

## Implementation of Solvency I and risk management in five Security companies in Kosovo (2016 – 2018)

PhD (C.) Ibrahim Mala

### Abstract

Commonly the application of Solvency in insurance companies is used as a risk management tool which may threaten these companies. Solvency mainly applies to all risks that insurance companies in Kosovo are exposed to. Through the implementation of Solvency I, the possibility for insurance companies to lose solvency in relation to the obligations and risks undertaken is reduced. Implementation of Solvency I and other early warning indicators (EWT) contributes to the degree of risk identification, assessment and selection of methods for reducing and preventing risks and unexpected losses. The implementation of Solvency I is based on the Regulation on the calculation of the minimum solvency limit, capital adequacy and guarantee fund for non-life insurers. This regulation is based on the European Solvency Directive I. The regulation of "Calculation of the minimum solvency limit, capital adequacy and guarantee fund for non-life insurers" (Solvency) is approved by the Central Bank of Kosovo on 23 February 2017.

Pursuant to this Regulation, the Solvency (Solvency I) is applied, which is calculated on the basis of premiums and claims. In addition to risk assessment for individual insurance companies, indicators from the implementation of Solvency I can also be used to assess the financial position, compared to other insurance companies (competitors) with the insurance sector as a whole. This analysis assesses the ability of an insurance company to meet solvency capital requirements (Solvencies i), assets covered by technical provisions and other early warning indicators.

As a result, the implementation of Solvency I in this paper was implemented based on the financial statements of insurance companies for three years (2016–2018), using indicators for five companies, including: Sigura, Ylliria, Elsig, Kosova e Re and Sigma. Companies are selected based on: composite criteria (to include non-life insurance in the company portfolio), scope and diversification of insurance portfolios (large insurance companies with a diversified portfolio structure), as well as the existence of a developed asset structures (to represent different forms of wealth).

**Keywords:** Solvency I and risk management, Security companies, Kosovo.

### Introduction

The capital adequacy of an insurance company is a key factor in maintaining solvency. Possessing a sufficient amount of capital, helps to cope with severe business crises as a result of unexpected risks and unforeseen losses.

Capital adequacy enables the insurance company to survive and ensure business continuity, even in the event of significant losses. In this case, capital serves for risks that could not have been foreseen, in whole or to a certain extent, making it impossible or unreasonable to undertake preventive risk management techniques. For any insurance company, capital is needed to ensure that liabilities to policyholders are

settled.

**Tabell1: Premium held in relation to total capital**

Retained Premium / Total Capital Company	2018	2017	2016
<i>K.S Siguria</i>	5.4	3.3	-4.7
<i>K.S Illyria</i>	2.3	1.9	1.7
<i>K.S Elsig</i>	1.3	1.3	1.5
<i>K.S Kosova e Re</i>	2.7	1.4	8.3
<i>K.S Sigma</i>	1.0	0.9	1.0

Source: BQK<sup>1</sup>

The flow of indicators in Table 1 shows the relationship between business activity and capitalization of the five insurance companies which is best illustrated by the following graph:

KS Sigma has a conservative business strategy that results in a high financial impact (the relationship between business activity and the level of capital). In 2018, the implemented premium was almost 1.0 times higher than the capital. This business strategy is well managed, because the written premium in relation to the capital is only once, which shows a good management of the insurance company SIGMA. Insurance company SIGURIA is the company which has marked a change in the variation of written premiums in relation to capital 5.4 times in 2016, which shows the undertaking of large risks in relation to capital, through the volume of premiums increased by 5.4 times more than the level of capital.

While the other three companies Elsig, Illyria and Kosova e Re stand within the acceptable parameters of written premiums in relation to capital. In 2018, due to the poorer performance and the decline in the level of capital, the insurance company "Kosova e Re" had a higher level of participation in gross written premiums in relation to capital. While Illyria due to capitalism of the company there is an improvement of gross written premiums in relation to capital.

