

Standard models and internal models

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To calculate the target capital, the insurer must model the possible changes in its risk-bearing capital over one year. FINMA provides standard models for market risk, credit risk and insurance risk in life, non-life and health insurance. The standard models combine analytical calculations with a set of prescribed scenarios, which simulate events such as a pandemic, an industrial accident, a severe financial market crisis, a natural catastrophe or the default of a reinsurer.¹ The scenarios are aggregated with the results of the analytical models, so that the final target capital reflects both statistically modelled risks and extreme events whose probability can only be estimated by expert judgement.

Insurers whose risk profile is not adequately captured by the standard models may, or in certain cases must, use internal models approved by FINMA. Large groups such as Zurich and reinsurers such as Swiss Re, whose portfolios of natural catastrophe and long-tail liability risks are global and complex, have used internal models since the beginning of the SST.² The approval of an internal model is a demanding process in which FINMA reviews the methodology, the data, the calibration, the validation and the integration of the model in the insurer's risk management. In the first decade of the SST, the approval process became a source of friction between FINMA and the industry, because many internal models were provisionally approved only with conditions or were the subject of long discussions. Some insurers abandoned their internal models and switched to the standard model.

The revision of 2024 changed the framework in this respect. The revised AVO enables insurers to use, with FINMA's approval, models that deviate from the standard model in specific respects without being full internal models. The requirements for internal models are also now set out in greater detail at the level of the ordinance.³ The aim is to give insurers greater legal certainty and to reduce the dependence of the approval process

on supervisory practice. The underlying tension, which arises because the supervisor must assess models that the insurer understands better than anyone else, cannot be resolved by legislation. It is a structural feature of all risk-based regimes that rely on internal models, as the experience of the Basel Committee with the internal ratings-based approach for banks shows.⁴

Groups and conglomerates calculate the SST at group level as well. The group SST takes into account the capital and risks of all entities of the group, the diversification between them and the restrictions on the transferability of capital within the group.⁵ FINMA has generally followed a cautious approach to the recognition of diversification benefits within groups, reasoning that capital in one legal entity may not be available to cover losses in another entity in a crisis, particularly when the entities are located in different jurisdictions. For the Basel group formed by the merger of Baloise and Helvetia, which has subsidiaries in Germany, Belgium, Luxembourg, Austria, Italy, Spain and France, the group SST is therefore a central element of capital management.⁶

1 Notes

1. FINMA, SST standard models (market risk, credit risk, life, non-life and health) and the prescribed scenarios; see the FINMA SST pages and technical documentation. To be verified. ↩
2. On the use of internal models in the SST by large insurers and reinsurers and FINMA's approval process, see FINMA annual reports and the Financial Condition Reports of Swiss Re and Zurich Insurance Group. To be verified. ↩
3. Revised AVO of 2024, provisions on standard models, deviations from standard models and internal models; FINMA explanatory report and implementing provisions. Status to be verified. ↩
4. Compare the debate on the variability of risk-weighted assets under the internal models of banks and the Basel III output floor (BCBS, Basel III: Finalising post-crisis reforms, December 2017), discussed in Part F of this book. Cross-reference. ↩
5. Arts. 64 ff. VAG (group and conglomerate supervision) and the AVO provisions on the group SST; FINMA practice on the group SST (granular vs consolidated approach). To be verified. ↩

6. On the geographical footprint of the combined Helvetia Baloise group and its capital management, see the group's annual and Financial Condition Reports from 2025 onwards. Status to be verified. ↩

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