

# Measuring economic performance & solvency at Swiss Re

Internal and regulatory economic valuation

13 March 2024





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# Summary

Swiss Re used its proprietary economic valuation and performance measurement framework (Economic Value Management, EVM) for its business steering with the objective to maximise shareholder value and allocate capital to the most attractive risk pools from an economic risk/return perspective. EVM allowed Swiss Re to establish an economically consistent link between risk-taking and value creation. As such, EVM was a market-consistent valuation framework used to evaluate the economic impact of controlled risk-taking and capital allocation decisions within the strategic asset allocation (asset risk selection) and the target liability portfolio (underwriting risk selection) process. With this steering tool Swiss Re could compare risk-adjusted returns across business and product lines and, therefore, steer capital capacity, taking into account risk appetite constraints.

With the introduction of IFRS, Swiss Re will discontinue EVM reporting with effect from the financial year starting 1 January 2024. The information contained herein is intended to be considered alongside the Group's Annual Report 2023.

Swiss Re's most important economic performance measure was called EVM profit. It measured Swiss Re's economic performance on a risk-adjusted basis. For the calculation and allocation of capital costs, an internal risk model was used. In addition to EVM profit, the total contribution to economic net worth (ENW) measured the total return generated for shareholders, before adjusting for the cost of taking risk. Total contribution to ENW was the main driver of ENW growth and could be set in relation to other accounting and valuation frameworks:

- **Swiss Solvency Test (SST):** SST and EVM applied similar market-consistent valuation principles consistently across all assets and liabilities (differences arise mainly with respect to capital costs and taxes). The total contribution to ENW was hence a key explanatory factor of the change in the SST risk-bearing capital.
- **United States generally accepted accounting principles (US GAAP):** There were several significant differences between US GAAP and EVM, which mainly related to the valuation of re/insurance liabilities (market-consistent valuation in EVM vs specific rules under US GAAP) and income recognition (see page 10 for a more detailed comparison). Despite these differences in measurement and recognition, it is important to be aware that over the lifetime of a contract or an investment cycle, total revenue earned was the same under US GAAP and EVM.

As a result, maximising ENW growth was consistent with maximising SST risk-bearing capital and US GAAP shareholders' equity over time. Steering based on EVM profit was key to maximising risk-adjusted shareholder value. EVM was a shareholder-focused economic steering and reporting framework; SST aims primarily at protecting policyholder interests.

In addition to the EVM financial statements, Swiss Re's economic disclosures include details on its economic solvency in accordance with SST. Specifically, the disclosure includes the solvency capital generation, which explains the change in SST excess capital over target capitalisation and established the link to EVM performance.

This document complements Swiss Re's economic disclosures in the Group's Annual Report 2023, which includes Financial Report 2023 and Business Report 2023:

- the key principles of economic valuation and risk measurement at Swiss Re as well as in accordance with SST,
- the main drivers of capital generation under EVM and SST, and
- the key differences between EVM and US GAAP valuation and performance.

# What was Economic Value Management at Swiss Re?

## Why a proprietary economic valuation framework like EVM?

Swiss Re used EVM for the steering of its business with the objective to maximise shareholder value and allocate capital to the most attractive risk pools from an economic risk/return perspective.

Unlike other economic performance measurement frameworks such as Traditional Embedded Value or Market Consistent Embedded Value, EVM could be applied consistently to all risk-taking activities within the firm. As a result, risk-adjusted performance could be used as a Key Performance Indicator across the Group. As EVM applied market-consistent valuation techniques, it was closely related to key regulatory economic valuation frameworks such as SST or Solvency II.

EVM allowed Swiss Re to gain a better understanding of the link between risk-taking and value creation. It provided a consistent framework to evaluate the outcome of controlled risk-taking and capital allocation decisions throughout a performance cycle. With this steering tool, Swiss Re could compare economic returns across business and product lines and, therefore, steer capital capacity, taking into account risk appetite constraints.

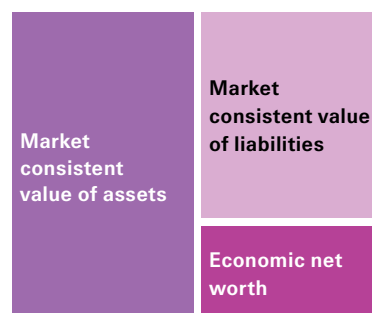
In assessing whether changes to the EVM accounting principles were required, Swiss Re monitored developments in related accounting or economic valuation frameworks (eg US GAAP, IFRS, Solvency II, SST) and other relevant sources. Our EVM financial information provided an economic view of our business performance and were comprised of an economic balance sheet, income statement and related notes.

## What were the key economic valuation principles and how did they differ compared to US GAAP?

Similar to regulatory economic valuation frameworks such as SST and Solvency II, the EVM framework rested on a set of formal economic valuation and accounting principles.

At the heart of the EVM valuation principles was the market-consistent valuation of all assets and liabilities. The composition of the EVM balance sheet is illustrated as follows:

