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SERBIAN REINSURANCE MARKET

ABSTRACT

Reinsurance is a very important part of the insurance business, as without it the insurance companies would not be able to provide coverage for claims caused by catastrophic events and unusual risks. On a global level in 2012 reinsurer's capital has increased about 11%, non-life reinsurance premium by 3.4%, life premiums decreased by 1.6% and there were less incurred claims than in the previous year. At the same time, characteristics of domestic market are quite different. Capital has increased by 21%, reinsurance premium by 13% and settled claims by 29%. Net profit for all 4 reinsurance companies has increased by 19%. The reinsurance premium is 12% of the total premium of insurance industry in Serbia. No matter how good performance is the domestic reinsurers are service for risk transfer abroad, which is required mainly due to domestic legislation.

Keywords: reinsurance, market

INTRODUCTION

Insurance is a risk transfer transaction by which the policyholders, move some of the risks that they have to face daily, to an insurance company in exchange for a price that is commonly known as a premium. Likewise, reinsurance is a risk transfer transaction by which an insurance company, after taking on risks from its customers, transfers part of such risks to reinsurers. The insurers thus are reducing their own exposure to risk, the volatility of operating results and achieve predictability of claims costs. Unlike insurance, where the deal is entered into between a consumer and a company, where, in the vast majority of the cases, the bargaining power of the parties cannot be regarded as equal, reinsurance is a business-to-business arrangement, that is to say a transaction concluded between professionals with comparable competence and expertise. The importance of reinsurance could be seen from the fact that in 2011, 325 natural and man-made catastrophes caused economic losses estimated at USD 370 billion, out of which only USD 116 billion, were covered by the insurance. Significant part of this amount was paid by the reinsurer. Without reinsurance, insurers would

not be able to provide coverage for claims resulting from unusual risks as well as catastrophic events, such as earthquakes and hurricanes, or such cover could be arranged at unsustainable premium levels only.

This paper will describe in detail reinsurance market in Serbia in 2012, along with a brief overview of contemporary international trends in reinsurance in order to understand better the role, importance and perspectives of local reinsurers.

1. GLOBAL REINSURANCE

In 2011 global reinsurance premiums were slightly more than USD 210 billion, while the total insurance premium was about USD 4,600 billion. Table 1 is showing top 15 reinsurers.

Table 1: Reinsurance premiums of the largest companies in 2011
(million USD)

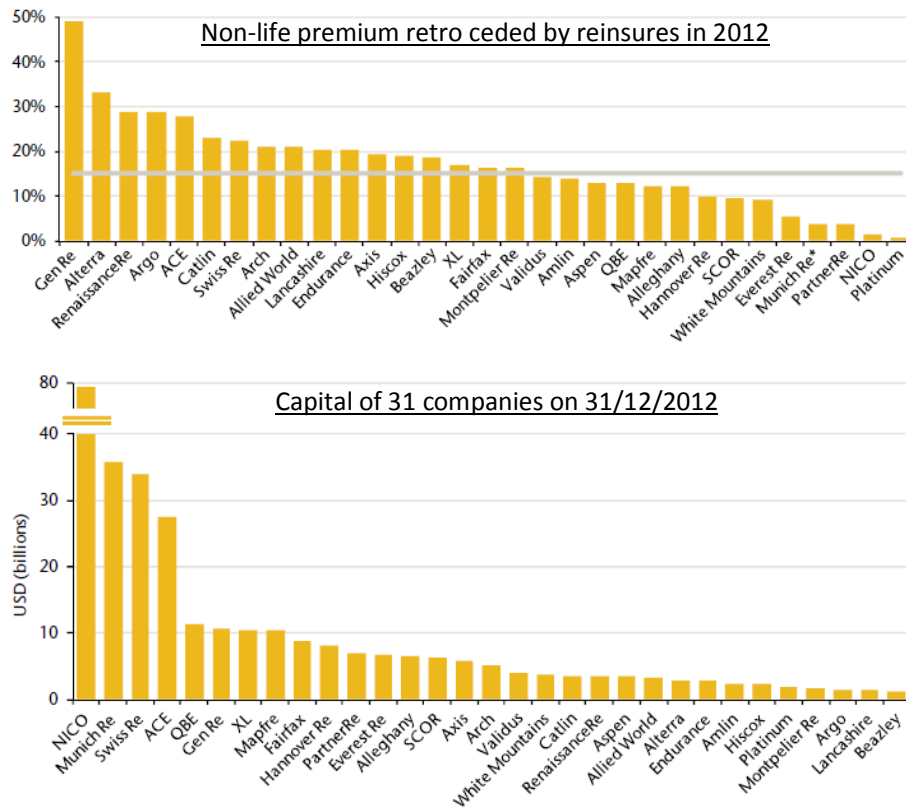
	Reinsurance company	Premium
1	Munich Reinsurance Company	33,719
2	Swiss Reinsurance Company Limited	28,664
3	Hannover Rueckversicherung AG	15,664
4	Berkshire Hathaway Inc.	15,000
5	Lloyd's	13,621
6	SCOR S.E.	9,845
7	Reinsurance Group of America Inc.	7,704
8	China Reinsurance (Group) Corporation	6,179
9	PartnerRe Ltd.	4,621
10	Korean Reinsurance Company	4,551
11	Everest Re Group Ltd.	4,286
12	Transatlantic Holdings, Inc.	4,035
13	MAPFRE RE, Compania de Reaseguros, S.A.	3,407
14	London Reinsurance Group Inc.	3,117
15	Assicurazioni Generali SpA	2,674
	The total premium of the 15 largest reinsurers	157,087
	The total premium of the 50 largest reinsurers	200,475

