes the three structures commonly used by U.S. insurers to utilize international reinsurance and their potential benefits and challenges.

2.2.2 THIRD-PARTY REINSURANCE

Third-party reinsurance enables U.S. insurers to transfer liabilities to established reinsurers outside the ceding company. This approach offers an efficient method for managing risk, managing capital, and leveraging the expertise of external reinsurers. This option provides flexibility and cost-efficiency compared to setting up proprietary structures. However, while it delivers immediate benefits in terms of simplicity and risk-sharing, third-party reinsurance involves trade-offs, such as shared economics through profit sharing or nominal risk sharing fees and exposure to counterparty risk. Some of the observations highlighted here would apply to onshore reinsurance as well.

Potential benefits to ceding company

- Availability of reinsurance: A wide array of international reinsurers has significant capital and are actively seeking contracts that align with their respective business goals, investment strategies, risk appetites, and risk diversification objectives. This environment presents U.S. insurers with the

opportunity to choose partners best suited to their needs. This flexibility lets insurers negotiate terms that fit their strategies, offering tailored liability management with reinsurers' expertise.

- Speed of implementation: Third-party reinsurance is often the fastest solution for the transfer of liabilities. Unlike more complex alternatives, this option leverages the reinsurer's existing infrastructure and operational capabilities. This reduces the administrative and regulatory burden on the ceding company, providing a streamlined solution that frees up resources for other strategic priorities.
- Risk management: By transferring liabilities, insurers benefit from risk-sharing arrangements that reduce exposure to potential financial losses in exchange for the payment of a ceding commission. Established reinsurers bring sophisticated risk management practices and strong capitalization, providing stability to insurers managing volatile or capital-intensive lines of business. This arrangement enhances the overall financial resilience of the insurer and supports long-term stability.

Potential challenges to ceding company

- Profit sharing: While the insurer gains immediate capital relief and risk-sharing benefits, there is a reduction in potential profits generated by the reinsured business. For insurers prioritizing long-term profitability, this economic sharing can limit overall returns, therefore third-party reinsurance requires careful alignment with financial goals.
- Counterparty risk: Entering into agreements with external reinsurers exposes the ceding company to counterparty risk, as the cedant ultimately retains financial responsibility to policyholders. The cedant may be adversely impacted if the reinsurer is unable to meet its obligations under the reinsurance contract or if circumstances require a forced recapture of the reinsurance treaty.

If the cedant needs to recapture the reinsurance treaty, an important consideration is managing the recapture of assets, which may involve a loss or include assets that are not within the cedant's area of expertise. Additionally, the cedant would have to be able to cover all claims and put up the reserves and required capital to back the business. To mitigate this risk, insurers must thoroughly assess the financial strength, creditworthiness and overall stability of potential reinsurers before entering into agreements. It is good practice for insurers to establish a counterparty risk framework and actively monitor the exposure risk so actions can be taken proactively. In addition, certain treaty provisions (e.g., collateral arrangements (trust accounts, letters of credit, funds withheld), termination and recapture clauses and financial strength warranties) can mitigate the counterparty risk. Treaties may also mandate regular financial disclosures and compliance with NAIC Credit for Reinsurance Model Law. These measures ensure access to funds, limit risk exposure, and provide flexibility to respond to reinsurer instability, protecting the ceding insurer's financial position.

2.2.3 INTERNATIONAL INTERNAL AFFILIATE REINSURER

U.S. insurers can leverage international affiliates to maximize control over reinsurance operations and retain full economic benefits. These wholly owned entities enable insurers to manage liabilities independently while benefiting from operating in non-U.S. jurisdictions, presenting opportunities to optimize reserve and capital efficiency. The setup process, typically spanning 6 to 18 months, requires navigating tax and compliance requirements and establishing operational capabilities. By retaining direct control over both investment

strategies and operational decisions, U.S. insurers can align affiliates closely with their strategic goals. Although establishing and maintaining international affiliates introduces costs and complexities, the ability to retain earnings and enhance capital efficiency positions them as an attractive option for insurers focused on long-term profitability in an evolving market.

Potential benefits to ceding company

- Enhanced financial flexibility and investment opportunities: International internal affiliates provide insurers with greater flexibility in their investment approaches and the potential for more efficient reserve and capital measurement. By operating in different jurisdictions, these affiliates can access higher-yield or alternative asset classes that may not be available or optimal under domestic regulatory frameworks. This flexibility enables insurers to optimize asset allocations to achieve higher yields, directly enhancing the profitability of business backed by the affiliate's asset portfolio, ultimately resulting in improved outcomes for policyholders.
- Control and retention of economics: The primary advantage of an international internal affiliate is the sponsor's ability to retain full control over its operations. Unlike other structures involving third-party investors, this model ensures that all strategic decisions—such as investment allocation, reinsurance pricing, and operational direction—remain within the insurer's control. Additionally, the sponsor retains all future earnings generated by the affiliate. This complete economic retention is particularly attractive for insurers seeking to maximize long-term profitability.

Potential challenges to ceding company

- Cost and complexity: For U.S. insurers, establishing an international internal affiliate requires addressing jurisdiction-specific requirements, such as forming the legal entity, obtaining necessary licenses, and adhering to local regulatory standards. This process involves filing applications with international regulators, aligning the affiliate's structure with U.S. tax rules, such as Controlled Foreign Corporation (CFC) provisions or 953(d) elections, and ensuring compatibility with economic substance requirements where applicable. Additionally, U.S. insurers must establish operational capabilities to support compliance, audit, and governance frameworks. These tasks often demand specialized expertise and significant coordination across internal teams and external advisors, introducing complexity that must be carefully managed to align with the insurer's strategic objectives.
- Regulatory compliance and economic substance requirements: International jurisdictions increasingly enforce economic substance rules to ensure that entities operating in their territories conduct genuine business activities in their jurisdiction, and do not create shell corporations. For an internal affiliate, this means maintaining a physical presence, employing local staff, and demonstrating decision making and meaningful operational activities within the jurisdiction.

2.2.4 SIDEKARS

Some U.S. insurers have established new reinsurance companies with shared equity ownership. These entities are commonly referred to as *sidecars*. These structures are used to free up capital, restructure balance sheets, increase assets under management without increasing liabilities, and partner with third-party investors in managing the reinsurance business.

While some recent sidecars have been established in Bermuda, at least one has been established in the U.S. Although sidecars are often associated with international reinsurance, they are not exclusive to international reinsurance.

U.S. insurers that establish a sidecar are often referred to as *sponsors*. They gather additional investors, often with the support of a lead investor or potentially an investment bank.

Sponsors and investors will be conscious of related party transaction rules under U.S. statutory and consolidation under GAAP rules. Statutory related party transaction rules generally apply when ownership exceeds 10%, while U.S. GAAP consolidation is determined by control, which is determined through a complex set of criteria.

Sidecars can be expensive to establish and manage, often requiring a large seed transaction to justify the expense. Further, the sponsor will generally have to bring forward an attractive business plan to attract investors, which often comes with the promise of a stream of future transactions between the sponsor and sidecar.

Potential benefits to ceding company

- Source of capital: The sponsor can free up or attract a substantial amount of capital through raising capital from third party investors and transactions with the sidecar. This capital can then be deployed for various purposes.
- Balance sheet management: Sidecars can help limit exposure to specific lines of business, supporting rating and diversification goals.
- Strategic Partnerships: Most investors will have a meaningful stake in the sidecar and it is common for investors to provide investment management services to the sidecar. Sidecar investors are often sophisticated asset managers that can source attractive assets and improve the competitiveness and profitability.
- Fee based revenue: Sponsors may earn fees for services such as asset management.
- Tax structuring: Some sidecars have structures that accommodate international investor tax situations. U.S. sponsors typically seek 953(d) status to avoid BEAT tax implications. See Section [2.6 Tax Considerations](#) for a more detailed conversation around tax considerations.

Potential challenges to ceding company

- Setup and maintenance costs: The sponsoring insurer will incur initial setup expenses. These include legal, tax, and administrative fees for entity formation, licensing, and regulatory compliance. Ongoing operational costs are significant due to regular reporting, auditing, and compliance obligations. Additionally, jurisdiction-specific regulatory requirements may necessitate a physical presence, adding to the operational costs of maintaining the sidecar.
- Time-intensive setup process: Sidecars can take from nine to 24 months to launch. Sidecars are complex vehicles that require careful planning, design and execution to implement. They require a clear objective from management and close collaboration between actuarial, accounting, tax and legal experts. Sponsors must comply with various legal frameworks, secure regulatory approvals, and often rely on third-party service providers for operational support. This lengthy setup period

can delay the sponsor's access to capital and risk mitigation, impacting the insurer's planning and timing for reinsurance transactions.

- Profit sharing: In international sidecars, insurers cede a portion of future earnings to external investors who provide capital. These investors are entitled to returns based on underwriting profits and investment income from the reinsured business. While this arrangement provides immediate capital relief and risk diversification, it reduces the insurer's long-term expected profitability. Investor returns are often prioritized, further diminishing surplus distributions to the sponsor. Insurers must weigh the benefits of external capital and risk transfer against the cost of sharing future profits, especially for business expected to be highly profitable.
- Counterparty risk: Although sponsors often retain partial ownership in the sidecar, sidecars are effectively independent reinsurance companies and pose counterparty risk to sponsors; however, they may pose relatively lower counterparty risk compared to third-party reinsurance due to the influence of the sponsor. This is particularly important as sponsors often commit to a significant stream of business to cede to the sidecar over a period of time that could amount to significant third-party risk exposure. Nevertheless, the counterparty exposure may be greater with a sidecar due to the large transaction size.

U.S. insurers have a range of reinsurance solutions available—third-party reinsurance, international internal affiliates, and sidecars—each offering distinct benefits and challenges.

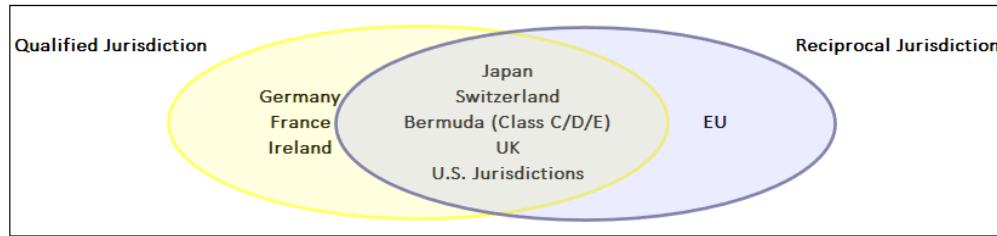
- Third-party reinsurance provides a fast, cost-effective, and straightforward option for transferring liabilities while sharing risks with established reinsurers, though it involves relinquishing control and sharing future earnings.
- International affiliates allow insurers to retain full control and economic benefits, leveraging flexible international regimes for investment flexibility and long-term profitability, albeit at the cost of higher complexity and setup requirements.
- Sidecars bridge the gap by combining external capital and operational independence with flexibility in design, enabling sponsors to balance risk-sharing with strategic alignment and capital efficiency.

By carefully evaluating their objectives, resource capabilities, and risk appetite, U.S. insurers can select the reinsurance approach that best supports their financial and operational goals in an increasingly dynamic and competitive market. Each solution offers unique pathways to optimize capital, manage risk, and strengthen the insurer's position through enhancing product performance and customer value.

2.3 QUALIFIED AND RECIPROCAL JURISDICTIONS AND SOLVENCY II EQUIVALENCY

The National Association of Insurance Commissioners (NAIC) has developed a regulatory framework that enable U.S. insurers to obtain credit for reinsurance when dealing with reinsurers located in certain foreign (non-U.S.) jurisdictions. This framework provide options for insurers in choosing qualified international partners while maintaining robust solvency oversight. The frameworks identify two types of potentially overlapping classifications of jurisdictions, *qualified* and *reciprocal*, that indicate different levels of regulatory requirements. As global reinsurance continues to evolve, these jurisdictions are likely to shape the future landscape, enhancing cross-border cooperation and market resilience.

Figure 1 illustrates the jurisdictions that currently have qualified and/or reciprocal status.

Figure 1Qualified Jurisdiction

A *qualified jurisdiction* is a non-U.S. jurisdiction that has been evaluated and approved by NAIC as meeting specific standards of financial regulation and oversight. This designation allows reinsurers domiciled in these jurisdictions to be considered for certification, enabling U.S. ceding insurers to receive credit for reinsurance with reduced or modified collateral requirements. The concept of qualified jurisdictions was established to recognize foreign regulatory regimes that are substantially similar to U.S. standards. This recognition facilitates international reinsurance transactions by reducing regulatory barriers and promoting market efficiency with access to new capital.

The NAIC conducts a thorough assessment of a jurisdiction's regulatory framework, focusing on factors such as regulatory supervisory system, solvency regulation, financial reporting, reinsurance practices, and Anti-Money Laundering and Counter-Terrorism Financing².

Certified Reinsurers

A *certified reinsurer* is a non-U.S. reinsurer that is licensed in a qualified jurisdiction and certified to provide reinsurance to U.S. insurers by state insurance regulators.³ Certification enables the reinsurer to post reduced collateral on reinsurance contracts with U.S.-based insurers (this does not apply to modified co-insurance transactions). To be certified, the reinsurer must meet specific regulatory and financial requirements, which are set by individual states in accordance with the NAIC's Credit for Reinsurance Model Law.

To become certified, a reinsurer must apply for certification through individual state insurance departments. Certified reinsurers are subject to annual reviews by U.S. regulators to ensure they continue to meet the qualifications for reduced collateral status.⁴

² National Association of Insurance Commissioners. Financial Regulation Standards and Accreditation (F) Committee. <https://content.naic.org/committees/f/financial-regulation-standards-accreditation-cmte>

³ National Association of Insurance Commissioners. Credit for Reinsurance Model Law. <https://content.naic.org/sites/default/files/model-law-785.pdf>

⁴ National Association of Insurance Commissioners. Credit for Reinsurance Model Law. <https://content.naic.org/sites/default/files/model-law-785.pdf>

Benefits to U.S. Insurers

- Reduced Counterparty Risk: By working with certified reinsurers, U.S. insurers reduce their risk of entering into reinsurance agreements with financially unstable entities. Certified reinsurers are regularly monitored to ensure they meet financial and regulatory standards.
- Greater Flexibility: U.S. insurers can negotiate reinsurance contracts with certified reinsurers from qualified jurisdictions with more flexibility around collateral and financial strength requirements, creating more competitive and efficient reinsurance deals.

The concepts of qualified jurisdictions and certified reinsurers are elements of the framework established by the NAIC allowing U.S. insurers to conduct reinsurance transactions with international reinsurers while upholding standards for financial stability and regulatory oversight. By lowering collateral requirements for reinsurers from qualified jurisdictions, the U.S. market has improved access to capital. Additionally, this promotes increased global cooperation and enhances risk management practices.

Reciprocal Jurisdiction

A *reciprocal jurisdiction* is a regulatory designation established by the NAIC that allows reinsurance companies from specific approved foreign jurisdictions enhanced access to the U.S. insurance market, provided that there is a mutual, reciprocal treatment for U.S.-based entities in that jurisdiction.⁵ This concept is built on the idea of equal treatment between U.S. reinsurers operating abroad and foreign reinsurers operating in the U.S., fostering a level playing field in the global reinsurance landscape.

The introduction of reciprocal jurisdictions is a part of the NAIC's ongoing efforts to modernize reinsurance regulations, particularly through the adoption of the Credit for Reinsurance Model Law and Model Regulation. The NAIC has recognized the European Union, United Kingdom, Bermuda, Japan, and Switzerland as reciprocal jurisdictions, facilitating reinsurance transactions with reduced collateral requirements across these markets.

Benefits to U.S. Insurers

- Regulatory Streamlining: Reciprocal Jurisdictions create a simplified regulatory environment by aligning standards between U.S. and designated foreign jurisdictions. This reduces the complexity for U.S. insurers and improves operational efficiency.
- Greater Market Access: U.S. insurers gain access to a broader range of financially stable, international reinsurers, promoting competition in the reinsurance market. This expanded access can lead to more favorable pricing, enhanced risk diversification, and more flexible contract terms.
- Comparable Solvency Frameworks: Foreign reinsurers operating in reciprocal jurisdictions operate under solvency and regulatory frameworks that differ from those in the United States but are recognized by the NAIC as effective.⁶ These frameworks may differ in structure and requirements,

⁵ National Association of Insurance Commissioners. Process for Evaluating Qualified and Reciprocal Jurisdictions. <https://content.naic.org/sites/default/files/committee-evaluating-qualified-reciprocal-jurisdictions.pdf>

⁶ National Association of Insurance Commissioners. Credit for Reinsurance Model Law. <https://content.naic.org/sites/default/files/model-law-785.pdf>

such as the absence of compliance with the NAIC's Valuation Manual. Despite these differences, the NAIC evaluates each jurisdiction to ensure that reinsurers demonstrate financial strength and reliability in meeting their obligations to U.S. insurers.

- Improved Capital Efficiency: By easing collateral requirements and regulatory redundancies, reciprocal jurisdictions allow U.S. insurers to optimize capital usage, making cross-border reinsurance arrangements more economically viable and competitive.

Unauthorized Reinsurers

An *unauthorized reinsurer* is a non-U.S. reinsurer that is not based in a qualified or reciprocal jurisdiction. There are additional requirements for cedents to take credit for reinsurance with unauthorized reinsurers, including but not limited to the reinsurance arrangement being collateralized to 100% of the U.S. statutory reserve of the business being ceded. While 100% collateralization is generally required, some states allow reduced collateral under certain conditions. Additionally, the collateral assets must be held in a qualified U.S. trust in compliance with all requirements of the Credit for Reinsurance Model Law Regulation.⁷

Solvency II Equivalency

Solvency II is the European Union's regulatory regime for insurance and reinsurance entities, emphasizing risk-based capital requirements, governance, and supervisory review. While primarily applicable to firms within the European Economic Area (EEA), Solvency II includes provisions for recognizing the regulatory frameworks of non-EEA countries through a concept known as equivalency.

Solvency II equivalency recognizes non-EU jurisdictions as having regulatory standards that are comparable to those of the EU. This enables EU insurers to receive credit for reinsurance ceded to reinsurers in equivalent jurisdictions without additional regulatory burdens.

For life and annuity reinsurance, Solvency II equivalency is particularly important because it:

- Promotes regulatory efficiency by reducing duplicative capital requirements.
- Facilitates cross-border reinsurance by allowing EU insurers to transact with non-EU reinsurers under familiar regulatory standards.

Jurisdictions including Bermuda, Switzerland, and Japan have been granted full equivalency status, allowing reinsurers domiciled in these countries to operate within the EU with reduced regulatory friction.⁸

While Solvency II equivalency is an EU-driven recognition process, it shares conceptual similarities with the NAIC's qualified and reciprocal jurisdiction framework. Both systems aim to⁹:

- Identify trusted foreign regulatory regimes.
- Facilitate international reinsurance transactions.
- Ensure solvency protection and regulatory cooperation.

⁷ National Association of Insurance Commissioners. Credit for Reinsurance Model Law. <https://content.naic.org/sites/default/files/model-law-785.pdf>

⁸ European Commission. *Equivalence of non-EU financial frameworks: Decisions*. https://finance.ec.europa.eu/eu-and-world/equivalence-non-eu-financial-frameworks_en#decisions

⁹ European Commission. *Equivalence of non-EU financial frameworks: Decisions*. https://finance.ec.europa.eu/eu-and-world/equivalence-non-eu-financial-frameworks_en#decisions

2.4 ASSET MANAGEMENT

In managing life and annuity products, asset allocation is critical for balancing risk, return, and capital requirements. Recent trends in asset allocation are influencing how insurers manage their portfolios and reinsurance strategies. Life insurers are increasingly diversifying their general account portfolios with alternative assets such as private credit, structured assets, private equity, real estate, and investments in infrastructure to boost investment returns. International reinsurers may provide expertise in sourcing these types of assets.^{10 11}

In the development of a reinsurance transaction, a key consideration is the asset management responsibility. This decision should consider the ceding company's existing asset management capabilities and the objectives of the transaction. There are three distinct options to be considered:

Internal Asset Management

The use of internal asset management is most suitable for companies with robust asset management capabilities that would not benefit significantly from accessing another party's investment capabilities. In this case, there would be a preference to maintain internal control over investments and investment strategies.

External Asset Management

The growth of international reinsurance has largely been driven by reinsurers backed by private equity and/or asset management firms with strong investment expertise. The use of external asset managers through reinsurance can help companies become more competitive through having greater access to investment options with potentially higher investment returns. These asset managers have extensive experience in optimizing the asset portfolio to achieve higher yields while considering impacts on capital requirements and maintaining robust risk management mechanisms.

Private Equity Partner

The use of private equity partnerships has considerations that are similar to the use of external asset management. Private equity partners share in the economics of the deal. They bring more sophisticated and specialized asset origination capabilities. However, increased investment allocations in potentially illiquid assets may increase the overall risk level of reinsurers.

2.5 REINSURANCE DEAL STRUCTURES

This section discusses the three common deal structures observed for asset-intensive reinsurance deals in the market today; coinsurance, coinsurance with funds withheld (Co-FWH) and modified coinsurance (ModCo). There are other reinsurance structures used in the life and annuity industry; however, they are not in the scope of this paper.

¹⁰ Moody's Ratings. (2025). US life insurers head offshore as private credit transforms industry.

<https://www.moodys.com/web/en/us/insights/data-stories/private-credit-transforms-life-insurance-industry.html>

¹¹ Fitch Ratings. (2025). U.S. Life Insurers' Investment Portfolios. <https://www.fitchratings.com/research/insurance/us-life-insurers-investment-portfolios-10-03-2025>

Deal structures differ in terms of how risks, assets, and liabilities are shared between the ceding insurer and the reinsurer. Each structure has its benefits and drawbacks, and the choice of reinsurance arrangement depends on the specific goals of the insurer. All deal structures can be utilized for either flow deals, which allow for new contracts under the treaty, or closed blocks of policies. Co-FWH and ModCo are the more common deal structures for reinsurance deals with an international reinsurer, as coinsurance involves the transferring of assets that can trigger further steps and potential restrictions (e.g., setting up a reserve credit trust and marking the assets transferred to current market value).

The deal structure impacts the transfer of assets and reserves as summarized in Table 1:

Table 1

Item transferred at treaty initiation (U.S. statutory view)	Ceding company			Assuming company		
	Coinsurance	Co-FWH	ModCo	Coinsurance	Co-FWH	ModCo
Ceding commission *	+	+	+	-	-	-
Assets transferred/premium	-			+		
Reserves transferred **	-	-		+	+	
Other liabilities	-	-		+	+	
Capital gains and losses on assets transferred	+***				****	

- Transfer from
+ Transfer to

* A ceding commission from the ceding company to the assuming company is possible, generally when unprofitable business is reinsured.

** Based on U.S. NAIC reserve requirements

*** Assuming fair value is greater than the book value for assets transferred

**** Assets transfer at fair value to the assuming company under a coinsurance structure

Coinurance

Coinurance is a proportional reinsurance arrangement in which the ceding company and the reinsurer share an agreed quota share percentage of the premiums, claims, surrenders and other benefits related to the underlying life insurance policies:

- The ceding company pays the reinsurer a proportional amount of the premiums collected from the underlying policyholder, and the reinsurer reimburses the ceding company for the proportional amount of the benefit payments provided by the underlying policy.
- A single policy can be coinsured with more than one reinsurer or under more than one reinsurance contract with the same insurer if the combined total of the risk that is subject to reinsurance and

retained by the ceding company is not more than 100% of the risk associated with the underlying policies.¹²

Coinurance is widely used because it aligns the interests of the ceding company and the reinsurer, as both parties share in the profits and losses from the reinsured policies (except when the insurer cedes a 100% quota share of the policies). This structure also allows the ceding company to achieve significant risk transfer and capital relief. Since the ceding company transfers assets to the reinsurer, it relinquishes some control over those assets, which can be a drawback. Typically, the ceding insurer continues to service the policies and is reimbursed for administration expenses incurred through expense allowances agreed as part of the reinsurance arrangement.

Coinurance with Funds Withheld (Co-FWH)

Co-FWH is similar to coinsurance in that the ceding company records a reinsurance recoverable against the policy benefit reserves on the business subject to the reinsurance contract for the amount to be ceded to the reinsurer.

- Under a funds withheld arrangement, assets backing the reserves are left on deposit with the ceding company as opposed to being transferred to the reinsurer:
 - The assets typically are segregated from the general investment portfolio, so that the investment performance of the assets backing ceded liabilities can be readily identified
 - The assets on deposit create a hypothetical loan from the reinsurer to the ceding company, which is recorded as a liability on the ceding company's financial statements¹³
- This often results in an embedded derivative; a feature within a reinsurance contract that has derivative-like characteristics. Its value changes are based on underlying variables such as interest rates, inflation, or market indexes, affecting the contract's cash flows. If the embedded derivative is not closely related to the host contract and the host is not measured at fair value through profit or loss, it must be separated and accounted for at fair value under U.S. GAAP and IFRS.¹⁴¹⁵

Co-FWH allows the ceding insurer to maintain control over assets and reduce counterparty credit risk exposure while achieving risk transfer. The assets remain on the insurer's balance sheet, providing additional transparency and ability to monitor potential investment restrictions. This structure is particularly useful in cross-border transactions where the transfer of assets might trigger tax or regulatory complications.

