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**METHODOLOGY FOR ASSIGNING INSURANCE SECTOR RISK SCORE – FULL VERSION**

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## I Summary

This methodology aims to be a guidance for the calculation of the Insurance Sector Risk (ISR) score intended for the insurance reliability ratings.

Our global score reflects the state of insurance sector importance and depth as well as the macro environment in the country rated. Our scale ranges from 1 to 6 where 1 means the lowest possible risk and 6 stands for the highest possible risk.

The calculation of the score is very simple. It takes into account four different variables to evaluate three factors in a time span of five years. Furthermore, it also includes a qualitative adjustment factor to account for specific events or situation in the economy or the insurance market which are not captured by the other factors. The factors used are the following:

- Insurance Market Penetration;
- Insurance Market Density;
- Country Score;
  - Country Credit Environment (CCE);
  - Banking Sector Risk (BSR);
- Adjustment Factors

## II Sources of information

The following sources of information are used for the assessment of the rating score:

- OECD;
- RAEX Europe internal ratings assessments;
- Other public sources of information.

## III Methodology (ISR)

### 1. Insurance Market Penetration

#### 1.1. Non-life Premiums to GDP

With this indicator we assess how important is the insurance market in a specific country. We measure penetration as the percentage of non-life insurance premiums to the country's GDP. A positive evaluation is given if the ratio is high as compared to the global and regional average.

Score	1	2	3	4	5	6
Non-life Premiums to GDP	>= 3,67	3,67 - 2,85	2,85 - 2,04	2,04 - 1,23	1,23 - 0,43	< 0,43

## 2. Insurance Market Density

### 2.1. Non-Life Premiums Per Capita

This indicators helps us to measure the usage of insurance products within a country. Density is calculated as the amount on non-life insurance premiums per capita. It will be favourable for the ISR score if the ratio is high as compared to the global and regional average.

Score	1	2	3	4	5	6
Non-life Premiums per capita	> = 1768	1768 - 1289	1289 - 810	810 - 331	810 - 92	< 92

## 3. Country score

### 3.1. Country Credit Environment rating score

This indicator is important to assess the overall macroeconomic risk of the country or countries included in the ISR analysis. The CCE score captures any fiscal, monetary, inflationary, institutional or regulatory risks the company may be exposed to.

Score	1	2	3	4	5	6
Country Credit Environment score	> = 65	65 - 44	44 - 23	23 - 2	2 - -20	< -20

### 3.2. Banking Sector Risk score

The BSR is a key factor in order to assess the systematic risk of an economy given the fact that an insurance company is a financial company and, thus, its exposure to the financial and banking system is substantial. The BSR captures the risk of the entire financial system, government risks and bank specific risks.

Score	1	2	3	4	5	6
Banking Sector Risk score	> = 13,5	13,5 - 11	11 - 8	8 - 5,2	5,2 - 2,4	< 2,4

## IV ISR score calculation

Each factor is weighted across the time span of five years with a respective optimal weight in accordance with the table below:

T	T-1	T-2	T-3	T-4
55%	17%	17%	6%	6%

We accumulate the effect of the weighted Factors to calculate the preliminary ISR score. As a result, each group of Factors has a certain weight towards the preliminary ISR score, as per the table below;

Factor	Weight
<b>Insurance Market Penetration</b>	<b>15%</b>
<b>Insurance Market Density</b>	<b>15%</b>
<b>Country Score</b>	<b>70%</b>
<i>Country Credit Environment</i>	<b>40%</b>
<i>Banking Sector Risk</i>	<b>30%</b>
<b>PRELIMINARY ISR SCORE</b>	

The preliminary ISR is then adjusted through the adjustment factors if needed.

<b>Adjustment factors</b>	<b>6%*</b>
<b>FINAL ISR SCORE</b>	

\* The adjustment factors have an impact of at least 6%. However, the impact could be greater in many of these factors are identified.

## V Final ISR Score application

The impact of the Insurance Sector Risk score on the final rating depends on the initial assessment of the ISR. The higher the ISR, the higher its weight on the final reliability rating score, and vice versa. The distribution of the final rating score per level of ISR has been weighted and benchmarked following the best industry practices, deep macro analysis and calibration requirements.

		ISR					
		1	1 - 2	2 - 3	3 - 4	4 - 5	5 - 6
PRELIMINARY RELIABILITY RATING	1	AAA	AAA / AA	AA- / A	A / BBB	BBB / BB+	BB- / B+
	1 - 0,95	AAA / AA+	AA+ / AA-	AA- / A	A- / BBB	BBB- / BB	BB- / B+
	0,95 - 0,9	AA+	AA+ / AA-	AA- / A	A- / BBB	BBB- / BB	BB- / B
	0,9 - 0,85	AA+	AA / AA-	A+ / A-	A- / BBB-	BBB- / BB	BB- / B
	0,85 - 0,8	AA+ / AA	AA / A+	A+ / A-	BBB+ / BBB-	BBB- / BB-	B+ / B
	0,8 - 0,75	AA / AA-	AA- / A	A / BBB+	BBB+ / BB+	BB+ / BB-	B+ / B-
	0,75 - 0,7	AA- / A+	AA- / A-	A / BBB	BBB / BB+	BB / B+	B / B-
	0,7 - 0,65	A+	A+ / A-	A- / BBB	BBB- / BB	BB / B+	B / B-
	0,65 - 0,6	A+ / A	A / BBB+	BBB+ / BBB-	BBB- / BB	BB- / B	B / B-
	0,6 - 0,55	A	A / BBB+	BBB+ / BBB-	BB+ / BB-	BB- / B	B- / CCC+
	0,55 - 0,5	A	A- / BBB+	BBB / BBB-	BB+ / BB-	BB- / B	B- / CCC+
	0,5 - 0,45	A / A-	A- / BBB	BBB / BB+	BB+ / BB-	B+ / B	B- / CCC+
	0,45 - 0,4	A- / BBB+	A- / BBB	BBB / BB+	BB+ / B+	B+ / B-	B- / CCC+
	0,4 - 0,35	BBB+	BBB+ / BBB-	BBB- / BB	BB / B+	B / B-	CCC+ / CCC
	0,35 - 0,3	BBB / BBB-	BBB / BB+	BB+ / BB-	BB- / B	B / CCC+	CCC+ / CCC
	0,3 - 0,25	BBB- / BB+	BBB- / BB-	BB / B	B+ / B-	B- / CCC	CCC+ / CCC
	0,25 - 0,2	BB / BB-	BB / B	BB- / B-	B / CCC+	CCC+ / CCC	CCC / CCC-
	0,2 - 0,15	BB- / B	B+ / B-	B / CCC+	B- / CCC	CCC / CCC-	CCC-
	0,15 - 0,1	B / CCC-	B- / CCC-	CCC+ / CCC-	CCC / CCC-	CCC-	CCC-
0,1 - 0,05	CCC-	CCC-	CCC-	CCC-	CCC-	CCC-	
0,05 - 0	C	C	C	C	C	C	