Source: *Top 50 Reinsurers Revealed*

By the time this paper was written there were no published data on reinsurance for 2012 worldwide. That's why paper is showing trend in a sample of 31 companies followed by the

analysts from one of the world's largest brokerage company Aon Benfield. Figure 1 is showing capital of companies from Aon sample, which as of 31/12/2012 amounted to about 62% of the total capital of all reinsurance companies. Therefore the sample is sufficiently representative.

Figure 1: Aon Benfield sample of reinsurance market characteristics



Source: *The Aon Benfield Aggregate Results for the full year ended December 31, 2012*

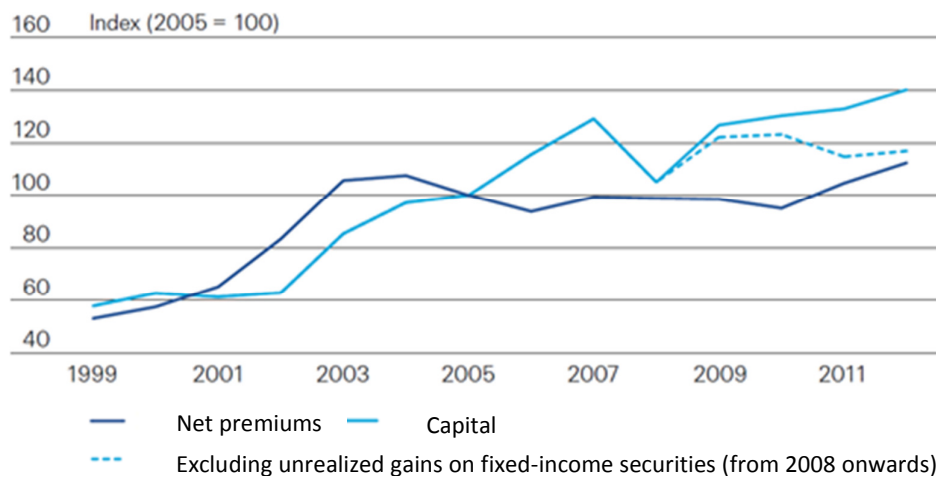
Capital of companies from the sample has increased by 12% and reached USD 313 billion, while premium income increased by USD 30 billion in comparison with 2011. Premiums of non-life reinsurance companies has increased by 6% due to higher demand for reinsurance and price increases in Asia and reached USD 100 billion. Self-retention has not changed in 2012 and remained at around 85%, as shown in Figure 2. Reinsurance combined ratio of listed companies was 88.9% mainly due to more estimated reserves for losses last year and achieving fewer natural disasters than expected during 2012. Profit before tax of these companies has doubled compared to the previous year, amounting over USD 35 billion.

Total capital of all international companies dealing with reinsurance had increased by about 11% in 2012 and slightly exceeded USD 500 billion. Concerning the fact that five years ago total capital of reinsurers was approximately USD 340 million strong growing trends is recorded. At the global level total damages in 2012 were significantly lower than in 2011, which led to a slight drop in demand for reinsurance. As the reinsurance capital has reached the highest level ever recorded, which means that the supply is growing and because of lower claim costs demand for reinsurance is decreasing, reinsurance rates in 2013 will decrease by several percent globally.