¹² National Association of Insurance Commissioners. Credit for Reinsurance Model Law. <https://content.naic.org/sites/default/files/model-law-785.pdf>

¹³ National Association of Insurance Commissioners. Credit for Reinsurance Model Law. <https://content.naic.org/sites/default/files/model-law-785.pdf>

¹⁴ Financial Accounting Standards Board. (2016). Accounting Standards Codification (ASC) 815: Derivatives and Hedging. <https://asc.fasb.org/>

¹⁵ International Accounting Standards Board. (2017). IFRS 9: Financial Instruments. <https://www.ifrs.org/issued-standards/list-of-standards/ifrs-9-financial-instruments/>

Modified Coinsurance (ModCo)

ModCo is similar to Co-FWH, except that the ceding company retains the reserves in addition to the assets backing the reserves on the business subject to reinsurance (i.e., the ModCo deposit):

- The assets supporting the ceded liabilities are typically segregated from the general investment portfolio of the cedent.
- No reinsurance recoverable is recorded.

This is accomplished by designating in the reinsurance contract the transfer of the reserves to the reinsurer and an immediate transfer of the reserve liability back to the ceding company in the amount of the ModCo deposit.

- At contract inception, the ceding company records a due to/from reinsurer for the difference between the payable to the reinsurer (representing the ModCo deposit) and the receivable from the reinsurer (representing the reserves on the business subject to reinsurance).
- In subsequent periods, the ceding company records any changes in the reserve liability and other activity (e.g., benefit payments and investment income/loss that adjust the ModCo deposit) as a component of the due to/from reinsurer, with the movement in the account balance presented on a net basis in the statement of operations.

This often results in an embedded derivative feature similar to Co-FWH.

ModCo provides the ceding company with capital relief while allowing it to maintain control over the assets. This is beneficial for insurers who want to transfer investment risks, particularly when dealing with long-term products like annuities. The ModCo structure requires careful management of the ModCo reserve adjustment to ensure that the reinsurer is appropriately compensated. This can add administrative complexity to the reinsurance arrangement.

ModCo structures can also differ in the overall tax treatment compared to coinsurance or Co-FWH. Similar to Co-FWH, there are no potential tax impacts from transfer of assets. ModCo differs from Co-FWH in that there is no tax impact related to the reserves as they are also not transferred.

2.6 TAX CONSIDERATIONS

A foreign insurance company, such as an international affiliate or sidecar, may elect to be treated as a U.S. domestic corporation for U.S. federal income tax purposes under Internal Revenue Code (IRC) Section 953(d), provided it meets certain requirements. This decision is based upon the company's business objectives and, as applicable, other investors' tax situations.

When a company elects to be a U.S. taxpayer under IRC 953(d), a foreign company should consider the following:

- **Company tax implications:** The electing foreign insurance company will be subject to U.S. income tax, which can increase the total tax burden for companies located in jurisdictions with low foreign tax rates.
- **Shareholder considerations:** U.S. shareholders may be able to benefit from Dividends Received Deduction (DRD) and qualified dividends income (QDI) treatment

- Additional compliance and reporting obligations may be required, potentially including and not limited to:
 - Filing a U.S. corporate tax return (forms 1120, 8858, etc.)
 - Reporting a detailed list of U.S. shareholders annually
 - Considerations around the life or nonlife character of the entity for U.S. tax purposes, including eligibility of the entity to consolidate with other U.S. companies on day one and related loss utilization impacts.
 - The company may need to satisfy one or more methods to make sure U.S. federal income taxes are guaranteed or reserved for payment up to 10% of the gross income in the year the election is made:
 - Office and assets test: the company, including its affiliates in a consolidated U.S. federal income tax return, must maintain sufficient assets and offices in the U.S. to cover 10% of gross income for the year of the election. A U.S. affiliate may also provide a guarantee for tax payment in place of direct asset satisfaction.
 - If the office and assets test is unmet, a letter of credit must be obtained reserving 10% of gross income as security for the Internal Revenue Service (IRS).

If the foreign insurance company does not elect 953(d), it is subject to the following treatment:

- **Company Tax implications:**
 - Federal excise tax (FET) on insurance premiums between U.S. based and foreign reinsurers (1% of premium)
 - Base Erosion and Anti-Abuse Tax (BEAT), which penalizes U.S. corporations making deductible payments to foreign related parties (subject to thresholds).
 - Controlled Foreign Corporation (CFC) considerations, including the need to report Subpart F income and potential Global Intangible Low-Taxed Income (GILTI)
 - Passive Foreign Investment Company (PFIC) status assessment, which may result in U.S. persons owning less than 10% having phantom income inclusions.
- **Shareholder considerations:** U.S. shareholders would need to consider Related Party Insurance Income (RPII) rules that would lower the threshold for included income under Subpart F.¹⁶

Tax Strategies

Jurisdictional choices can greatly affect tax treatment. U.S. insurers strategically choose international structures that comply with U.S. and local tax regulations, often favoring jurisdictions with tax treaties. Careful tax planning allows insurers to reinvest freed capital, maximizing growth and market competitiveness.

Key tax considerations:

- **Tax efficiency:** Decisions around tax elections, jurisdictional selection, and ownership percentages impact tax treatment for both sponsors and foreign investors.
- **Foreign investor design:** For sidecars with foreign investors, U.S. insurers can implement structures that use U.S. tax treaties to minimize withholding taxes. Options like foreign limited partnerships or

¹⁶ U.S. House of Representatives. Title 26 – Internal Revenue Code (Sections 4371, 59A, 953(d), 953(c)(2), 951–965, 1291–1298). <https://uscode.house.gov/view.xhtml?req=granuleid:USC-2023-title26&edition=2023>

U.S. holding companies can further improve tax efficiency, aligning with both the sponsor's and investors' tax positions.

- **Qualified derivatives:** Some sidecars use qualified derivatives to avoid specific withholding taxes on distributions, creating tax-efficient pathways for foreign capital.

2.7 INSURANCE CAPITAL STANDARDS (ICS)

The International Association of Insurance Supervisors (IAIS) developed ICS, a uniform, risk-based framework for assessing the capital adequacy of large, Internationally Active Insurance Groups (IAIG). IAIGs are insurance companies that operate in multiple countries at significant levels of size and scale. The IAIS has identified 60 IAIG's in 19 jurisdictions as of 28 May 2025.¹⁷

For these IAIGs, the implications of ICS on reinsurance between the U.S. life and annuities market and international jurisdictions may be significant. This section explores the ICS's potential impact on U.S. life and annuities business, the role of international reinsurance jurisdictions, and how the two interact within the broader regulatory framework.

Overview of ICS

The ICS is a global standard aimed at ensuring the financial stability and solvency of IAIGs. Its objective is to provide a capital standard for these international groups, which are defined as those operating in multiple countries and meeting specific size thresholds.¹⁸ The ICS has several key components, including:

- Market-consistent valuation of assets and liabilities, reflecting the economic value of an insurer's balance sheet
- Risk-based capital requirements, calculated across a broad spectrum of risks, including market, credit, insurance, and operational risks
- Capital quality, ensuring that capital resources available to meet regulatory requirements have a strong loss-absorbing capacity

The ICS applies on a group level and does not apply to any single entity in the IAIGs.

The ICS has conducted a monitoring phase (2020-2024), where IAIGs reported their capital levels based on the ICS framework. In this phase, IAIGs were allowed to submit Aggregation Method (AM) data as an alternative approach of determining group capital requirements. Full implementation was adopted by the ICS in December 2024.¹⁹

¹⁷International Association of Insurance Supervisors. (2025). Register of Internationally Active Insurance Groups (IAIGs). <https://www.iais.org/uploads/2025/05/Register-of-Internationally-Active-Insurance-Groups-IAIGs.pdf>

¹⁸ International Association of Insurance Supervisors. (2024). <https://www.iais.org/2024/12/iais-adopts-insurance-capital-standard-and-other-enhancements-to-its-global-standards-to-promote-a-resilient-insurance-sector/>

¹⁹ International Association of Insurance Supervisors. (2024). <https://www.iais.org/2024/12/iais-adopts-insurance-capital-standard-and-other-enhancements-to-its-global-standards-to-promote-a-resilient-insurance-sector/>

Interaction between ICS and International Reinsurance Jurisdictions

The implementation of the ICS may have significant implications for the use of international reinsurance jurisdictions by U.S. life and annuities insurers. Insurers using international reinsurance as a means of reducing capital requirements may face challenges under the ICS framework in situations where the ICS capital requirements are higher. Below are some key areas of interaction that may drive higher ICS capital requirements:

Capital Adequacy and Risk Transfer

Under the ICS, capital adequacy is assessed on a consolidated group basis, taking into account the risks transferred through reinsurance. International reinsurance arrangements must be carefully structured to ensure that the risk transfer is recognized for ICS purposes. This means that life insurers using international reinsurance need to demonstrate that the reinsurance arrangements genuinely reduce risk and are not solely used for capital relief.

The ICS framework may limit the benefits of reinsurance with international jurisdictions that do not meet certain solvency and regulatory standards. For instance, if an international reinsurer operates from a jurisdiction that is not recognized as an equivalent-outcomes jurisdiction under ICS, the ICS requirements may be greater than the local requirements, and the capital benefits of such reinsurance could be diminished.

As a result, life and annuity insurers may shift their reinsurance arrangements toward jurisdictions with recognized equivalency to maintain capital efficiency under the ICS.

Opportunities and challenges

The convergence of the ICS with the international reinsurance landscape presents both opportunities and challenges for U.S. life and annuity insurers.

Opportunities

- Use of ICS equivalent outcomes jurisdictions: Insurers that strategically align their reinsurance arrangements with jurisdictions recognized by the IAIS can benefit from streamlined operations.
- Strengthening Risk Management: The ICS benefits insurers to adopt strong risk management practices. U.S. life and annuities insurers that proactively enhance their risk governance, especially in relation to reinsurance, will be better equipped to meet ICS requirements while optimizing their capital structure.
- Global Harmonization: For globally active insurers, the ICS represents an opportunity to benefit from a more harmonized capital framework, reducing the need to navigate multiple, often conflicting, regulatory requirements across different jurisdictions.

Challenges

- Increased Regulatory Scrutiny: International reinsurance transactions will likely face increased scrutiny under the ICS, with a focus on the economic substance of risk transfer. Insurers will need to provide more robust documentation and demonstrate that their reinsurance arrangements meet the ICS's risk-based requirements.

- Potential Capital Strain: For insurers with significant exposure to non-equivalent outcomes jurisdictions, the ICS may impose additional capital requirements, leading to a potential capital strain. This could affect their solvency ratios and reduce the financial benefits of international reinsurance.
- Complexity in Compliance: Navigating both the ICS and the varying capital regimes of international jurisdictions may increase operational complexity for insurers, requiring enhanced compliance and risk management capabilities.

As the ICS enters its full implementation phase, U.S. life insurers will need to adapt their reinsurance strategies, considering both the benefits and challenges posed by international jurisdictions and how those jurisdictions are considered under ICS.

2.8 PRODUCT SPECIFIC CONSIDERATIONS AND TRENDS

This section discusses product trends and product specific drivers for the transactions during recent years.

Product Trends

Although any U.S. life and annuity product can be considered for international reinsurance, the most commonly reinsured products tend to have the following characteristics:

- Medium to long duration
- Upfront premiums with predictable cashflows
- Statutory reserve levels that exceed the insurer's internal assessment of economic liabilities

These types of products in international jurisdictions tend to allow for the most investment flexibility and the opportunity to realize higher yield potential, as well as potential reserve and capital efficiencies.

Products most commonly reinsured through international reinsurance in recent years have been:

- Deferred annuities: fixed indexed annuity (FIA), fixed annuity (FA), multi-year guaranteed annuity (MYGA)
- Structured settlements which tend to have very long durations
- Pension risk transfer

Reinsurance of life insurance and health insurance, including long-term care insurance, tends to be less common due to the existence of recurring premiums, which tend to attract less favorable treatment under certain international reinsurance regimes. Paid-up policies tend to receive more favorable capital requirements. However, in the Author's experience, there are a number of international reinsurance transactions that have included no lapse guarantee universal life products.

2.9 ACTUARIAL GUIDELINE LV (AG55)

Actuarial Guideline LV (AG55), adopted by the National Association of Insurance Commissioners (NAIC) in August 2025,²⁰ establishes a regulatory framework for evaluating the adequacy of reserves associated with

²⁰ National Association of Insurance Commissioners. (2025). *Actuarial Guideline LV (AG55)*. <https://content.naic.org/sites/default/files/committees-pending-action-aglv.pdf>

asset-intensive life reinsurance transactions. It addresses reserve adequacy when U.S. life insurers cede business to reinsurers that are not subject to U.S. state regulatory oversight or do not produce a VM-30 actuarial memorandum.

Purpose

AG55 applies to reinsurance arrangements that may otherwise fall outside the scope of traditional regulatory review. It requires insurers to demonstrate that their reserves remain sufficient after entering into reinsurance agreements, particularly when the assuming reinsurer is not subject to the same regulatory standards as the ceding company.

Scope

AG55 applies to life insurers that cede asset-intensive reinsurance in transactions 1/1/2016 or later, who are not required to submit a VM-30 memorandum, and meet any of the following thresholds by counterparty²¹:

- Reserve credit or modified coinsurance reserve exceeding \$5 billion.
- Reserve credit or modified coinsurance reserve exceeding \$1 billion and 5% of gross reserves.
- Reserve credit or modified coinsurance reserve exceeding \$500 million and 10% of gross reserves.
- Reserve credit or modified coinsurance reserve exceeding \$100 million and 20% of gross reserves.

These thresholds capture transactions that pose material risk to the insurer's balance sheet and policyholder obligations. Additionally, the ceding company's appointed actuary may determine to include transactions regardless of transaction date.

Key Requirements

1. Asset Adequacy Testing (AAT)

Insurers must perform AAT under moderately adverse conditions. The guideline requires a mandatory run where the starting asset amount is equal to the Post-Reinsurance Reserve. At the company's discretion, an alternative run may also be performed using an increased amount of starting assets. For this alternative run, the appointed actuary should provide justification for this higher amount.

The AAT runs must use either²²:

- The actual assets allocated to support the reinsured liabilities, or
- A hypothetical asset portfolio constructed using conservative assumptions that reflect the characteristics of the liabilities.

²¹ National Association of Insurance Commissioners. (2025). Actuarial Guideline LV (AG55). <https://content.naic.org/sites/default/files/committees-pending-action-aglv.pdf>

²² National Association of Insurance Commissioners. (2025). Actuarial Guideline LV (AG55). <https://content.naic.org/sites/default/files/committees-pending-action-aglv.pdf>

2. Actuarial Documentation

The appointed actuary must prepare a report that includes²³:

- A description of the assets used in testing.
- Identification of risks associated with the reinsurance transaction.
- Justification for the assumptions and methodologies applied.
- A conclusion on whether reserves are adequate.

3. Risk Indicators and Regulatory Review

AG55 outlines several indicators that may prompt additional scrutiny, including:

- Absence of a VM-30 memorandum from the assuming reinsurer.
- Significant reserve reductions resulting from the reinsurance transaction.
- Use of assets not permitted under the guideline.
- Concerns about the financial condition or collectability of the reinsurer.

AG55 builds upon earlier guidelines such as AG51 and AG53, reflecting a broader regulatory effort to enhance transparency and rigor in reinsurance practices. It is part of the NAIC's ongoing initiative to strengthen oversight of international and affiliated reinsurance transactions.²⁴

Impacts on Reinsurance Transactions

AG55 introduces regulatory expectations that may materially influence how reinsurance transactions are structured, executed, and evaluated. These impacts are particularly relevant for transactions with assuming reinsurers that are not subject to U.S. state regulatory oversight or do not produce a VM-30 actuarial memorandum.

Operational Implications

AG55 increases the documentation and analytical requirements on ceding insurers. To comply, insurers must coordinate closely with reinsurers to obtain sufficient data and support for reserve adequacy testing. This may require reinsurers to provide detailed asset information and support actuarial modeling efforts. As a result, treaty execution timelines may lengthen, and internal governance processes may need to be enhanced to ensure compliance.

Financial Impacts

The ability to recognize reserve credit from reinsurance transactions may be constrained by regulators if the insurer cannot demonstrate that reserves remain adequate after the transaction. In some cases, insurers may need to hold additional reserves or to restructure transactions to maintain their financial position under statutory reporting.

²³ National Association of Insurance Commissioners. (2025). *Actuarial Guideline LV (AG55)*. <https://content.naic.org/sites/default/files/committees-pending-action-aglv.pdf>

²⁴ National Association of Insurance Commissioners. (2025). *Actuarial Guideline LV (AG55): Application of the Valuation Manual for Testing the Adequacy of Reserves Related to Certain Life Reinsurance Treaties*. https://content.naic.org/sites/default/files/inline-files/AG%2055%28adopted%29_1.pdf

Strategic Impacts

AG55 may influence long-term reinsurance strategy in several ways:

- Insurers may prefer counterparties that can provide VM-30 equivalent documentation or are subject to comparable regulatory oversight.
- Treaty terms may evolve to include stronger collateral provisions or asset control mechanisms to support reserve adequacy.
- Insurers may choose to limit the size or scope of transactions to remain below AG55 applicability thresholds.

These shifts are likely to promote greater alignment between reinsurance practices and regulatory expectations, encouraging more transparent and risk-sensitive treaty design.

Section 3. International Jurisdiction Overview

3.1 OVERVIEW

3.1.1 KEY INFORMATION GATHERED

Building upon the key considerations laid out in the previous section, this section explores the attributes of various jurisdictions in which international reinsurance may be pursued. Key information is presented such as current market activity, licensing requirements, the type of business being reinsured and insights from those regulators and industry bodies who participated in a survey for this study.

Reserving and capital requirements for each jurisdiction are covered separately in [Section 4: Capital and Reserving Framework](#).

The researchers relied on publicly available information listed in the [References](#) section. Researchers also conducted interviews with representatives from the regulators and industry bodies in the jurisdictions (for those that have agreed to participate in the survey). Jurisdictions where the researchers were able to gather input from regulators and/or industry bodies have more information reflecting direct input from regulators and the industry.

The SOA and the researchers are very thankful for the active participation of regulators and industry bodies and participants are acknowledged in [Section 5: Acknowledgments](#).

3.1.1 REGULATOR AND INDUSTRY BODY OUTREACH

The researched jurisdictions are listed in Table 2 with active links for ease of navigation.

Table 2

Section / jurisdiction	Regulator	Industry bodies
3.2 Bermuda	<i>Bermuda Regulatory Authority ("BMA")</i> Website: Regulatory, Monetary, and Financial Advisory Body of Bermuda – BMA	<i>Bermuda International Long-Term Insurers and Reinsurers ("BILTIR")</i> Website: BILTIR – Bermuda International Long Term Insurers and Reinsurers
3.3 Cayman Islands	<i>Cayman Islands Monetary Authority ("CIMA")</i> Website: Monetary, Regulatory and Advisory Body of the Cayman Islands- CIMA	<i>Cayman International Reinsurance Companies Association ("CIRCA")</i> Website: CIRCA – Cayman International Reinsurance Companies Association
3.4 Puerto Rico	<i>The Office of the Commissioner of Insurance ("OCS")</i> Website: OCS Oficina del Comisionado de Seguros	<i>Puerto Rico International Insurers Association ("PRIIA")</i> Website: HOME PRIIA

<u>3.5 Barbados</u>	<i>Insurance Division of the Financial Services Commission</i> Website: Financial Services Commission Financial Services Commission – Home	<i>Insurance Association of the Caribbean ("IAC")</i> Website: IAC Home The Insurance Association of the Caribbean Inc.
<u>3.6 Bahamas</u>	<i>Insurance Commission of The Bahamas</i> Website: Home Insurance Commission of The Bahamas	<i>Bahamas Insurance Association ("BIA")</i> Website: BIA
<u>3.7 Guernsey</u>	<i>Guernsey Financial Services Commission ("GFSC")</i> Website: Guernsey Financial Services Commission — GFSC	<i>Guernsey International Insurance Association ("GIIA")</i> Website: GIIA Guernsey International Insurance Association
<u>3.8 Hong Kong</u>	<i>Insurance Authority ("IA")</i> Website: Insurance Authority – Index Page	<i>Hong Kong Federation of Insurers ("HKFI")</i> Website: HKFI – The Hong Kong Federation of Insurers
<u>3.9 Luxembourg</u>	<i>Commissariat Aux Assurances ("CAA")</i> Website: Home – Commissariat aux Assurances	Association of Insurance Companies (ACA) Website: ACA The voice of the Insurance and Reinsurance industry
<u>3.10 Jersey</u>	<i>Jersey Financial Services Commission ("JFSC")</i> Website: Jersey Financial Services Commission	<i>Jersey International Insurance Association ("JIIA")</i> Website:
<u>3.11 Malta</u>	<i>Malta Financial Services Authority ("MFSA")</i> Website: Home – MFSA	<i>Malta Insurance Association ("MIA")</i> Website: Home – Insurance Association Malta
<u>3.12 Singapore</u>	<i>Monetary Authority of Singapore ("MAS")</i> Website: Monetary Authority of Singapore	<i>Life Insurance Association Singapore ("LIA")</i> Website: Life Insurance Association Singapore
<u>3.13 Gibraltar</u>	<i>Gibraltar Financial Services Commission ("GFSC")</i> Website: GFSC – Gibraltar Financial Services Commission – Home	<i>Gibraltar Insurance Association ("GIA")</i> Website: Gibraltar Insurance Association GIA Home Gibraltar Insurance Entities
<u>3.14 Isle of Man</u>	<i>Isle of Man Financial Services Authority ("IOMFSA")</i>	<i>IOM Insurance Association and IOM Captive Association</i> Website: IOM Insurance Association

	Website: Isle of Man Financial Services Authority	
3.15 Ireland	<i>Central Bank of Ireland (CBI)</i>	<i>Insurance Ireland</i>
	Website: Home Central Bank of Ireland	Website: Insurance Ireland – Insurance Ireland

3.2 BERMUDA

3.2.1 KEY FACTS AND FIGURES

Table 3 summarizes key information gathered on Bermuda.

Table 3

Components	Summary information
Political and legal system	<ul style="list-style-type: none"> ▪ British Overseas Territory ▪ Common law with right of appeal to the privy council of the UK government
Regulator and industry body	<ul style="list-style-type: none"> ▪ Bermuda Monetary Authority (BMA) ▪ Bermuda International Long-Term Insurers and Reinsurers (BILTIR)
Status with U.S. and Europe regulators	<ul style="list-style-type: none"> ▪ NAIC qualified jurisdiction – Yes ▪ NAIC reciprocal jurisdiction – Yes ▪ Solvency II equivalent jurisdiction – Yes
Sovereign credit rating	<ul style="list-style-type: none"> ▪ A+ (S&P), A2 (Moody's)
Capital and reporting requirements	<ul style="list-style-type: none"> ▪ Accounting standards follow IFRS or recognized GAAP (e.g., U.S., UK) with specified modifications for statutory reporting (Bermuda Statutory) ▪ Reserving on an economic basis ▪ Bermuda Solvency Capital Requirement (BSCR), a blend of factor-based and balance sheet shock solvency capital requirements, with flexibility to apply company specific parameters under a defined framework, with regulatory approval
Number of licensed entities	<ul style="list-style-type: none"> ▪ YE 2022 (180), YE 2023 (185), Sept 2024 (197)²⁵ ▪ The number of licensed long-term (life) entities as of September 2024 was 197 comprised of 10 Class A, 13 Class B, 90 Class C, 7 Class D and 77 Class E licenses.

²⁵ [Bermuda Monetary Authority. \(2023\). Annual Report 2023. <https://www.bma.bm/pdfview/9508>](#)

Tax considerations for U.S. insurers	<ul style="list-style-type: none"> U.S. tax treaty – Yes, but very limited and often inapplicable in practice, as it only applies to certain types of income and has more restrictions to qualify than other treaties. Pillar Two tax considerations – Bermuda published the Corporate Income Tax Act,²⁶ which imposes a corporate income tax on large multinational corporations starting 1 January 2025. Companies that have made a Section 953(d) election are expected to have their U.S. income taxes at 21% creditable against any Corporate Income Tax Act liabilities.
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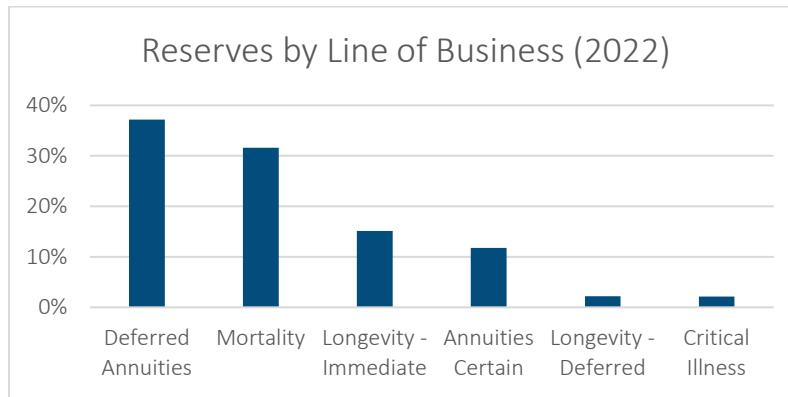
3.2.2 MARKET OVERVIEW AND RECENT ACTIVITY

The life and annuity market in Bermuda has seen significant growth over the last five years, expanding the reputation of the insurance property and casualty market, which has been present in Bermuda for decades.