The insurance sector in Republic of Kosovo (RK) as a whole, as well as the companies analyzed individually, have generally experienced an increase in financial leverage (the ratio between the volume of business activity and capital involved) over the last 3 years. This may be an indication of an increase in business activity in relation to the available capital of insurance companies, but at the same time it also signals a lower degree of capital hedging from the unexpected risks that may arise from the increase of business activity. The insurance sector in RK has a relatively low financial impact compared to the surveyed companies, which is mainly influenced by smaller insurance companies with a predominant portion of portfolio liabilities.

Due to insufficient diversification of the insurance portfolio, some of these companies risk entering the bankruptcy area in case of sudden and major damage, as well as market distortions. An indicator of the share of equity in total assets, indirectly shows the level of debt of the insurance company. Basically, the size of this indicates the

<sup>1</sup> [http://www.kselsig.com/raportet\\_financiare](http://www.kselsig.com/raportet_financiare), <https://www.illyriainsurance.com/sq-ko/documents/>, <http://kosovaere.com/rreth-nesh/raportet-financiare/>, <http://sigma-ks.net/raportet/>, <https://www.ks-siguria.com/kompania/raportet-financiare/>

degree of the company's exposure to the market, the investment. Thus, a low level of value of this indicator may indicate a high exposure to the aforementioned risks, given the fact that the function of capital is to provide the company with business continuity.

**Tabel2: Total assets**

Total capital / Total assets			
Company	2018	2017	2016
<i>K.S Siguria</i>	8.4%	14.8%	-12.8%
<i>K.S Ilyiria</i>	23.2%	25.9%	25.4%
<i>K.S Elsig</i>	35.5%	38.3%	34.6%
<i>K.S Kosova e Re</i>	18.0%	28.0%	6.3%
<i>K.S Sigma</i>	26.9%	27.9%	27.8%

Source: [www.bqk-kos.org](http://www.bqk-kos.org) Raportet e 2016–2018<sup>2</sup>

Insurance company Kosova e Re and Siguria have the lowest share of capital, in relation to the total assets of the company. The lowest participation in this relationship has "Siguria", with 8.4% in 2018 which is a result of the lowest performance of the company. While the other three companies Elsig, Illyria and Sigma have a higher share of capital in relation to total assets, but still remains low. It is estimated that the insurance sector in RK as a whole has sufficient capital adequacy, but that is mainly related to the established minimum capital requirement.

### Capital in relation to technical provisions

It is very important to see the level of insurance capital in relation to the technical and math provisions.

**Tabel 6: Technical capital / provisions**

Total capital / Technical reserves (%) (2016–2018)			
Company	2018	2017	2016
<i>K.S Siguria</i>	10.1%	18.7%	-12.1%
<i>K.S Ilyiria</i>	34.7%	40.1%	38.8%
<i>K.S Elsig</i>	59.8%	68.1%	56.2%
<i>K.S Kosova e Re</i>	24.2%	42.7%	7.2%
<i>K.S Sigma</i>	46.7%	49.7%	48.2%

Source: [www.bqk-kos.org](http://www.bqk-kos.org) Data of 2016–2018<sup>3</sup>

Technical provisions are the result of an actual assessment of recognized and reported claims (RBNS) but not reported (IBNR) claims for policyholders and other injured parties. Due to risk factors that could not have been foreseen, sufficient capital must be

<sup>2</sup> [www.bqk-kos.org](http://www.bqk-kos.org) Raportet e 2016–2018

<sup>3</sup> [www.bqk-kos.org](http://www.bqk-kos.org) Raportet e 2016–2018.

provided to meet the contingent liabilities that may arise from the insurance contract. The purpose of risk management in this case is to ensure a balance between capital and technical provisions, so that capital is sufficient to cover unforeseen losses, but also to use it effectively in relation to the level of activity of business and take over the insurance portfolio.

KS Sigma has the best ratio of technical provisions in relation to capital at the rate of 46.7% in 2018. While the lowest ratio has the insurance company Safija at the rate of 10%, which shows a poor performance of this company. This is due to the fact that Security is one of the insurance companies in Kosovo which has financial problems in maintaining the minimum level of legally required capital.

### Asset Quality

The level of company exposure to market risk, investment and credit depends on the quality of the insurance company assets. If greater diversification (investment in different forms and types of assets) and greater distribution (lower concentration of investment assets with different clients) are ensured, the risk of their marketability is lower and the possibility of fulfillment of financial liabilities is more likely.

