

# „Solvency and Financial Condition Reports (SFCR)” The body-mass-index of the life insurance industry

## METHODOLOGY PAPER

In the study about the Solvency and Financial Condition Reports (SFCRs) - that have to be disclosed under the Solvency II Directive (Art. 51) – we take a closer look on eight different figures that are calculated and rated

1. **Transparency**, expressed on a point scale (from -2 to 19);
2. **Solvency ratio**, expressed as a percentage of existing capital out of insurance liabilities;
3. **Expected profits**, as a percentage of profit (calculated in future premiums) out of the total own funds;
4. **Market risk**, as a percentage out of total risk;
5. **Government bonds**, as a percentage of out of total assets;
6. **Diversification**; showing how well diversified the portfolio is;
7. **Surplus funds**; showing the additional profits not yet disbursed to policyholders; and
8. **Risk margin**, as a percentage of provisions covered in addition by a third party.

These figures (or metrics) are explained in the sections below. Each figure or metric is then assigned a colour reflecting “traffic lights”:

- “Green” figures indicate a situation that is quite good from the perspective of a policy holder;
- “Yellow” figures express a potential of optimization while the situation is nevertheless still acceptable; and
- “Red” is a sign for a problem that should be solved; or
- “Light Grey” is used to indicate an unreasonable high solvency ratio.

All the figures are based on the SFCRs from the ten biggest life<sup>1</sup> insurance companies in 6 EU Member States (France, Germany, Italy, the Netherlands, and Spain). As such, with a quick look at the colour-profile you can get a glance about the financial situation of the life insurance company.

The following sections explain the metrics (indicators) and the methodology to calculate and assess them.

## 1. Transparency

The insurance companies are obliged to publish the SFCRs.<sup>2</sup> These reports are intended to describe the financial condition, its risks and general business developments. The language used in drafting these reports should be generally understandable, at least for experts. Therefore, the report examines the transparency of SFCRs under the following two questions:

- a) *How understandable, comprehensible and detailed is the report?*
- b) *How helpful is the company to provide information when asked?*

The philosophy of Solvency II consists of the so-called “three pillars”. The first pillar describes the quantitative requirements. The second pillar sets rules for the qualitative requirements of the risk management. The third pillar has the main focus on transparency. “Transparency” is therefore not a soft criterion, but a key factor in the regulatory assessment of a company. We therefore rank the companies according to the evaluated transparency of the SFCRs.

By transparency we understand how much useful information is given in the narrative part of the SFCR so that the reader can make his own judgement. A very well written summary explaining the own risk position with explaining the movements of solvency ratios is more meaningful than one which explains only what a SFCR report is. The criteria are adapted every year to take into account the evolvement of best practice but also changing market conditions (e.g. Covid 19). However, the core criteria are:

- meaningfulness of the summary
- detailed explained remuneration policy
- details of the investment income

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<sup>1</sup> We have selected the biggest life insurance companies by premiums

<sup>2</sup> According to Art. 51 of the Solvency II Directive (2009/138/EG).

- distribution costs
- details of technical and market risks and their sensitivities; and
- detailed explanation why the solvency ratio has changed over the year.

For the time being the mentioning of climate risks gives an additional point. From next year we would consider as an obligatory information which would give a negative point if it is not mentioned.

If very useful information is given (such as diversification degree by risk module), mortality sensitivities due to Covid 19 and the implied liquidity risk...) extra points are attributed.

**The evaluation of the transparency** is based on the investigation by Dr. Carsten Zielke from Zielke Research Consult GmbH. If a company's report has collected a total of 5 transparency points, it is marked in green. If a SFCR is rated with fewer transparency points than 5, but remained positive or zero overall, it is marked in yellow. However, if the result was a value less than zero, it is marked in red in this report.

## 2. Solvency Ratio

The solvency ratio, referred to as the *Solvency Capital Requirement* (Art. 100 Solvency II Regulation), is not expressly defined as to what it means but only how it is calculated and what risks it should cover. Therefore, based on the reading of legal provisions, we infer that the solvency ratio is the ratio of funds or capital divided by the amount an insurance company must maintain on its balance sheets to absorb losses (in case of adverse market conditions, so called Solvency Capital Requirement) and pay the insurance coverage.

If an insurer has a solvency ratio of 100, this means: the insurer has sufficient eligible capital to sustain losses that occur within the next year with a probability of at least 99.5 percent. Therefore, such an event occurs statistically once every 200 years. To model extreme capital market fluctuations as well as changes in life expectancy and contract withdraw of the insured these parameters are simulated.

However, this mere limit value does not allow the conclusion that a higher value is necessarily better than a lower value. An excessively high value can also mean that policyholders have not (yet) participated in a fair manner on all bonuses, profits and surpluses. The interaction of the solvency ratio with the other listed variables is also decisive.

There are special rules for the calculation of the solvency ratio in order to be able to use "transitional measures". Those rules apply for a period of 16 years. The so called "pure solvency ratio" indicates the value that results if no transitional measures, no volatility and no matching adjustments are used. The "reported solvency ratio" is the one that results when the transitional measures, volatility and matching adjustments are used to that extent that the company wishes.

**The evaluation** is based on the solvency ratios determined by Zielke Research Consult GmbH. On the one hand, the "pure solvency" was considered, on the other hand the "reported solvency ratio" are evaluated, too. These two quotas are evaluated separately in the first step and combined in the second step by referring to the poorer result. A "pure solvency" is rated green if it is between 100 percent and 200 percent. According to the BdV, this is the range in which "pure solvency" should ideally be. For the "reported solvency ratio", a range between 100 and 350 percent is used for green.