The world non-life reinsurance market

Except the financial crisis, natural disasters have left a major mark on the earnings in the field of non-life reinsurance. In the first three quarters of 2012, the global reinsurance business had a relatively good performance. However, the fourth quarter was significantly influenced by a damage made by Hurricane Sandy, worth several billion dollars. Rating agencies have reported a modest surplus of capital globally. But, this capital is unevenly distributed across a few players and there is no trend of positive rating outlooks. Capital requirements have increased due to greater exposure to natural disasters and riskier assets. Additional uncertainty relating to Solvency II also raises capital requirements.

Figure 2: Non-life reinsurance premiums and reinsurance company equity



Source: Swiss Re Economic Research & Consulting *Global insurance review 2012 and outlook 2013/14*

Figure 2 is showing net premiums and equity in global non-life reinsurance business from 1999 until the first half of 2012. The level of capital is recovered by the end of 2009 from a fall caused by crisis of 2008. During 2010 and 2011, the capital remained constant and continued to grow slightly until the first half of 2012. Premium income, after years of stagnation, again started to grow because of a moderate increase in premium rates. After serious losses due to natural disasters in the 2011 in property insurance for natural disasters have significantly increased rates. Prices for property insurance for disasters have increased between 5% and 10% based on the harmonization of risk. The areas that had the greatest losses due to the natural disaster have shown the highest growth of premium rate.

Reinsurers combined ratio improved due to disasters claims were below average in the first nine months of 2012 and approximately at the same level as in 2009. However, the instability of the reinsurance business on a worldwide basis is constantly increasing with the increasing focus on business in the area of insurance against disaster. Proof of this is that claims for damages due to Hurricane Sandy dominate the results of underwriting insurance in the fourth quarter of 2012. It is expected that the combined ratio at the end of 2012 is between 103% and 105%. In any case, the profitability of underwriting insurance reinsurance markets is held better than in many primary insurance markets. Releasing from the claims provisions in previous years at this time help to improve the claims ratio for two to three percentage points.

Table 2: Real growth in non-life reinsurance premiums

Market	2010	2011	2012	Forecast for 2013	Forecast for 2014
Advanced markets	-4.3%	5.9%	2.1%	3.8%	4.9%
Emerging markets	-0.2%	15.5%	7.7%	8.5%	7.8%
World	-3.5%	8.0%	3.4%	4.9%	5.7%

Source: Swiss Re Economic Research & Consulting *Global insurance review 2012 and outlook 2013/14*

The global market for life reinsurance

The top eight life reinsurers increased their net premium by about 10% in the first half of 2012 (in USD). Strong growth was driven by consolidation, block transactions, reinsurance of

longevity risk, enhanced annuities and business in the field of accident insurance and health insurance.

Table 3: Real premium growth of traditional life reinsurance

Market	2010	2011	2012	Forecast for 2013	Forecast for 2014
Advanced markets	1.8%	-0.4%	-2.1%	-1.3%	-1.0%
Emerging markets	7.0%	16.3%	4.8%	6.3%	6.3%
World	2.1%	0.5%	-1.6%	-0.7%	-0.4%

Source: Swiss Re Economic Research & Consulting *Global insurance review 2012 and outlook 2013/14*

Traditional life insurance premiums fell by 1.6% in 2012. In developed markets, premiums fell by 2.1%; while in emerging markets grew by almost 5%. Decline in developed markets was driven by permanent reinsurance business reduction in the US and the UK, which currently account for 55% of global ceding. Reinsurance premiums in the US and the UK have fallen by nearly 4.5% in 2012 mainly due to a decrease in reinsurance rates as a result of changes in regulations.

Analysts from the company Swiss Re expect further declination of traditional life reinsurance in the next few years. In developed markets, life insurance premiums will fall by between 0.5% and 1% per year (excluding inflation). In the US and the UK, the business opportunities will fade away with changes in legislation. In other developed markets, where the rate of ceding is usually much lower than in the US and the UK, the traditional reinsurance will continue to record low, single-digit growth rates that correspond to the growth of traditional life insurance. In developing markets, is expected to increase the life reinsurance by about 6% per year over the next few years. In these markets, the major reinsurers will offer support for insurers in product development, underwriting policy and claims management. However, strong growth in emerging markets will not be enough to compensate for the business, which melts in the US and the UK, so that the life reinsurers seek non-traditional or less developed areas for growth. In the next few years, insurance companies will require a solution for the pressure on the capital from macroeconomic climate.

2. REINSURANCE IN SERBIA

Legislative changes in 2004 entrusted the National Bank of Serbia with the supervision of

insurance activities in Serbia, and therefore of reinsurance. Legislation in the field of insurance and reinsurance is in responsibility of the Assembly of the Republic of Serbia on the proposal of the Ministry of Finance, while for sub-laws in this area the National Bank of Serbia is in charge.