A key element in assessing the quality of assets is the liquidity (recoverability) of certain types of assets, as well as the ability to objectively determine (without overstatement) the value of certain types of assets. In the asset balance sheet structure of an insurance company, according to the degree of liquidity (marketability) and strength of performance, there are several basic categories of assets: Unfortunately in Kosovo the securities market is not developed. The only option for insurance companies in Kosovo is to invest in stocks, subordinated debt securities - mainly government bonds, deposits in commercial banks. while insurance companies do not have the right to invest in financial markets and international stock exchanges outside the territory of the Republic of Kosovo.

Investment asset is formed, as a rule, from the most liquid parts of the assets they give and thus contributes to the operational performance, competitiveness and solvency of the insurance company. This share of assets shows high direct market exposure and credit risks. In general, insurance companies tend to keep a minimal amount of cash to maintain current liquidity, due to the low returns it brings. It is part of a relatively low risk asset and represents the purpose and end result of a business activity. Other assets consist of: tax assets, active accruals of co-insurers (mainly deferred costs of obtaining insurance - DAC), technical reserves falling on the new liability of the insurer and co-insurer. These funds present specific forms characteristic of insurance companies and are the result of the implementation of business policies of insurance companies.

**Tabel3: Liquid Assets / Total assets**

Liquid assets (cash and cash equivalents) / Total Assets			
Company	2018	2017	2016
<i>K.S Siguria</i>	47.5%	54.8%	47.1%

<i>K.S Ylliria</i>	66.7%	67.5%	66.9%
<i>K.S Elsig</i>	67.1%	70.8%	69.9%
<i>K.S Kosova e Re</i>	39.7%	38.9%	52.8%
<i>K.S Sigma</i>	69.6%	71.1%	71.6%

Source [www.bqk-kos.org](http://www.bqk-kos.org) Data of 2016–2018<sup>4</sup>

The best ratio of liquid assets in relation to total assets have the insurance companies Sigma with 67.1% of the share in 2018, KS Elsig with 67.1% and Illyria with 66.7%. while the weakest ratio has the insurance company Siguria with a share of only 47.5%. Investment property indicates the placement of long-term assets, excluding investments in related legal entities, which are included in functional assets:

**Table 4: Real Estate / Total Assets**

Real Estate / Total Assets			
Company	2018	2017	2016
<i>K.S Siguria</i>	37.7%	33.3%	40.3%
<i>K.S Ylliria</i>	22.3%	23.0%	24.9%
<i>K.S Elsig</i>	6.5%	7.0%	9.6%
<i>K.S Kosova e Re</i>	41.4%	48.2%	33.0%
<i>K.S Sigma</i>	5.2%	4.3%	5.0%

Source [www.bqk-kos.org](http://www.bqk-kos.org) Data of 2016–2018<sup>5</sup>

When considering the relationship between real estate in the asset structure we find that the insurance company Sigma has the lowest percentage of real estate share in total assets with only 5.2% in 2018. Then there is the insurance company Elsig which also has a very low ratio of real estate share in total assets with only 6.5%. The highest ratio of real estate share in total assets has the insurance company Kosova e Re with 41.4% of the share in 2018, followed by the insurance company Siguria with 37.7%. Most of the insurance companies, the founders of which are based abroad, do not own real estate, which is why they have a lower share of real estate in the total assets of the company and at the same time higher costs of lease. Their financial structure is dominated by current investments, bank deposits and government securities.

### Collection of premiums

The share of claims in relation to the total premium, as an indicator of asset quality, varies from 22.4% in 2018 to 27% in 2017, dropping to 16.3% as of December 31, 2016. Insurance companies need to work efficiently in collecting insurance companies premiums. However, due to the specificity of our insurance market, the value of this ration is most often associated with the degree of provision receivables.

<sup>4</sup> [www.bqk-kos.org](http://www.bqk-kos.org) Raportet e 2016–2018.

<sup>5</sup> [www.bqk-kos.org](http://www.bqk-kos.org) Raportet e 2016–2018.