The BdV does not see solvency ratios that exceed the "green zone" as extraordinary positive. Depending on the individual situation of the insurance company, a high solvency ratio could be a strong sign for unfair business conduct against the policy holders. But it is not necessarily such a sign - especially for life insurers who largely cover biometric risks. For this reason, BdV evaluates high solvency ratios (which exceed the "green area") with "grey".

Solvency ratios below 100 ("pure solvency" and "reported solvency ratio") are always marked in red. We also calculate for information purposes the pure-diluted solvency ratio-which takes into account callable but non-paid in capital in the nominator and the pure solvency ratio without surplus funds which subtracts a quota-share of non-allocated policyholders benefits from the nominator.

**Warning!** *To calculate the ratio without surplus fund, due to not enough information we didn't apply an adjustment to avoid the double counting of the French PPE (non-allocated policy holders' benefits) impact in the calculation of the transitional measure amount on technical provisions and in the and in the eligible own funds without surplus fund. The absence of neutralization of its cross effects underestimates the solvency ratio without surplus fund.*

### 3. Expected profits

We want to measure the profitability of future premiums which are generated by existing contracts. Therefore, we use the ratio of *expected profits included in future premiums* (EPIFP) to own funds. EPIFP gives an indication how profitable future premiums out of existing business is. If the insurance company for instance has guaranteed too high investment returns or mispriced the longevity risk this ratio would be negative. If they calculate with very comfortable margins then it would be largely positive. A very high value is seen as a sign for a high-margin profit calculation. A moderately positive value is an indication that the company let the shareholders or other owners participate on the profits in a reasonable manner. If the value is negative, however, losses can be expected in the company in the medium term. The business model of the insurer itself is then in question.

**The evaluation** is based on figures calculated by Zielke Research Consult GmbH by referring to the SFCRs. These were then rated green if they were at least 0.5 but below 4 percent. Still yellow if they were positive and below 0.5 percent or between 4 and 8 percent. In the opinion of the BdV, profit expectations above 8 percent indicate a non-consumer-friendly corporate policy and have been marked in red. A negative profit expectation is marked as a sign for problems in the business model and is marked with red

### 4. Market Risk

Financial markets are volatile which creates a risk for the insurance company. This is expressed by the market risk, which is measured by the ratio of market risk to total risk. This figure shows the relation of all capital market risks (equity, real estate, foreign currency or interest rate risks) to the totality of the risks. A high value indicates a lack of diversification of the capital investment.

Note on evaluation: This evaluation is also similar to the body mass index. Too little is negative, but too much is not good either.

**The evaluation** is based on figures calculated by Zielke Research Consult GmbH by referring to the SFCRs. These were then rated green if they were at least 50 but below 70 percent. Still yellow if they were above 40 and below 80, otherwise red.

If there is an exceptional high market risk and at the same time a very high diversification of the assets then the evaluation of the market risk is improved.

## 5. Government Bonds

Government bonds are generally considered risk-free investments, and are used as a mean to get a guaranteed return for the insurance company. They are free of capital charge in the standard solvency model and therefore a popular investment. However, in the recent years they have not produced many positive returns, which is negative for the policyholder.

The share of government bonds in total assets is quantified in this figure. A high value expresses the risk averseness of the insurance company and the potential for returns for the policyholder is reduced. Thus the diversification could be improved. This does not necessarily go hand in hand with low market risks – e.g. French and Italian government bonds have particularly high proportions.

Note on evaluation: This value is also similar to a body mass index. Too little is negative, but too much is not good either.

**The evaluation** is based on figures calculated by Zielke Research Consult GmbH by referring to the SFCRs. These are rated green if they are between 20 and 33.33, still yellow if they were at least between 10 and 50 and otherwise red.

## 6. Diversification

The degree of diversification shows the extent to which the capital investment is strong or only slightly divided into different investment classes. The higher the degree of diversification, the better for the policyholder.

A low diversification leads to the risk that the insurer drives the capital investment too one-sided. If, for example, this investment is going badly, it can be difficult to compensate it with other investments. This reduces the surpluses and, under certain circumstances, the company can get into severe trouble.

**The evaluation** is based on figures calculated by Zielke Research Consult GmbH by referring to the SFCRs. These are rated green if they are at least 25. At least 15 still leads to yellow, otherwise it is evaluated red.

## 7. Surplus Funds

These are accumulated profits that have not yet been used to strengthen the policyholders' reserves. If this value is high, it means that a large amount of profits is set aside and not given to the policy holders (although it belongs to policyholders!). A fair and timely participation in the surpluses is characterized by a lower value. Attention: Companies with high shares of biometric contracts always have higher values.

**The evaluation** is based on figures calculated by Zielke Research Consult GmbH by referring to the SFCRs. These are rated green if they are between 1.0 and 2.5. Values between 2.5 and 5.0 are rated yellow, above 5 red.

## 8. Risk margin

The risk margin should be calculated according to the value that a third party would pay to take over the insurance contracts. In practice, however, it indicates what percentage of the technical provisions are additionally secured by the margin. Under Solvency II and IFRS (International Financial Reporting Standards) this is a safety buffer within the technical provisions and thus has the character of borrowed capital. The higher the margin, the more "cautiously" the premiums are calculated.

From the consumer's point of view, this value is also to be understood as a body mass index. The calculation should be careful, but not overly careful.

**The evaluation** is based on figures calculated by Zielke Research Consult GmbH by referring to the SFCRs. These are rated green if they are between 1 and 2, still yellow if they were at least between 0.5 and 2.5 and otherwise red.