### Market consistent valuation of assets and liabilities across all businesses and product lines

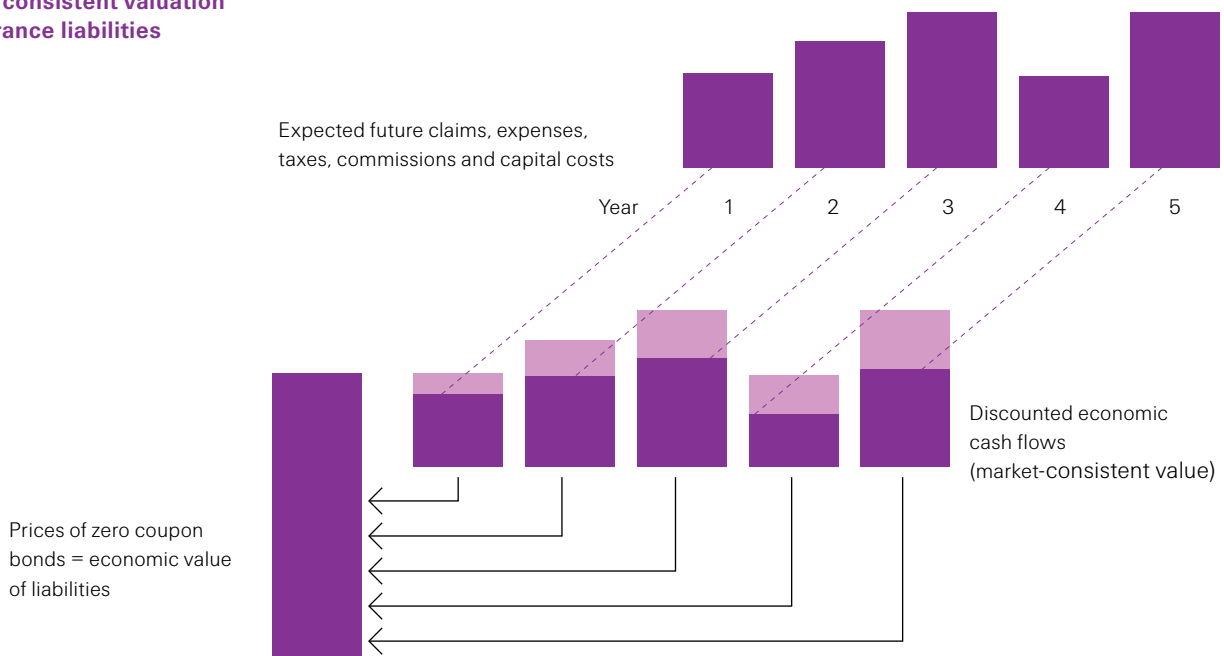


### Market-consistent valuation of assets and liabilities

All traded assets and liabilities were marked-to-market, based on quoted prices in active markets or observable inputs. Non-traded assets and liabilities were valued on a market-consistent basis. The Group's insurance liabilities were valued on a market-consistent basis by replicating future best-estimate expected cash flows with liquid financial market instruments. As the majority of the Group's insurance liabilities did not contain embedded financial market risks other than interest-rate risk, the market-consistent value of liabilities was determined by discounting estimated future cash flows using prevailing risk-free interest rates. If insurance liabilities included embedded options or guarantees (eg variable annuities or interest sensitive life business), they were valued on a market-consistent basis using stochastic models and other appropriate valuation techniques.

If re/insurance liabilities included embedded options and guarantees (eg variable annuities or interest sensitive life business), they were valued on a market-consistent basis using stochastic models and other appropriate valuation techniques.

### Market consistent valuation of insurance liabilities



- The replicating portfolio provided the cash flows needed to meet expected future payments
- The choice of replicating instruments depended on the financial market risk exposure embedded in the liabilities

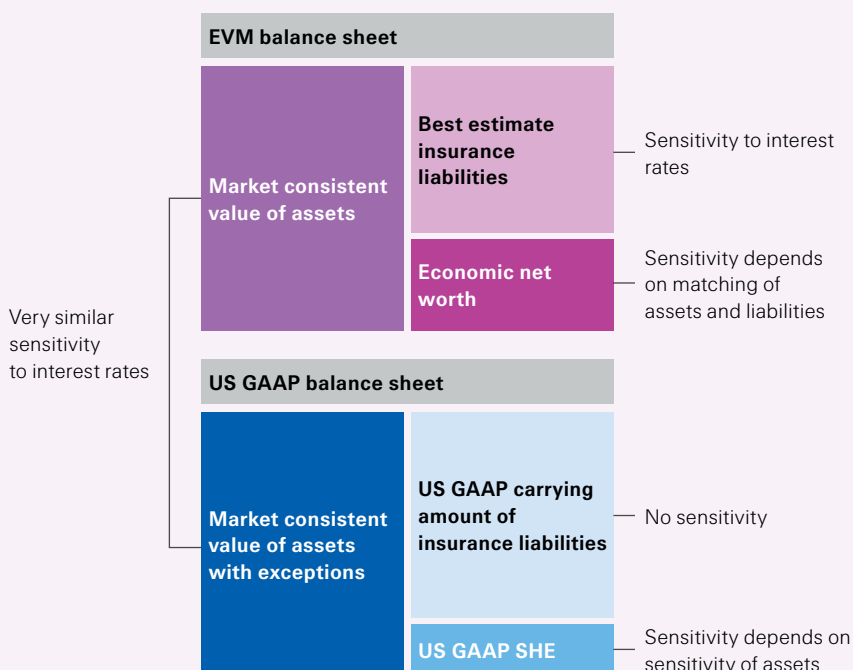
### An example:

Expected mortality claims payments in 5 years can be replicated by a 5-year zero coupon bond with the same maturity and pay-out. The market value of the bond today equals the economic value of the expected claims payments.

## Difference to US GAAP

	EVM	US GAAP
<b>Investment assets</b>	Market values	Mostly market values with exceptions such as real estate and real estate for own use
<b>Liability cash flows</b>	Market-consistent valuation using risk-free rates	Non-life business: generally no discounting Life business: reserves are usually discounted based on book yields and without market-consistent valuation of embedded options and guarantees
<b>Goodwill and intangibles</b>	Not recognised	Recognised, subject to impairment test
<b>Debt</b>	Market values	Generally at amortised cost

Due to the different valuation approaches for individual balance sheet items, the sensitivity of the EVM ENW and US GAAP shareholders' equity to changes in interest rates was different. While US GAAP shareholders' equity (SHE) may have been significantly affected by risk-free interest rate changes, the EVM ENW was not affected as long as the duration of assets and liabilities was economically matched.



### Use of best estimates in the preparation of financial statements

Similar to US GAAP, Solvency II or SST valuations, the preparation of EVM financial statements required management to make significant estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses. The valuation of assets and liabilities reflected best estimates of underlying cash flows (eg premiums, claims, commissions, expenses, etc), using models and taking into consideration all relevant information available at the balance sheet date. In line with other valuation methods based on projections of future cash flows, EVM involved significant judgement when establishing assumptions to be used. The Group actively and carefully reviewed assumptions, selecting those which are considered appropriate and seeking consistency among business activities. Valuations were updated at each balance sheet date as experience developed and more information became available. In-force business assets and liabilities included estimates for

premiums as well as claims and benefit payments not received from ceding companies at the balance sheet date. In addition, the Group had certain assets and liabilities for which liquid market prices did not exist. These estimates were determined on a market-consistent basis using all relevant information available at the time of valuation. However, actual results could differ significantly from these estimates.