**Tabel5: Collected in relation to written premiums.**

Tabela 6: Collected in relation to written premiums			
Company	2018	2017	2016
<i>K.S Siguria</i>	12.8%	10.2%	9.1%
<i>K.S Ylliria</i>	5.7%	4.6%	3.6%
<i>K.S Elsig</i>	18.3%	19.3%	14.0%
<i>K.S Kosova e Re</i>	7.8%	4.7%	6.0%
<i>K.S Sigma</i>	55.1%	55.3%	54.1%

Source: [www.bqk-kos.org](http://www.bqk-kos.org) Data of 2016–2018<sup>6</sup>

The range between ratios over the years is relatively high for most companies, and only individual analysis can determine whether they stem from a more efficient collection of premiums or from a collection valuation policy (value adjustments). Interestingly, the movement of this indicator, although the average level for the insurance sector is high in RK. This trend shows stricter rules for valuing balance sheet positions. In this regard, the highest ratio of premium debtors in relation to written premiums has "Sigma" with 55.1% in 2018, then is KS Elsig with 18.3%. This may also be because written premiums from voluntary insurance can be made with the option of payment in installments.

### Reinsurance and current policies

The insurance company protects itself from the risk of major damage that could jeopardize its operations by securing sufficient capital values or by transferring the risk to reinsurance. Reinsurance is a basic form of vertical risk distribution. In the event of a major impairment, the Company's ability to settle its obligations under insurance contracts depends to a large extent on whether the transfer of risk to reinsurance has been performed properly. If a company improperly assesses the risk and the degree of self-preservation while maintaining excessive risk, it in the event of major damage can not settle the obligations under the assumed contracts. On the other hand, if a company transfers a lot of risk vertically and relies heavily on the reinsurer, in addition to the fact that it has unreasonably higher costs, in the event of reinsurer bankruptcy or adverse changes in the reinsurance market, it may have difficulty repaying his obligations to the insured. The R1 report shows which part of the relevant general premium is transferred from the insurance company to reinsurance and co-insurance, and which part is retained in self-sufficiency. This ratio depends directly on the technical and financial capability of the insurance company.

### Structure of gross written premiums

The insurance market in Kosovo continues to be dominated by compulsory third

<sup>6</sup> [www.bqk-kos.org](http://www.bqk-kos.org) Raportet e 2016–2018.

party liability insurance despite a gradual increase in voluntary products.

**Tabel6: Premium structure**

Premiums from MTPL / Total Premiums			
Company	2018	2017	2016
<i>K.S Siguria</i>	85.5%	81.4%	78.5%
<i>K.S Ylliria</i>	79.3%	75.2%	69.7%
<i>K.S Elsig</i>	82.2%	78.3%	74.5%
<i>K.S Kosova e Re</i>	85.1%	79.3%	74,7%
<i>K.S Sigma</i>	77.7%	71.2%	65.2%

Source: [www.bqk-kos.org](http://www.bqk-kos.org) Data of 2016–2018<sup>7</sup>

The three main insurance companies in RKS ("Sigurija, Elsig and Kosova e Re) have a high gross written premium rate from auto liability insurance, while the other two companies Illyria and Sigma have a better performance of premium growth. written gross by voluntary insurance.

### Profitability ratios

a) Loss ratio - The following indicators present the main profitability reports of the Non-Life insurance market, including the loss ratio, the expense ratio and the combined ratio:

- Loss ratio (incurred claims), is calculated as the ratio of the amount of claims incurred in relation to net earned premiums, for the period 31 December 2018 which results in the amount of;
- The operating report as of December 31, 2018 is presented to the extent that the report compared to the previous period has marked a significant increase which exceeds the accepted ratio of 100%.

**Tabel7: Damage reports**

Damages Occurred / Net premium earned			
Company	2018	2017	2016
<i>K.S Siguria</i>	53.6%	22.5%	104.3%
<i>K.S Ylliria</i>	67.5%	48.5%	52.9%
<i>K.S Elsig</i>	48.8%	26.3%	32.7%
<i>K.S Kosova e Re</i>	48.6%	43.0%	91.6%
<i>K.S Sigma</i>	63.5%	62.3%	54.7%

Source: [www.bqk-kos.org](http://www.bqk-kos.org) Data of 2016–2018<sup>8</sup>

Insurance company Illyria and Sigma have the highest ratio of claims incurred, at 67.5 and 63.5%. While other insurance companies, Siguria, Elsig and Kosova e re have a lower ratio of claims incurred. This indicator shows the correctness of insurers against policyholders

<sup>7</sup> [www.bqk-kos.org](http://www.bqk-kos.org) Raportet e 2016–2018.

