The Swiss Solvency Test SST: Experiences and Future Actions

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Agenda

- Importance of Solvency Assessment
- SST: Development History
- SST: Defining Principles
- SST: Insights
- SST: Impact
- SST: Challenges

- Preliminary Conclusions and Future Actions
Importance of Solvency Assessment (1)

- The primary objective of supervision is to protect the insured from the consequences of the insolvency of an insurer.

- FINMA assesses the solvency of the supervised entities.

- If the solvency requirements are not met (if there is less available capital than required capital), FINMA takes corrective measures:
  - Requires supervised entities to increase capital or reduce risk.
  - Can impose restrictions on dividends, profit participations of policyholders, new business (severe cases); it can require portfolio transfers, withdraw licenses (extreme cases).

- With solvency assessment being so critical, the supervisory tool is of prime importance.
What makes for a good solvency assessment tool?

- The quality of solvency assessment can never be better than the quality of the assessment of technical provisions
  - If technical provisions are underestimated, available capital is overestimated
- It must allow for a reliable solvency assessment
- Solvency I is inadequate
  - Solvency I for solo entities relies on statutory accounts for assessing available capital; it hardly reacts to changes in yield curve
  - Solvency I for groups usually relies on IFRS or US GAAP; changes in yield curve only impact the asset side of the balance sheet
  - Both rely on volume measures for assessing required capital
- The inadequacy of Solvency I became obvious during the financial crisis of 2001 / 2002 and was confirmed during the subprime crisis of 2008
SST: Development History

European Financial Sovereign Debt Crisis
Subprime Crisis
Crisis in force?

Development of SST
Introduction of SST (transition period)
SST in force
SST: Development History

Development of SST

Introduction of SST (transition period)

European Sovereign Dept Crisis

Subprime Crisis

Financial Crisis

Solvency II in force?

SST in force

Data source: bloomberg
SST: Defining Principles(1)

- Positions which have a readily available market value are valued on that basis.
- Positions which have no readily available market value are valued based on a model:
  - The model must be based on sound methods of financial mathematics.
  - Calibration of the model must be based on observable market values.
  - The market consistent value of technical provisions is usually assessed as a best estimate plus a “market value margin”.
  - Changes in interest rates have an impact on the asset and on the liability side of the balance sheet.

The SST is based on market consistent valuations.
The following risks must be taken into account when assessing required capital:

- Market risk
- Insurance risk
- Credit risk

Operational risk is not taken into account.

Liquidity and concentration risk are only taken to a limited extent into account.
The SST is based on a total balance sheet approach

- All positions are taken into account, there are no off balance sheet positions
- Assets and liabilities are valued consistently
- The valuation and risk modeling of a position are consistent
Model limitations

- „Tail risk“ and „tail dependency“ risk not properly taken into account in analytical part of most models
  - Need for scenario aggregation
- Concentration risk not properly taken into account
  - Need for limits and / or scenarios
- Liquidity risk not taken into account
  - As is the case for most solvency testing models
- No adjustment is made for model risk
  - Need for qualitative risk management
The defining principles of the SST and of Solvency II are the same

- There are differences in calibration between the two solvency regimes
Figure 3a: Contribution to Target Capital of different risk categories
Figure 5a: Decomposition of market risk into its components
Figure 10a: Contribution to Target Capital of different risk categories
Figure 12a: Decomposition of market risk into its components
The risk profile of life insurers is dominated by market risk
  - In turn this market risk is driven by interest rate risk

For P&C companies both market risk and insurance risk are important
  - The relative importance of these risks varies strongly among companies

Both for life and P&C companies credit risk is of minor importance
  - The concentration risk of bank counterparty exposure on the balance sheet of life companies is underestimated

Interest rate risk is global threat for life insurers; it may affect most life insurers
Figure 45: Impact of Scenarios and Intervention Levels. Intervention Levels are computed as: \((\text{RBC - Impact Of Scenario}) / \text{Target Capital}\). The values are medians over the entire line of business (Life, Non Life or Health).
The SST has established itself as an essential supervisory tool; FINMA is able:

- To identify companies with an excessive risk profile / insufficient capital resources in a timely manner
- To identify risks which represent a global threat (low interest rates, 2nd or 3rd round effects of the European sovereign debt crisis)

FINMA can take measures based on a “ladder of intervention”:

- If SST ratio is below 100%, FINMA can restrict dividends and profit sharing with policyholders
- If SST ratio is below 80% FINMA can restrict new business
- If SST ratio is below 33% FINMA can withdraw license
SST: Impact (2)

- In advance of SST coming into force, insurers took capital increase and/or risk reduction measures
  - Issuing of hybrid instruments in the financial markets
  - Intra group transactions (capital injections, hybrid instruments, guarantees)
  - Improved asset liability matching; de-risking of investments
  - Exit from certain market segments

- Between 1 January 2010 and 1 January 2011 the aggregate SST ratio of life insurers improved from 117% to 145%

- During the transition period life and other insurers have shown improvement in their risk management
  - Better understanding of interest rate risk and ALM
  - Improved ability to price options and guarantees in traditional life products
Driven by low interest rates, life insurance companies are trying to sell less interest rate sensitive products

- Difficult sell
- Material impact on balance sheet only after many years
Implementation of SST coincides with low interest rates environment

Data source: bloomberg

SST in force

European Sovereign Dept Crisis

Solvency II in force?

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Financial Crisis

Development of SST

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Implementation of SST coincides with low interest rates environment
SST: Challenges (2)

The Solvency II process in the EU is delayed

- Political pressure to align SST on Solvency II
- Calibration of Solvency II still subject to uncertainties
- Omnibus II directive and Level 2 Implementing Measures are not yet finalized
- Open points are in particular
  - Basis for the Yield Curve
    - Swap rates vs. government bond yields
    - Extrapolation of yield curve based on Ultimate Forward Rate
  - Illiquidity Premium, Counter-Cyclical Premium, Matching Premium
The Association of Swiss Insurers view the SST capital requirements as too high compared with Solvency II.

It would like FINMA to weaken the capital requirements of the SST in respect of the following features:

- Yield curve to be based on swap rates rather than government bonds
- No aggregation of scenarios for the purpose of assessing the required capital
- Duration of real estate cash flows to be increased

Need for adjustments?
The full implementation of the SST on 1 January 2011 has had many beneficial consequences

- It motivated Swiss insurers to address their solvency situation
  - Companies took necessary capital increasing and risk reducing measures
  - Companies improved their risk management

- With the SST, FINMA has access to an effective solvency testing instrument
  - Solvency problems are identified in a timely fashion
  - Conservative measures can be taken based on a “ladder of intervention”
Preliminary Conclusions and Future Actions (2)

- A better co-ordination between the SST and Solvency II is desirable
  - There should be no “cherry picking”
  - In some respects SST is less demanding than Solvency II and vice-versa
  - A final comparison between the SST and Solvency II will only be possible after the Omnibus II directive and the level 2 implementing measures have been adopted
Preliminary Conclusions and Future Actions (3)

- Need for anti-cyclical measures?
  - Have become a particular concern due to worsening of market conditions

- Anti-cyclical measures can be based on
  - A weakening of valuation principles (equity dampeners, swap rates, ultimate forward rates, illiquidity premiums …)
  - A weakening of the capital requirements (underestimation of “tail risk”…)

- Anti-cyclical measures can also be based on
  - A relaxation of the confidence level (transparent)
  - A relaxation of the “ladder of intervention”
Preliminary Conclusions and Future Actions (4)

- The introduction of anti-cyclical measures
  - Is a political decision
  - Hides actual solvency problems; fosters complacency
  - Not sustainable; is based on the assumption that markets will “soon” revert to “normality”
  - Must be transparent to all concerned, in particular to the insured