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Development in the insurance sector reflects the country's economic welfare

An analysis of international insurance market statistics

Strong correlation between economic welfare and development in the insurance sector Ошибка! Закладка не определена.

Reasons for the correlation Ошибка! Закладка не определена.

Resource rent has a negative effect on the insurance sector 4

Institutional factors limit potential development in Russia's insurance sector 5

ACRA notes a high correlation between the country's economic welfare (per capita GDP) and the share of insurance premiums in the non-life segment in GDP. This is reflected in data on insurance markets in leading countries. According to ACRA, the Pearson coefficient between these indicators stands at 0.89 for 2007-2018.

One reason for the high correlation may be that a higher level of per capita GDP could be a result of higher volumes of productive capital in the economy. Insuring this capital creates additional premiums in the non-life segment, especially in corporate insurance. Therefore, the share of insurance premiums in GDP – the so-called level of insurance penetration – increases.

The correlation could also be linked to consumption structure. As the population's income increases, the share of spending on housing and cars, private medicine, etc., increases at an accelerated rate. This leads to a corresponding increase in insurance premiums and an increase in their share in GDP.

It can also be assumed that the level of economic welfare and demand for insurance depend on similar institutional factors, such as how risk is handled and the role of the state in providing assistance to victims of natural disasters. The state assuming the role of insurer may be economically inefficient and hinder the development of commercial insurance.

GDP structure affects the level of insurance penetration. In particular, there is a negative correlation between the level of insurance penetration and the share of resource rents in GDP. This effect is particularly noticeable in Persian Gulf countries and is significant for Russia as well.

A comparative analysis with other countries shows that the current level of insurance penetration in Russia in the non-life segment (1% for 2018) lags behind its potential by about 1.7x. According to ACRA, creating institutional conditions aimed at increasing the insurance market in Russia could serve as long-term stimulus for the entire economy and the economic welfare of the nation.

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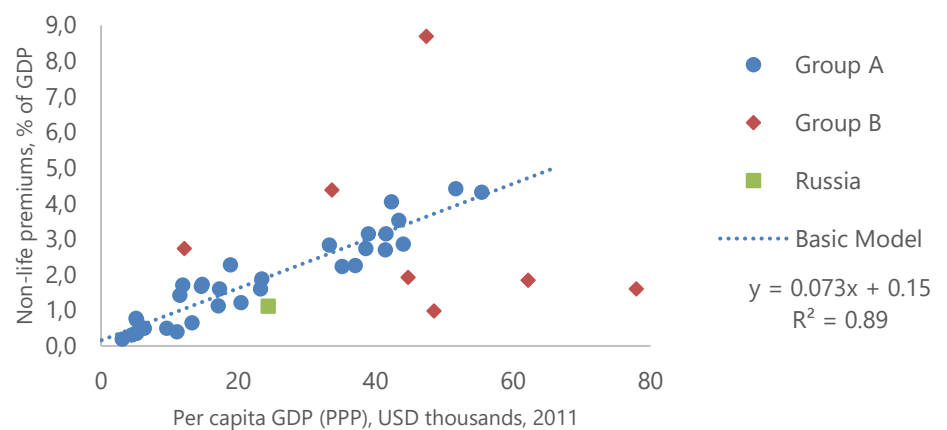
Strong correlation between economic welfare and development in the insurance sector

Based on data from insurance markets in leading countries, ACRA sees a high correlation between economic welfare in terms of per capita GDP and the share of non-life insurance premiums in GDP. ACRA analyzed forty major economies in terms of GDP volume for 2018 using data from the IMF. In addition, ACRA used data calculated by the IMF on GDP by purchasing power parity (PPP) in international dollars in 2011 to reduce the effect of changes in exchange rates and inflation on the analysis (a list of countries and their data can be found in Appendix 1).

ACRA used information from Swiss Re Institute publications on insurance markets in these countries for 2008-2019. These publications provide data on the share of non-life insurance premiums in GDP for 39 of the 40 countries (excluding Iraq) for 2007-2018.