### Difference to US GAAP

For non-life business the assumption setting for EVM was similar to US GAAP. Life business is generally based on locked-in assumptions under US GAAP.

#### *Closed book principle*

EVM recognised all profits and losses resulting from expected cash flows from contractual rights and obligations at inception or the effective date of a business transaction. Acquisitions did not result in the recording of goodwill or intangible assets. Changes to previous assumptions and estimates were recognised as they occur (for further details please refer to the next section “What were Swiss Re’s key economic performance metrics?”).

### Difference to US GAAP

The deferral and matching principle under US GAAP postpones recognition of revenues until they are earned and matches expenses to those revenues.

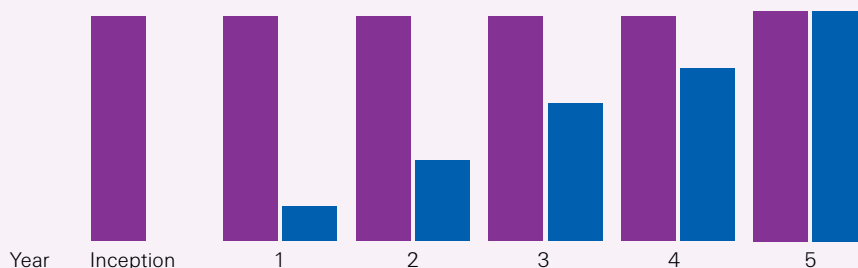
Over the lifetime of the contract the total revenue earned was the same under US GAAP and EVM. Illustrative example, ignoring discounting and capital costs:

Net cash flow (expected future premiums, claims, expenses, taxes, commissions)



Cumulative revenues (illustrative)

■ EVM revenues  
■ US GAAP revenues



### *Performance measurement after capital costs*

To measure economic value creation, the shareholders' compensation for taking risk had to be considered. This compensation was called capital costs and consisted of the following elements:

- **Base cost of capital** reflected through a charge for risk-free return on available capital and market risk premiums. Market risk premiums compensated for systematic, non-diversifiable risk exposure, mainly assumed through investment activities.
- **Frictional capital costs**, which compensated for agency costs, cost of potential financial distress and regulatory (illiquidity) costs. The frictional capital costs were similar to the market value margin and the risk margin as defined in the SST and the Solvency II frameworks respectively, but were defined under the going-concern valuation principle. Finally, frictional capital costs included **cost of double taxation** on the risk-free return on capital allocated to business activities.

### **Difference to US GAAP**

Generally, under US GAAP, no capital costs are taken into account.

### *Valuation based on a going-concern assumption*

This specifically impacted the valuation of future expected expense cash flows as well as capital costs as the underlying assumptions reflected diversification benefits and economies of scale.

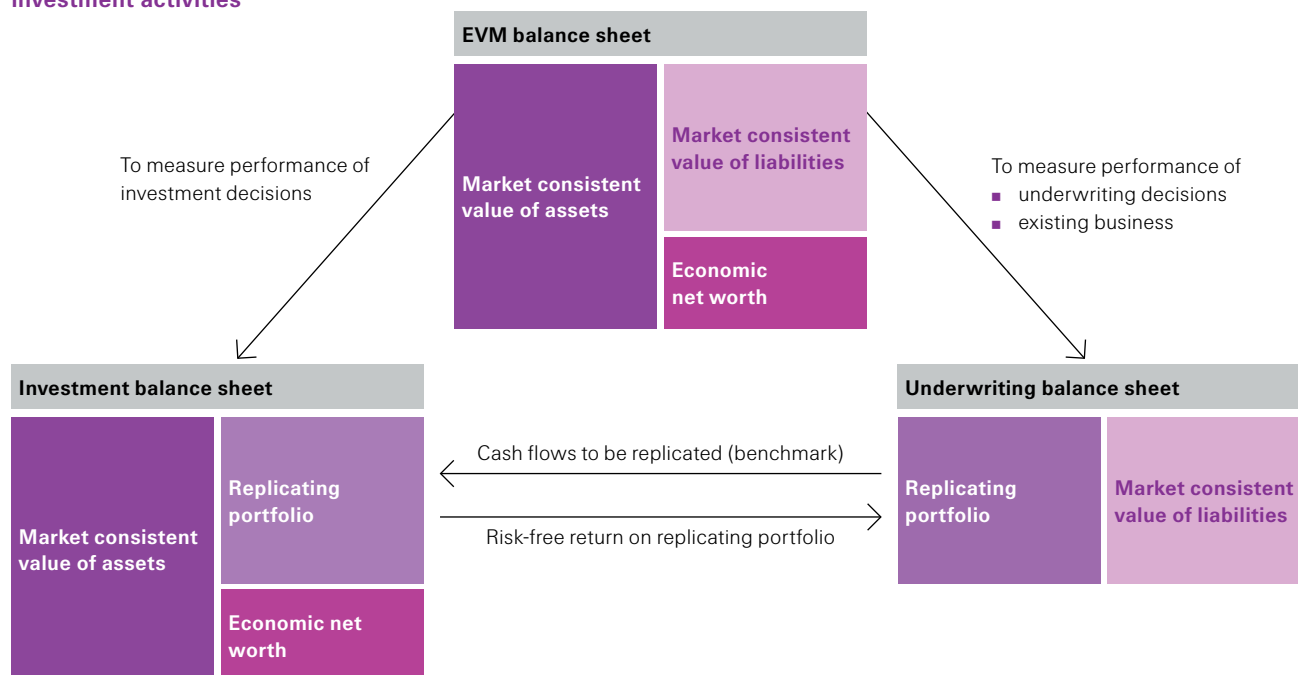
### **What were Swiss Re's key economic performance metrics?**

Economic performance was tracked using two key measures:

- **EVM profit**: Economic value was created only if the total economic return generated for shareholders was above the expected total return for taking risk (capital costs). In other words, the economic profit was a risk-adjusted performance measure.
- The total EVM profit was split into three components:
  - new business profit/loss from underwriting,
  - previous years' business profit/loss from underwriting,
  - the profit/loss from investment activities.
- **Total contribution to ENW**: It was the total economic return generated for shareholders and was the key element of (gross) excess capital generation. It was calculated as the sum of EVM profit, capital costs released to shareholders (reflecting the shareholders' minimum return expectation), cost of debt and additional taxes.