<sup>8</sup> [www.bqk-kos.org](http://www.bqk-kos.org) Raportet e 2016–2018.

b) Expenditure ratio - Expenditure ratio, represents the expenses incurred for the period in relation to the net earned premium. At the end of the period 31 December 2019, this ratio results in a mass of 48.19% (2018; 47.22%) which indicates that the expenditure ratio has marked a small increase, compared to the same period of the previous year.

**Tabel8: Expenditure report**

Operating expenses / Net premium earned			
Company	2018	2017	2016
<i>K.S Siguria</i>	60.6%	58.4%	70.3%
<i>K.S Ylliria</i>	37.5%	43.9%	46.5%
<i>K.S Elsig</i>	59.6%	61.4%	61.6%
<i>K.S Kosova e Re</i>	55.5%	62.4%	62.9%
<i>K.S Sigma</i>	25.6%	33.2%	32.2%

Source: [www.bqk-kos.org](http://www.bqk-kos.org) Data of 2016–2018<sup>9</sup>

The two insurance companies, Siguria and Elsig have the highest ratio of expenses, the first has 60.6% and the second 59.6% followed by the insurance company Kosova e Re which has the ratio of expenses at 55.5%. The high cost ratio affects the profitability of the company and is an indicator of a poor performance and management of the company.

c) Combined ratio - The combined ratio is the result of the sum of the ratio of claims incurred and the ratio of expenses. If investment income is included, then the operating report is obtained.

**Tabel 9: Combined ratio**

Tabela 6: Combined ratio			
Company	2016	2017	2018
<i>K.S Siguria</i>	114.2%	80.8%	174.6%
<i>K.S Ylliria</i>	105.0%	92.4%	99.4%
<i>K.S Elsig</i>	108.4%	87.8%	94.3%
<i>K.S Kosova e Re</i>	104.1%	105.4%	154.5%
<i>K.S Sigma</i>	89.1%	95.5%	86.9%

Source: [www.bqk-kos.org](http://www.bqk-kos.org) Data of 2016–2018<sup>10</sup>

Only insurance company Sigma has a combined ratio below 100%, the combined ratio of the company is 89.1%. All other companies have a very high combined ratio which indicates poor financial performance. Among the insurance companies which has a very high combined ratio is Siguria with 114.2% followed by the insurance company Elsig with 108.4%

<sup>9</sup> [www.bqk-kos.org](http://www.bqk-kos.org) Raportet e 2016–2018

<sup>10</sup> [www.bqk-kos.org](http://www.bqk-kos.org) Raportet e 2016–2018

### Investments report

Revenues in the business of insurance companies from investment income constitute a very small rate of income due to investment restrictions in Kosovo. The only investment opportunity in Kosovo is bank deposits and government securities.

**Tabel10: Investment report**

Income from investments / premiums earned			
Company	2018	2017	2016
<i>K.S Siguria</i>	1.54%	1.56%	2.13%
<i>K.S Ylliria</i>	2.34%	2.13%	2.29%
<i>K.S Elsig</i>	4.07%	3.89%	4.28%
<i>K.S Kosova e Re</i>	1.57	1.61%	1.34%
<i>K.S Sigma</i>	1.54%	5.39	4.93%

Source: [www.bqk-kos.org](http://www.bqk-kos.org) Data of 2016–2018<sup>11</sup>

The highest investment rate in Kosovo has the insurance company Elsig at the rate of 4.07%, followed by the insurance company Illyria at 2.34%.

### Liquid assets / Technical provisions

The following table reflects the liquidity of insurance companies Siguria, Illyria, Elsig, Kosova e Re and Sigma. The following table presents the ratio of liquid assets (cash, deposits and Government securities) in relation to total technical provisions. Technical provisions consist of unearned premium and claims reserves.