In 2022, the United States accounted for more than 60% of Bermuda long-term insurers' reserves, followed by Asia. European business (including the UK's) represented less than 5%.

Figure 2 summarizes reserves by product in Bermuda in 2022. According to the Bermuda Long-term Insurance Market Analysis and Stress Testing Report,²⁷ deferred annuities were the most material product relative to total reserves, accounting for 37% of the total U.S. \$708 billion reserve. Similarly, the report shows mortality (32%), longevity – immediate (15%), annuities certain (12%), longevity – deferred (2%) and critical illness (2%).

Figure 2



Bermuda is unique in having developed its own reserving and capital framework, Economic Balance Sheet (EBS), which it uses to govern the reserving and capital requirements of long-term life insurers. The framework provides a market and risk-based solvency regime for long-term (life) insurers. The framework is assessed frequently by international regulatory setting bodies, including the NAIC, which granted Bermuda

²⁶ Government of Bermuda. (2023). Corporate Income Tax Act 2023. <https://www.gov.bm/sites/default/files/2023-12>

²⁷ Bermuda Monetary Authority. (2024). Bermuda Long-term Insurance Market Analysis and Stress Testing Report. <https://www.bma.bm/pdfview/8782>

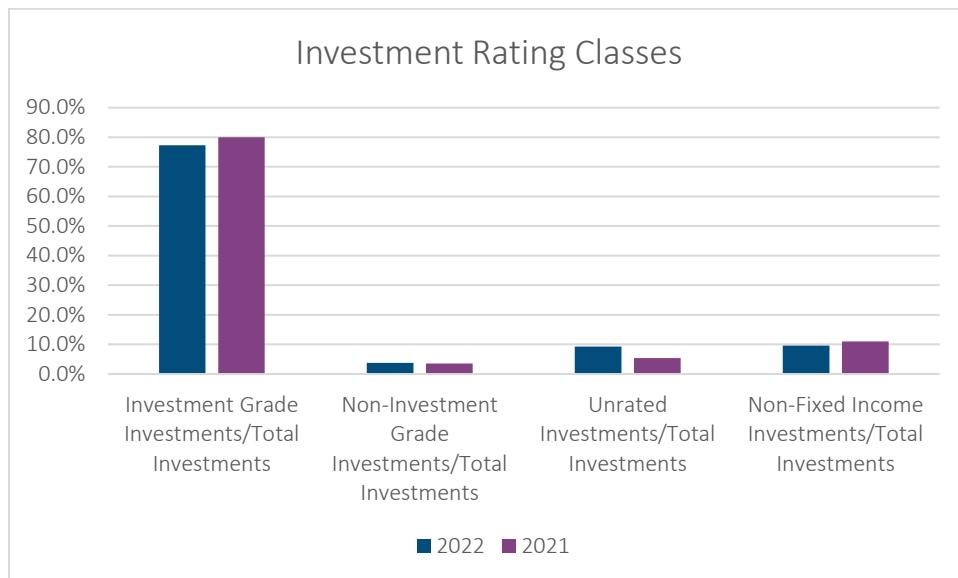
qualified and reciprocal jurisdiction status and the European Commission, which granted Bermuda full Solvency II equivalence.

The status achieved by Bermuda with other regulatory bodies along with the benefits found by reinsurers in managing to an economic and risk-based framework played a significant role in the growth of this jurisdiction. Detailed information on Bermuda's EBS framework and other financial reporting requirements are provided in Section 4.

As stated in the Bermuda Long-term Insurance Market Analysis and Stress Testing Report²⁸, the Bermuda long-term reinsurance market remains well capitalized and has adequate liquidity. Bermuda's long-term insurers made US\$61.3 billion of payments to policyholders in 2022. This figure has increased to over US\$80 billion to U.S. policyholders alone in 2023, making the total amount paid by Bermuda's long-term insurers to U.S. policyholders from 2021 to 2023 nearly US\$200 billion. This points to the global importance of the Bermuda long-term insurance sector, and the role which Bermuda insurers play in reducing the global protection gap, which is the difference between the actual insurance coverage persons have and the coverage that they ideally require to protect against various risks.

Bermuda reinsurers largely hold high quality assets. In 2022, fixed income securities of investment grade rating made up 77.3% of total investments. Securities with sub-investment grade ratings made up 3.8% of total investments, 9.3% of total investments were unrated, and 9.6% of total investments are not classed as fixed income. Bonds rated BBB or better composed roughly 94% of total bonds at year-end 2022.

Figure 3



²⁸ [Bermuda Monetary Authority. \(2024\). Bermuda Long-term Insurance Market Analysis and Stress Testing Report.](https://www.bma.bm/pdfview/8782)
<https://www.bma.bm/pdfview/8782>

While high-quality assets are most common, Bermuda also offers the flexibility to hold alternative assets subject to regulatory oversight. In fact, there are several firms owned or supported by private equity. This trend has increased significantly in recent years.²⁹

3.2.3 LICENSE REQUIREMENTS

Bermuda has a multi-license system of regulation, which categorizes licenses according to the size and type of business. The commercial long-term sector is broadly classified by the following license classes:

- **Class A:** Single-parent, long-term captive* insurance company underwriting only the long-term business risks of the owners of the insurance company and/or affiliates of the owners. Class A insurers are required to maintain capital and surplus equal to, or in excess of, the minimum solvency margin (an amount derived from an asset-based formula) subject to a \$120,000 floor.
- **Class B:** Multi-owner, long-term captive insurance company, owned by unrelated entities, underwriting only the long-term business risks of the owners and affiliates of the owners and/or risks related to or arising out of the business or operations of their owners and affiliates. Class B insurers are required to maintain capital and surplus equal to or in excess of the minimum solvency margin (an amount derived from an asset-based formula), subject to a US\$250,000 floor.
- **Class C:** Long-term insurers and reinsurers with total assets of less than US\$250 million. Class C insurers are required to maintain eligible capital and surplus equal to, or in excess of, the ECR, which corresponds to the greater of (1) Bermuda Solvency Capital Requirement (BSCR), (2) an asset-based formula, and (3) a US\$500,000 floor.
- **Class D:** Long-term insurers and reinsurers with total assets of US\$250 million or more but less than US\$500 million. Class D insurers are required to maintain eligible capital and surplus equal to, or in excess of, the ECR, which corresponds to the greater of (1) BSCR, (2) an asset-based formula, and (3) a \$4 million floor.
- **Class E:** Long-term insurers and reinsurers with total assets of more than US\$500 million. Class E (re)insurers are required to maintain eligible capital and surplus equal to, or in excess of, the ECR, which corresponds to the greater of (1) BSCR, (2) an asset-based formula, and (3) an US\$8 million floor.

* Note that captives are separate legal undertakings within a group structure whose only objective is to reinsurance the risks of the group

²⁹ Bermuda Monetary Authority. (2023). Supervision and Regulation of PE Insurers in Bermuda. <https://www.bma.bm/pdfview/87822023-12-18-19-22-35-Supervision-and-Regulation-of-Private-Equity-Insurers.pdf>

Table 4 displays the breakdown of **new** licenses per class from 2022 to 2024.

Class	2022	2023	2024
C	4	3	2
D	0	0	0
E	0	1	5

As Table 4 shows, there has been a shift from class C to class E licenses over this time period.

Additional information on Bermuda licensing requirements can be found on the licensing section of the BMA website³⁰.

3.2.4 ADDITIONAL INSIGHTS FROM THE REGULATOR AND INDUSTRY BODIES

This section reflects the input provided by the BMA (regulator) as part of a survey conducted by the researchers. Unless stated otherwise, the information provided here reflects the perspective of survey participants.

Bermuda's regulatory framework is aligned to the Insurance Core Principles of the International Association of Insurance Supervisors (IAIS). The BMA is a founding member of the IAIS and actively participates in the organization's work as a global standard-setting body for insurance regulators, with representation at nearly all committees and subcommittees, and holds leadership positions.

BMA's approach to supervision

The BMA's supervisory approach is risk-based and forward-looking and adheres to international best practices. The BMA's regulatory and supervisory frameworks have been assessed by international regulatory setting bodies, including the European Commission, which granted Bermuda the status as having Full Solvency II equivalence, and the NAIC, which granted Bermuda status as a qualified and reciprocal jurisdiction.

Focus areas and priorities shared by the BMA

The three principal areas on which the BMA is currently focused are:

- **Meeting stakeholder interest in Bermuda and the life insurance regulatory framework.** Significant interest from multiple stakeholders reflects the fact that no two insurance regulatory regimes are the same, given the characteristics of each market vary, which leads to insurers of different nature, scale and complexity being present within them. The BMA recognizes that its market is a global reinsurance market which plays a key role in closing the global protection gap. If this gap exists, from a macroeconomic level, it places a significant burden on the affected government,

³⁰ [Bermuda Monetary Authority. Insurance Licensing. <https://www.bma.bm/insurance-licensing>](https://www.bma.bm/insurance-licensing)

often increasing social welfare costs; whilst from a microeconomic level, the presence of a global protection gap may leave individuals unprepared for retirement, leading to higher elderly poverty rates and affecting the quality of life. Further, the BMA has increased active reach out and engagement with the NAIC in recent years, enabling it to stay ahead of industry trends and adapt quickly.

- **Meeting the demand for appropriately skilled and experienced talent.** The BMA recognizes that the nature, scale and complexity of life (re)insurance requires appropriately skilled and experienced talent to facilitate the correct outcomes for the companies under their supervision. As a result, the BMA has developed a team with diverse specialist expertise to manage these needs.
- **Commitment to harness responsible innovation and prudent risk management.** Recent regulatory changes have focused on asset and liquidity risk. As detailed in the BMA's Liquidity Risk in the Bermuda Long-term Insurance Market³¹ white paper, long-term insurers must regularly report the results of a variety of liquidity stress tests. The industry displays strong resilience against liquidity stress overall, but liquidity risk management remains a significant focus. The BMA continues to engage with the long-term sector on the outcomes of its tailored liquidity stress tests to ensure robust liquidity risk management practices are maintained.

The BMA's current priorities for the insurance sector, as per its 2024 business plan,³² include the following:

- **Embedding frameworks into the Bermuda commercial regulatory regime.** Integrating and embedding the Common Framework for Internationally Active Insurance Groups and Holistic Framework for Systemic Risk³³ into the Bermuda commercial regulatory regime, including the resolution regime and the implementation of the Insurance Capital Standard.
- **Environmental, social and governance (ESG) strategy.** Further integrating ESG strategy into the regulatory framework, particularly in relation to climate change. To assist in leveraging ESG opportunities, the BMA will provide guidance on climate risk financial disclosures and publish a report with results from an insurance industry survey on climate risk, protection gaps and diversity, equity and inclusion (DEI) initiatives.
- **Accounting developments.** Presenting relevant guidance on incorporating major insurance accounting changes into the regulatory reporting framework. This includes updates such as IFRS 17 Insurance Contracts under International Financial Reporting Standards (IFRS), and FASB Accounting Standards Update No. 2018-12, *Targeted Improvements to the Accounting for Long-Duration Contracts* under U.S. GAAP.
- **Incorporating holding company oversight.** Reviewing and amending the insurance group supervision regime to incorporate holding company oversight for insurance groups.

The BMA supervisory team

The BMA has multiple departments, including Licensing, Supervision, Actuarial, Anti Money Laundering (AML), Authorizations, Policy, Financial Stability and Enforcement, which collaborate to supervise and

³¹ [Bermuda Monetary Authority. \(2024\). Liquidity Risk in the Bermuda Long-term Insurance Market. <https://www.bma.bm/pdfview/9648>](https://www.bma.bm/pdfview/9648)

³² [Bermuda Monetary Authority. \(2024\). Business Plan 2024. <https://www.bma.bm/pdfview/8817>](https://www.bma.bm/pdfview/8817)

³³ [International Association of Insurance Supervisors. \(2019\). Holistic Framework for Systemic Risk in the Insurance Sector. \[www.iais.org/uploads/2022/01/191114-Holistic-Framework-for-Systemic-Risk.pdf\]\(https://www.iais.org/uploads/2022/01/191114-Holistic-Framework-for-Systemic-Risk.pdf\)](https://www.iais.org/uploads/2022/01/191114-Holistic-Framework-for-Systemic-Risk.pdf)

regulate Bermuda long-term life insurers over their entire lifecycle. The organization's headcount increased to 302 as of 31 December 2024, from 273³⁴ at year-end 2023.

Industry representation

This section reflects the input provided by BILTIR (industry body) as part of a survey conducted by the researchers. Unless stated otherwise, the information provided here reflects the perspective of survey participants.

Bermuda has an active and established industry body (Bermuda International Long-Term Insurers and Reinsurers, known as BILTIR) which works collaboratively across its membership and with the BMA to be a consistent and coherent voice for any concerns of the long-term insurance and reinsurance sector in Bermuda. BILTIR has several committees currently established to focus on specific topics:

- Global Advocacy Committee
- Risk and Capital Committee
- Regulatory/Legal Committee
- Tax Committee
- Community Outreach Committee

BILTIR highlighted that there are many misconceptions associated with the use of international reinsurance and its active role in stakeholder education and global advocacy.

Important messages relayed by BILTIR include:

- Private capital is well suited to the insurance business because of its long-term investment approach and alignment with the stable and predictable nature of insurance cash flows.
- The sector is well-capitalized and holds quality assets, providing security and assurance for policyholders and stability for the industry.
- There has been an increased risk management and governance focus through the enhanced Prudent Person Principle³⁵ requirements, where factors such as the choice of advisors, asset/liability matching, credit monitoring, liquidity risk management, and back-office capabilities all limit the potential downside risk.
- The overall capital requirements mandated of the Bermuda Solvency Capital Requirement (BSCR) is comparable to other capital frameworks such as Solvency II, even if individual components or elements of the frameworks are different. This overall comparability between the two regimes is often lost in the narratives that home in on certain components and ignore the overall Total Asset Requirement (TAR).

³⁴ [Bermuda Monetary Authority. \(2024\). Annual Report 2024. <https://www.bma.bm/pdfview/10134>](https://www.bma.bm/pdfview/10134)

³⁵ [Bermuda Monetary Authority. \(2024\). Consultation Paper – Proposed Instructions and Guidance on the Application of the Prudent Person Principle. <https://www.bma.bm/viewPDF/documents/2024-12-11-11-27-51-Consultation-Paper---Proposed-Instructions-and-Guidanceon-the-Application-of-the-Prudent-Person-Principle.pdf>](https://www.bma.bm/viewPDF/documents/2024-12-11-11-27-51-Consultation-Paper---Proposed-Instructions-and-Guidanceon-the-Application-of-the-Prudent-Person-Principle.pdf)

Bermuda is an important contributor in filling the protection/retirement gap. Bermuda's long-term insurance industry has experienced growth over the last few years primarily driven by demand from direct insurers for exposure and capital management and by an aging population with improved mortality. A 2023 report by the Global Federation of Insurance Associations (GFIA), estimated the global pension gap at US\$1 trillion annually with expectation to continue growing even further. It also reported that people over 65 grew from 6.8% in 2002 to 9.3% in 2020, increasing the demand for pension disbursements. This translates into an increased need for long-term reinsurers support in helping to close this gap.

3.3 CAYMAN ISLANDS

3.3.1 KEY FACTS AND FIGURES

Table 5 summarizes key information gathered on the Cayman Islands.

Table 5

Components	Summary information
Political and legal system	<ul style="list-style-type: none"> ▪ British Overseas Territory ▪ Common law with right of appeal to the privy council of the UK government
Regulator and industry body	<ul style="list-style-type: none"> ▪ Cayman Islands Monetary Authority (CIMA) ▪ Cayman International Reinsurance Companies Association (CIRCA)
Status with U.S. and European regulators	<ul style="list-style-type: none"> ▪ NAIC qualified jurisdiction – No ▪ NAIC reciprocal jurisdiction – No ▪ Solvency II equivalent jurisdiction – No
Sovereign credit rating	<ul style="list-style-type: none"> ▪ Aa3 (Moody's)
Capital and reporting requirements	<ul style="list-style-type: none"> ▪ Internationally recognized accounting standards (e.g., IFRS, U.S. GAAP or U.S. statutory) with modifications/permitted practices allowed subject to regulatory approval. ▪ Insurers solvency capital requirement is the Prescribed Capital Requirement ("PCR") which can be calculated via standard formula or Internal Capital Model ("ICM") that is aligned to Insurance Core Principles 17 published by the IAIS and approved by the regulator. U.S. NAIC RBC is most commonly used. Modifications to such models are also permissible subject to regulatory approval.
Number of licensed entities	<ul style="list-style-type: none"> ▪ Class B: YE 2022 (642), YE 2023 (658), YE 2024 (670) ▪ Class D: YE 2022 (7), YE 2023 (8), YE 2024 (9)³⁶

³⁶ Cayman Islands Monetary Authority. Cayman Islands Insurance Statistics. <https://www.cima.ky/insurance-statistics>

Tax considerations for U.S. insurers	<ul style="list-style-type: none"> ▪ U.S. tax treaty – No. ▪ Pillar Two tax considerations – No plans to introduce Pillar Two tax and will remain tax-neutral.
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3.3.2 MARKET OVERVIEW AND RECENT ACTIVITY

The Cayman Islands' financial services sector is predominantly U.S.-facing, and approximately 90% of all insured risks are North America based. Approximately 70% of the international insurance market in the Cayman Islands is self-insurance vehicles (captives) while 30% are commercial insurance and reinsurance companies³⁷. The market for long-term life and annuity business has been growing in recent years.

One notable distinction for the Cayman Islands is that it elected not to pursue Solvency II equivalency, offering prospective reinsurers an alternative legislative and regulatory regime which can offer flexibility and less prescriptive approaches than other jurisdictions. This allows reinsurers to adhere to a principle-based framework more tailored to their specific business.

3.3.3 LICENSE REQUIREMENTS

Under the Insurance Act, the Cayman Islands Monetary Authority (CIMA) may issue insurance licenses to insurance/reinsurance businesses, through a formal application process.^{38,39}

The Cayman Islands has a multi-license system of regulation, which categorizes licensees primarily according to the size and type of business. The commercial long-term sector is one of the following license classes. Insurers often choose Class B(iii) as they can use a local insurance manager (IM), and this can provide a quicker route to the market:

- Class B: Separated into three subclasses, (i-iii), depending on the proportion of premiums written by the insurer from related parties. Class B(iii) is for entities that write less than 50% of their business from related parties.
- Class D: Stand-alone self-managed entities that have a majority of their team on-island.

The licensing process has typically taken between one and three months, depending upon the completeness of the application as documented further on the CIMA website.⁴⁰

³⁷ Cayman Islands Monetary Authority. Cayman Islands Insurance Statistics. <https://www.cima.ky/insurance-statistics>

³⁸ Cayman Islands Monetary Authority. (2021). Regulatory Policy: Licensing for Class B Insurers. https://www.cima.ky/upimages/regulatorymeasures/RegulatoryPolicy-LicensingforClassBInsurersFINAL_1614287757.pdf

³⁹ Cayman Islands Monetary Authority. (2023). Regulatory Policy: Licensing for Class D Insurers. https://www.cima.ky/upimages/regulatorymeasures/RegulatoryPolicy-LicencingforClassDInsurers_1685635410.pdf

⁴⁰ Cayman Islands Monetary Authority. Cayman Islands Insurance Licensing Requirements. <https://www.cima.ky/insurance-licensing-requirements>

3.3.4 ADDITIONAL INSIGHTS FROM THE REGULATOR AND INDUSTRY BODIES

CIMA has a longstanding reputation as a global regulatory authority. Companies value CIMA's status as a founding member of the IAIS, which underpins its global reputation.

According to the 2023 CIMA annual report,⁴¹ the regulator expects continued diversification in the international insurance market within the Cayman Islands, particularly with the formation of more commercial insurance and reinsurance companies. The reinsurance sector represents a rapidly growing area for new insurance ventures, as evidenced by the establishment of asset-intensive reinsurance firms over the past five years.

CIMA also notes that technological innovations are also gaining momentum in the Cayman Islands, highlighted by the emergence of Insurtech companies leveraging artificial intelligence. As new risks and threats arise, impacting the insurance sector on a macroeconomic level, CIMA remains optimistic about the sector's growth trajectory. This growth stems from ongoing efforts to address protection gaps, respond to intensified economic challenges and embrace technological advances.

As highlighted in the 2023 CIMA annual report, the following are areas in which CIMA has focused efforts throughout 2023 to support its 2020-23 strategic plan:

- Strengthen capacity and capabilities for the successful delivery of CIMA's principal functions.
- Enhance the regulatory response to innovations in business models and technologies.
- Reform and retool operational structures and supervisory approaches to better implement a risk-based approach.
- Develop and implement a renewed framework for effective stakeholder engagement.

Industry representation

This section reflects the input provided by CIRCA (industry body) as part of the survey conducted by the researchers. Unless stated otherwise, the information provided here reflects the perspective of survey participants.

Overview

Cayman has an active and established industry body (Cayman International Reinsurance Companies Association, known as CIRCA) made up of over 50 full and associate members. CIRCA is the voice of the commercial reinsurance industry in the Cayman Islands. CIRCA strives to represent the common interests of members with regulatory bodies and to promote a positive reputation for the jurisdiction.

What attracts members to the Cayman Islands?

⁴¹ Cayman Islands Monetary Authority. (2023). Annual Report 2023.
https://www.cima.ky/upimages/publicationdoc/AnnualReportandAu_1726167169.pdf

A company may, at the time of licensing and with regulatory approval, select an accounting and capital framework that best aligns with its business plan, the lines of business it intends to reinsure, and the primary jurisdiction from which it will assume risk. The Cayman Islands' continued commitment to tax neutrality strengthens its position as a hub for attracting global capital to support these liabilities, adding essential capacity to the markets served by CIRCA members.

U.S. landscape and anticipated changes

Among life and annuity reinsurers in the Cayman Islands, the most common liabilities currently assumed from the U.S. at the time of writing are general account retirement products such as MYGA, FIA and FA.

The market for U.S. retirement products is growing rapidly and is very competitive. Writing companies are both capital and yield constrained to support that growth and maintain competitive products that offer the best value to direct customers.

VM-22 and principle-based annuity reserves in the U.S. could lead to insurers revisiting the use of reinsurance. It could also lead to greater product differentiations in the retirement market. Cayman Islands reinsurers may see a greater diversification of risks assumed as a result. CIRCA anticipates the U.S. market for retirement products to grow faster than the domestic capital to support it; Cayman Islands reinsurers stand ready to provide capacity to that market.

Challenges

CIRCA believes the Cayman Islands faces one primary challenge with multiple facets: perception. Therefore, CIRCA has provided specific comments on three topics:

1. Transparency: There is a view that the Cayman Islands is not transparent. CIRCA member companies routinely share their financials with all relevant stakeholders such as current and prospective cedants, ceding company regulators, rating agencies, auditors and CIMA. It is common practice for CIMA to discuss a new transaction with the ceding company's regulator prior to approving the transaction. CIMA has more than 70 cooperation agreements with international regulatory authorities, including memoranda of understanding with the NAIC and multiple state departments of insurance. Parties requiring information can get that information.
2. Capital: There is a suggestion that Cayman Islands reinsurers can hold a "fraction of the capital" required elsewhere. This may stem from a misunderstanding of minimum and prescribed capital requirements. In practice, Cayman-based life and annuity reinsurers use Internal Capital Models (ICMs) reviewed and approved by CIMA in the licensing process. In that review, the ICM is stress tested and calibrated to a VaR 99.5% over a one-year time horizon.
3. Security: There is a belief that Cayman offers less security for ceding companies since it is not a qualified or reciprocal jurisdiction. Member companies are currently considered unauthorized reinsurers when transacting with a U.S. cedant. As such, for ceding insurers to receive reserve credit for reinsurance, Cayman based reinsurers are required to collateralize at the U.S. statutory reserve level for all transactions and many transactions provide for overcollateralization. The collateral assets are subject to investment guidelines negotiated with the cedent.

Regulatory interaction

CIRCA's Regulatory Committee and officers have quarterly meetings with CIMA. CIRCA also interacts with CIMA at NAIC meetings and industry conferences. Further, CIRCA members have frequent contact with CIMA representatives and new reinsurance arrangements require CIMA approval.

3.4 PUERTO RICO

3.4.1 KEY FACTS AND FIGURES

Table 6 summarizes the key information gathered on Puerto Rico.