Swiss Re targeted a Group ENW per share growth of 10% over the cycle, under the condition that the written business was also maximising Swiss Re's risk-adjusted profit. Total contribution to ENW was driving ENW per share growth. Other impacts mainly included the impact of changes in foreign exchange rates on ENW and share buyback programmes. The ENW per share growth was calculated as follows:  $(\text{current-year closing ENW per share} + \text{current-year dividends per share}) / (\text{prior-year closing ENW per share} + \text{current-year opening balance sheet adjustments per share})$ .

## Split of underwriting and investment activities



## How did Swiss Re allocate economic performance between underwriting and investment activities?

Swiss Re separates performance evaluation between underwriting and investment activities. This separation allows our underwriters to focus on the parameters and models that require their expert judgement, while our investment professionals apply their expertise to decision-taking related to systematic financial market risk.

Economic value for shareholders with respect to life and non-life business was created if underwriting deployed capital in a manner that generated economic profit from core cash flows (after the cost of capital was charged). On the other hand, investments needed to outperform a minimum risk benchmark that was linked to the underwriting liabilities (after the cost of capital was charged).

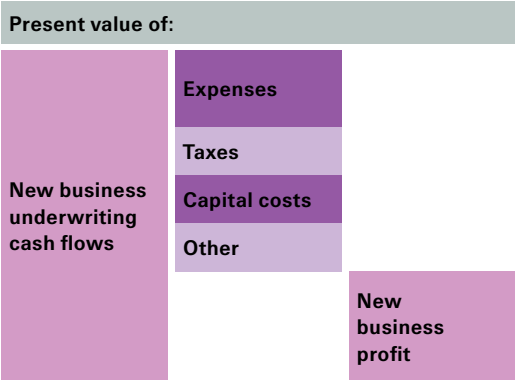
## How did Swiss Re measure economic underwriting performance and what was the difference to US GAAP?

The performance cycle for underwriting was measured consistently over time by comparing costing at inception with the subsequent development of the business written. The underlying cause for any subsequent development could be analysed and fed back into costing and, ultimately, strategy.

New business was defined as business that inceptioned in the current reporting year. In determining new business profit/loss, all cash flows resulting from new re/insurance contracts that inceptioned in the current reporting year were recognised at inception on a present value basis. Embedded financial options and guarantees were valued on a market-consistent basis.

**New business profit as net present value of all cash flows from new re/insurance contracts**

The composition of new business profit is illustrated as follows:



The underwriting result from previous years’ business represented the present value of all changes in estimated cash flows on re/insurance contracts incepting in prior reporting years. These changes in cash flows reflected changes in best estimates as they occur.

**Difference to US GAAP**

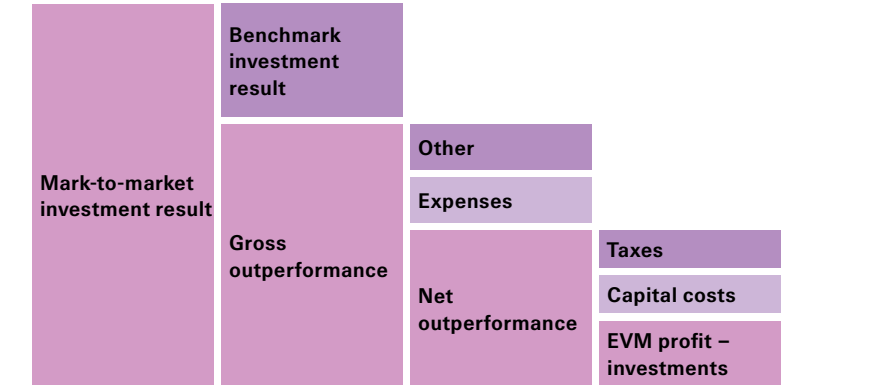
Generally, US GAAP net income is not a risk-adjusted performance measure and, therefore, does not reflect capital costs.

The main driver of differences in the underwriting results was represented by recognition differences, which are described above under the closed book principle (see page 6). EVM recognised all profits and losses at inception, whereas US GAAP recognises profits and losses over the lifetime of the contracts.

**How did Swiss Re measure economic investment performance and what was the difference to US GAAP?**

Investment activities were evaluated based on the performance of asset allocation decisions, taking into account our liability driven risk budgeting framework.

**Composition of the investment profit**



The investment profit consisted of the following elements:

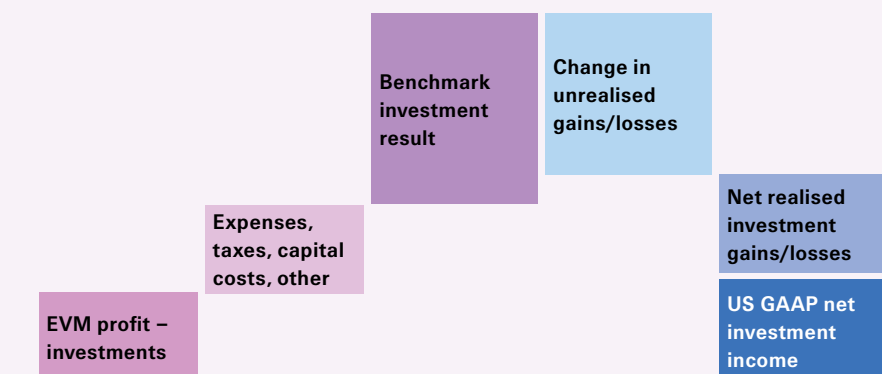
- **Mark-to-market investment result:** Defined as the total return of Swiss Re’s investments including any changes in fair value. For assets traded in active markets, the fair value equalled the market value at the valuation date. The mark-to-market investment result excluded any investment income from cedents, unit-linked and with-profit business and certain loans.
- **Benchmark investment result:** Included changes in the economic value of liabilities as a result of movements in risk-free discount rates, the passage of time,

changes in credit spreads, changes in equity prices or changes in the economic value of embedded options and guarantees.