**Tabel 11: Liquid assets / Technical provisions**

Liquid assets / Technical provisions			
Emertimi i kompanive	2018	2017	2016
<i>K.S Siguria</i>	60.3%	73.4%	47.8%
<i>K.S Ylliria</i>	87.3%	97.2%	97.4%
<i>K.S Elsig</i>	108.0%	116.3%	109.0%
<i>K.S Kosova e Re</i>	54.8%	60.8%	72.5%
<i>K.S Sigma</i>	118.1%	123.2%	119.8%

Source: [www.bqk-kos.org](http://www.bqk-kos.org) Data of 2016–2018<sup>12</sup>

From the table above it can be seen that the insurance company Sigma has the highest liquidity ratio of 118.1 in 2018. As can be seen Sigma is a foreign company and the structure of its assets consists mainly of liquid assets. Insurance company Sigma has no real estate assets and this is one of the reasons that this company has high liquidity. Then there is the insurance company Elsig which also has a very high liquidity ratio. While the insurance company Kosova e Re has the lowest liquidity ratio, at the rate of only 54.8% in 2018. With the lowest liquidity ratio is also the insurance company Siguria at the rate of only 60.3%.

<sup>11</sup> [www.bqk-kos.org](http://www.bqk-kos.org) Raportet e 2016–2018.

<sup>12</sup> [www.bqk-kos.org](http://www.bqk-kos.org) Raportet e 2016–2018.

### Liquid assets / Total liabilities

The following table reflects the liquidity of insurance companies Siguria, Illyria, Elsig, Kosova e Re and Sigma. The following table presents the ratio of liquid assets (cash, deposits and Government securities) in relation to total liabilities

**Table 12: Liquid assets / Total liabilities**

Liquid assets / Total liabilities			
Company	2018	2017	2016
<i>K.S Siguria</i>	55.2%	68.0%	44.8%
<i>K.S Ylliria</i>	88.3%	93.3%	91.2%
<i>K.S Elsig</i>	101.0%	110.0%	104.0%
<i>K.S Kosova e Re</i>	53.1%	52.9%	61.1%
<i>K.S Sigma</i>	93.0%	95.8%	95.9%

Source: [www.bqk-kos.org](http://www.bqk-kos.org) Data of 2016–2018<sup>13</sup>

The table above shows that the insurance company Elsig has the highest liquidity ratio of 101.0% in 2018. KS Elsig is one of the insurance companies which is able to cover all its liabilities with liquid assets. Then there is the insurance company Sigma, a company with external capital and a high quality asset structure which mainly consists of liquid assets. Liquidity ratio of this company in 2018 is at the rate of 93%. Then there is the insurance company Illyria which also has a very high liquidity ratio. While the insurance company Siguria has the lowest liquidity ratio, at the rate of only 53.1% in 2018. With the lowest liquidity ratio is also the insurance company Kosova e Re at the rate of only 53.1%.

### Conclusions

Until today in Kosovo the Solvency I is being applied to manage the risks exposed by insurance companies. Companies are implementing this method to reduce solvency losses in relation to liabilities and risks taken from the obligations. But, the efforts are ongoing to switch to the newest risk management methods which are applied in the countries of the region and Europe, including the CARMEL method.

### References

- Doff, R. (2007). Risk Management for Insurers: Risk Control, Economic Capital and Solvency.  
 Gashi, Sh. (2013). Menaxhimiirreziqevenëtrej e sigurimeve, Prishtinë.  
[http://www.kselsig.com/raportet\\_financiare](http://www.kselsig.com/raportet_financiare)  
<https://www.illyriainsurance.com/sq-ko/documents/>  
<http://kosovaere.com/rreth-nesh/raportet-financiare/>  
<http://sigma-ks.net/raportet/>  
<https://www.ks-siguria.com/kompania/raportet-financiare/>  
<https://www.bks-ks.org/>  
[www.bqk-kos.org](http://www.bqk-kos.org) Raportet e 2016–2018.

<sup>13</sup> [www.bqk-kos.org](http://www.bqk-kos.org) Raportet e 2016–2018.