To reduce volatility, GDP (PPP) figures and the share of non-life insurance premiums in GDP were averaged over a twelve-year period, from 2007 to 2018 (Fig. 1).

Figure 1. For most countries, economic welfare is proportional to insurance penetration



Sources: IMF, Swiss Re Institute, ACRA

Figure 1 shows that there is a strong correlation between economic welfare and insurance penetration in 32 of the analyzed countries (Group A and Russia). However, this correlation is absent in the seven countries comprising Group B¹.

According to ACRA, Group B's deviation from the general trend is due to characteristics in the economies, health systems, or insurance markets of these countries. The Netherlands, where a limited number of medical services are funded by the state, is especially characterized by the high volume of its private health insurance market. The situation in Scandinavian countries, particularly Sweden, is the opposite. Insurance companies in South Africa, in turn, provide risk protection to a significant number of neighboring countries, so the level of insurance penetration is significantly higher than per capita GDP would indicate. Saudi Arabia and the UAE deviate from the general trend for reasons discussed below.

¹ The Netherlands, Saudi Arabia, Singapore, South Africa, South Korea, Sweden, and the UAE.

The direct relationship between economic welfare and insurance penetration means that insurance premiums are growing faster than per capita GDP. Statistical data for 2007-2018 generally confirms this. In China, per capita GDP (PPP) increased by 2.7x (in current prices) for the specified period, while non-life insurance premiums increased by 7.7x. India showed increases of 2.2x and 3.6x for these indicators, respectively.

Reasons for the correlation

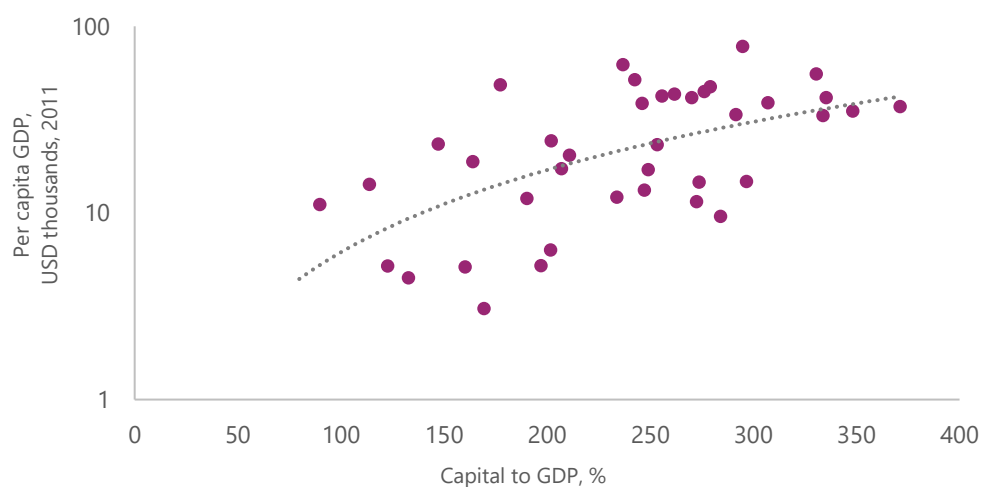
ACRA believes the first possible reason for this correlation is the volume of capital assets in the economy, a factor that is common for both economic welfare and the share of non-life insurance premiums in GDP. According to the macroeconomic concept of production function, the total output of goods in an economy, which by definition is GDP, depends on labor costs and the amount of production capital applied. The greater the amount of capital is per employee and per unit of output, the higher labor productivity (i.e., GDP to labor costs) will be.

Averaging over a period of several years neutralizes the effect of economic cycles; therefore, the averaged GDP will be close to the production function value in the equilibrium of labor and capital markets. The balanced level of labor costs in the economy is proportional to the population. ACRA believes that the age structure of the population has a relatively smaller impact on labor supply. At the same time, the size of insurance premiums is directly proportional to the amount of capital. Therefore, there must be a direct relationship between per capita GDP and the share of non-life insurance premiums in GDP.