Table 6

Components	Summary information
Political and legal system	<ul style="list-style-type: none"> ▪ U.S. territory with fiscal autonomy
Regulator and industry body	<ul style="list-style-type: none"> ▪ Puerto Rico Office of the Commissioner of Insurance (OCS) ▪ Puerto Rico International Insurers Association (PRIIA)
Status with U.S. and European regulators	<ul style="list-style-type: none"> ▪ NAIC qualified jurisdiction – Recognized as part of the NAIC ▪ NAIC reciprocal jurisdiction – Recognized as part of the NAIC ▪ Solvency II equivalent jurisdiction- No
Sovereign credit rating	<ul style="list-style-type: none"> ▪ D (S&P)
Capital and reporting requirements	<ul style="list-style-type: none"> ▪ Puerto Rico primarily follows U.S. GAAP for financial reporting. International Insurers may follow IFRS or U.S. Statutory standards ▪ Class 5 International Insurers may propose custom Premium to Surplus standards provided they submit an Actuarial Feasibility Study to be approved by the regulator
Number of licensed entities	<ul style="list-style-type: none"> ▪ YE 2022 (13), YE 2023 (14) ▪ The number of licensed, long-term life entities licensed under Class 5 as of December 2023 was 14 and is an increase over prior years⁴²
Tax considerations for U.S. insurers	<ul style="list-style-type: none"> ▪ U.S. tax treaty – No ▪ Pillar Two tax considerations – Puerto Rico's House of Representatives approved a bill proposing minimum tax based on Pillar Two

⁴² Oficina del Comisionado de Seguros de Puerto Rico. (2023). Annual Report 2023. <https://docs.pr.gov/files/OCS/English/Our%20Office/Our%20Office%20%20Annual%20and%20Quarter%20Reports/Informe%20Anual/2023/Annual%20Reports%20OCS%202023%20Eng.pdf>

3.4.2 MARKET OVERVIEW AND RECENT ACTIVITY

Puerto Rico is a member of the NAIC and considered a hybrid jurisdiction where U.S. federal laws apply alongside fiscal autonomy.

In Puerto Rico, an insurance entity can choose to operate under one of two jurisdictions: as an NAIC qualified jurisdiction which follows U.S. statutory requirements, or as a non-NAIC qualified jurisdiction, which follows U.S. GAAP with some flexibility for capital requirements. The non-NAIC option is authorized by the International Insurance Center (“IIC”).

Puerto Rico created the IIC, a division of the Office of the Commissioner of Insurance (or OCS), which provides for the authorization of international insurers and reinsurers in Puerto Rico. The purpose of the IIC is to promote the development of the economy of Puerto Rico by exporting financial and professional services to other countries. Under this framework, several special incentives create a favorable tax environment to attract international insurers and their holding companies to Puerto Rico and support those already established on the island in expanding their presence in the global insurance market.

Activity in the life and annuity market continues to increase – both domestically and from foreign insurers. Puerto Rico has adopted legislation like other international jurisdictions that allows international insurers to create protected cells within their structure. These cells provide legal separation of assets and liabilities for each plan while also offering potential tax advantages.

As stated by PRIA, Puerto Rico is an attractive jurisdiction for insurers based on its fiscal autonomy from, yet otherwise close ties to, the rest of the United States. It has low political risk, as it falls under U.S. sovereignty. The market is well developed, mature and considered large per capita. Puerto Rico's financial sector is also well integrated into the U.S., since it is part of the NAIC. Further, Puerto Rican residents and corporate persons are not required to pay federal income taxes if the sources of income are not U.S. income.

In accordance with the 2024 Puerto Rico Financial Services Review,⁴³ Puerto Rico was removed from the U.S. Treasury's list of high-risk money-laundering jurisdictions, marking a significant milestone and reflecting the enhanced anti-money-laundering (AML) and know-your-customer (KYC) protocols of Puerto Rico's regulatory bodies. This accomplishment opens new avenues for international partnerships and investments.

3.4.3 LICENSE REQUIREMENTS

Insurance and reinsurance businesses are required to hold the appropriate license applicable to the business written. Life and annuity reinsurers are licensed under Class 5 and are subject to a minimum capital requirement of US\$750,000 and a premium-to-surplus ratio according to the Actuarial Feasibility

⁴³ Puerto Rico International Insurers Association. (2024). 2024 Puerto Rico Financial Services Review. <https://www.pria.org/post/2024-puerto-rico-financial-services-review>

Study filed before the regulator. International insurers and reinsurers are subject to an annual contribution based on a premium level ranging from US\$5,000 to US\$75,000.⁴⁴

3.4.4 ADDITIONAL INSIGHTS FROM THE REGULATOR AND INDUSTRY BODIES

This section reflects the input provided by PRIIA (industry body) as part of the survey conducted by the researchers. Unless stated otherwise, the information provided here reflects the perspective of survey participants.

The OCS has a long history of regulatory expertise. Some recent challenges have been related to market misunderstanding of the legislation in Puerto Rico Act 49 -2024, which PRIIA was a driving force to establish. This act clarified that international insurers may assume business from the U.S. but are treated as non-reciprocal jurisdiction reinsurers (see Section 3.3, *Qualified and Reciprocal Jurisdictions*, for more information).⁴⁵ The OCS publishes an annual report; the 2023 report includes discussion of the development of the ILLC.

Puerto Rico has an active and established industry body (Puerto Rico International Insurers Association, known as PRIIA) whose primary objectives are to

- **Promote the jurisdiction.** This objective aims to help put the international center on the agenda, with articles on trends and regulations published frequently, hosting a financial services forum and roadshows.
- **Educate and be a liaison between international and local providers.** Work with local service providers so that they can understand the international insurance industry better.
- **Serve as one voice for the members.** Be a united voice if there are legislative threats. A recent example of where PRIIA acted as a united voice and took action to improve the IIC was passing the legislation of Act 49.

PRIIA does not have formal sub committees but does include groups that cover legal affairs and focus on legislative/legal matters. It also has a marketing group to promote the jurisdiction. Members are highly active to accomplish PRIIA's goals and cooperate across roles despite not having an official committee formed.

PRIIA currently focuses on the following two issues:

1. **Federal excise tax (FET):** Legislation has been proposed by the representatives in congress in Puerto Rico to eliminate the FET for Puerto Rico.
2. **Budget and resources of the OCS:**
 - a. The fiscal and oversight board looks after government spending and has cut allocation to OCS.
 - b. Staffing was reduced from approximately 140 to 70 recently, which is creating some challenges.

⁴⁴ Oficina del Comisionado de Seguros de Puerto Rico. Requisitos de Autorización para Aseguradores Internacionales. <https://www.ocs.pr.gov/aseguradores-internacionales/requisitos-de-autorizacion>

⁴⁵ Ramírez-Aponte, A. J. (2024). ACT 49-2024 – Righting the Course. Puerto Rico International Insurers Association. <https://www.priia.org/post/act-49-2024-righting-the-course>

- c. If the government wants economic development, it is important to have a good regulator and skills within the OCS and IIC.
- d. 60-day license application turnaround not being met due to resource constraints.

3.5 BARBADOS

3.5.1 KEY FACTS AND FIGURES

Table 7 summarizes key information gathered on Barbados.

Table 7

Components	Summary information
Political and legal system	<ul style="list-style-type: none"> ▪ Sovereign nation
Regulator and industry body	<ul style="list-style-type: none"> ▪ Financial Services Commission (FSC) ▪ Insurance Association of the Caribbean (IAC)
Status with U.S. and European regulators	<ul style="list-style-type: none"> ▪ NAIC qualified jurisdiction – No ▪ NAIC reciprocal jurisdiction – No ▪ Solvency II equivalent jurisdiction- No
Sovereign credit rating	<ul style="list-style-type: none"> ▪ B (S&P), B (Fitch), B3 (Moody's)
Capital and reporting requirements	<ul style="list-style-type: none"> ▪ IFRS reporting requirements and standards are most used ▪ Factor-based and shock-based solvency capital framework
Number of licensed entities	<ul style="list-style-type: none"> ▪ October 2024 (178 – class 1, 114 – Class 2)⁴⁶ which includes domestic and international operations
Tax considerations for U.S. insurers	<ul style="list-style-type: none"> ▪ U.S. tax treaty – Yes ▪ Pillar Two tax considerations – On 15 May 2024, the Barbados Senate passed the Corporation Top-up Tax Bill with the adoption of a Domestic Minimum Top-Up Tax (DMTT) ▪ Barbados has imposed tax on life and nonlife insurance companies for decades; however, life reinsurers effectively are only subject to tax, if at all, on a limited amount.

⁴⁶ Financial Services Commission. (2024). No. of Licensees. <https://www.fsc.gov.bb/viewPDF/documents/2024-11-12-16-58-39-Insurance--October-2024.pdf>

3.5.2 MARKET OVERVIEW AND RECENT ACTIVITY

Barbados is one of the world's leading domiciles for captive insurance companies and has established a network of tax treaties with several countries including the U.S. Activity from U.S. life and annuity writers has not been significant in recent years, although many of the global reinsurance companies have established operations on the island.

Strategic priorities outlined by the Financial Services Commission (FSC) are organizational transformation, enhanced supervision and regulation, stakeholder engagement, and legislative reforms⁴⁷

The Insurance Association of the Caribbean (IAC) represents insurers in the Caribbean, including Barbados. Its mission is to promote and foster the advancement of the Caribbean insurance industry through research, education, and advocacy, in so doing to create a platform for regional harmonization and integration in the industry.

3.5.3 LICENSE REQUIREMENTS

Insurers in Barbados continue to operate within a single legislative framework for all licensed entities. Companies conducting business in Barbados are characterized in the following classes:

- Class 1 Licensee – an insurance company that underwrites related party business
- Class 2 Licensee – an insurance company that underwrites risks of third parties
- Class 3 Licensee – an insurance intermediary, an insurance management company, or an insurance holding company

An international insurance company can be licensed in Barbados under the Exempt Insurance Act, Cap. 308A or, alternatively, registered under the Insurance Act, Cap. 310 which also governs local insurance companies. Most international insurance companies on the island have chosen to be licensed under the Exempt Insurance Act. International companies that choose to register under the Insurance Act are known as Qualifying Insurance Companies and face some tax liability in Barbados.

3.6 THE BAHAMAS

3.6.1 KEY FACTS AND FIGURES

Table 8 summarizes key information gathered on The Bahamas.

Table 8

Components	Summary information
Political and legal system	<ul style="list-style-type: none"> ▪ Sovereign nation and a member of the Commonwealth of Nations

⁴⁷ Financial Services Commission. Strategic Priorities. <https://www.fsc.gov.bb/strategicpriorities>

Regulator and industry body	<ul style="list-style-type: none"> ▪ Insurance Commission of The Bahamas (ICB) ▪ Bahamas Insurance Association (BIA)
Status with U.S. and European regulators	<ul style="list-style-type: none"> ▪ NAIC qualified jurisdiction – No ▪ NAIC reciprocal jurisdiction – No ▪ Solvency II equivalent jurisdiction- No
Sovereign credit rating	<ul style="list-style-type: none"> ▪ B+ (S&P), B1 (Moody's)
Capital and reporting requirements	<ul style="list-style-type: none"> ▪ Accounting standards follow IFRS, but licensed entities may apply for U.S. GAAP to be used ▪ Risk-based assessment used for solvency capital requirements
Number of licensed entities	<ul style="list-style-type: none"> ▪ Jan 2025 (18 – external insurers) ▪ Of the 18 licensed entities, 8 are classified as long-term insurers with the remainder being classified as captives.⁴⁸
Tax considerations for U.S. insurers	<ul style="list-style-type: none"> ▪ U.S. tax treaty – No ▪ Pillar Two tax considerations – expected to implement a domestic minimum top-up tax (DMTT) aligned with the OECD's Pillar Two framework.

3.6.2 MARKET OVERVIEW AND RECENT ACTIVITY

The external insurance market in The Bahamas is regulated by the External Insurance Act 2009. The market is largely comprised of property and casualty reinsurance business with captive insurers including cell captives⁴⁹. There are some long-term insurers engaged in the unit-linked insurance business. Activity from U.S. life and annuity writers has not been significant in recent years.

3.6.3 LICENSE REQUIREMENTS

Entities domiciled in The Bahamas that provide insurance services to markets outside of this jurisdiction are classified as external insurers. There are two types of licenses:

- Restricted – an external insurer that underwrites the risks of its members, subsidiaries, affiliates
- Unrestricted – an external insurer that is not a restricted insurer

External insurers are subject to minimum capital requirements of US\$100,000 to US\$300,000 depending on the business (general business, long-term business, or both). The ICB has committed to a 30-day

⁴⁸ [ICB -Insurance Commission of The Bahamas. \(2024\). External Insurance Company Statistics. \[https://www.icb.gov.bs/files/ugd/537806_8ed7bd70d6974b8f8c08258b0b3c0f2f.pdf\]\(https://www.icb.gov.bs/files/ugd/537806_8ed7bd70d6974b8f8c08258b0b3c0f2f.pdf\)](https://www.icb.gov.bs/files/ugd/537806_8ed7bd70d6974b8f8c08258b0b3c0f2f.pdf)

⁴⁹ [Insurance Commission of The Bahamas. \(2023\). Annual Report 2023. \[https://issuu.com/icbahamas/docs/2023_icb_annual_report\]\(https://issuu.com/icbahamas/docs/2023_icb_annual_report\)](https://issuu.com/icbahamas/docs/2023_icb_annual_report)

approval period for restricted licensee applicants and a 60-day approval period for unrestricted licensee applicants from the date the last required document has been received.⁵⁰

3.6.4 ADDITIONAL INSIGHTS FROM THE REGULATOR AND INDUSTRY BODIES

This section reflects the input provided by the ICB (regulator) as part of the survey conducted by the researchers. Unless stated otherwise, the information provided here reflects the perspective of survey participants.

The BIA serves as a trade association of insurance companies, brokerages and agencies licensed by the ICB. It deals in all lines of property and casualty and life and health insurance. Its main purpose is to represent the interests of the Insurance industry to the Bahamian Government and people, and to other local and international bodies⁵¹.

The ICB is an authoritative body, established by the Act of Parliament. In addition to maintaining a robust regularity framework and regulation of its licensees, the ICB is focused on InsurTech development and education as well as overhauling the existing regulations (External Insurance Act 2009, and Insurance Act 2005) to align with industry and international best practices.

The ICB identifies a key differentiation of the jurisdiction to be the emphasis of risk-based capital and reserve requirements in the regulatory framework, while still allowing for tailored solutions for insurance companies that ensure they maintain adequate financial resources to meet their obligations. Additionally, the ICB provides a tax-efficient environment, including no income tax, capital gains tax, or inheritance tax, which makes The Bahamas attractive to international insurers.

The ICB has adopted a risk-based framework designed to facilitate proactive and dynamic assessment of insurers regulated by the ICB. The risk-based supervisory approach focuses on:

1. Early identification of emerging risks to facilitate timely interventions through integration of macro and micro prudential supervision.
2. Assessments that parallel how an insurer is managed and can leverage an insurers corporate governance, risk management and oversight.
3. Better evaluation of risk through separate assessment of inherent risks and risk management processes resulting in a deeper understanding of an insurer's operations, its risk appetite, and the key drivers of its risk profile.
4. Early identification of problem insurers and areas in an insurer with prudential issues and concerns.
5. Cost effective utilization of resources through sharper focus on risks.
6. Reporting risk-focused assessments to insurers to promote good practices.
7. Reducing regulatory burden on well managed insurers.
8. Encouraging a strong risk management culture in insurers; and

⁵⁰ [Insurance Commission of The Bahamas. \(2009\). External Insurer's Act 2009: Licence Requirements \(Section 4\).](https://www.icb.gov.bs/_files/ugd/537806_250ae346e9684b1f878ece00feaf7854.pdf)
https://www.icb.gov.bs/_files/ugd/537806_250ae346e9684b1f878ece00feaf7854.pdf

⁵¹ [Bahamas Insurance Association. <https://bahamasinsuranceassociation.org/>](https://bahamasinsuranceassociation.org/)

9. Providing flexibility for supervisors to use professional judgment within a structured process.

The ICB's supervisory team consists of 16 staff members dedicated to the life and annuity business, inclusive of financial analysts and on-site analysts who deal with registrants. The key focus area for the supervisory team is maintaining a robust regulatory framework, specifically as it relates to the risk management processes of licenses, in addition to ensuring their adherence with legislation, guidelines and international best practices.

3.7 GUERNSEY

3.7.1 KEY FACTS AND FIGURES

Table 9 summarizes key information gathered on Guernsey.

Table 9

Components	Summary information
Political and legal system	<ul style="list-style-type: none"> ▪ Self-governing British Crown dependency (i.e., not part of the United Kingdom, but is under British sovereignty and is represented internationally by the UK government)
Regulator and industry body	<ul style="list-style-type: none"> ▪ Guernsey Financial Services Commission (GFSC) ▪ Guernsey International Insurance Association (GIIA)
Status with U.S. and Europe regulators	<ul style="list-style-type: none"> ▪ NAIC qualified jurisdiction – No ▪ NAIC reciprocal jurisdiction – No ▪ Solvency II equivalent jurisdiction- No
Sovereign credit rating	<ul style="list-style-type: none"> ▪ A+ (S&P)
Capital and reporting requirements	<ul style="list-style-type: none"> ▪ Flexibility in the accounting standard applied, where companies generally follow the regime of their parent company (e.g., IFRS, U.S. GAAP, UK GAAP) ▪ Risk-based capital framework determined using a Guernsey standard formula approach. Option to use a “recognized standard formula” (e.g., Solvency II or BSCR) or an internal model developed by the company as an alternative, subject to approval by the GFSC
Number of licensed reinsurers	<ul style="list-style-type: none"> ▪ YE 2022 (26), YE 2023 (25 – Commercial Reinsurers (non-cellular)⁵²
Tax considerations for U.S. insurers	<ul style="list-style-type: none"> ▪ U.S. tax treaty – No ▪ Pillar Two tax considerations – In May 2023, the governments of Guernsey, Jersey and the Isle of Man announced their intention to implement an income inclusion rule (IIR). Guernsey decided to adopt the Organisation for Economic Co-operation and Development’s (OECD) global minimum tax⁵³ as of 2025

3.7.2 MARKET OVERVIEW AND RECENT ACTIVITY

Non-domestic insurance business in Guernsey is predominately UK captive business and insurance-linked securities reinsurance. Guernsey pioneered the protected cell structure and more recently has seen growth in the use of the incorporated cell companies for the transfer of longevity risk for pension funds.

⁵² Guernsey Financial Services Commission. Insurance Statistics. <https://www.gfsc.gg/industry-sectors/insurance/statistics>

⁵³ Walkers Global. (2024). Guernsey Adopts OECDs Global Minimum Tax Rate of 15.

<https://www.walkersglobal.com/en/Insights/2024/11/Guernsey-Adopts-OECDs-Global-Minimum-Tax-Rate-of-15>

Approximately 25% of Guernsey-licensed life insurers (19 registered entities at YE 2023) have U.S. business within their group. Despite this, activity or interest from U.S. life and annuity writers reinsuring into Guernsey has not been significant.

3.7.3 LICENSE REQUIREMENTS

International insurers can be classified into two types as follows:

- **Pure captive insurer** – an insurer established for the sole purpose of reinsuring the risks of the parent or other insurance entities in the group
- **Commercial insurer** – an insurer established for the primary purpose of participating in the traditional insurance or reinsurance market

Guernsey offers a “fast track” process that allows set up in a matter of weeks. However, these timelines depend on preparation and completeness of the application and can face heightened scrutiny from counterparties and regulators.

3.7.4 ADDITIONAL INSIGHTS FROM THE REGULATOR AND INDUSTRY BODIES

This section reflects the input provided by the GFSC (regulator) as part of the survey conducted by the researchers. Unless stated otherwise, the information provided here reflects the perspective of survey participants.

The Guernsey Financial Services Commission (GFSC) and Guernsey International Insurance Association (GIIA) regulate and represent the insurance industry, respectively.

The GFSC is an active regulator with approximately 25 full-time staff on the supervisory and policy teams. This number has remained stable in recent years, with slight growth to address additional responsibilities that the team has taken on, including increasing retail insurance activity. The GFSC ensures that the regulatory framework and practices meet international standards and is a committed participant in discussions pertaining to international standards. It does so through membership of, or association with, several international organizations. For example, the GFSC actively participates on parent committees of the International Association of Insurance Supervisors (e.g., its Executive Committee, Policy Development Committee), as well as some of its working groups. The GFSC also serves as the Chair for the Group of International Insurance Centre Supervisors (GIICS).

3.8 HONG KONG

3.8.1 KEY FACTS AND FIGURES

Table 10 summarizes key information gathered on Hong Kong.

Table 10

Components	Summary information
Political and legal system	<ul style="list-style-type: none"> ▪ Special Administrative Region (SAR) of the People’s Republic of China ▪ Operates under Hong Kong Basic Law and its own legislature

Regulator and industry body	<ul style="list-style-type: none"> ▪ Insurance Authority (IA) ▪ The Hong Kong Federation of Insurers (HKFI)
Status with U.S. and European regulators	<ul style="list-style-type: none"> ▪ NAIC qualified jurisdiction – No ▪ NAIC reciprocal jurisdiction – No ▪ Solvency II equivalent jurisdiction- No
Sovereign credit rating	<ul style="list-style-type: none"> ▪ AA+ (S&P), Aa3 (Moody's)
Capital and reporting requirements	<ul style="list-style-type: none"> ▪ IFRS reporting requirements and standards are most commonly used ▪ HK Risk-Based Capital (RBC) introduced on 1 July 2024 is a three-pillar approach and similar to Solvency II and IAIS Insurance Capital Standards (ICS)
Number of licensed entities	<ul style="list-style-type: none"> ▪ June 2024 (157 – total authorized insurers/reinsurers) ▪ Of the 157 entities – 3 of those are U.S. incorporated entities writing long-term business, and many of the global reinsurance entities have established operations and are licensed.⁵⁴
Tax considerations for U.S. insurers	<ul style="list-style-type: none"> ▪ U.S. tax treaty – No ▪ Pillar Two tax considerations – Plans announced to implement the Pillar Two Global Minimum Tax from 2025.

3.8.2 MARKET OVERVIEW AND RECENT ACTIVITY

Hong Kong is a well-known international business hub with an active domestic insurance/reinsurance market. For offshore business, while the reinsurance market does include some life and health business (primarily serving high net worth individuals from regions such as China and Southeast Asia), it remains predominantly focused on property and casualty business. Risks from Europe and the U.S. are not common, and the introduction of the new capital framework (HK RBC) will be an important consideration for international reinsurance transactions.

Based on published information, at June 30, 2024 there were 157 authorized insurers in Hong Kong, of which 85 were pure general insurers, 52 were pure long-term insurers, 18 were composite insurers and 2 were special purpose insurers.⁵⁵

3.8.3 LICENSE REQUIREMENTS

The Insurance Authority (IA) issues licenses under the following categories: general, long-term, composite, and special purpose. However, the only composite licenses that the IA issues are for professional reinsurers. An insurer, other than a professional reinsurer, is authorized to carry on either general business

⁵⁴ [Insurance Authority. \(2025\). Register of Authorized Insurers.](https://www.ia.org.hk/en/supervision/reg_insurers_lloyd/register_of_authorized_insurers.html)

https://www.ia.org.hk/en/supervision/reg_insurers_lloyd/register_of_authorized_insurers.html

⁵⁵ [Insurance Authority. \(2025\). The Market. <https://www.ia.org.hk/en/infocenter/statistics/market.html>](https://www.ia.org.hk/en/infocenter/statistics/market.html)

or long-term business, but not both. An insurer wishing to carry on general and long-term business in Hong Kong needs to form two separate companies.

There is no difference in the authorization requirements between an overseas insurer and a local insurer. The IA does not impose any requirement of the place of incorporation on applicant companies or citizenship or local residence requirements on their directors. However, appointment of a chief executive based in Hong Kong is required.

It is estimated that the application process from the submission of a formal application to the issue of a letter of “approval-in-principle” may normally take 2 to 2.5 months, but some complex cases may take 12 months.

3.8.4 INSIGHTS FROM THE REGULATOR AND INDUSTRY BODIES

This section reflects the input provided by the HKFI (industry body) as part of the survey conducted by the researchers. Unless stated otherwise, the information provided here reflects the perspective of survey participants.

The Insurance Authority (IA) and the Hong Kong Federation of Insurers (HKFI) regulate and represent the insurance industry, respectively.

The IA uses a collaborative approach via consultation with HKFI and industry before putting regulation in place (RBC requirements are a good example of this). HKFI have regular meetings with IA.

The HKFI has active committees and special task forces to promote healthy growth in the Hong Kong market and to tackle issues and emerging topics. Examples of such task forces are the InsurTech Task Force, Professional Standards Working Group, Task Force on RBC Enhancement and the Actuarial Working Group

3.9 LUXEMBOURG

3.9.1 KEY FACTS AND FIGURES

Table 11 summarizes key information gathered on Luxembourg.