- **Gross outperformance:** Defined as the difference between the mark-to-market investment result and the benchmark investment result. The latter was deducted because it was credited to underwriting activities in determining the underwriting profit. This ensured that our client facing and costing teams were evaluated on the success in delivering economic value through underwriting profitability, while our investment activities were evaluated on their success in delivering risk-adjusted investment returns.
- **Net outperformance:** Defined as the gross outperformance after deducting the actual costs incurred by managing our actual investment portfolio in excess of the internal fee paid by underwriting for the purchase and maintenance of the investment portfolio replicating the best estimate liability and backing the associated capital requirements.
- **EVM profit – investments:** Defined as the risk-adjusted net outperformance, after taxes and capital costs, which depend on the market-implied riskiness of the investments.

#### Difference to US GAAP

The following illustrates the difference between US GAAP net investment income and EVM profit – investments. The direction and size of the EVM items could substantially differ from one period to another depending on market movements, particularly interest rates determining the benchmark investment result.



Capital costs: the EVM profit was risk-adjusted and, therefore, accounts for the costs incurred by the shareholder for taking investment risk (see page 7 “Performance measurement after capital costs”).

Benchmark investment result: in EVM, investments needed to outperform a minimum risk benchmark replicating the underwriting liabilities (see page 8, illustration “Split of underwriting and investment activities”).

Unrealised gains/losses: EVM recognised the total mark-to-market investment result, while the US GAAP net investment income only comprised realised gains/losses. The change in unrealised gains/losses was attributed to the other comprehensive income (note: from 2018, unrealised gains/losses for equity securities and most alternative investments were reported under US GAAP net realised investment gains/losses).

## Summary of valuation differences between US GAAP and EVM

	EVM	US GAAP
<b>Discounting</b>	<ul style="list-style-type: none"> <li>■ Discounting of liability cash flows using risk-free rates</li> </ul>	<ul style="list-style-type: none"> <li>■ Non-life business: generally no discounting</li> <li>■ Life &amp; Health business: reserves are usually discounted based on book yields and without market-consistent valuation of embedded options and guarantees</li> </ul>
<b>Investments and debt</b>	<ul style="list-style-type: none"> <li>■ Market values</li> </ul>	<ul style="list-style-type: none"> <li>■ Mostly market values with exceptions such as real estate, real estate for own use and debt (amortised cost)</li> </ul>
<b>Reserving basis</b>	<ul style="list-style-type: none"> <li>■ Best estimate</li> </ul>	<ul style="list-style-type: none"> <li>■ Non-life business: best estimate</li> <li>■ Life &amp; Health business: assumptions are generally locked-in and can include a provision for adverse deviation</li> </ul>
<b>Recognition differences</b>	<ul style="list-style-type: none"> <li>■ Profit recognition of new contracts: at inception</li> <li>■ Balance sheet recognition: EVM considered the economic value related to annual management changes in unit-linked funds and adjusted for counterparty credit risk in the valuation of insurance-related net assets. In addition, minority interests assets and liabilities were consolidated based on the proportion of the interest held by Swiss Re</li> </ul>	<ul style="list-style-type: none"> <li>■ Profit recognition of new contracts: over lifetime of the contract</li> <li>■ Balance sheet recognition: no adjustment for counterparty credit risk in the valuation of insurance related assets. Minority interests are shown separately on the balance sheet</li> </ul>
<b>Goodwill and intangibles</b>	<ul style="list-style-type: none"> <li>■ Not recognised</li> </ul>	<ul style="list-style-type: none"> <li>■ Recognised, subject to impairment test</li> </ul>
<b>Changes in interest rates</b>	<ul style="list-style-type: none"> <li>■ Asset change offset by change in re/insurance liability</li> </ul>	<ul style="list-style-type: none"> <li>■ Unrealised gains/losses on available-for-sale securities recognised in shareholders' equity. Generally no changes in re/insurance liability</li> </ul>
<b>Capital costs</b>	<ul style="list-style-type: none"> <li>■ The present value of capital costs allocated to existing contracts were recognised in the EVM balance sheet</li> </ul>	<ul style="list-style-type: none"> <li>■ Generally no capital costs</li> </ul>
<b>Taxes</b>	<ul style="list-style-type: none"> <li>■ In addition to the taxes reported under US GAAP, deferred tax assets and liabilities were recognised for temporary valuation differences between US GAAP and EVM</li> </ul>	<ul style="list-style-type: none"> <li>■ Income taxes payable/recoverable and deferred taxes</li> </ul>



Visit us online to learn more about EVM results in Swiss Re's Financial Report.

# Swiss Re's internal risk model

## Why does Swiss Re use an internal model for the purpose of risk measurement?

Risk measurement enables Swiss Re to assess the magnitude of its risk exposures and set quantitative controls that limit risk-taking.

Swiss Re uses a full internal risk model to determine the economic capital required to support the risks on the Group's books, as well as to allocate risk-taking capacity to the different lines of business. The model also provided the basis for capital cost allocation in the EVM framework and is used to determine regulatory capital requirements under economic solvency frameworks such as the Swiss Solvency Test (SST) and Solvency II.

The internal risk model provides a meaningful assessment of the risks to which the Group is exposed and is an important tool for managing the business. Swiss Re's model has a history of more than 20 years of development and continuous improvement driven both by the Group's specific risk profile and changing requirements as a globally operating re/insurer.

While economic solvency regimes such as SST and Solvency II offer standard formulas for calculating regulatory requirements, such models are generally geared towards regulating the local or regional re/insurance market and thus do not take sufficient account of Swiss Re's broad geographic and diversified portfolio structure. Swiss Re's model uses the Monte Carlo simulation method to estimate a joint multivariate distribution of all relevant risk factors, rather than a limited set of deterministic scenarios and factors. It therefore provides more detailed results than standard formulas, which are based on simplified industry-wide common denominators.