To test this thesis, ACRA compared IMF data on per capita GDP and the ratio of total capital assets to GDP for the above 40 countries² averaged for 2007-2017. Data on capital assets for 2018 have not yet been published.

ACRA assessed capital assets by calculating the sum of the production capital of private, public, and public-private organizations. The results suggest that there is a positive relationship between the indicators (*Fig. 2*).

Figure 2. Per capita GDP is directly related to the ratio of capital to GDP



Sources: IMF, ACRA

² Excluding Australia, as data for this country are unavailable.

According to ACRA, the second reason for the high correlation between the level of economic welfare and the share of non-life insurance premiums in GDP may be related to demand for housing, durable goods (primarily cars), as well as non-state medical care and tourist trips. All of these consumption components are closely related to the insurance costs associated with them. Spending in these areas increases at an accelerated rate as the population's income increases, which leads to a corresponding increase in insurance premiums and an increase in their share in GDP.

ACRA believes the third possible reason for the correlation between levels of economic welfare and insurance penetration could be the higher efficiency of insurance compared to alternative options. Alternatives include self-insurance (e.g., independent reserves or savings from companies and the public to cover unexpected losses or costs) and government guarantees on damage compensation (formal or informal). Unlike the alternatives, insurance is characterized by a significantly higher level of risk diversification, including through international reinsurance mechanisms. This optimizes liquidity and the profitability of the asset structure and contributes to an increase in overall economic efficiency. Alternative risk protection systems have to maintain a higher proportion of liquid and, as a result, less profitable assets. In addition, states guarantee compensation for damage using administrative tax redistribution whose economic efficiency is lower when compared to market mechanisms.

Resource rent has a negative effect on the insurance sector

The fact that Saudi Arabia and the UAE³ fall into Group B suggests a possible correlation between GDP structure and the level of insurance penetration. The oil sector accounts for a significant share of the GDP of these two countries (as is the case in Russia) and therefore may affect the calculation of the potential volume of non-life insurance premiums.

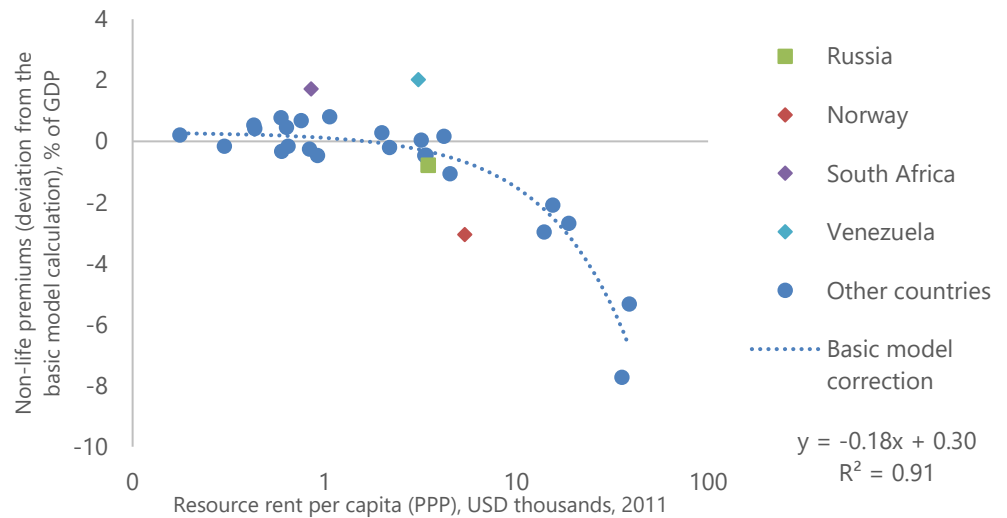
ACRA analyzed the 30 largest economies by total resource rents in GDP for 2007-2017⁴. Data on non-life insurance penetration from the Swiss Re Institute are available for 28 countries, excluding Iraq and Libya (a list of countries and their data can be found in Appendix 2).