Table 11

Components	Summary information
Political and legal system	<ul style="list-style-type: none"> ▪ Sovereign nation and member of the European Union (EU)
Regulator and industry body	<ul style="list-style-type: none"> ▪ Commissariat Aux Assurances (CAA) ▪ Professional Association of Luxembourg Insurers and Reinsurers (ACA)
Status with U.S. and European regulators	<ul style="list-style-type: none"> ▪ NAIC qualified jurisdiction – No ▪ NAIC reciprocal jurisdiction – Yes ▪ Jurisdiction subject to Solvency II
Sovereign credit rating	<ul style="list-style-type: none"> ▪ AAA (S&P), Aaa (Moody's)

Capital and reporting requirements	<ul style="list-style-type: none"> ▪ IFRS reporting requirements ▪ Capital requirements – Solvency II
Number of licensed entities	<ul style="list-style-type: none"> ▪ 193 reinsurance companies currently licensed (Nov 2024)⁵⁶
Tax considerations for U.S. insurers	<ul style="list-style-type: none"> ▪ U.S. tax treaty – Yes ▪ Pillar Two tax considerations – implemented the Pillar Two rules in December 2022 on ensuring a global minimum level of taxation for multinational enterprise groups and large-scale domestic groups.

3.9.2 MARKET OVERVIEW AND RECENT ACTIVITY

Luxembourg is the largest captive reinsurance market in the European Union. The vast majority of the 193 reinsurance companies in Luxembourg are “captives. Luxembourg’s geographical proximity places it at the forefront of international trading networks – especially post-Brexit. Luxembourg’s competence in financial services means there is a broad network of expertise within the country, giving rise to innovative re)insurance solutions. However, activity from U.S. life and annuity writers has not been significant to date.⁵⁷

3.9.3 LICENSE REQUIREMENTS

The Commissariat Aux Assurances (CAA) and the Professional Association of Luxembourg Insurers and Reinsurers (ACA) regulate and represent the insurance industry, respectively. The CAA has signed the IAIS Multilateral Cooperation Agreement together with more than 150 supervisory authorities from other countries around the world to exchange information as well as some other bilateral cooperation agreements.

Entities operating within Luxembourg are required to carry the appropriate license depending on the class of business – life, non-life, reinsurance.

3.10 JERSEY

3.10.1 KEY FACTS AND FIGURES

Table 12 summarizes key information gathered on Jersey.

⁵⁶ Commissariat aux Assurances. Reinsurance Operators. <https://www.caa.lu/fr/operateurs/reassurances/reassurances>

⁵⁷ Professional Association of Luxembourg Insurers and Reinsurers. (2023). Key Figures 2023. <https://www.aca.lu/wp-content/uploads/2024/03/Key-Figures-2023.pdf>

Table 12

Components	Summary information
Political and legal system	▪ Self-governing British Crown dependency (i.e., not part of the United Kingdom, but is under British sovereignty and is represented internationally by the UK government)
Regulator and industry body	▪ Jersey Financial Services Commission (JFSC) ▪ Jersey International Insurance Association (JIIA)
Status with U.S. and European regulators	▪ NAIC qualified jurisdiction – No ▪ NAIC reciprocal jurisdiction – No ▪ Solvency II equivalent jurisdiction- No
Sovereign credit rating	▪ AA- (S&P)
Capital and reporting requirements	▪ IFRS reporting requirements ▪ Factor-based capital requirements
Number of licensed entities	▪ 164 insurance companies currently licensed (Nov 2024), 44 of which are classified as long-term insurers/reinsurers ⁵⁸
Tax considerations for U.S. insurers	▪ U.S. tax treaty – No ▪ Pillar Two tax considerations – In May 2023, the governments of Guernsey, Jersey and the Isle of Man announced their intention to implement an IIR and a domestic minimum tax from 2025

3.10.2 MARKET OVERVIEW AND RECENT ACTIVITY

Jersey has historically been more closely associated with international banking and investment management, whereas other jurisdictions close-by such as Guernsey and the Isle of Man are more known for captive insurance. Activity from U.S. life and annuity writers thought to be low.

3.10.3 LICENSE REQUIREMENTS

The Jersey Financial Services Commission (JFSC) and the Jersey International Insurance Association (JIIA) regulate and represent the insurance industry, respectively.

⁵⁸ Jersey Financial Services Commission. Regulated Entities. <https://www.jerseyfsc.org/industry/regulated-entities>

Under the JFSC, there are two categories of insurance business permits (licenses):⁵⁹

- **Category A permits:** These are granted to insurance companies that are already authorized to carry on insurance business by a jurisdiction outside of Jersey. Essentially, Category A permits cover insurance companies that have existing authorization elsewhere.
- **Category B permits:** All other insurance businesses intending to carry on insurance business in or from within Jersey require a Category B permit. If an insurance company is not already authorized elsewhere, it falls under this category. The Category B permit facility also allows for the formation of captives and caters for the establishment of special purpose vehicles such as transformer vehicles and companies for the securitization of insurance risk. A captive insurance company incorporated under the Companies (Jersey) Law 1991 needs to hold a Category B permit even if it does not undertake its insurance business in or from within the Island.

3.11 MALTA

3.11.1 KEY FACTS AND FIGURES

Table 13 summarizes key information gathered on Malta.

Table 13

Components	Summary information
Political and legal system	<ul style="list-style-type: none"> ▪ Sovereign nation and member of the European Union (EU)
Regulator and industry body	<ul style="list-style-type: none"> ▪ Malta Financial Services Authority (MFSA) ▪ Malta Insurance Association (MIA)
Status with U.S. and Europe regulators	<ul style="list-style-type: none"> ▪ NAIC qualified jurisdiction – No ▪ NAIC reciprocal jurisdiction – No ▪ Jurisdiction subject to Solvency II
Sovereign credit rating	<ul style="list-style-type: none"> ▪ A- (S&P), A2 (Moody's)
Capital and reporting requirements	<ul style="list-style-type: none"> ▪ IFRS reporting standards or General Accounting Principles in respect of certain Eligible Entities (GAPEE)⁶⁰ can be used ▪ Capital requirements – Solvency II
Number of licensed entities	<ul style="list-style-type: none"> ▪ The number of licensed insurance and reinsurance entities at YE 2023 was 66, which includes general and long-term business

⁵⁹ Jersey Financial Services Commission. (2011). Policy Statement: Licensing Policy in respect of those activities that require a permit under the Insurance Business (Jersey) Law 1996. <https://www.jerseyfsc.org/media/2776/pol-licensing-policy-insurance.pdf>

⁶⁰ Supplement tal-Gazzetta tal-Gvern ta' Malta. (2023). ACCOUNTANCY PROFESSION ACT. <https://legislation.mt/eli/ln/2023/299/mlt>

Tax considerations for U.S. insurers	<ul style="list-style-type: none"> ▪ U.S. tax treaty – Yes ▪ Pillar Two tax considerations – Malta has opted to apply the derogation afforded by the Pillar Two Directive, allowing for a delay in implementation.
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3.11.2 MARKET OVERVIEW AND RECENT ACTIVITY

EU passporting rights and competitive operating costs are some of the key attractions of Malta for international reinsurance. The large majority of the 66 registered insurance/reinsurance companies are international players with only a handful of companies being active in the local market. Activity or interest from U.S. life and annuity writers but thought to be low.

3.11.3 LICENSE REQUIREMENTS

Insurance business in Malta is regulated under the Insurance Business Act, 1998 (“IBA”), which provides for the authorization and supervision of insurance and reinsurance undertakings, including captive insurance and reinsurance. The license classes are divided into general business and long-term business⁶¹

An authorization entitles a company with a head office in Malta to carry on business of insurance in a Member State or European Economic Area (EEA) state in accordance with the European Passport Rights for Insurance and Reinsurance Undertakings Regulations.

3.12 SINGAPORE

3.12.1 KEY FACTS AND FIGURES

Table 14 summarizes key information gathered on Singapore.

Table 14

Components	Summary information
Political and legal system	<ul style="list-style-type: none"> ▪ Sovereign nation
Regulator and industry body	<ul style="list-style-type: none"> ▪ Monetary Authority of Singapore (MAS) ▪ Life Insurance Association Singapore (LIA)
Status with U.S. and European regulators	<ul style="list-style-type: none"> ▪ NAIC qualified jurisdiction – No ▪ NAIC reciprocal jurisdiction – No ▪ Solvency II equivalent jurisdiction- No

⁶¹ [Malta Financial Services Authority, A Guide to the Business of Insurance and Reinsurance. <https://www.mfsa.mt/wp-content/uploads/2019/01/Insurance-Reinsurance-02.01.17.pdf>](https://www.mfsa.mt/wp-content/uploads/2019/01/Insurance-Reinsurance-02.01.17.pdf)

Sovereign credit rating	<ul style="list-style-type: none"> AAA(S&P), Aaa (Moody's)
Capital and reporting requirements	<ul style="list-style-type: none"> Accounting standards follow Singapore Financial Reporting Standards (SFRS) and are based on IFRS Risk-based solvency capital requirements for all licensed insurers ("RBS 2")
Number of licensed entities	<ul style="list-style-type: none"> The number of licensed reinsurance entities (life and composite) licensed in December 2024 is 1⁶²
Tax considerations for U.S. insurers	<ul style="list-style-type: none"> U.S. tax treaty – No Pillar Two tax considerations – announced that it will implement the IIR and a domestic minimum top-up tax from businesses' fiscal years starting on or after 1 January 2025. The implementation of the Undertaxed Profits Rule (UTPR) will be considered at a later stage.

3.12.2 MARKET OVERVIEW AND RECENT ACTIVITY

Singapore is one of the leading global financial centers. The insurance and reinsurance activity is largely local to Asia and Singapore dollar denominated business. Many of the large international reinsurers have branches in Singapore and reinsurance a variety of risks across life, medical, and critical illness, but primarily from local writers. There is an active market for product offerings that target high net worth individuals, which are often denominated in U.S. dollars, and a competitive reinsurance market for these products as well. Activity from U.S. life and annuity writers has not been significant in recent years.

3.12.3 LICENSE REQUIREMENTS

Licensing of insurers is governed by the Insurance Act, which establishes requirements and standards to ensure that only qualified entities operate within the insurance landscape. The Insurance Act provides for the following classifications of reinsurers:

- Licensed reinsurers who have a physical business presence in Singapore
- Authorised reinsurers who remain offshore but solicit business in the Singapore market
- Unregulated/unlicensed reinsurers who are offshore reinsurers and do not solicit business in Singapore, but who are approached by local insurers or registered insurance brokers to reinsure insurance policies.

⁶² Monetary Authority of Singapore. Financial Institutions Directory. <https://eservices.mas.gov.sg/fid>

3.12.4 INSIGHTS FROM THE REGULATOR AND INDUSTRY BODIES

This section reflects the input provided by the LIA (industry body) as part of the survey conducted by the researchers. Unless stated otherwise, the information provided here reflects the perspective of survey participants.

The Monetary Authority of Singapore (MAS) and the Life Insurance Association Singapore (LIA) regulate and represent the insurance industry, respectively. LIA represents 100% of the life insurance entities in Singapore. It plays a key role as the bridge between industry and the MAS and the Ministry of Health (the health regulator). The LIA consists of a team of 8 individuals working on a full-time basis.

3.13 GIBRALTAR

3.13.1 KEY FACTS AND FIGURES

Table 15 summarizes key information gathered on Gibraltar.

Table 15

Components	Summary information
Political and legal system	<ul style="list-style-type: none"> ▪ British Overseas Territory ▪ Common law with right of appeal to the privy council of the UK government
Regulator and industry body	<ul style="list-style-type: none"> ▪ Gibraltar Financial Services Commission (GFSC) ▪ Gibraltar Insurance Association (GIA)
Status with U.S. and European regulators	<ul style="list-style-type: none"> ▪ NAIC qualified jurisdiction – No ▪ NAIC reciprocal jurisdiction – No ▪ Jurisdiction subject to Solvency II
Sovereign credit rating	<ul style="list-style-type: none"> ▪ Does not have sovereign credit ratings assigned by American credit rating agencies Fitch or Moody's.
Capital and reporting requirements	<ul style="list-style-type: none"> ▪ Gibraltar allows companies to prepare financial statements either in accordance with IFRS or with the generally accepted accounting principles (GAAP) of Gibraltar. ▪ Capital requirements – Solvency II
Number of licensed entities	<ul style="list-style-type: none"> ▪ The number of licensed insurance/reinsurance entities in Gibraltar is 57⁶³.
Tax considerations for U.S. insurers	<ul style="list-style-type: none"> ▪ U.S. tax treaty – No ▪ Pillar Two tax considerations – Introduced Pillar Two-compliant Qualified Domestic Minimum Top-Up Tax (QDMTT) for fiscal years starting on or after December 31, 2023, with full implementation of Pillar Two rules planned after December 31, 2024

⁶³ [Gibraltar Financial Services Commission, Regulated Entities Register, <https://www.fsc.gi/regulated-entities/insurance-companies-7>](https://www.fsc.gi/regulated-entities/insurance-companies-7)

3.13.2 MARKET OVERVIEW AND RECENT ACTIVITY

Gibraltar has been a recognized financial center for over 30 years and was acceded to the Single European Market for Insurance in 1997 and benefited from the EU passporting rights similar to other European jurisdictions until the end of 2020 when the United Kingdom and the European Union concluded the terms of an agreement for the orderly departure of the former from the EU. Gibraltar was a part of that agreement. Reinsurance activity is primarily through captives and protected cell companies. Activity from U.S. life and annuity writers is thought to be low.

The Gibraltar Financial Services Commission (GFSC) and Gibraltar Insurance Association (GIA) regulate and represent the insurance industry, respectively.

3.13.3 LICENSE REQUIREMENTS

Authorization is required for each class of business that an insurance/reinsurance company intends to transact and classify under general/non-life business and life business. The authorization of an insurance company, unless otherwise expressly restricted, permits the transaction of reinsurance.

3.14 ISLE OF MAN

3.14.1 KEY FACTS AND FIGURES

Table 16 summarizes key information gathered on Isle of Man.

Table 16

Components	Summary information
Political and legal system	<ul style="list-style-type: none"> ▪ Self-governing British Crown dependency (i.e., not part of the United Kingdom, but is under British sovereignty and is represented internationally by the UK government)
Regulator and industry body	<ul style="list-style-type: none"> ▪ Isle of Man Financial Services Authority (IOMFSA) ▪ Isle of Man Insurance Association (IOMIA)
Status with U.S. and European regulators	<ul style="list-style-type: none"> ▪ NAIC qualified jurisdiction – No ▪ NAIC reciprocal jurisdiction – No ▪ Solvency II equivalent jurisdiction – No
Sovereign credit rating	<ul style="list-style-type: none"> ▪ Aa3 (Moody's)
Capital and reporting requirements	<ul style="list-style-type: none"> ▪ Accounting standards generally follow IFRS and UK GAAP, however other standards can be approved ▪ Capital requirements – based on Solvency II with some modifications

Number of licensed entities	<ul style="list-style-type: none"> The number of authorized insurers and insurance groups is 109⁶⁴ – comprises of life, non-life, special purpose vehicles
Tax considerations for U.S. insurers	<ul style="list-style-type: none"> U.S. tax treaty – No Pillar Two tax considerations – In May 2023, the governments of Guernsey, Jersey and the Isle of Man announced their intention to implement an IIR and a domestic minimum tax from 2025

3.14.2 MARKET OVERVIEW AND RECENT ACTIVITY

The insurance and reinsurance market in the Isle of Man is primarily captives and follows the UK market closely. Since Brexit there has been increased interest from insurers within the EEA (Ireland and Luxembourg) wishing to carry out long-term business in the UK on a cross-border basis. The Insurance Act 2008 (Insurance Act) provides the statutory framework within which insurance (including reinsurance) is regulated. Included in this framework is the Policyholder Compensation Scheme (PCS)⁶⁵, which compensates policyholders up to 90% of any loss in the event of the failure of a class 1 or 2 insurer.

3.14.3 LICENSE REQUIREMENTS

The Isle of Man Financial Services Authority (IOMFSA) and Isle of Man Insurance Association (IOMIA) regulate and represent the insurance industry, respectively.

Authorized (re)insurers may only carry on insurance business within the specific classes of insurance business for which they are authorized. Long-term (Class 1 – linked long term; and Class 2 – long term) are where long-term life and annuity business would fall. Insurers can be incorporated as companies, protected cell companies, incorporated cell companies, or limited partnerships.

3.15 IRELAND

3.15.1 KEY FACTS AND FIGURES

Table 17 summarizes key information gathered on Ireland.

⁶⁴ Isle of Man Financial Services Authority. Register of Regulated Entities. <https://www.iomfsa.im/register-results/?entity-name=&entity-current=on&BusinessType=1&BusinessType=10>

⁶⁵ [Isle of Man Financial Services Authority, Compensation Scheme – Life Assurance. https://www.iomfsa.im/consumer-material/compensation-scheme-life-assurance/](https://www.iomfsa.im/consumer-material/compensation-scheme-life-assurance/)

Table 17

Components	Summary information
Political and legal system	<ul style="list-style-type: none"> ▪ Sovereign nation and member of the EU
Regulator and industry body	<ul style="list-style-type: none"> ▪ Central Bank of Ireland (CBI) ▪ Insurance Ireland (IA)
Status with U.S. and European regulators	<ul style="list-style-type: none"> ▪ NAIC qualified jurisdiction – Yes ▪ NAIC reciprocal jurisdiction – Yes ▪ Jurisdiction subject to Solvency II
Sovereign credit rating	<ul style="list-style-type: none"> ▪ AA (S&P), Aa3 (Moody's)
Capital and reporting requirements	<ul style="list-style-type: none"> ▪ IFRS reporting requirements ▪ Capital requirements – Solvency II
Number of licensed entities	<ul style="list-style-type: none"> ▪ The number of licensed entities regulated by the Central Bank of Ireland in December 2024 is 220 broken into life (41), non-life (119) and reinsurers and special purpose reinsurance vehicles (60)⁶⁶
Tax considerations for U.S. insurers	<ul style="list-style-type: none"> ▪ U.S. tax treaty – Yes ▪ Pillar Two tax considerations – The Pillar Two rules have been enacted in Ireland as of 18th December 2023, and take effect for in-scope businesses with accounting periods beginning on or after 31 December 2023

3.15.2 MARKET OVERVIEW AND RECENT ACTIVITY

Ireland is a global hub for reinsurance and captive insurance firms with the Irish reinsurance market being one of the largest reinsurance markets in Europe with many of the global reinsurers having established operations. Many of Irish reinsurance companies have parent entities in Bermuda or U.S. and so the focus for Ireland is more on taxation and access to the European markets, rather than capital management.

3.15.3 LICENSE REQUIREMENTS

Companies wishing to set up a (re)insurance business in Ireland must obtain authorization from the regulator. An authorization of an insurance undertaking shall be granted for a particular class of insurance falling under life or non-life.⁶⁷

⁶⁶ Central Bank of Ireland. Register of Insurance Undertakings. <https://registers.centralbank.ie/DownloadsPage.aspx>

⁶⁷ [Government of Ireland. European Union \(Insurance and Reinsurance\) Regulations 2015 \(S.I. No. 485 of 2015\).](https://www.irishstatutebook.ie/eli/2015/si/485/made/en/pdf)
<https://www.irishstatutebook.ie/eli/2015/si/485/made/en/pdf>

3.15.4 ADDITIONAL INSIGHTS FROM THE REGULATOR AND INDUSTRY BODIES

This section reflects the input provided by the IA (industry body) as part of the survey conducted by the researchers. Unless stated otherwise, the information provided here reflects the perspective of survey participants.

The Central Bank of Ireland (CBI) and Insurance Ireland (IA) regulate and represent the insurance industry, respectively. IA's role is to advocate on behalf of its members within Ireland, in Europe and internationally. It engages policymakers, regulators, other statutory bodies and the media by emphasizing the positive role that insurance plays in business and for consumers. IA also plays a pivotal role in highlighting any areas of concern within the industry.

IA has a dedicated council to focus on international business and issues, with subsections covering international life business, specialty and non-life sectors, reinsurance and captives. The Council aims to develop and execute a successful engagement plan to promote Ireland in the best possible way as a base for insurance companies, helping to grow and promote Ireland's international financial sector.

IA is active across the European Economic Area (EEA), with a presence in Brussels to help engage with business operating in the EU and through a relationship with the European Insurance and Occupational Pensions Authority (EIOPA).⁶⁸

⁶⁸ European Insurance and Occupational Pensions Authority (EIOPA). Homepage. https://www.eiopa.europa.eu/index_en

Section 4. Capital and Reserving Framework

4.1 OVERVIEW

This section provides an overview of the current state of capital and reserving practices across the 14 international jurisdictions covered in this study. The overview will cover Bermuda, Cayman Islands, and other jurisdictions based on GAAP and IFRS frameworks.

The diversity of regulatory environments is highlighted, and the application of various reserving and capital frameworks is illustrated using case studies based on life and annuity products commonly seen in the industry.

International reserving frameworks vary by jurisdiction in their approaches. Bermuda has developed its own market-consistent reserve methodology, while other jurisdictions allow reinsurers to leverage established financial reporting frameworks (sometimes with regulator approved permitted practices). Common examples are International Financial Reporting Standards (IFRS) and U.S. Generally Accepted Accounting Principles (U.S. GAAP) for reserves along with established capital standards such as Solvency II or U.S. Risk Based Capital (RBC).

A summary of the reserving and capital requirement frameworks by jurisdiction is provided in Table 18:

Table 18: Summary of Reserving and Capital Frameworks by Jurisdiction

Jurisdiction	Regulator	Reserve Framework	Capital Framework	Section
United States	NAIC	U.S. statutory	Risk Based Capital (RBC)	N/A
Bermuda	Bermuda Monetary Authority (BMA)	Economic Balance Sheet (EBS)	Bermuda Solvency Capital Requirements (BSCR)	4.3 Bermuda
Cayman Islands	Cayman Islands Monetary Authority (CIMA)	Internationally recognized framework that is fit for purpose and approved by CIMA. Typically, these are IFRS, U.S. GAAP or U.S. statutory.	Calculated via standard formula or Internal Capital Model ("ICM") that is aligned to Insurance Core Principles 17 published by the IAIS and approved by the regulator	4.4 Cayman Islands

Jurisdiction	Regulator	Reserve Framework	Capital Framework	Section
Puerto Rico	International Insurance Center (IIC) and Puerto Rico Insurance Commissioner's Office (OCS) ⁶⁹	U.S. GAAP or IFRS	Factor-based	4.5 GAAP and IFRS based Jurisdictions
Barbados	Financial Services Commission (FSC)	IFRS	Factor-based	4.5 GAAP and IFRS based Jurisdictions
Bahamas	Insurance Commission of the Bahamas (ICB)	IFRS or U.S. GAAP	Risk-based	4.5 GAAP and IFRS based Jurisdictions
Guernsey	Guernsey Financial Services Commission (GFSC)	IFRS or U.S. GAAP or UK GAAP	The Insurance Business (Solvency) Rules and Guidance ⁷⁰	4.5 GAAP and IFRS based Jurisdictions
Hong Kong	Insurance Authority (IA)	IFRS	Factor-based	4.5 GAAP and IFRS based Jurisdictions
Luxembourg	Commissariat Aux Assurances (CAA)	IFRS	Solvency II (SII)	4.5 GAAP and IFRS based Jurisdictions
Jersey	Jersey Financial Services Commission (JFSC)	IFRS	Factor-based	4.5 GAAP and IFRS based Jurisdictions
Malta	Malta Financial Services Authority (MFSA)	IFRS	SII	4.5 GAAP and IFRS based Jurisdictions
Singapore	Monetary Authority of Singapore (MAS)	SFRS	Risk-based	4.5 GAAP and IFRS based Jurisdictions
Gibraltar	Gibraltar Financial Services Commission (GFSC)	IFRS	SII	4.5 GAAP and IFRS based Jurisdictions

⁶⁹ Puerto Rico's regulator allows for a choice of U.S. GAAP, U.S. statutory accounting or IFRS. Regulations require a reconciliation of U.S. GAAP to statutory accounting with limited reconciliation items, as provided in regulation. For more details, see Section 2.4.2

⁷⁰ [Guernsey Financial Services Commission. The Insurance Business \(Solvency\) Rules and Guidance, 2021. www.gfsc.gg/sites/default/files/2021-10/The%20Insurance%20Business%20\(Solvency\)%20Rules%20and%20Guidance%202021_0.pdf](http://www.gfsc.gg/sites/default/files/2021-10/The%20Insurance%20Business%20(Solvency)%20Rules%20and%20Guidance%202021_0.pdf)

Jurisdiction	Regulator	Reserve Framework	Capital Framework	Section
Isle of Man	Isle of Man Financial Services Authority (IOMFSA)	IFRS or UK GAAP	Risk-based (similar to SII)	4.5 GAAP and IFRS based Jurisdictions
Ireland	Central Bank of Ireland (CBI)	IFRS	SII	4.5 GAAP and IFRS based Jurisdictions

4.2 CASE STUDY BACKGROUND

This paper uses several U.S. life and annuity insurance products to illustrate the reserving and capital framework of the international jurisdictions.

These case studies provide illustrative financials and augment the overview of the reserving and capital frameworks.

Table 19 provides a summary of the illustrative products used for the analysis.