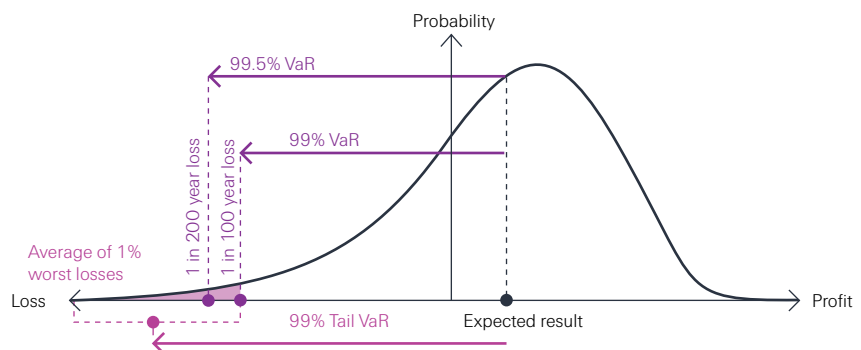
## What are the key principles underlying Swiss Re's internal risk model?

Swiss Re's internal model is based on two important principles. First, it applies an asset-liability management approach, which measures the net impact of risk on the economic value of both assets and liabilities. Second, it adopts an integrated perspective, recognising that a single risk factor can affect different sub-portfolios and that different risk factors can have mutual dependencies.

Swiss Re's internal model is fully stochastic and is based on a separation of risk factors and exposure functions. The model generates a probability distribution for economic profit and loss, specifying the likelihood that the outcome will fall within a given range.

In line with the SST, the Group measures its economic risk capital requirement at the 99% expected shortfall (or tail value at risk) level. This represents an estimate of the average annual loss likely to occur with a frequency of less than once in a 100 years, thus capturing the potential for severe, but rare, aggregate losses.

### Swiss Re's economic risk capital requirement, measured at the 99% shortfall (Tail VaR) level



In addition, the model is used to calculate value at risk (VaR) measures including 99.5% VaR, which is used in other regulatory regimes such as Solvency II. 99.5% VaR represents the loss likely to be exceeded in only one year out of 200 and is thus more severe than the 99% VaR measure, which estimates the loss likely to be exceeded in one year out of 100. For Swiss Re's loss distribution, the 99% expected shortfall (tail VaR) measure is generally larger than the 99.5% VaR measure.

### Is the model also applicable to individual financial reporting entities?

In order to assess the risk and provide solvency information for individual financial reporting entities within a network of entities, it is necessary to consider the impact of intra-group relationships. For this purpose, the Group's internal risk model takes the following items into account:

- Intra-group transactions (including loans, guarantees and retrocessions)
- Intra-group credit risk and (for SST) potential limited liability toward subsidiaries
- Secondary effects resulting from the potential insolvency of other reporting entities within the Group

Swiss Re's risk model assesses the potential economic loss at a specific confidence level. There is thus a possibility that actual losses may exceed the selected threshold. In addition, the reliability of the model may be limited when future conditions are difficult to predict. For this reason, the model and its parameters are continuously reviewed and updated to reflect changes in the risk environment and current best practice. In addition, Swiss Re complements its risk models by ensuring a sound understanding of the underlying risks within the Group and by applying robust internal controls.

The risk model is governed by Swiss Re's Model and Tool Assurance Framework. This includes an independent end-to-end validation process that comprises specification, algorithms, calibration, implementation, results and testing.

As it is used for regulatory reporting purposes, Swiss Re's risk model is subject to regulatory scrutiny. In 2017, the Swiss regulator Financial Market Supervisory Authority (FINMA) approved Swiss Re's internal model for use for the SST report (step one approval) following the new FINMA approval process that was initiated in 2016. On a regular basis, FINMA conducts material reviews on specific components of the internal model to assess appropriateness and major changes in the model are subject to regulatory approval. Furthermore, the model has been approved by the Luxembourg regulator, Commissariat Aux Assurances, for the Solvency II reporting of Swiss Re's legal entities established in the European Economic Area.

# Swiss Solvency Test

The SST is the solvency regime applicable to re/insurance entities and groups domiciled in Switzerland. The key principles of the SST are defined in the Insurance Supervision Ordinance (ISO). Swiss Re Group and its Swiss-regulated entities submit their SST report to FINMA. The published SST ratio is subject to FINMA’s review and approval. Swiss Re applies an internal model to calculate the SST ratio, which is also subject to FINMA’s approval (see page 12 for details).

## What are the key SST valuation principles and how is risk measured under SST?

The SST is a market-consistent and risk-based approach for determining available and required capital. An entity is solvent under SST if the available capital (the SST risk-bearing capital or SST RBC) is equal or higher than the required capital (the SST target capital).

Following the update of the ISO regulation as of 1 January 2024, the SST ratio determines the solvency position of an entity and is defined as:

### SST ratio

SST risk-bearing capital

SST target capital

= SST ratio

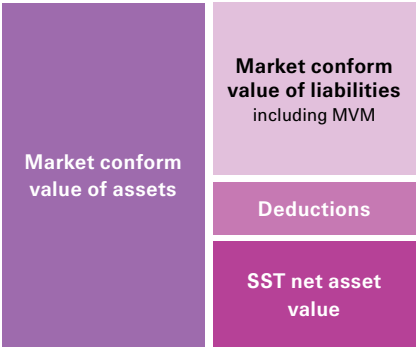
The market value margin (MVM), similarly to the risk margin in Solvency II, reflects run-off capital costs and is added as a liability to the SST RBC in accordance with Art. 30 para. 2 ISO.

### SST valuation principles

With the exception of capital costs and taxes, SST valuations were largely aligned to the valuation principles laid out under EVM as described in the section “What was Economic Value Management at Swiss Re”. The SST net asset value is defined as the difference of market conform value of assets and the market conform value of liabilities including capital costs (MVM) and other SST deductions (Art. 32 para. 3-4 ISO). Investments are determined using mark-to-market valuations. Re/insurance business assets and liabilities are derived using best estimate cash flow projections and risk-free discounting. The value of a participation is based on the market conform value of assets minus market conform value of liabilities.