To assess the effect of resource rents on the insurance sector, ACRA compared deviations of the average penetration level from the linear trend in 2007-2017 (*Fig. 1*) and the average amount of resource rent per capita (PPP) for the same period (in international dollars in 2011). Figure 3 shows the results of the comparison: the y-axis shows the difference between the actual value of insurance penetration and the result of the calculation based on the basic model (per capita GDP). The x-axis shows the amount of resource rents per capita. For greater clarity, the x-axis is built on a logarithmic scale, so the linear trend in the figure looks like an exponent.

³ Insurance sector penetration differs markedly from the basic model in these countries (*Fig. 1*).

⁴ According to data from the World Bank.

Figure 3. The assessment model of non-life insurance premium penetration shows the negative effect of resource rents



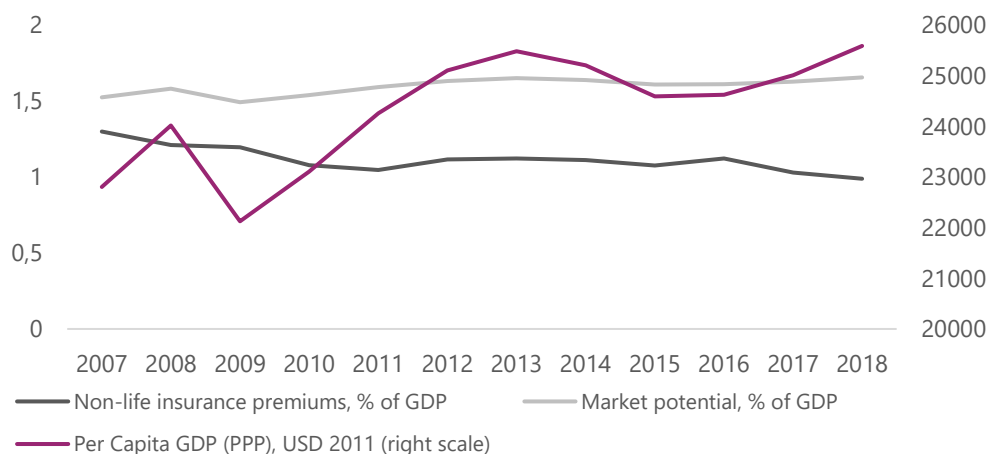
Sources: World Bank, Swiss Re Institute, ACRA

ACRA's analysis shows that the amount of resource rent per capita can have a significant impact on the level of insurance penetration. For most countries in the analysis, the deviation of actual insurance sector penetration from the indicators calculated in basic model depends linearly on the amount of resource rent. This dependence is stronger than in the basic model, since the absolute value of the linear trend coefficient is higher (-0.18 compared to 0.073). This means that GDP growth due to resource rents will not accelerate the growth of the insurance market, and may even slow it down.

Institutional factors limit potential development in Russia's insurance sector

In 2018 and 2019, the penetration level of non-life insurance in Russia was approximately 1%. At the same time, per capita GDP (PPP) according to the IMF equaled 25,600 international dollars in 2011. Given the adjustment for the average amount of resource rent in the basic model, the potential level of insurance market penetration in Russia in the current economy is 1.7%.

Figure 4. Insurance market penetration in Russia is significantly lower than its potential



Source: IMF, Swiss Re Institute, ACRA

The dynamics of actual and potential shares of non-life insurance premiums in GDP from 2007 to 2018 reflect an increase in the spread between them (*Fig. 4*). The stagnation of the Russian insurance market is usually associated with negative changes in the population's disposable income. However, there were periods of income growth over this period that did not correspond to development in the insurance market.

ACRA believes that in addition to income levels, there are long-term institutional factors impeding the growth of the insurance market in the non-life segment. The population's low tendency to purchase insurance, the state assuming the role of insurer, and the lack of long-term strategies for the development of Russian insurance companies are interrelated.