Table 19: Case Study Summary of Products

#	Product selection	High-level features	Rationale
1	5-year guaranteed annuity	<ul style="list-style-type: none"> Initial premium US\$100,000 Crediting rate: 5.25% Withdrawal charges: 8%, 7%, 6%, 5%, 4% Annuitization option: life contingent No rider guarantees MVA (market value adjustment) applicable on surrender prior to end of guarantee 	Simple, relatively short-term accumulation product with high capital strain in the U.S.
2	Pension risk transfer (PRT)	<ul style="list-style-type: none"> Single premium immediate fixed annuity (SPIA), retired lives only Single premium US\$1 million per contract Income for life, single life Multiple ages 	Annuity products with longer horizons and different nature (payout and not accumulation).
3	10-year level term life insurance	<ul style="list-style-type: none"> Face amount US\$100,000, Issue age 40 Preferred and standard non-smoker risk class Annual level premiums No riders 	Common life insurance product.

Table 20 summarizes the duration and amount of liabilities for each case study:

Table 20: Case Study Durations and Liability Amounts

#	Product selection	Effective duration	Liability amount
1	5-year guaranteed annuity	<ul style="list-style-type: none"> Asset: 4.9 Liability: 4.4 	US\$100 million of initial premium
2	Pension risk transfer	<ul style="list-style-type: none"> Asset: 5.7 Liability: 6.3 	US\$100 million of initial premium
3	10-year Term Life Insurance	<ul style="list-style-type: none"> Asset: 7.3 Liability: 0.1 	US\$500 million of initial face amount

The case studies use representative actuarial assumptions and asset allocations for illustrative purposes.

The objective of the case studies is not to provide a detailed financial comparison across jurisdictions but rather bring illustrations to provide a better understanding of the frameworks discussed.

4.3 BERMUDA

4.3.1 OVERVIEW

The Bermuda framework is regulated by the Bermuda Monetary Authority (BMA). Bermuda is the only international jurisdiction included in this research that has created its own capital and reserving framework.

Insurers are required to prepare three sets of financial statements annually in Bermuda:

1. **Consolidated GAAP Financial Statements:** This is a GAAP view consolidated across all Bermuda companies. This can be conducted under IFRS or any acceptable GAAP basis approved by the BMA.⁷¹
2. **Bermuda Statutory Financial Statements (SFS):** This is the Consolidated and Unconsolidated GAAP with “prudential filters” applied for statutory purposes⁷²
3. **Economic Balance Sheet (EBS):** This is a fair value basis used to determine reserves and capital. This is supported by an actuarial opinion regarding the data, methodology, and assumptions.⁷³

The EBS framework utilizes a market-consistent or fair value approach. EBS is designated as Solvency II equivalent and has qualified and reciprocal status under the NAIC^{74 75}.

⁷¹ Bermuda Monetary Authority. Insurance Account Rules Amendment 2025 – Condensed General Purpose Financial Statements (IFRS). <https://cdn.bma.bm/documents/2025-03-07-15-07-57-Notice---Insurance-Account-Rules-Amendment-2025---Condensed-General-Purpose-Financial-Statements---IFRS.pdf>

⁷² Bermuda Monetary Authority. Insurance Account Rules 2016. <https://www.bermudalaws.bm/Document/%7Bf9515f27-14ef-4ca2-8548-b3bd7d142734%7D>

⁷³ Bermuda Monetary Authority. Economic Balance Sheet Guidance Notes. <https://www.bma.bm/insurance-sector>

⁷⁴ National Association of Insurance Commissioners. Summary of Findings and Determination: Bermuda Monetary Authority as Reciprocal Jurisdiction. <https://content.naic.org/sites/default/files/inline-files/Bermuda%20Reciprocal%20Jurisdiction%20Findings%20Final.pdf>

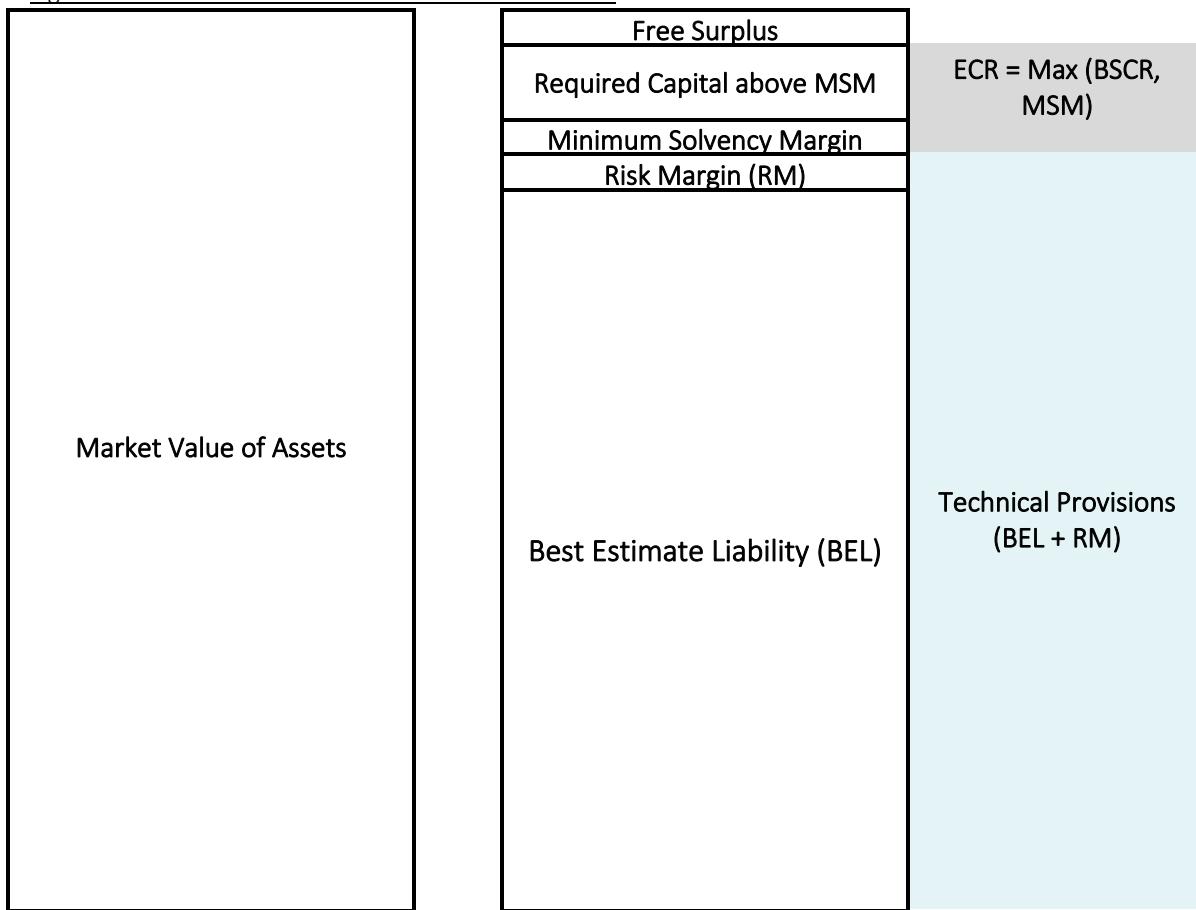
⁷⁵ European Commission. Equivalence of non-EU financial frameworks: Decisions. https://finance.ec.europa.eu/eu-and-world/equivalence-non-eu-financial-frameworks_en#decisions

According to the *Bermuda Monetary Authority's Economic Balance Sheet Guidance Notes*⁷⁶, the EBS balance sheet consists of the following components:

- Assets
 - Recorded at fair value
 - Also, referred to as the Total Asset Requirement (TAR) equal to the liabilities plus target capital
- Liabilities
 - Reserves referred to as "Technical Provisions"
 - Consists of the best estimate liability (BEL) plus a risk margin (RM) to approximate a current transfer value given uncertainty in liability cash flows.
 - Determined using market value principles consistent with the assets
- Capital
 - The Enhanced Capital Requirement (ECR) is the minimum required capital
 - The Bermuda Solvency Capital Requirement model (BSCR) is used to determine the required capital
 - The BSCR is subject to a prescribed minimum called the Minimum Solvency Margin (MSM)
 - Any capital above the ECR is free surplus
 - The BMA also provides for a target capital level ("TCL") equal to 120% of the ECR. This is monitored by the BMA as part of the supervision process and may require actions from the insurers if capital goes below this threshold.

The EBS components are illustrated in Figure 4 and discussed in more detail in the following sections.

⁷⁶ Bermuda Monetary Authority. Economic Balance Sheet Guidance Notes. <https://www.bma.bm/insurance-sector>

Figure 4: Bermuda Economic Balance Sheet Illustration⁷⁷

4.3.2 RESERVE FRAMEWORK

According to the Bermuda Monetary Authority's 2024 Year-End Long-Term Instructions Handbook, the reserve requirement under EBS is referred to as the Technical Provisions ("TP").⁷⁸ This equals the following:

$$TP = BEL^{79} + RM$$

4.3.2.1 Best Estimate Liability

The BEL is based on a projection of best estimate cash flows without prudent margins or prescribed assumptions that U.S. insurers may use for other frameworks. The BEL can be calculated using one of two approaches: the Standard Approach (SA) or the Scenario Based Approach (SBA). The SA is a present value

⁷⁷ Bermuda Monetary Authority. 2024 Year-End Long-Term Instructions Handbook. <https://cdn.bma.bm/documents/2024-12-02-12-56-21-2024-Year-end-Long-Term-Instructions-Handbook.pdf>

⁷⁸ Bermuda Monetary Authority. 2024 Year-End Long-Term Instructions Handbook. <https://cdn.bma.bm/documents/2024-12-02-12-56-21-2024-Year-end-Long-Term-Instructions-Handbook.pdf>

⁷⁹ BEL is inclusive of LapC

of best estimate cash flows at prescribed current market rates whereas the SBA uses an asset-liability modeling based reserving approach. By default, reinsurers in Bermuda are expected to use the SA methodology and need to apply for and be approved to use the SBA.

The key features of each methodology are outlined in Table 21.

Table 21

	Standard Approach	Scenario Based Approach
Liability assumptions	Best estimate	Best estimate, including a provision for lapse risk known as the <i>LapC</i> adjustment
Discounting method	Prescribed discount curve based on current observable market rates The published curve reflects a liquidity adjustment based on a notional portfolio.	Asset-liability modeling-based reserving approach to calculate the minimum asset requirement based upon 9 prescribed interest rate scenarios
Calculation specifics	Present value of net liability cashflows (benefits plus expenses minus premium). The BMA curve is constructed from the risk-free curve with a liquidity adjustment from a notional portfolio.	For each scenario, the minimum asset requirement is equal to the minimum market value of assets at the model start date required to fund the liability cash flows without borrowing. This methodology is referred to as <i>defeasance</i> . The BEL is based on the biting scenario which has the highest minimum asset requirement.
Assets backing liabilities considered?	No	Yes, must use assets with predictable cash flows meeting certain credit quality, as discussed below. Certain otherwise ineligible assets may be approved to back long-term liability cashflows beyond 30 years, subject to guardrails and limits. Requires reinvestment assumptions consistent with a long-term strategic asset allocation
Potential benefits	Simplicity: No insurer-specific asset inputs required	Considers company-specific assets backing the liability and how well asset and liability cashflows are matched.
Potential challenges	The liability discount rate does not take into account company-specific assets, potentially leading to increased income volatility.	Complexity. May not be appropriate for some product types such as recurring premium products with negative liability cashflows that cannot be matched by assets.

Under the SBA, the BEL discount rate is aligned with the insurer's asset portfolio and how well the asset and liability cashflows are matched. The BMA specifies the following requirements around the type of assets that can back liabilities:

Table 22

Category	Asset Types
Acceptable assets <i>Investment grade assets only</i>	Government bonds
	Municipal bonds
	Public corporate bonds
	Cash and cash equivalents
Assets requiring prior approval <i>Investment grade assets only</i>	Private assets
	Structured securities and other assets, including but not limited to: <ol style="list-style-type: none"> 1. Mortgage-backed securities 2. Asset-backed securities 3. Collateralized loan obligations 4. Residential mortgage loans 5. Commercial mortgage loans 6. Investment grade preferred stock
Other asset types requiring approval and not to exceed 10% of the portfolio	Assets that are otherwise acceptable with approval, but are below investment grade
	Commercial real estate

4.3.2.2 Risk Margin

The RM is held in addition to the BEL to arrive at a transfer value of liabilities, considering the capital required to be held given uncertainty in the BEL cash flows. This is calculated as the risk-free discounted value of holding required capital for non-hedgeable risks.

The BMA prescribes a cost-of-capital approach for calculating the RM using the following formula:

$$RM = CoC * \sum_{t \geq 0} \frac{ModECR_t}{(1 + r_{t+1})^{t+1}}$$

Where

- a. $ModECR_t$ is the insurer's required capital at the valuation date and annually for all future years for the lifetime of the liabilities, per the prescribed formula or per a company's own internal model. It is limited to non-hedgeable market risks only, including insurance, credit and operational risk.
- b. r is the risk-free discount rate and is prescribed by the BMA quarterly

- c. CoC is the cost of capital (prescribed at 6%)

4.3.2.3 Lapse Cost

When the SBA method is selected for calculating the BEL, an additional component called LapC is required. LapC is calculated to reflect the potential impact of policyholder lapse behavior on liability cash flows. The methodology for determining LapC is prescribed by the Bermuda Monetary Authority and includes steps for estimating lapse rate variability and applying the BSCR lapse shock.

LapC is determined through the following steps:

- a. Calculate the difference between the historical actual and expected lapse rates expressed as a percentage of expected lapse rates.
- b. Calculate lapse rate sigma as the standard deviation of these lapse rate differences, rounded up to the nearest 1%.
 - o An insurer can use other approaches to calculate lapse rate sigma (e.g., where there is limited or no historical lapse experience data) provided they are shown to be prudent. The approved actuary reviews these as part of forming their opinion and report.
- c. Calculate the lapse capital charge using the greater of the lapse up or lapse down BSCR shock.
- d. LapC is then determined by the following formula:

$$\text{LapC} = (\text{lapse rate sigma} \div \text{BSCR prescribed lapse shock}) \times \text{lapse capital charge}$$

4.3.3 CAPITAL FRAMEWORK

4.3.3.1 Overview

According to the Bermuda Monetary Authority's *2024 Year-End Long-Term Instructions Handbook*, the EBS framework defines minimum capital as the ECR⁸⁰. This is based upon a combination of prescribed principle-based and factor-based risk calculations with covariance. Capital is also subject to a prescribed minimum.

An insurer can evaluate its ECR ratio by taking the available statutory capital and surplus divided by the ECR. The ECR ratio is calculated as available statutory capital and surplus divided by the ECR. Companies often monitor this ratio as part of their solvency assessment, and rating agencies may consider it when evaluating financial strength. The BMA may apply enhanced supervision if the ECR ratio falls below a TCL threshold of 120%.

More specifics regarding the calculation of the ECR are in the following subsections.

4.3.3.2 Enhanced Capital Requirement

Bermuda's ECR is the maximum of the following:

⁸⁰ Bermuda Monetary Authority. 2024 Year-End Long-Term Instructions Handbook. <https://cdn.bma.bm/documents/2024-12-02-12-56-21-2024-Year-end-Long-Term-Instructions-Handbook.pdf>

- BSCR – A capital framework to determine minimum capital based on first principles and factor-based elements. The following section details each risk charge and covariance component within BSCR.
- Minimum Solvency Margin – The MSM is a prescribed regulatory capital floor as a function of business volume, set to the greater of US\$8 million or 2% of the first US\$500,000 in assets plus 1.5% of assets above US\$500,000 for Class E long-term insurers based on the statutory financial statement (SFS)

Companies are allowed to calculate required capital with either:

- The BMA's prescribed risk-based capital model, the BSCR, which is a combination of shock-based and factor-based calculations
- The Company's own capital model, with BMA's approval

Companies may apply to use their own internal capital models, subject to BMA approval, as an alternative to the BSCR.

4.3.3.3 Bermuda Solvency Capital Requirement

BSCR is established on an EBS valuation basis as the sum of the following five components:

1. Basic BSCR risk charge
2. Operational risk charge
3. Regulatory capital requirement for regulated non-insurance financial operating entities
4. Adjustment for loss-absorbing capacity of technical provisions
5. Adjustment for loss-absorbing capacity of deferred taxes

In 2019, the BMA introduced updated rules for risk charges and diversification and in 2024 updated rules for lapse and expense risk charges. A transition from 2018 and prior rules ("2018 rules") to the updated rules ("2019/2024 rules") is considered through weighting factors with full transition to occur in 2028.

Table 23 summarizes the differences in diversification methodology between the two sets of rules.

Table 23

	2018 rules	2019/2024 rules
Diversification methodology	All risks combined through a square root formula	Risks are combined by a series of correlation matrices
Correlation between individual risks	Mortality risk has a 50% correlation with longevity risk. All other risks have a 0% correlation.	Mortality risk has a 50% correlation with longevity risk. Market and insurance risks have separate correlation matrices applied first Final correlation matrix combines market, insurance and credit risks

For the purpose of this paper, all formulas shown in the following subsections are based upon the updated 2019/2024 rules. The case study illustrations demonstrate how the transition factors are applied to determine BSCR.

4.3.3.3.1 Basic BSCR risk charge

The basic BSCR risk charge consists of calculations for market risk, long-term risk and credit risk. The BMA prescribes a covariance matrix to combine these three risks. The basic BSCR risk charge is expressed in the following formula:

$$\text{Basic BSCR} = \sqrt{\sum_{i,j} \text{CorrBBSCR}_{i,j} \times C_i \times C_j}$$

Where,

- $\text{CorrBBSCR}_{i,j}$ are the elements of the following prescribed correlation matrix between market risk, long-term risk and credit risk:

Table 24: Basic BSCR Covariance Matrix

	Market	Long-Term	Credit
Market	1		
Long-term	0.25	1	
Credit	0.125	0.25	1

- C_i and C_j are the relevant permutations of risk module charges for market, long-term and credit risk: C_{Market} , C_{LT} , and C_{Credit}

The market risk charge C_{Market} is calculated in accordance with the following formula:

$$\sqrt{\sum_{i,j} \text{CorrMarket}_{i,j} \times C_i \times C_j}$$

C_i and C_j are the relevant permutations of market risk module charges for each of the risks:

- Fixed income: Risk charges vary by asset type and rating, ranging from 0% to 35%
- Equity: Risk charges vary by equity type, ranging from 0% to 45%. These charges are aggregated using a prescribed correlation matrix by equity type.
- Long-term interest and liquidity: Interest rate risk calculated based on duration-based approach or prescribed shocks to the discount rate. Shock varies by tenor and reaches 200bps at maximum points. Credit up to 50% for interest rate risk charge based on the asset-liability management policy under the duration-based approach.
- Currency: Capturing the risk charge for business involving different currency types. U.S. companies in general will not have this risk charge if they only have assets and liabilities in U.S. dollars.
- Concentration: Risk charge applies to an insurer's 10 largest counterparty exposures based on the aggregate of all assets relating to that counterparty.

<i>CorrMarket_{i,j}</i> is the prescribed market risk covariance matrix shown below:	Fixed income	Equity	Interest	Currency	Concentration
Fixed income	1				
Equity	0.5	1			
Interest	0.25**	0.25**	1		
Currency	0.25	0.25	0.25	1	
Concentration	0	0	0	0	1

** Interest rate correlation is generally 0.25 but can be 0 if the shock-based approach is used and the risk charge is being determined based on the interest rate shock.

- The long-term insurance risk charge C_{LT} is calculated in accordance with the following formula:

$$\sqrt{\sum_{i,j} CorrLT_{i,j} \times C_i \times C_j}$$

C_i and C_j are the relevant permutations of long-term insurance risk module charges for each of the following risks:

- Mortality: Mortality capital factors apply to net amount of risk (“NAR”) on an additive basis, with decreasing factors across NAR tiers
- Stop Loss: Insurance risk charge for stop loss is 50% on the net annual premium for stop loss business
- Rider: Insurance risk charge for rider is 25% of the net annual premium for insurance product riders
- Morbidity: Prescribed risk charge factors for morbidity and disability based on NAR, premiums, or BEL based on product type.
- Longevity: Longevity risk factors ranging from 2% to 7% based on product reserves and age band
- Variable annuity: Uses prescribed risk charges that vary by guaranteed benefit type but alternatively may be determined using an internal capital model with BMA approval.
- Other risk: the other risk charge defined in the guidance prior to 2024 is based on the capital charge factor for each product type and the BSCR adjusted reserve defined by the BMA. Effective March 28, 2024, the BMA published a new set of rules to capture the other insurance risk charge for lapses and expense. Lapse and expense risk charges are further discussed in the next two bullet points.
- Lapse: Lapse risk charge for long-term business is determined as the maximum loss, resulting from the lapse up, lapse down and mass lapse stresses:

- Lapse up: A permanent stress increase in assumed lapse rates, for all policies in homogeneous risk groups adversely affected by such increases.
 - The permanent stress increase is 40% for the U.S. market as defined by the BMA.
- Lapse down: A permanent stress decrease in assumed lapse rates, for all policies in homogeneous risk groups adversely affected by such decreases.
 - The permanent stress decrease is 40% for the U.S. market as defined by the BMA.
- Mass lapse: An immediate discontinuance of insurance policies in the first year of the projection with best estimate lapse assumptions used thereafter.
 - The first-year mass lapse stress magnitude is equal to three times the applicable annual best estimate lapse rate assumption
 - The BMA prescribes a mass lapse rate minimum that varies by product type and market.
 - Any gains from policies where lapses are favorable are limited to offsetting 50% of any losses from policies where lapses are unfavorable.
- Expense: The expense risk charge for long-term business is calculated as the loss resulting from the prescribed expense stress with a 6% increase to the expense assumption and a 1% increase to inflation.

$CorrLT_{i,j}$ is the prescribed market risk covariance matrix shown below:	Mortality	Stop Loss	Riders	Morbidity	Longevity	Variable Annuity	Other
Mortality	1						
Stop Loss	0.75	1					
Riders	0.75	0.75	1				
Morbidity	0.25	0	0.25	1			
Longevity	-0.50	-0.50	-0.50	0	1		
Variable Annuity	0	0	0	0	0	1	
Other	0.125	0.25	0.25	0.25	0.25	0.25	1

- The credit risk insurance risk charge C_{Credit} is calculated in accordance with the prescribed charge based on counterparty credit rating. This risk charge only applies to uncollateralized receivables and positive derivative balances. The capital factors by rating range from 0.7% to 35%.

4.3.3.3.2 Operational risk charge

The operational risk charge involves a qualitative risk assessment of the insurer's risk management function. The BMA defines a Corporate Governance Score and Risk Function Score to be used to determine the operational risk factor. This factor ranges from 1% to 20% and is applied to the basic BSCR after adjustment for the loss-absorbing capacity of technical provisions.

4.3.3.3.3 Other Capital Adjustments

Three other capital adjustments are included in BSCR and are discussed briefly below:

- Regulatory capital requirement for regulated non-insurance financial operating entities
 - If applicable, this equals the insurer's proportionate share of the registered entity's capital requirement in accordance with applicable solvency laws of the jurisdiction where the entity was licensed or registered.
- Adjustment for the loss-absorbing capacity of technical provisions
 - This is a consideration for reflecting management actions related to discretionary benefits in the basic BSCR through modified risk charges.
- Adjustment for loss absorbing capacity of deferred taxes
 - Credit based on loss carryforwards, RM and net DTL, subject to cap of 20% or the tax rate, whichever is lower.

4.3.4 FINANCIAL STATEMENT REQUIREMENTS

According to the Bermuda Monetary Authority's Insurance Account Rules 2016, insurers are required to file audited consolidated GAAP financial statements and Bermuda statutory financial statements (SFS), prepared in accordance with prescribed forms and prudential filters⁸¹.

The BMA requires audited annual statements by an approved auditor. The auditor is required to express an opinion on reasonableness and compliance with regulations. Additionally, the BMA conducts detailed on-site reviews along with comprehensive off-site analysis.⁸²

For the consolidated GAAP financial statement, business is consolidated across all of an insurer's Bermuda companies. Insurers can choose to report under any GAAP that BMA may recognize including:

- U.S. GAAP
- IFRS

Unlike GAAP, SFS is provided on both a consolidated and unconsolidated basis.

⁸¹ Bermuda Monetary Authority. Insurance Account Rules 2016. <https://bermudalaws.bm/Document/%7Bf9515f27-14ef-4ca2-8548-b3bd7d142734%7D>

⁸² Bermuda Monetary Authority. Insurance Supervision and Regulation. <https://www.bma.bm/insurance-supervision-regulation>

To obtain SFS, prudential filters are applied to the GAAP statement. Prudential filters are defined as:

- Adjustments to eliminate non-admitted assets, including goodwill and other similar intangible assets, not considered admissible for solvency purposes
- Adjustments to include certain assets and liabilities that are generally off-balance sheet under general purpose reporting. These include items such as guarantees and other instruments that do not relate to the insurer's own insurance contracts.

For SFS, the following additional prudential filters are applied to the GAAP financials:

- Goodwill is valued at zero. Other similar intangible assets are only recognized if they can be sold separately, and the expected future economic benefits will flow to the insurer and can be reliably measured.
- Prepays and deferred expenses are valued at zero
- Deferred acquisition cost assets are allowed and are valued consistent with GAAP
- Contingent liabilities equal the expected present value of future cash flows at the risk-free rate
- Deferred tax assets and liabilities are valued consistent with GAAP

4.3.5 CASE STUDY ILLUSTRATIONS

This section presents case studies for the representative life and annuity products introduced in [Section 4.2](#): 5-Year MYGA, 10-year level term life, and PRT.