Table 4: Main macroeconomic indicators in Serbia

Indicator	2012.	2011.
Real change in GDP (%)	-1.7%	1.6%
GDP (million EUR)	29,932	31,472
Unemployment rate (%)	23.9%	23.0%
Consumer prices index (%)	12.2%	7.0%
Average monthly earnings (EUR)	364	372
Total insurance premium (billion RSD)	61.5	57.3
Total reinsurance premium (billion RSD)	8.0	7.1

Source: National Bank of Serbia, *The main macroeconomic indicators*, 08.03.2013.

As stated in Table 4, after a slow recovery of the domestic economy and two years of GDP growth, GDP fell by 1.7% in 2012. The other indicators are worse than in the previous year - inflation has increased by more than 5 percentage points, the unemployment rate has increased 1 percentage point and the average wage denominated in euro fell 2%. However, insurance premiums recorded a nominal increase in RSD of 7% and reinsurance premium increased about 13%.

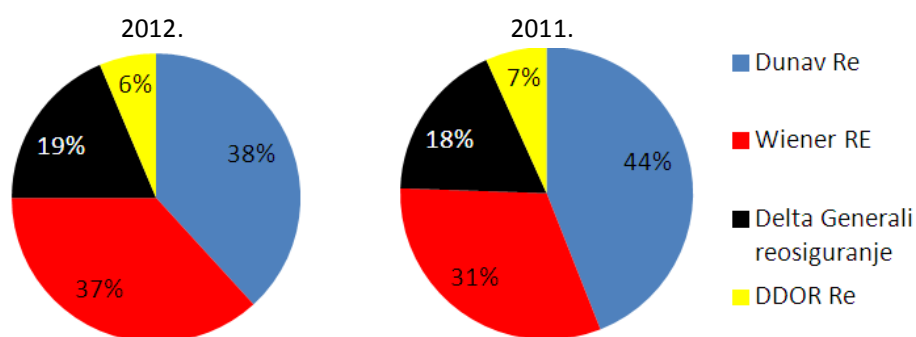
In 2012 on Serbian insurance market, four companies deal with reinsurance: DDOR Re, Delta Generali reinsurance, Dunav-Re and Wiener Re. According to Powers-Shubik¹ rule, the optimal number of reinsurers in a market is approximately the square root of the number of insurers. In Serbia, 24 insurance companies were engaged in the 2012, the square root of 24 is 4.9, which means that the optimal number of reinsurers is 5 and it is likely that in the near future another company will start to deal with reinsurance on the Serbian market.

Number of employees in companies engaged in reinsurance has not changed from last year. Reinsurance deals with 55 employees, of which 60% work in the company Dunav Re, which is state owned.

¹ Powers, M. R., Shubik, M. A *'Square-Root Rule' for Reinsurance*

The owners of two reinsurance companies are international companies, one is owned by domestic insurance company that is more than 50% foreign ownership and the fourth reinsurance company is owned by a local government insurance company. Reinsurance companies with foreign capital majority had a dominant market share of 56% in 2011, while in 2012 occupies 62% of the market. Trend of declining market share by companies owned by domestic firms is quite strong in the last few years. In 2008 Dunav-Re had a 70% of market share, while in 2012 reduced it to 38%. Market competition is taking place mostly between companies Dunav-Re and Wiener Re, while Delta Generali reinsurance and DDOR Re are predominantly used by mother companies for transfer risks to foreign reinsurers, due to legislation which does not allow direct reinsurance abroad. The concentration of the portfolio in the market, measured by Herfinahl Hirschman index is quite high, but decreases from 3,333 in 2011 to 3,210 in 2012 year.

Figure 3: Reinsurance premiums of insurance companies in Serbia



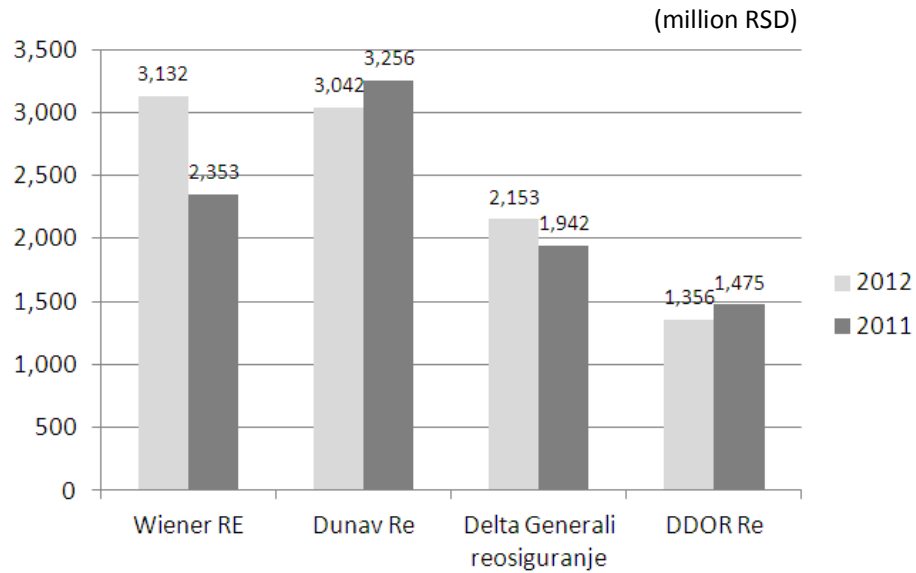
(000 EUR)