The composition of the SST balance sheet is illustrated as follows:

### SST balance sheet, based on a market conform valuation of assets and liabilities



Since SST and EVM are economic valuation frameworks, the valuation principles are similar. The main differences in the frameworks stem from EVM measuring the value creation to shareholders versus SST measuring capital available to protect policyholders in case of large loss events.

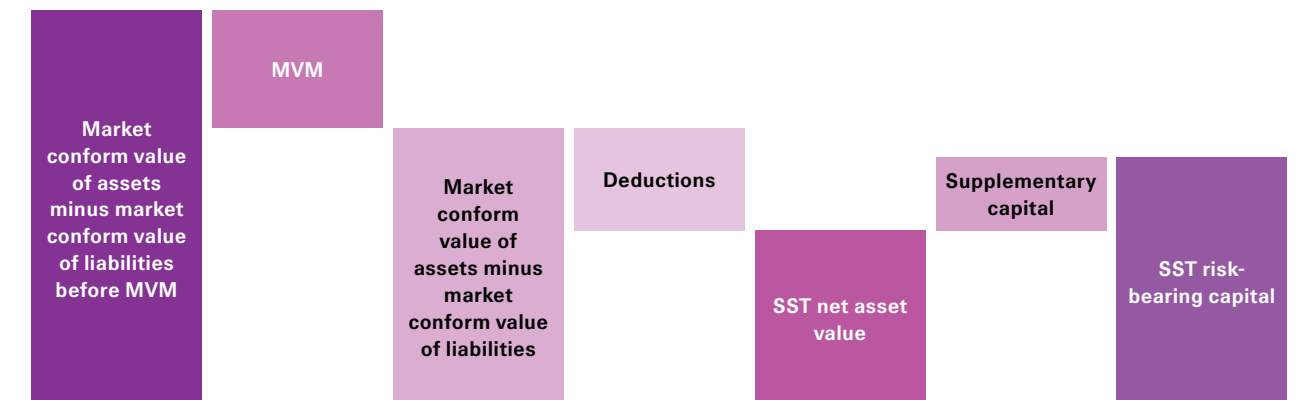
	EVM economic net worth	SST net asset value
<b>Core economic valuation principles</b>	<p>Same key principles</p> <ul style="list-style-type: none"> <li>■ Market-consistent valuation of assets and liabilities</li> <li>■ Use of best estimates</li> <li>■ Closed book principle</li> </ul> <p>Refer to the key economic valuation principles from page 3 onwards for details</p>	
<b>Tax treatment</b>	■ After tax	■ Mainly pre-tax
<b>Capital costs</b>	■ Market-consistent, reflected internal target capitalisation and going concern basis	■ Run-off assumption and a 6% charge
<b>Other valuation differences</b>	<ul style="list-style-type: none"> <li>■ Own debt: market values</li> <li>■ No specific reserve for letters of credit as covered by EVM capital costs</li> </ul>	<ul style="list-style-type: none"> <li>■ Own debt: risk-free valuation for own debt not qualified as supplementary capital</li> <li>■ Specific reserve for contractually-fixed term letters of credit</li> </ul>

For differences between EVM and US GAAP valuation, please refer to the key economic valuation principles from page 3 onwards and to the summary of the valuation differences on page 11.

#### *SST risk-bearing capital*

The SST risk-bearing capital is the amount of capital that is available to protect the policyholders of an entity in case of a large and unexpected adverse event. It is derived from the market conform value of assets minus market conform value of liabilities before MVM.

#### Composition of the SST risk-bearing capital



The deductions from the market conform value of assets minus market conform value of liabilities consist of projected dividends and share buyback programmes expected to be paid in the upcoming one-year period and deferred and transactional real estate specific taxes. Please note that no deductions are made for own shares and intangible assets, as these items are not valued in Swiss Re's SST balance sheet.

The supplementary capital consists of additional risk absorbing capital instruments, such as hybrid debt. The eligibility of debt instruments as supplementary capital is defined in the ISO and subject to FINMA's approval.

Composition of  
SST target capital

*SST target capital*

The SST target capital represents the capital required to cover the risks assumed by the entity. It is based on the entity’s total risk. In order to derive SST target capital, the total risk is adjusted for various other items categorised under other impacts.



An entity’s total risk is measured in terms of 99% shortfall (tail VaR), which represents the average unexpected loss at entity level that occurs with a frequency of less than once in 100 years over a one-year time horizon. All losses are a combination of re/insurance, financial market and credit losses and accumulation as well as diversification between individual risks is taken into account (see page 12 for details).

Other impacts reflect the impact from business development over the forecasting period and requirements from FINMA that are not included in total risk as they are not consistent with Swiss Re’s own risk view.

How is Swiss Re’s economic capitalisation target defined?

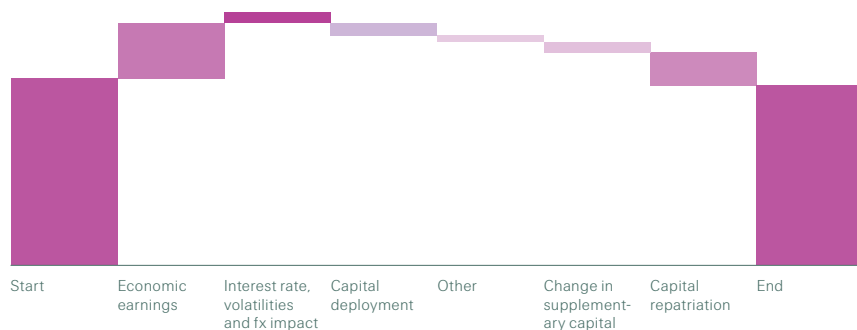
Swiss Re’s Group Risk Policy is defined by the Group Board and articulates the risk appetite framework (risk appetite and tolerance) as well as fundamental risk and capital structure principles. In particular, it includes an economic capitalisation target range for the Group, currently set at an SST ratio of 200–250%.

## Drivers of solvency capital generation (illustrative)

### What drives the generation of economic capital?

Swiss Re's solvency capital generation explains the change in economic capital.