Each case study provides a discussion of the results under a baseline best estimate scenario along with sensitivities related to specific product risks including interest rate, mortality and asset liability mismatch risk, showcasing how these products are managed under the Bermuda EBS framework. Results will vary depending on the specific asset and liability profiles of individual reinsurers. The examples provided are intended solely for illustrative purposes.

For reference to detailed calculations, [Appendix B](#) shows the following for the MYGA case study:

- Technical Provisions
 - BEL, including LapC under the SBA
 - RM
- ECR

4.3.5.1 Illustration 1: 5-year MYGA

4.3.5.1.1 Best Estimate Liability

Based on market observations, reinsurers in Bermuda often use the SBA methodology for MYGA products. This approach aligns with the BMA's prerequisite for close duration or cash flow matching when applying SBA. Asset duration in this case study is slightly higher than the liability duration – see Table 20.

Table 25 shows the SBA minimum asset requirement with a US\$100 million initial premium and an asset sensitivity where assets are significantly longer in duration than the liabilities.

In this case study, the range of minimum asset requirements under SBA is narrow because the assets and liabilities are closely matched. The biting scenario (highest asset requirement) is SBA scenario 8. For this product, scenarios with increasing interest rates generally result in higher reserves. This occurs because

most policies lapse after the 5-year guarantee period, and assets sold to fund these surrenders have lower market values under rising interest rate conditions.

For the asset sensitivity run, the asset portfolio for MYGA is shifted into longer duration assets with a duration mismatch increase from 0.5 to 3.0. Consequently, the asset market value is more sensitive to interest rate movements than the liability, and the minimum asset requirement under the SBA approach increases by US\$2.9 million.

Table 25: SBA minimum asset requirement by scenario (US\$ millions):

Scenario	Description	MYGA base	MYGA asset sensitivity	Impact of asset sensitivity
Base	Base scenario with no adjustments made to rates	92.4	90.5	(1.9)
SBA 1	Decrease all rates grading linearly by 1.5% in 10 years, unchanged thereafter	90.0	83.4	(6.6)
SBA 2	Increase all rates grading linearly by 1.5% in 10 years, unchanged thereafter	93.3	96.4	2.9
SBA 3	Decrease all rates grading linearly by 1.5% in 5 years, then back up 1.5% by year 10	88.1	83.2	(4.9)
SBA 4	Increase all rates grading linearly by 1.5% in 5 years, then back down 1.5% by year 10	91.9	91.7	(0.2)
SBA 5	Decrease rates with positive twist grading linearly over 10 years (linearly interpolate other durations): <ul style="list-style-type: none">• Year 1 spot rate -1.5%• Year 10 spot rate -1.0%• Year 30 spot rate -0.5%	89.8	83.3	(6.5)
SBA 6	Decrease rates with negative twist grading linearly over 10 years, (linearly interpolate other durations): <ul style="list-style-type: none">• Year 1 spot rate -0.5%• Year 10 spot rate -1.0%• Year 30 spot rate -1.5%	92.2	88.6	(3.6)
SBA 7	Increase rates with positive twist grading linearly over 10 years (linearly interpolate other durations): <ul style="list-style-type: none">• Year 1 spot rate +0.5%• Year 10 spot rate +1.0%• Year 30 spot rate +1.5%	92.6	92.5	(0.1)
SBA 8	Increase rates with negative twist grading linearly over 10 years (linearly interpolate other durations): <ul style="list-style-type: none">• Year 1 spot rate +1.5%• Year 10 spot rate +1.0%• Year 30 spot rate +0.5%	93.5	96.4	2.9
Biting Scenario	Scenario producing the highest asset requirement	93.5 (SBA 8)	96.4 (SBA 8)	2.9

4.3.5.1.2 Comparison of Standard Approach and Scenario Based Approach

In this example, the BEL calculated using SA is higher than SBA. The SA methodology does not account for the insurer's asset-liability matching strategy and instead uses a prescribed curve provided by the BMA.

The lower SBA BEL compared to the SA BEL suggests that the assets and liabilities are well matched and net earned rates are higher than those in the prescribed SA curve.

Year	SA BEL	SBA BEL	Difference	% Difference
0	98.4	93.7	4.7	5%

4.3.5.1.3 Reserve and Capital Projections

Best estimate – TAR and reserve projection

Table 26 illustrates the TAR and reserve projections for the MYGA product under the best estimate scenario with a target ECR ratio of 160%.

During the 5-year MYGA period, the reserves and capital are increasing due to growth in account value and the approach of the expected shock lapse at the beginning of year 6. The reserve and capital increase more quickly than the account value due to the SBA interest rates being higher than the credited rate.

Table 26

Year	Reserve (SBA BEL + RM)	Capital	TAR	Account Value	ECR Ratio
0	93.9	5.4	99.3	100.4	160.0%
5	101.2	6.0	107.2	104.3	160.0%
9	10.7	1.0	11.8	12.1	160.0%

Sensitivity: 1% Interest rate decrease – TAR and reserve projection

Interest rate risk is a material risk for MYGA products. For a sensitivity, the TAR and reserve projection is updated for a 1% decrease in interest rates at time 0.

- **Result of 1% interest rate decrease:** In this scenario, the ECR ratio decreases by (1.3%) to 158.7%. This decline indicates a weakening in the insurer's solvency position.

Table 27

Year	Reserve (SBA BEL + RM)	Capital	TAR	ECR Ratio
0	98.6	5.6	104.2	158.7%
Change from Best Estimate	4.7	0.2	4.9	(1.3%)

- **Drivers of impact:**
 - **Duration matching:** Typically, if the durations of assets and liabilities are similar, the ECR ratio remains stable despite changes in interest rates due to the market-consistent EBS

framework. Duration refers to how sensitive the value of an asset or liability is to interest rate fluctuations.

- **Surplus assets:** The observed decrease in the ECR ratio occurs because the surplus assets (the portion of assets exceeding liabilities) do not match the duration of the liabilities. Often and in this case, the surplus assets have shorter durations than the liabilities.
- **Conclusion:** In this case study, a 1% decrease in interest rates resulted in a 1.3% decline in the ECR ratio to 158.7%. This occurred because the BEL and ECR both increased, while surplus assets—having shorter durations than liabilities—did not rise proportionally. This illustrates how interest rate movements can affect solvency metrics, but the magnitude of impact will vary depending on asset-liability matching and portfolio structure.

4.3.5.2 Illustration 2: PRT

4.3.5.2.1 Best Estimate Liability

Based on market observations, reinsurers in Bermuda often use the SBA methodology for PRT because the product's assets and liabilities are generally well coordinated, which aligns with the principles of SBA. Table 28 illustrates the SBA minimum asset requirement for a US\$100 million initial premium and an asset sensitivity where assets are significantly shorter in duration than the liabilities.

The range of minimum asset requirement by scenario is narrow, representing a well-matched asset and liability. The biting scenario (highest liability) is SBA scenario 1 for this illustrative PRT block and supporting assets. In general, for this product, decreasing interest rate scenarios have higher reserves because the assets are shorter duration than the liability. Longevity risk is the primary risk for payout annuity products such as PRT. When liabilities are longer duration than assets, the BEL calculation is more likely to be impacted by reinvestment yields.

For the asset sensitivity, the asset portfolio for PRT is shifted into assets 2 years shorter in duration compared to the liabilities. Consequently, the minimum asset requirement is more sensitive to interest rate movement than the liability and increases by US\$3.2m. The duration being significantly shorter than the liabilities requires additional reinvestment in the model. In decreasing interest rate scenarios, this will result in reduced asset yields and higher reserves.

Table 28: SBA minimum asset requirement by scenario (US\$ millions):

Scenario	Description	PRT base	PRT asset sensitivity	Impact of asset sensitivity
Base	Base scenario with no adjustments made to rates	97.6	98.6	1.0
SBA 1	Decrease all rates grading linearly by 1.5% in 10 years; unchanged thereafter	99.4	101.1	1.7
SBA 2	Increase all rates grading linearly by 1.5% in 10 years; unchanged thereafter	96.1	96.3	0.2
SBA 3	Decrease all rates grading linearly by 1.5% in 5 years, then back up 1.5% by year 10	98.4	102.6	4.2
SBA 4	Increase all rates grading linearly by 1.5% in 5 years, then back down 1.5% by year 10	97.0	95.4	(1.6)
SBA 5	Decrease rates with positive twist grading linearly over 10 years (linearly interpolate other durations): <ul style="list-style-type: none"> ● Year 1 spot rate -1.5% ● Year 10 spot rate -1.0% 	98.6	99.9	1.3

	• Year 30 spot rate -0.5%			
SBA 6	Decrease rates with negative twist grading linearly over 10 years, (linearly interpolate other durations): • Year 1 spot rate -0.5% • Year 10 spot rate -1.0% • Year 30 spot rate -1.5%	99.0	100.6	1.6
SBA 7	Increase rates with positive twist grading linearly over 10 years (linearly interpolate other durations): • Year 1 spot rate +0.5% • Year 10 spot rate +1.0% • Year 30 spot rate +1.5%	96.4	96.8	0.4
SBA 8	Increase rates with negative twist grading linearly over 10 years (linearly interpolate other durations): • Year 1 spot rate +1.5% • Year 10 spot rate +1.0% • Year 30 spot rate +0.5%	96.7	97.3	0.6
Bitng Scenario	Scenario producing the highest asset requirement	99.4 (SBA 1)	102.6 (SBA 3)	3.2

4.3.5.2.2 Comparison of Standard Approach and Scenario Based Approach

The difference in outcomes between the SA and SBA methodology primarily affects the BEL calculation for the illustrations in this study.

In the best estimate scenario, the BEL calculated using SA is higher than SBA. The SA methodology does not account for the insurer's asset-liability matching strategy and instead uses a prescribed curve provided by the BMA. The lower SBA BEL compared to the SA BEL suggests that the assets and liabilities are well matched and net earned rates are higher than those in the prescribed SA curve.

Table 29: Comparison between SA and SBA BEL for the PRT Case Study

Year	SA BEL	SBA BEL	Difference	% Difference
0	108.0	99.4	8.6	9%

4.3.5.2.3 Reserve and Capital Projections

Best estimate – TAR and reserve projection

Table 30 illustrates the TAR and reserve projections for the PRT product under the best estimate scenario with a target ECR of 160%.

Table 30

Year	Reserve (SBA BEL + RM)	Capital	TAR	ECR Ratio

0	102.3	10.8	113.1	160.0%
5	75.1	8.5	83.6	160.0%
9	52.5	6.0	58.5	160.0%

1% Interest rate decrease – TAR and reserve impact

For the first sensitivity, the TAR and reserve projection is updated for a 1% decrease in interest rates at time 0.

- **Result of 1% interest rate decrease:** In this scenario, the ECR ratio decreases by 5.0% to 155.0%. This decline indicates a weakening in the insurer's solvency position.

Table 31

Year	Reserve (SBA BEL + RM)	Capital	TAR	ECR Ratio
0	109.8	11.3	121.1	155.0%
Change from Best Estimate	7.5	0.5	8.0	(5.0%)

- **Drivers of impact:**
 - **Duration matching:** Typically, if the durations of assets and liabilities are similar, the ECR ratio remains stable despite changes in interest rates. Duration refers to how sensitive the value of an asset or liability is to interest rate fluctuations.
 - **Surplus assets:** The observed decrease in the ECR ratio occurs because the surplus assets (the portion of assets exceeding liabilities) do not match the duration of the liabilities. Often and in this case, the surplus assets have shorter durations than the liabilities.
- **Conclusion:** In this case study, a 1% decrease in interest rates resulted in a 5.0% decline in the ECR ratio to 155.0%. This occurred because the BEL increased more than the surplus assets, reflecting the higher sensitivity of long-duration liabilities to interest rate changes. While this illustrates the impact of interest rate movements on solvency metrics, the magnitude of change will vary depending on asset-liability matching and portfolio structure.

2.5% Mortality decrease – TAR and reserve impact

For the second sensitivity, the TAR and reserve projection is updated for a 2.5% decrease in mortality. Longevity is a primary risk for payout annuities such as PRT.

- **Result of 2.5% mortality decrease:** In this scenario, the ECR ratio decreases significantly by 13.7% to 146.3%. This decline indicates a weakening in the insurer's solvency position.

Table 32

Year	Reserve (SBA BEL + RM)	Capital	TAR	ECR Ratio
0	103.2	9.9	113.1	146.3%
Change from Best Estimate	0.9	(0.9)	0.0	(13.7%)

- **Drivers of impact:**
 - **Best estimate assumption update:** The BEL is based upon current best estimate assumptions and is a prospective reserve. RM and ECR are also impacted by mortality assumptions, and they increase as well. A 2.5% mortality rate reduction for all years is a significant assumption update and has a corresponding significant negative impact on the ECR Ratio.
 - **No asset impact:** The market value of assets (TAR) is not impacted by mortality assumptions. The increase in the reserve results in a corresponding decrease in available capital. Additional assets are required to maintain the targeted 160% ECR ratio.

Conclusion: In this case study, updating best estimate assumptions had a material impact on the ECR ratio. A 2.5% mortality decrease increased reserves and reduced available capital, resulting in a 13.7% decline in the ECR ratio. While this illustrates the sensitivity of capital metrics to assumption changes, the magnitude of impact will vary by product mix, liability profile, and asset strategy.

4.3.5.3 Illustration 3: 10-year Term Life Insurance

4.3.5.3.1 Best Estimate Liability

Based on market observations, reinsurers in Bermuda often use the SA methodology for term life products. The SBA methodology is less common because term life products typically involve recurring premiums and are not cash flow matched. Level premium products, such as term life insurance, often generate negative net liability cash flows in the early policy years, as fixed premiums exceed expected claims and expenses during this initial period. This makes effective asset-liability matching challenging, since surplus cash flows may not align with the timing or nature of the liabilities.

4.3.5.3.2 Reserve and Capital Projections

Best estimate – TAR and reserve projection

Table 33 illustrates the TAR and SA reserve projections for the 10-year term product under the best estimate scenario with a target ECR ratio of 160%. The size of the term business is US\$500 million of face amount.

Table 33

Year	Reserve (SA BEL + RM)	Capital	TAR	ECR Ratio
0	0.7	3.3	4.0	160.0%

5	1.6	3.4	5.0	160.0%
9	1.9	4.3	6.2	160.0%

1% Interest Rate decrease – TAR and reserve impact

For the first sensitivity, the TAR and reserve projection is updated for a 1% decrease in interest rates at time 0.

- **Result of 1% interest rate decrease:** In this scenario, the ECR ratio increases by 5.2% to 165.2%. This increase indicates a strengthening in the insurer's solvency position.

Table 34

Year	Reserve (SA BEL + RM)	Capital	TAR	ECR Ratio
0	0.7	3.4	4.2	165.2%
Change from Best Estimate	0.0	0.1	0.2	5.2%

- **Drivers of impact:**
 - **Duration matching:** Typically, if the durations of assets and liabilities are similar, the ECR ratio remains stable despite changes in interest rates. Duration refers to how sensitive the value of an asset or liability is to interest rate fluctuations.
 - **Liability characteristics:** For a short duration product such as 10-year term life insurance, there will be reduced sensitivity to interest rates. Additionally, most of the TAR is backed by surplus assets due to the lower reserves at issue for this product type.
 - **Surplus assets:** The observed increase in the ECR ratio is driven by a mismatch in duration between surplus assets and liabilities. In the case of the term product, the liability duration is effectively zero, meaning its value is largely unaffected by changes in interest rates. However, surplus assets are sensitive to interest rate movements and tend to increase in value when interest rates decline. This divergence leads to an improvement in the ECR ratio.
- **Conclusion:** In this case study, a 1% decrease in interest rates resulted in a 5.2% increase in the ECR ratio to 165.2%. This improvement occurred because the surplus assets—being sensitive to interest rate movements—rose in value, while the short-duration liabilities remained largely unaffected. This illustrates how interest rate changes can benefit short-duration products under the EBS framework, but the magnitude of impact will vary depending on liability characteristics and asset allocation.

2.5% mortality increase – TAR and reserve impact

For the second sensitivity, the TAR and reserve projection is updated for a 2.5% increase in the mortality assumption. Mortality is the primary risk for term life insurance.

- **Result of 2.5% mortality increase:** In this scenario, the ECR ratio decreases by 3.1% to 156.9%. This decline indicates a weakening in the insurer's solvency position.

Table 35

Year	Reserve (SA BEL + RM)	Capital	TAR	ECR Ratio
0	0.8	3.2	4.0	156.9%
Change from Best Estimate	0.1	(0.1)	-	(3.1%)

- **Drivers of impact:**
 - **Best estimate assumption update:** The BEL is based upon current best estimate assumptions and is a prospective reserve. RM and ECR are also impacted by mortality assumptions, and they increase as well. A 2.5% mortality rate increase for all years is a significant assumption update and has a corresponding significant negative impact on capital.
 - **No asset impact:** The market value of assets is not impacted by mortality assumptions. Reserves and capital increase and additional assets are required to maintain the targeted 160% ECR ratio.

4.3.5.4 Capital diversification

The aggregation of liabilities for determining capital may reduce the ECR through diversification benefits between different product types. For example, aggregating product risks such as mortality and longevity in the long-term insurance risk charge C_{LT} can result in a reduction in the overall capital requirement.

To illustrate the impact of aggregating risks to capital requirements, the three case studies are combined in Table.

Table 36

Capital (undiversified) – US\$ millions			
MYGA	PRT	Term	Total
5.4	10.8	3.3	19.5

Capital undiversified	Capital diversified	Diversification benefit	Diversification benefit (%)
19.5	15.3	(4.2)	(21%)

Similarly, the aggregation of risk margin for the liabilities can further reduce the total risk margin through diversification of risks. In this example, the combination of longevity (PRT) and mortality risks (term) is a

significant driver of a 36% reduction in the risk margin after applying the long-term insurance risk correlation matrix.

Table 37

Risk Margin Undiversified	Risk Margin Diversified	Diversification Benefit	Diversification Benefit (%)
4.1	2.6	(1.5)	(36%)

4.4 CAYMAN ISLANDS

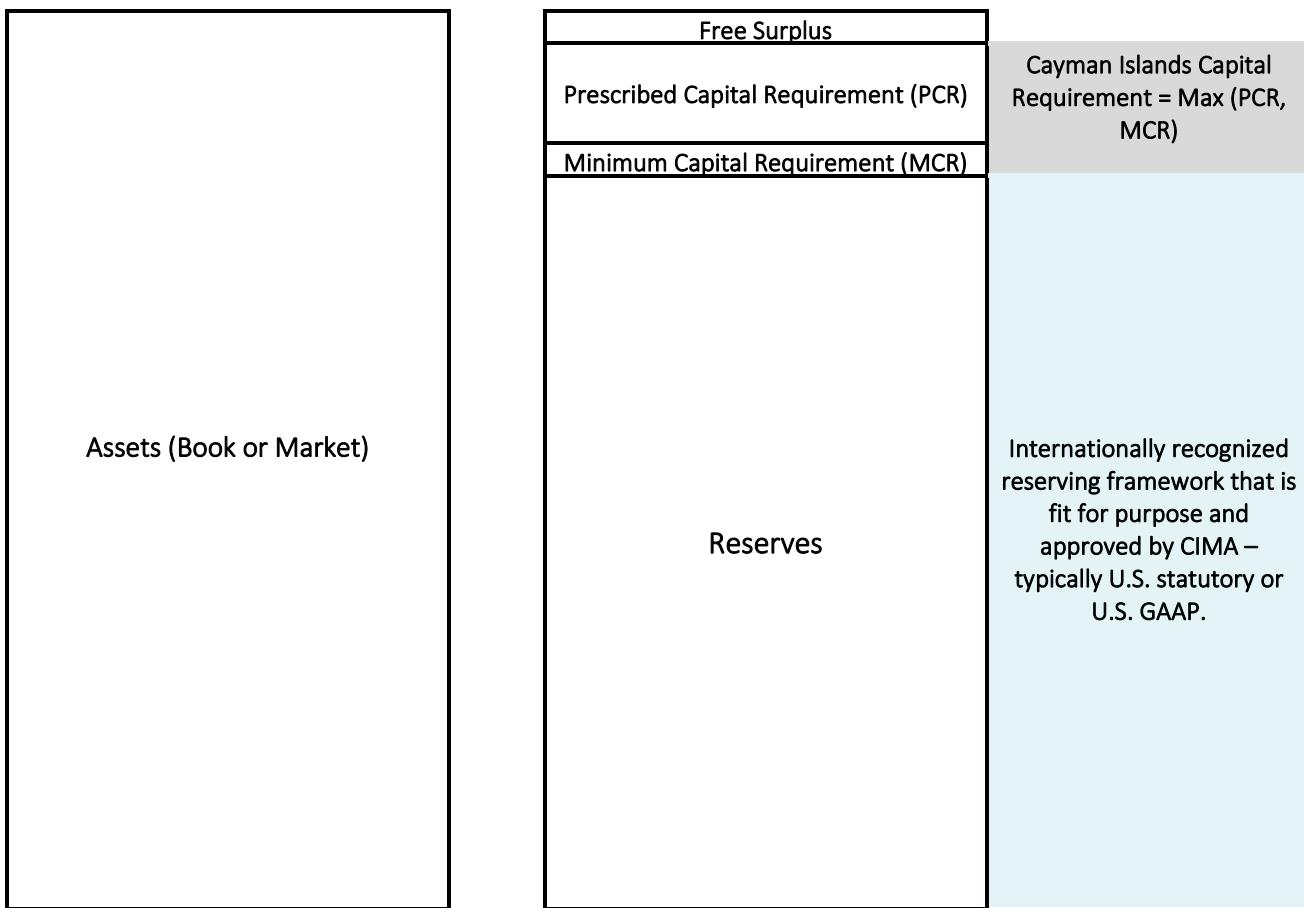
4.4.1 OVERVIEW

The Cayman Islands' insurance industry is regulated by the Cayman Islands Monetary Authority (CIMA). The Cayman Islands is not Solvency II equivalent and is a non-qualified jurisdiction under the NAIC, however, CIMA is actively pursuing NAIC qualified status with the potential for reciprocal jurisdiction status thereafter.

CIMA has not specified a reserving framework and allows accounting frameworks in accordance with internationally recognized accounting standards. For solvency capital requirements, CIMA has a prescribed minimum capital requirement ("MCR") or a factor-based prescribed capital requirement ("PCR") depending on insurer size. Most large reinsurers use an internal capital model aligned to IAIS standards to determine the PCR, typically based on the U.S. RBC framework, given its alignment to their business profile.

The Cayman Islands balance sheet components are illustrated in Figure 5 and discussed in more detail in the following sections.

Figure 5



4.4.2 RESERVING FRAMEWORK

When choosing an accounting framework, (re)insurers typically utilize a basis from the jurisdiction from which they predominately assume risk and if an affiliate of a direct insurer, one that is consistent with their existing financial statements. For reserving, common bases used are modified U.S. GAAP, modified U.S. statutory and the Canadian Asset Liability Method (CALM). Modifications must be approved by CIMA and may include the following:

- U.S. GAAP based upon the fair value option
- Use of different discount rates including book yields
- U.S. statutory with state permitted practices

4.4.3 CAPITAL FRAMEWORK

CIMA defines capital requirements that vary by license. Life and annuity insurers in the Cayman Islands are typically either Class B(iii) or Class D. There are two key regulatory capital requirements: the Minimum Capital Requirement (MCR) and the Prescribed Capital Requirement (PCR). CIMA does not permit life and

annuity (re)insurers to hold a PCR equal to its MCR and, unless otherwise approved by CIMA, (re)insurers are required to keep solvency equal to or in excess of the total PCR. In practice, as in the U.S., companies target materially higher capital levels to meet the expectations of rating agencies. Should a (re)insurer's capital fall below the PCR but remain above the MCR, the (re)insurer is required to meet with CIMA and present a remedial action plan. Functionally, PCR can be thought of as 300% ACL RBC in the U.S., the upper limit of a Company Action Level Event. If capital falls below the MCR, CIMA may consider regulatory actions.

The MCR for Class B(iii) and Class D insurers is US\$400,000 and US\$50 million, respectively. For PCR, (re)insurers largely choose to use internal capital models subject to the approval of CIMA. CIMA employs a risk-based approach to solvency capital requirements, requiring applicants at the time of licensing to demonstrate how their chosen capital model adequately supports the business they are reinsuring, in accordance with CIMA's Internal Capital Model Statement of Guidance.⁸³ CIMA also applies enhanced capital requirements on licensees based on the business and risk profile.

There is also a factor-based standard formula capital model for Class D companies in the Cayman Islands regulations, however it is widely understood that this formula is primarily applicable to property and casualty companies. Life and annuity companies typically utilize the ICM Statement of Guidance, which aligns more closely with their operational frameworks and risk profile.

4.4.4 CASE STUDY ILLUSTRATIONS

This section presents case studies for the representative life and annuity products detailed in Tables 19 and 20 in Section 3.2: 5-Year MYGA, 10-Year level term, and PRT.

As CIMA allows the reinsurer to choose from internationally recognized reserve and capital frameworks, this section focuses on the GAAP fair value reserving framework with RBC as the capital framework.