The government's willingness to compensate for the losses of many economic agents using budget funds reduces the need to manage risks using market instruments and increases the tax burden on the economy. ACRA believes that enabling the development of private insurers will improve the overall efficiency of the Russian economy.

Appendix 1. GDP, insurance sector, and production capital data for the 40 largest countries in the world in terms of GDP

Country	Per capita GDP (average for 2007–2018) by PPP in international dollars (2011)	Insurance penetration: non-life premiums (average for 2007–2018), % of GDP	Total capital (average for 2007–2017), % of GDP	Country	Per capita GDP (average for 2007–2018) by PPP in international dollars (2011)	Insurance penetration: non-life premiums (average for 2007–2018), % of GDP	Total capital (average for 2007–2017), % of GDP
Algeria	13,251	0.65	247	Netherlands	47,373	8.70	279
Argentina	18,845	2.28	164	Nigeria	5,187	0.35	123
Australia	44,023	2.87	--	Pakistan	4,482	0.31	133
Bangladesh	3,075	0.19	169	Philippines	6,334	0.50	202
Belgium	41,401	2.70	335	Poland	23,399	1.89	147
Brazil	14,601	1.68	274	Russia	24,328	1.12	202
Canada	42,310	4.05	256	Saudi Arabia	48,499	0.99	177
China	11,498	1.42	272	Singapore	77,946	1.60	295
Colombia	11,922	1.71	190	South Africa	12,146	2.74	234
Egypt	11,082	0.40	90	South Korea	33,600	4.38	292
France	38,915	3.15	307	Spain	33,254	2.83	334
Germany	43,348	3.53	262	Sweden	44,705	1.93	276
India	5,206	0.74	197	Switzerland	55,429	4.32	331
Indonesia	9,577	0.50	284	Taiwan	41,494	3.15	270
Iran	17,252	1.61	207	Thailand	14,745	1.73	297
Iraq	14,203	--	114	Turkey	20,375	1.22	211
Italy	35,107	2.23	348	UAE	62,186	1.85	237
Japan	37,038	2.26	371	UK	38,571	2.74	246
Malaysia	23,227	1.61	253	US	51,670	4.42	242
Mexico	17,055	1.13	249	Vietnam	5,121	0.78	160

Sources: IMF, Swiss Re Institute, ACRA

Appendix 2. GDP, insurance sector, and resource rent data for the 30 largest countries in the world in terms of resource rent size

Country	Per capita GDP (average for 2007–2017) by PPP in international dollars (2011)*	Resource rents per capita (average for 2007–2017) by PPP in international dollars (2011)	Insurance penetration: non-life premiums (average for 2007–2017), % of GDP
Algeria	13,240	3,329	0.65
Angola	6,423	1,994	0.90
Argentina	18,858	594	2.30
Australia	42,718	3,387	2.81
Brazil	14,553	635	1.67
Canada	42,080	1,065	4.02
Chile	20,698	3,201	1.69
China	11,144	434	1.38
Colombia	11,912	758	1.69
Egypt	9,957	921	0.41
India	4,969	177	0.71
Indonesia	9,260	597	0.50
Iran	17,613	4,194	1.59
Iraq	14,288	6,175	--
Kazakhstan	21,648	4,521	0.66
Kuwait	78,008	38,781	0.51
Libya	21,259	10,717	--
Malaysia	22,981	2,181	1.62
Mexico	16,903	837	1.12
Nigeria	5,192	647	0.37
Norway	63,508	5,390	1.73
Oman	41,922	15,518	1.12
Qatar	117,015	35,504	0.96
Russia	24,207	3,481	1.13
Saudi Arabia	48,048	18,799	0.97
South Africa	12,162	854	2.75
UAE	63,433	14,003	1.81
UK	38,281	301	2.78
US	51,315	429	4.43
Venezuela**	17,562	3,087	3.45

* Assessments from the IMF (given in Appendix 1) and World Bank may differ slightly.

** Average value for 2007-2014.

Sources: World Bank, Swiss Re Institute, ACRA

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