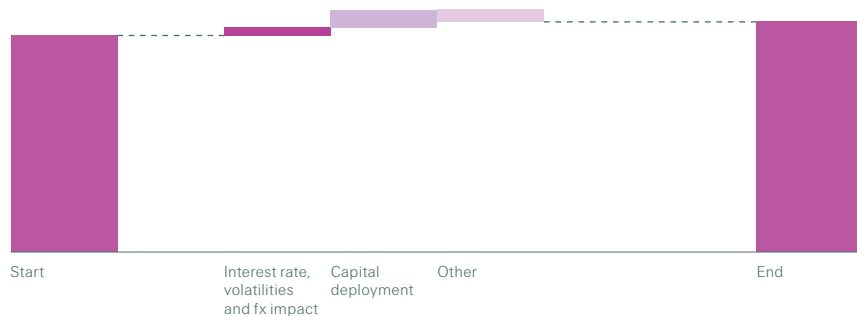
#### SST available capital



#### SST ratio



#### SST economic target capital



For the purposes of determining SST 2024, reflecting solvency information as of 1 January 2024, the solvency capital generation is decomposed into the following key drivers that impact the SST available capital and SST economic target capital:

- **Economic earnings**, ie total contribution to ENW
- **Interest rate, volatilities and fx impact**, which for SST available capital reflects the foreign exchange impact and interest rate impact on valuation differences between EVM and SST, for SST economic target the foreign exchange, interest rate and volatilities impact on shortfall,
- **Capital deployment**, which include for SST available capital the change in MVM from business update, for SST economic target capital the change in shortfall from business update and market moves,
- **Other**, which includes other valuation differences between EVM and SST as well as model changes,
- **Change in supplementary capital**, and
- **Capital repatriation**, including projected dividends and share buyback programmes.

## How does SST compare to Solvency II?

Both SST and Solvency II represent similar risk-based, market-consistent solvency regimes. Although the two solvency regimes are equivalent, they differ with respect to the applied methodology.

The key methodological differences are summarised in the table below.

	SST	Solvency II	Assessment for Swiss Re
<b>Risk measure (1-year risk)</b>	99% tail VaR	99.5% VaR	For Swiss Re's risk profile, the SST risk measure is more conservative
<b>Modelling differences</b>	Operational risk is not explicitly quantified; capital costs (MVM) are assessed with the SST risk measure with Group-level diversification	Operational risk is quantified; capital costs (risk margin) are assessed with the Solvency II risk measure, not allowing for Group-level diversification	The Solvency II framework is more conservative with respect to these modelling differences
<b>Valuation (discounting)</b>	Application of regulatory approved risk-free interest rates	Credit adjusted swap curves and ultimate forward rate	Direction and magnitude of impact depends on shape of the applied yield curves
<b>Deferred taxes</b>	Evaluated pre-tax	Deferred tax assets and liabilities on the balance sheet; loss absorbing capacity of deferred taxes reduces required capital	The SST evaluation is more conservative

# Appendix

## **In-force business assets and liabilities**

In-force business assets were assets associated with re/insurance contracts and include estimated future premiums and other expected cash inflows related to those contracts. They were carried at market-consistent values as described above. In-force business liabilities were liabilities associated with re/insurance contracts and include best estimate reserves for expected claims, commissions and expenses. They were carried at market-consistent values as described above.

## **Retrocession assets and liabilities**

Retrocessions were carried at market consistent values in line with the methods applied to inward business. A market-consistent allowance for counterparty credit risk was applied to uncollateralised external net retrocession assets.

## **Investments**

All investments were carried at fair value. For non-traded assets, fair values were determined using a mark-to-model approach or other market-consistent techniques.

## **Cash and cash equivalents**

Cash and cash equivalents included cash on hand, short-term deposits, certain short term investments in money market funds and highly liquid debt instruments with a remaining maturity at the date of acquisition of three months or less.

## **Tax assets and liabilities**

The EVM valuation of tax assets and liabilities was determined in two steps. In step one, the portion of total EVM tax expense relevant for business steering and performance measurement was determined by applying standard tax rates to pre-tax results driven by the respective EVM cash flows. This portion of the total EVM tax expense was recognised in EVM profit. In step two, the total EVM tax expense was determined as the sum of (a) the change in US GAAP tax assets and liabilities and (b) the change in deferred tax assets and liabilities for temporary balance sheet valuation differences between US GAAP and EVM. The difference between the total EVM tax expense (step two) and the portion of the total EVM tax expense recognised in EVM profit (step one) was recognised in total contribution to ENW and presented in a separate line below EVM profit as 'Additional taxes'.

## **Other assets**

Other assets included derivative financial instrument assets, receivables related to investing activities, real estate for own use, property, plant and equipment, accrued income, prepaid assets and the positive value of acquisitions and disposals signed but not yet closed. Real estate for own use was carried at fair value.

## **Other liabilities**

Other liabilities included derivative financial instrument liabilities, payables related to investing activities, provisions for employee incentive plans, pension and other post retirement benefits, a provision for estimated future overhead expenses and the negative value of acquisitions and disposals signed but not yet closed.

## **Debt**

Swiss Re's external debt, including hybrid instruments, was carried at fair value. Where available, market prices were used to determine the fair value of debt. Debt that was not publicly traded was valued using market consistent valuation techniques, which took into account, where applicable, the impact of own credit risk. In EVM, all hybrid debt instruments, including convertible instruments, were treated as liabilities.

## **Economic net worth**

Economic net worth (ENW) was defined as the difference between the market consistent value of assets and liabilities. ENW was an economic measure of shareholders' equity and the starting point in determining available capital under the SST.



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Financial information included in the EVM section of the Annual Report contains non-GAAP financial measures. The EVM principles differ significantly from US GAAP and, accordingly, the Group's results are prepared in accordance with US GAAP will differ from its EVM results, and those differences could be material. The Group's annual EVM results can be more volatile than the US GAAP results because, among other things, assets and liabilities are measured on a market-consistent basis, profit recognition on new contracts is recognised at inception rather than over the lifetime of the contract, and life and health actuarial assumptions are on a best estimate basis as opposed to generally being locked-in. The Group's EVM financial statements should not be viewed as a substitute for the Group's US GAAP financial statements.

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