Companies	2012	2011
Dunav-Re	27,993	29,708
Wiener RE	26,950	21,282
Delta Generali Reinsurance	13,659	11,939
DDOR Re	4,665	4,572
Total	73,266	67,501

Source: National Bank of Serbia, *Business Insurance Companies*

The balance sheet amount can be used as a measure of business volume for insurance companies who are specialized in reinsurance. As of 31/12/2012 balance sheet total amount was EUR 9.68 billion and was 7% higher than a year ago, when it stood at RSD 9.03 billion.

Figure 4: Balance sheet amounts of insurance companies who are specialized in reinsurance

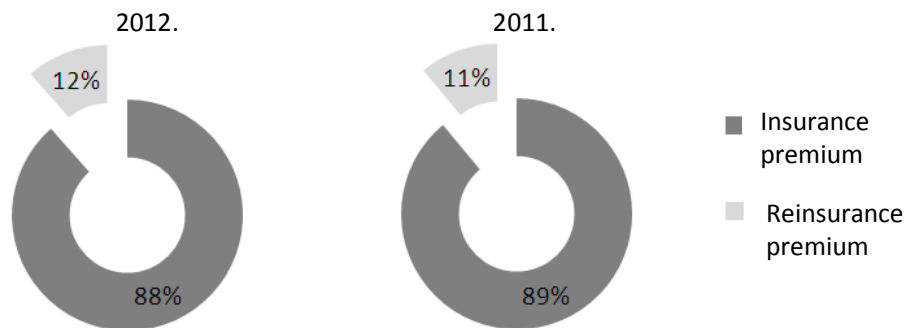


Source: National Bank of Serbia, *Business Insurance Companies*

Premium

The total reinsurance premiums amounted to 11% of the total premium in insurance and reinsurance industry in 2011 and the insurance companies 12.3% of its premiums ceded to reinsurance companies. In 2012 reinsurance companies ceded 13.0% of their premiums.

Figure 5: Insurance and reinsurance premiums in Serbia



Source: National Bank of Serbia, *Business Insurance Companies*

Reinsurance premiums by type of insurance are shown in Table 5. In 2012, the largest

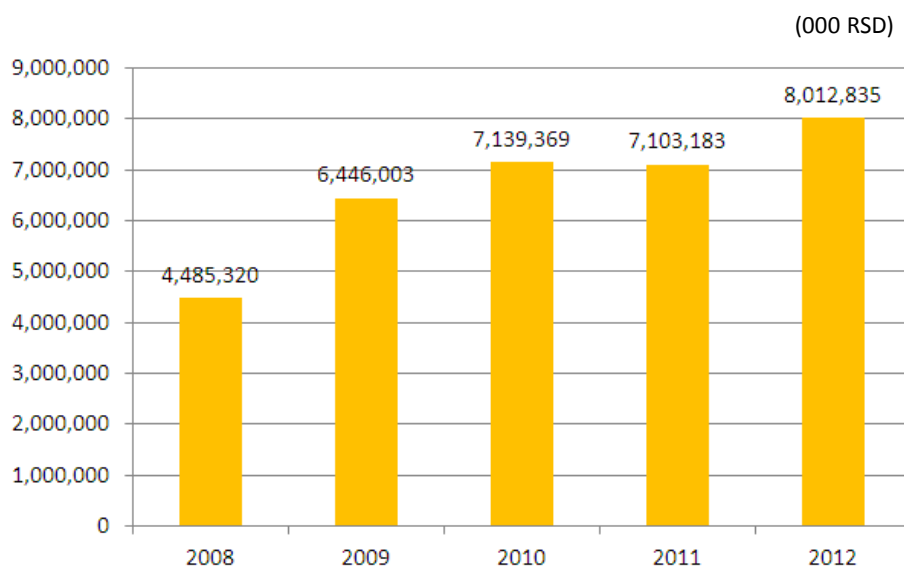
reinsurance premium was in property insurance, over 71% of the total premium, while the next largest is Casco insurance with about 13% of the total insurance premiums.