Each case study provides a discussion of the results under a baseline best estimate scenario along with sensitivities related to specific product risks including interest rate, mortality and asset liability mismatch risk, showcasing how these products are managed under the Cayman framework. The case studies illustrate the theoretical concepts outlined in the previous sections and the applications of these reserving and capital methodologies for different product types. Results will vary depending on the specific asset and liability profiles of individual reinsurers. The examples provided are intended solely for illustrative purposes.

4.4.4.1 Illustration 1: 5-year MYGA

4.4.4.1.1 Reserve and Capital Projections and Sensitivities

Baseline – GAAP Fair Value TAR and reserve projection

Table 38 illustrates the TAR and reserve projections for the MYGA product under the baseline best estimate scenario with a target RBC ratio of 400%.

⁸³ [Cayman Islands Monetary Authority, Statement of Guidance – Internal Capital Model.](https://www.cima.ky/upimages/regulatorymeasures/1499683640StatementofGuidance-ICM-Final_1599569408.pdf)
https://www.cima.ky/upimages/regulatorymeasures/1499683640StatementofGuidance-ICM-Final_1599569408.pdf

Table 38

Year	GAAP Fair Value Reserve	Capital	TAR	Account Value	RBC Ratio
0	99.5	7.8	107.3	100.4	400%
5	101.4	7.9	109.4	104.3	400%
9	11.4	0.9	12.3	12.1	400%

1% Interest rate decrease – TAR and reserve projection

Interest rate risk is a material risk for MYGA products. For a sensitivity, the TAR and reserve projection is updated for a 1% decrease in interest rates at time 0.

- **Result of 1% interest rate decrease:** In this scenario, the RBC ratio decreases by 6.2% to 393.8%. This indicates a weakening in the insurer's solvency position.

Table 39

	GAAP Fair Value Reserve	Capital	TAR	RBC Ratio
Year 0	105.2	8.1	113.3	393.8%
Change from Baseline	5.7	0.3	6.0	(6.2%)

- **Drivers of impact:**
 - **Duration Matching:** Typically, if the durations of assets and liabilities are similar, the RBC ratio remains stable despite changes in interest rates due to both assets and liabilities being measured at fair value.
 - **Surplus Assets:** The observed decrease in the RBC ratio is because the surplus assets (the portion of assets exceeding liabilities) do not match the duration of the liabilities. Often and in this case, the surplus assets have shorter durations than the liabilities.

4.4.4.2 Illustration 2: PRT**4.4.4.2.1 Reserve and Capital Projections and Sensitivities**Baseline – TAR and reserve projection

Table 40 illustrates the TAR and reserve projections for the PRT product under the baseline scenario with a target RBC ratio of 400%. This block represents US\$100 million of initial premium.

Table 40

Year	GAAP fair value reserve	Capital	TAR	RBC ratio
0	109.6	12.4	122.0	400.0%
5	79.5	9.0	88.6	400.0%
9	56.4	6.4	62.9	400.0%

1% interest rate decrease – TAR and reserve impact

For the first sensitivity, the TAR and reserve projection is updated for a 1% decrease in interest rates at time 0.

- **Result of 1% interest rate decrease:** In this scenario, the RBC ratio increases by 13.5% to 386.5%. This indicates a weakening in the insurer's solvency position.

Table 41

	GAAP Fair Value Reserve	Capital	TAR	RBC Ratio
Year 0	118.2	12.9	131.1	386.5%
Change from Baseline	8.6	0.5	9.1	(13.5%)

- **Drivers of impact:**
 - **Duration Matching:** Typically, if the durations of assets and liabilities are similar, the RBC ratio remains stable despite changes in interest rates due to both assets and liabilities being measured at fair value.
 - **Surplus Assets:** The observed decrease in the RBC ratio is because the surplus assets (the portion of assets exceeding liabilities) do not match the duration of the liabilities. Often and in this case, the surplus assets have shorter durations than the liabilities.

2.5% mortality decrease – TAR and reserve impact

For the second sensitivity, the TAR and reserve projection is updated for a 2.5% decrease in mortality. Longevity is a primary risk for payout annuities such as PRT.

- **Result of 2.5% Mortality decrease:** In this scenario, the RBC ratio decreases by 32.1% to 367.9%. This decline indicates a weakening in the insurer's solvency position.

Table 42

	GAAP Fair Value Reserve	Capital	TAR	RBC Ratio
Year 0	110.6	11.5	122.1	367.9%
Change from Baseline	0.9	(0.9)	0.0	(32.1%)

- **Drivers of impact:**
 - **Best Estimate Assumption Update:** The GAAP fair value is based upon current assumptions and is a prospective reserve. Lower mortality assumptions increase the reserve. A 2.5% mortality rate decrease for all years is a significant assumption update for this product. Additional assets are required to maintain the targeted 400% RBC ratio.
 - **No asset impact:** The value of assets is not impacted by mortality assumptions.

Conclusion: In this case study, a 2.5% decrease in mortality resulted in a 32.1% decline in the RBC ratio to 367.9%. This occurred because lower mortality assumptions increased the GAAP fair value reserve, reducing available capital. While this illustrates the sensitivity of solvency metrics to assumption changes, the magnitude of impact will vary depending on product type, liability profile, and asset strategy.

4.4.4.3 Illustration 3: 10-year Term Life Insurance

4.4.4.3.1 Reserve and Capital Projections and Sensitivities

Baseline – TAR and reserve projection

Table 43 illustrates the TAR and reserve projections for the 10-year level term insurance product under the baseline scenario with a target RBC ratio of 400%. The starting amount for this block is US\$500 million.

Table 43

Year	GAAP Fair Value Reserve	Capital	TAR	RBC Ratio
0	(0.3)	6.0	5.7	400.0%
5	0.2	6.0	6.2	400.0%
9	0.3	6.8	7.0	400.0%

1% interest rate decrease – TAR and reserve impact

For the first sensitivity, the TAR and reserve projection is updated for a 1% decrease in interest rates at time 0.

- **Result of 1% interest rate decrease:** In this scenario, the RBC ratio increases by 15.7% to 415.7%. This indicates a strengthening in the insurer's solvency position.

Table 44

	GAAP Fair Value Reserve	Capital	TAR	RBC Ratio
Year 0	(0.3)	6.2	5.9	415.7%
Change from Baseline	0.0	0.2	0.2	15.7%

- **Drivers of impact:**
 - **Duration Matching:** Typically, if the durations of assets and liabilities are similar, the RBC ratio remains stable despite changes in interest rates due to both assets and liabilities being measured at fair value. Level premium term is difficult to duration match due to negative net cashflows in early years.
 - **Surplus Assets:** The observed increase in the RBC ratio is due to most of the term TAR being related to capital. The increase in the market value of these assets, relative to the required capital increases the RBC ratio.

2.5% mortality increase – TAR and reserve impact

For the second sensitivity, the TAR and reserve projection is updated for a 2.5% increase in mortality. Mortality is the primary risk for term life insurance.

- **Result of 2.5% mortality increase:** In this scenario, the RBC ratio decreases by 5.9% to 394.1%. This decline indicates a weakening in the insurer's solvency position.

Table 45

	GAAP Fair Value Reserve	Capital	TAR	RBC Ratio
Year 0	(0.3)	5.9	5.6	394.1%
Change from Baseline	0.0	(0.1)	(0.1)	(5.9%)

- **Drivers of impact:**
 - **Best Estimate Assumption Update:** The GAAP fair value is based upon current assumptions and is a prospective reserve. Higher mortality assumptions increase the reserve. A 2.5% mortality rate increase for all years is a significant assumption update for this product.
 - **No asset impact:** The value of assets is not impacted by mortality assumptions. Additional assets will be required to maintain the targeted 400% RBC ratio.

4.5 GAAP AND IFRS-BASED JURISDICTIONS

4.5.1 SUMMARY

The other jurisdictions reviewed all follow IFRS based reserving frameworks, and some allow U.S. or UK GAAP as an option.

Both IFRS⁸⁴ and U.S. GAAP are similar in measuring capital based upon market values of assets and liabilities discounted at current interest rates, with no gain or loss recognized at inception. Both frameworks reflect up-to-date future expectations in the liabilities. UK GAAP, governed by FRS 102⁸⁵ and FRS 103⁸⁶, also emphasizes the measurement of insurance contracts but follows a different approach.

Key Differences

Revenue recognition:

- IFRS: Revenue recognition is based on the balance sheet, emphasizing the measurement of insurance contracts through the Contractual Service Margin (CSM), which represents unearned profit recognized over the coverage period.
- U.S. GAAP: Revenue is recognized when earned, primarily based on the income statement. It focuses on the release of locked-in margins and amortization of deferred acquisition costs (DAC).
- UK GAAP: Revenue recognition aligns with the earned revenue concept, similar to U.S. GAAP, but includes specific provisions for insurance contracts under FRS 103, focusing on unearned premiums and claims incurred.

Earnings Emergence:

- IFRS: Earnings are recognized through the release of risk margins and the CSM, which can lead to increased volatility once the CSM is depleted.
- U.S. GAAP: Earnings emerge from the release of locked-in margins and DAC amortization, which can lead to volatility based on assumptions made at inception.
- UK GAAP: Earnings emergence is influenced by actual claims experience and the recognition of unearned premiums, typically resulting in more stable earnings patterns.

Measurement of Liabilities:

- IFRS: Requires a detailed calculation of liabilities, including risk adjustments and the CSM, leading to potentially higher volatility in reported earnings
- U.S. GAAP: Measures liabilities based on initial assumptions, with adjustments made for actual experience, which can introduce volatility

⁸⁴ International Financial Reporting Standards Foundation. IFRS 17 – Insurance Contracts. <https://www.ifrs.org/issued-standards/list-of-standards/ifrs-17-insurance-contracts/>

⁸⁵ Financial Reporting Council (UK). FRS 102 – The Financial Reporting Standard applicable in the UK and Republic of Ireland (September 2024 Edition). https://media.frc.org.uk/documents/FRS_102_September_2024_Redacted_edition_UkckFQ0.pdf

⁸⁶ Financial Reporting Council (UK). FRS 103 – Insurance Contracts (September 2024 Edition). https://media.frc.org.uk/documents/FRS_103_September_2024_rSi5poe.pdf

- UK GAAP: Offers a simpler approach to liability measurement, which may reduce volatility compared to IFRS

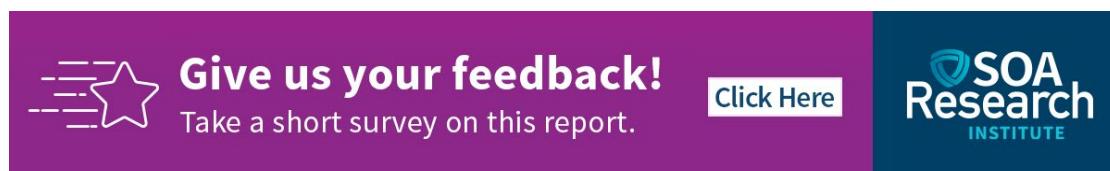
Deferred Acquisition Costs (DAC):

- IFRS: DAC is integrated into the CSM framework, affecting how costs are recognized in relation to revenue.
- U.S. GAAP: DAC can be capitalized and amortized over the life of the contract, impacting the timing of expense recognition.
- UK GAAP: The treatment of DAC is more restrictive, which can limit the ability to defer costs and influence the timing of expense recognition.

Table 45 summarizes the observed accounting regimes and capital requirements for each jurisdiction in the scope of this paper, with the exception of Bermuda and the Cayman Islands, which are discussed in Sections 3.3 and 3.4 respectively.

Table 46

#	Jurisdiction	Accounting regime driving capital calculation	Capital requirements
1	Puerto Rico	IFRS or U.S. GAAP	Factor-based ⁸⁷
2	Barbados	IFRS	Factor-based
3	Bahamas	IFRS or U.S. GAAP	Risk-based
4	Guernsey	IFRS or U.S. GAAP or UK GAAP	Risk-based
5	Hong Kong	IFRS	Factor-based
6	Luxembourg	IFRS	SII
7	Jersey	IFRS	Factor-based
8	Malta	IFRS	SII
9	Singapore	SFRS (based on IFRS)	Risk-based
10	Gibraltar	IFRS	SII
11	Isle of Man	IFRS or UK GAAP	Risk-based (similar to SII)
12	Ireland	IFRS	SII



⁸⁷ Puerto Rico has minimum Capital and Surplus requirements of \$750,000 plus Premium to Surplus pursuant to Actuarial Feasibility Study filed before the regulator.

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- Bahamas Insurance Association (BIA)
- Hong Kong Federation of Insurers (HKFI)
- Life Insurance Association Singapore (LIA)
- Insurance Ireland
- Fitch Ratings

Appendix A: Qualified and Reciprocal Jurisdictions

The National Association of Insurance Commissioners (NAIC) has established specific regulatory frameworks to ensure U.S. insurers can secure credit for reinsurance when engaging with international reinsurers. These frameworks introduce key designations: Qualified Jurisdictions, Certified Reinsurers, Reciprocal Jurisdictions, and Reciprocal Reinsurers. Each is designed to uphold solvency standards, mitigate risks, and ensure U.S. insurers collaborate with financially stable and reputable reinsurers.

Qualified Jurisdiction

A Qualified Jurisdiction is a non-U.S. jurisdiction that the NAIC has evaluated and approved based on its financial regulatory standards and oversight capabilities. This designation permits reinsurers based in these jurisdictions to be considered for certification, allowing U.S. insurers to obtain credit for reinsurance with reduced or modified collateral requirements.

The NAIC rigorously assesses the jurisdiction's regulatory framework, focusing on:

- Regulatory Supervisory System: The strength and effectiveness of the jurisdiction's insurance regulatory authority.
- Solvency Regulation: Requirements around capital adequacy, reserves, and risk-based capital.
- Financial Reporting: Standards governing accounting and financial disclosures.
- Reinsurance Practices: Oversight of reinsurance activities and enforcement of contractual obligations.
- Anti-Money Laundering (AML) and Counter-Terrorism Financing (CTF): Compliance with international AML and CTF standards.

Current Qualified Jurisdictions⁸⁸: The NAIC has currently recognized Bermuda, Switzerland, Japan, Germany, the United Kingdom, France, and Ireland as Qualified Jurisdictions.

Certified Reinsurers

A Certified Reinsurer is a non-U.S. reinsurer licensed and certified by state insurance regulators to provide reinsurance to U.S. insurers. Certification enables these reinsurers to post reduced collateral on reinsurance contracts with U.S.-based insurers. Certification criteria are set by individual U.S. states, aligned with the NAIC's Credit for Reinsurance Model Law.

Key Requirements for Certified Reinsurers:

1. Regulatory Oversight: The reinsurer must be licensed in a qualified jurisdiction where the regulatory authority aligns with NAIC standards.

⁸⁸ National Association of Insurance Commissioners: NAIC List of Qualified Jurisdictions. https://content.naic.org/sites/default/files/inline-files/committees_e_reinsurance_qualified_jurisdictions_list_1.pdf

2. Financial Strength Rating: Certified reinsurers need ratings from at least two approved agencies (e.g., A.M. Best, S&P, Moody's, Fitch or Kroll). The rating influences the collateral requirements in the U.S., with higher ratings allowing for lower or no collateral.
3. Solvency Standards: Certified reinsurers must meet stringent solvency and capital requirements, often aligned with international norms such as Europe's Solvency II.
4. Reciprocity: The Certified Reinsurer's home jurisdiction must afford similar recognition to U.S.-based reinsurers, promoting reciprocal reinsurance terms.

The Certification Process

To become certified, a reinsurer must apply for certification through individual U.S. state insurance departments. The certification process typically involves:

- Application Submission: The reinsurer applies to the state insurance department(s) where it seeks certification, providing detailed financial information and demonstrating compliance with the criteria.
- Regulatory Review: The state regulator reviews the application, often in coordination with other states through the NAIC's Reinsurance Financial Analysis Working Group (RFAWG), to ensure consistency and efficiency.
- Public Notification: There may be a period for public comment or notification, allowing stakeholders to provide input on the reinsurer's certification.
- Approval and Rating Assignment: Upon approval, the reinsurer is assigned a rating category that determines its collateral requirements.
- Ongoing Monitoring: Certified Reinsurers are subject to annual reviews and must provide regular financial reporting to maintain their status.

Certified reinsurers are subject to annual reviews by U.S. regulators to ensure they continue to meet the qualifications for reduced collateral status.

Reciprocal Jurisdiction

A Reciprocal Jurisdiction, designated by the NAIC, offers enhanced access for reinsurers from specified foreign jurisdictions to the U.S. market, provided mutual, reciprocal treatment is extended to U.S.-based reinsurers in that jurisdiction. This approach fosters a level playing field for U.S. and foreign reinsurers globally.

Reciprocal Jurisdictions support NAIC's modernization goals through the Credit for Reinsurance Model Law and include several benefits similar to Qualified Jurisdictions and Certified Reinsurers, with a focus on reciprocity:

- Collateral Exemption: Reinsurers from Reciprocal Jurisdictions are exempt from posting collateral for U.S. reinsurance business, easing liquidity constraints and financial burdens.
- Mutual Recognition: For reciprocal recognition, the jurisdiction must permit U.S. reinsurers to operate under comparable conditions.

- Regulatory Alignment: Reciprocal Jurisdictions maintain oversight in line with NAIC standards, covering financial solvency, reporting, and adherence to global regulations (e.g., IAIS).
- Designation by NAIC: The NAIC rigorously evaluates a jurisdiction's framework to confirm its commitment to mutual treatment.

NAIC-Recognized Reciprocal Jurisdictions

As of recent updates, the NAIC has recognized the following as Reciprocal Jurisdictions:

- European Union (EU): As part of the U.S. - EU Covered Agreement, the European Union has been designated as a Reciprocal Jurisdiction. This agreement facilitates reinsurance transactions between the U.S. and the EU, reducing the collateral burden for reinsurers from both sides.
- United Kingdom (UK): Following Brexit, the U.S. and the UK entered into a similar U.S.-UK Covered Agreement, recognizing the UK as a Reciprocal Jurisdiction and ensuring continued collaboration in the reinsurance space between the two markets.
- Bermuda, a major global reinsurance hub, is also recognized as a Reciprocal Jurisdiction. The NAIC's decision allows Bermuda-based reinsurers to benefit from reduced or no collateral requirements, provided they meet certain financial strength standards.
- Switzerland has been recognized as a Reciprocal Jurisdiction, enabling Swiss reinsurers to operate in the U.S. under similar favorable conditions, such as reduced collateral requirements. This is supported by the U.S. - Swiss regulatory cooperation.
- Japan has been recognized as a Reciprocal Jurisdiction, allowing Japanese reinsurers to operate in the U.S. with reduced collateral requirements. This status reflects the regulatory cooperation between the U.S. and Japan, aimed at facilitating reinsurance transactions and enhancing market access for reinsurers in both countries.

Process for Establishing Reciprocal Jurisdiction:

Below is the process for establishing a Reciprocal Jurisdiction:

1. Application or International Agreement:
 - Jurisdictions can either apply for reciprocal status or enter into international agreements (e.g., U.S.-EU Covered Agreement) where mutual recognition is established.
2. NAIC Evaluation:
 - The NAIC reviews the foreign jurisdiction's regulatory framework, focusing on solvency, financial strength, and reinsurance laws to ensure they meet U.S. standards.
 - Reciprocity is a key condition — the foreign jurisdiction must provide U.S. reinsurers with similar regulatory treatment.
3. Public Consultation:

- A public comment period allows stakeholders (insurers, reinsurers, and the public) to provide feedback on whether the jurisdiction should be designated as reciprocal.

4. Final NAIC Decision:

- After reviewing all information and feedback, the NAIC makes a final decision. If approved, the jurisdiction is designated as a Reciprocal Jurisdiction, allowing reinsurers to operate with reduced or no collateral requirements.

5. State-Level Implementation:

- U.S. states must adopt the NAIC's guidelines to formally recognize the reduced collateral requirements for reinsurers from the reciprocal jurisdiction.

6. Ongoing Monitoring:

- The NAIC regularly reviews the jurisdiction's regulatory environment. If it fails to maintain standards or reciprocal treatment, the status may be revoked.

Reciprocal Jurisdictions streamline U.S. reinsurance by fostering mutual recognition, reducing regulatory burdens, and promoting a more competitive global market. By easing collateral requirements, U.S. insurers gain flexibility in selecting qualified international partners, while the framework ensures strong solvency oversight. These jurisdictions are poised to influence the global reinsurance landscape, promoting resilience and cooperation across borders.

Appendix B: Comprehensive Calculations for Bermuda Case Studies

For illustrative purposes, the following are the comprehensive calculations of the MYGA case study in the Bermuda EBS framework.

Reserve Calculation: Technical Provision (TP)

The Technical Provision for the MYGA is calculated using the SBA methodology. The BEL is determined through various scenarios, as shown below:

Scenario	Best Estimate Liability
Base	61,609,724
SBA 1	60,020,036
SBA 2	62,231,188
SBA 3	58,739,976
SBA 4	61,275,824
SBA 5	59,889,684
SBA 6	61,475,260
SBA 7	61,739,004
SBA 8	62,309,300
Biting Scenario (SBA 8)	62,309,300

Lapse Cost

The LapC is calculated to account for the lapse risk associated with the MYGA product. The formula used is:

$$\text{LapC} = (\text{Lapse Rate Sigma} \div \text{BSCR prescribed lapse shock}) \times \text{Lapse Capital Charge}$$

Where:

- Lapse Rate Sigma, the standard deviation of historical to expected differences, is assumed to be 20%
- BSCR prescribed lapse shock is 40%
- Lapse Capital Charge is calculated to be 295,128

Applying the formula, $\text{LapC} = (20\% / 40\%) * 295,128 = 147,564$

Risk Margin

The RM is based on the prescribed Cost of Capital (6%) and projected capital based on the formula in section 3.3.2.2. This calculation is similar to the ECR calculation in section 3.3.5.1.5, but is limited to the non-hedgeable risks (insurance, credit and operational risk).

The RM is calculated to equal 137,677.

Total Technical Provisions

The Technical Provisions are calculated by summing the BEL, LapC, and RM:

$$\text{TP} = \text{BEL} + \text{LapC} + \text{RM}$$

$$\text{TP} = 62,309,300 + 147,564 + 137,677 = 62,594,541$$

Minimum Capital Requirement (ECR)

The minimum capital requirement is determined as the maximum of the BSCR and the MSM. The calculation of BSCR incorporates a 10-year transition period based on different capital methodologies.

The formula for BSCR is:

$$\text{BSCR} = \text{BSCR}_{2018} * \text{Transition Factor}_{2018} + (1 - \text{Transition Factor}_{2018}) * (\text{BSCR}_{2019} * (1 - \text{Transition Factor}_{2024}) + \text{BSCR}_{2024} * \text{Transition Factor}_{2024})$$

Where for this example, the year 2024 factors are used:

- Transition Factor₂₀₁₈ = 40% (decreasing by 10% until 2027)
- Transition Factor₂₀₁₉ = 60% (increasing by 10% until 2027)
- Transition Factor₂₀₂₄ = 10% (increasing by 10% until 2033)

BSCR₂₀₂₄ Calculation

The BSCR for the year 2024 is calculated using the following formulas:

$$\text{BSTCR}_{2024} = \text{Basic BSCR} (1 + \text{Operational Risk factor})$$

The Operational Risk Factor is assumed to be 10%. For the formulas related to Basic BSCR and risk charges, please refer to Section 3.3.3.

Risk charges are summarized in the table below:

Table 47

Risk Type	Description	Value
Market Risk	$C_{\text{Fixed Income}}$	1,944,130
	$C_{\text{LT Interest Rate}}$	715,455
	$C_{\text{Concentration}}$	178,864
	$C_{\text{Market}} - \text{Undiversified}$	2,838,449
	$C_{\text{Market}} - \text{Diversified}$	2,240,307
Long Term Insurance Risk	$C_{\text{LT Lapse}}$	295,128
	$C_{\text{LT Expense}}$	9,052
	$C_{\text{LT}} - \text{Undiversified}$	304,180
	$C_{\text{LT}} - \text{Diversified}$	299,757
Credit Risk	C_{Credit}	0

After applying the prescribed correlation matrix shown in Section 3.3.3.3.1 to the above diversified risk charges, the Basic BSCR₂₀₂₄ can be determined.

$$\text{Basic BSCR}_{2024} = 2,297,111$$

$$\text{BSCR}_{2024} = 2,297,111 * (1 + \text{Operational Risk Factor}) \text{ where Operational Risk equals 10\%}$$

$$\text{BSCR}_{2024} = 2,526,822$$

The BSCR calculated for 2018 and 2019 are also included in Table 48 below along with the transition factors used to weigh these into final BSCR.

Table 48

Description	Value
BSCR ₂₀₁₈	2,312,767
Transition Factor 2018	40%
BSCR ₂₀₁₉	2,530,127
Transition Factor 2019	54%
BSCR ₂₀₂₄	2,526,822
Transition Factor 2024	6%

$$\text{BSCR} = 2,312,767 * 40\% + 60\% * (2,530,127 * 90\% + 2,526,822 * 10\%) = 2,442,985$$

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