Table 5: Reinsurance premiums by the type of insurance in Serbia in the last 5 years

(000 RSD)					
Type of insurance	2008	2009	2010	2011	2012
Accident insurance	54,904	165,555	328,272	341,389	363,486
Voluntary health insurance	12,564	7,590	838	0	535
Casco insurance	986,513	1,505,633	1,452,037	1,294,142	1,073,815
Property insurance	2,833,179	3,835,524	4,489,374	4,740,048	5,740,295
MTPL	492,049	736,439	646,883	495,701	585,986
Life insurance	106,111	195,262	221,965	231,903	248,718
Total	4,485,320	6,446,003	7,139,369	7,103,183	8,012,835

Source: National Bank of Serbia, *Business Insurance Companies*

Figure 6: Reinsurance premiums in Serbia in the last 5 years



Source: National Bank of Serbia, *Business Insurance Companies*

In 2012 Serbian market reinsurance premium was RSD 8.01 billion, up 13% over the previous year. Although the beginning of the five-year period had a premium increase, in 2011, the trend has changed to slightly decline, to 2012 were returned to growth. Non-life reinsurance premium dominates by 97%. Unlike insurance premiums where the largest share has MTPL, reinsurance premiums from it are about 7% of the total premium reinsurance market.

Reinsurance premiums retained by type of insurance is shown in Table 6. As premiums ceded from the insurance companies, in 2012, the highest premium after retrocession was in property insurance, about 49%, while the following Casco premium with about 29% of the total premium in self-retention. Obviously, there is a big difference in the structure of reinsurance premiums and reinsurance premium retained. It can be concluded that the national reinsurers have a relatively small capacity. Therefore they retain one-third of Casco insurance that has a proportionally small probable maximum loss (PML), while retaining only 10% of the premiums of property insurance, which PML substantially exceed the maximal self-retentions of national companies.

Table 6: Reinsurance premiums retained in Serbia in the last 5 years

(000 RSD)					
Type of insurance	2008	2009	2010	2011	2012
Accident insurance	23,919	123,310	240,805	186,219	173,852
Voluntary health insurance	5,502	5,838	783	0	11
Casco insurance	570,193	764,029	717,850	566,260	361,618
Property insurance	379,381	644,704	703,168	629,053	615,295
MTPL	52,106	68,083	43,214	44,345	62,846
Life insurance	10,298	85,873	98,207	27,314	31,215
Total	1,041,399	1,691,837	1,804,027	1,453,191	1,244,837

Source: National Bank of Serbia, *Business Insurance Companies*

Retained premium grew up to 2010 and then began to decline, so in 2012 were reduced by 14%, indicating that domestic reinsurers are becoming a service for risk transfer abroad, which is only necessary because of the legislation.

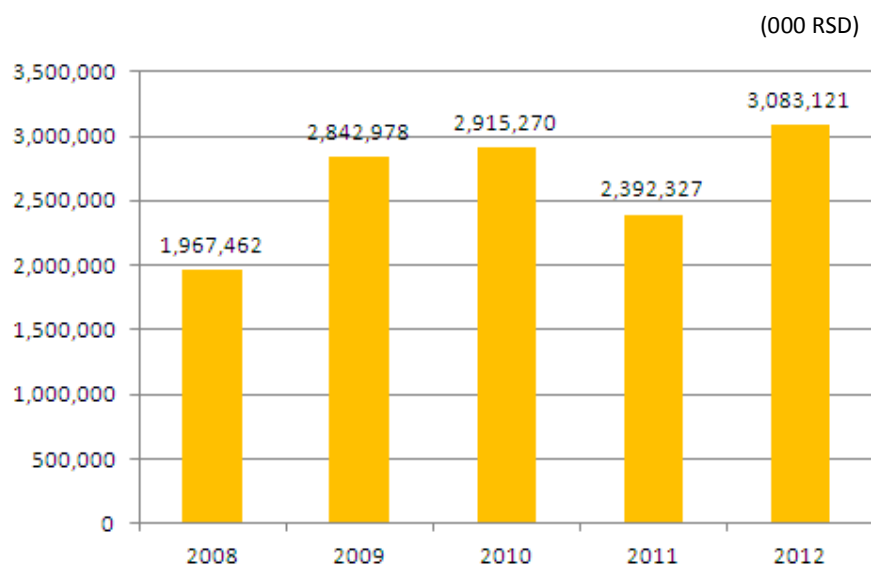
Claims

The amount of paid claims fluctuates over the past 5 years in the Serbian reinsurance market. In 2012 there were settled RSD 3.08 billion, a significant increase compared to the previous year by 29%, but only slight increase of 5% compared to 2010.

Settled claims in reinsurance by type of insurance are shown in Figure 8. In 2012, the largest losses are settled in property insurance, about 54% of total claims, while the next largest was Casco insurance with about 26% of total damage. There is a significant difference in the

structure of claims in insurance where most of the settled claims are about 33% in automobile MTPL, followed by property insurance with a share of 25%.

Figure 7: Settled claims in reinsurance in Serbia in the last 5 years



(000 RSD)

Type of insurance	2008	2009	2010	2011	2012
Accident insurance	14,092	57,296	143,190	190,613	291,330
Voluntary health insurance	2,195	3,067	477	0	0
Casco insurance	496,746	1,041,425	937,532	850,505	812,191
Property insurance	944,766	884,666	1,546,877	1,037,849	1,653,395
MTPL	489,294	793,494	210,514	257,532	238,081
Life insurance	20,369	63,030	76,680	55,828	88,124
Total	1,967,462	2,842,978	2,915,270	2,392,327	3,083,121

Source: National Bank of Serbia, *Business Insurance Companies*

Settled claims in self-retention of reinsurance by type of insurance are shown in Table 7. In 2012, the largest retained damage belongs to property insurance, about 40% of the total claims, while the next one is Casco insurance with a share of about 36%. Settled claims in self-retention were almost 3 times increased in the period between 2008 and 2010, then were reduced by about 16% in 2011 and fell slightly, by 3% in the 2012. The fall of settled claims in the past two years paid by domestic reinsurer is directly correlated with a reduction in the premium that they have retained the same period.

Total claims in the domestic insurance market in the 2012 amounted to approximately RSD 25.1 billion, while total claims in reinsurance market amounted to only about 12% of insurance claims, or RSD 3.08 billion. Settled claims which retro ceded in the same period, were about RSD 2.2 billion or about 73% of claims in reinsurance, or about 9% of damage the insurance market.

Table 7: Settled claims in self-retention of reinsurance in Serbia in the last 5 years

(000 RSD)					
Type of insurance	2008	2009	2010	2011	2012
Accident insurance	10,777	46,345	126,046	136,859	170,133
Voluntary health insurance	170	244	96	0	0
Casco insurance	182,767	492,390	519,012	359,381	304,976
Property insurance	146,587	236,798	314,378	356,301	337,964
MTPL	7,412	38,994	20,539	6,500	17,310
Life insurance	2,063	40,027	45,994	6,458	10,971
Total	349,776	854,798	1,026,065	865,499	841,354

Source: National Bank of Serbia, *Business Insurance Companies*

The claims ratio

In Table 8 is shown claims ratio around the Serbian reinsurance market for risks which insurers ceded to reinsurers. Claims ratio is calculated by a standard actuarial formula as the ratio of incurred claims and earned premiums. Incurred claims are calculated as paid losses with claims handling expenses, increased by the change in outstanding claims and decreased by collected recourse claims. Due to the lack of available data about collection of recourse claims, introduced the assumption that all recourse receivables collected. The earned premium is calculated as written premium decreased for unearned premiums reserve change. The claims ratio is still very affordable and is 39% in the 2012, although by 5 percentage points worse than it was last year.

Table 8: Claims ratio in reinsurance market in Serbia

(million EUR)		
	2012	2011
Earned premium	69.47	66.67
Claims	27.30	22.45
Claims ratio	39%	34%

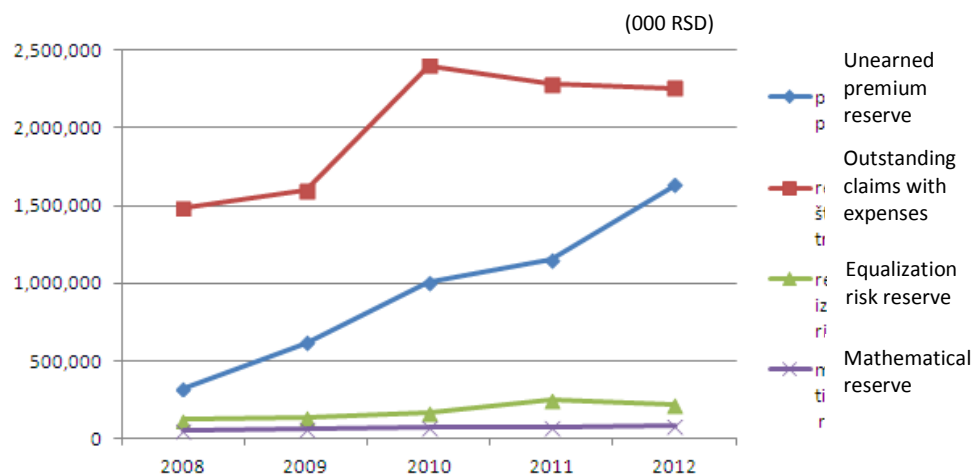
Table 8 shows the claims ratio around the Serbian reinsurance market for risks that remain after retrocession to other reinsurers. Claims ratio is calculated by standard actuarial formulas as the previous one. The ratio is very unfavorable and is 133% in 2012, or by 44 percentage points worse than in the last year. Although the claims ratio is unacceptably high, thanks to the low acquisition and administration costs and large financial income, all Serbian companies dealing in reinsurance reported profit in 2012.

Table 9: Claims ratio in self-retention in reinsurance market in Serbia

	(million EUR)	
	2012	2011
Earned premium	6.72	8.15
Claims	8.92	7.22
Claims ratio in self-retention	133%	89%

Technical reserves

Figure 8: Technical reserves of reinsurance



(000 RSD)

Year	Unearned premium reserve	Outstanding claims with expenses	Equalization risk reserve	Mathematical reserve	Total
2008	324,653	1,483,449	120,935	51,239	1,980,276
2009	616,949	1,597,115	134,300	61,852	2,410,216
2010	1,005,650	2,401,633	166,666	71,308	3,645,257
2011	1,155,803	2,283,014	248,278	72,926	3,760,021
2012	1,633,932	2,256,631	217,892	81,050	4,189,505

Source: National Bank of Serbia, *Business Insurance Companies*

Figure 8 shows the technical reserves of reinsurance which collectively have seen strong trend growth in the last 5 years. In 2012 increased by 11% compared to the previous year, while premiums increased by 13%. In five years, the technical reserves have raised 112% significantly more than premium (79%). Only outstanding claims have a different trend from the other technical reserves, since 2010 they are slightly decreased.

The expenses in reinsurance companies

Acquisition and administration expenses in 2012 amounted to RSD 288.3 million, which is 7% lower than in 2011. In both years, reinsurance expenses were about 4% of reinsurance premiums earned. Reinsurance business is much efficient of insurance business, as is evident from the fact that the cost of insurance in Serbia 2011 reached to 41% of earned premium, or about 10 times more than expenses in reinsurance.

Retrocession

Retrocession reduces volatility of risks and protects reinsurers from serious damage that could be a threat to a company's operations. Unexpected claims that remain in the self-retention would be covered by a capital. The relationship between earned premium in self-retention and total premium earned indicates the volume of risks transferred to the retrocession. In 2012 this ratio is reduced in comparison with 2011 by 2.5 percentage points to 9.7%, which means that the reinsurer retained only about 10% of premiums received and more than 90% retro ceded to other reinsurers.

Profit in Reinsurance

All reinsurance companies in Serbia in the last two years have demonstrated profit. Total profit after tax in reinsurance market in 2011 amounted to RSD 368 million. In 2012, the total profit after tax amounted to RSD 439 million or 19% more than in the previous year.

CONCLUSION

The aim of this paperwork is to present the reinsurance in Serbia, one of the areas of insurance, which is rarely studied separately from the total insurance business. In short, the Serbian reinsurance market in 2012 is characterized by the following:

- An increase in balance sheet amount of reinsurance companies by 7%, which is RSD 9.68 billion,
- Capital increased by 21%, amounting to RSD 2.59 billion,
- Increase in net profit after tax by 19%, which is RSD 0.44 billion,
- Technical reserves increased by 11%, amounting to RSD 4.19 billion,
- Increase in total premium by 13%, which amounts to RSD 8.01 billion,
- Reduction of the total premium in self-retention by 14%, which is RSD 1.24 billion,
- Increase in total claims settled by 29% amounting to RSD 3.08 billion,
- Reduction of total claims settled in retention by 3%, which is RSD 0.84 billion,
- Concentration of the reinsurance market as measured by Herfindahl Hirschman index is high, but declined by 4% in 3.210,
- The number of 4 companies engaged in reinsurance has not been changed and
- The number of 55 employees in reinsurance companies has not been changed.

Domestic reinsurance companies had good performance in 2012. Despite that they are mostly service for risk transfer abroad which is needed to fulfill requirements of Serbian legislation.

LITERATURE

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