



Financial Intermediary and Insurance Companies: Assessing Financial Stability

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ARTICLE INFO

Received June 19, 2019
Revised from July 31, 2019
Available online December 15, 2019

JEL classification:

C58; G22; I13.

DOI: 10.14254/1800-5845/2019.15-3.14

Keywords:

Financial stability,
insurance company;
effectiveness of insurance business,
rating systems,
CAMELS approach,
risk management systems

ABSTRACT

In modern fast changing world financial institutions are exposed to a big variety of risks, which shall be properly addressed. In these circumstances it is vitally important to predict the risks and understand how each of them can affect the company's financial stability. Among the approaches assessing financial stability of a financial intermediary, CAMELS rating system is considered by leading research agencies (such as CFI and Bloomberg) to be one of the most universal one. Although the approach is used mainly to analyse banks, components of CAMELS rating are applicable to insurance companies. The aim of this study was to analyse global and Russian insurance markets and confirm or refute the hypothesis that CAMELS rating system can be applied for evaluation of financial stability of specific Russian insurance companies. Application of CAMELS method showed that Russian insurance companies, especially those that are not part of globally integrated structures, are not in a strong financial position. Companies being members of business groups, although being exposed to group-related risks, at the same time have some protection from the negative impact of external factors due to group resources and ability to attract financial resources from more financially sustainable affiliated companies. The study led to the conclusion that Russian insurance companies need to implement international business standards for insurance companies (like those investigated by the study) to become financially stronger.

INTRODUCTION

Given the diversity of financial products and services, financial institutions combine basic operations, such as transactions involving cash, securities, and other financial assets, with functions of intermediary (Chen et al, 2018; Hasik, 2018). Thus, they serve as intermediaries be-

tween capital providers and capital seekers, and facilitate the management of assets and risks (Belás et al., 2012; Minh and Huu, 2016; Mentel et al., 2017). For example, companies that normally provide life insurance services may not only provide mortality insurance but also help to save client's money (Analysis of Financial Institutions, 2019). Most insurance companies earn revenues from premiums (amounts paid by the purchaser of insurance products) and from investment income earned on the float (amounts collected as premiums and not yet paid out as benefits) (Cole and Gunther, 2000; Barr et al., 2002).

Property and casualty (P&C) insurance companies are usually short term, and the final cost will usually be known within a year of a covered event, whereas life and health (L&H) insurance companies are usually longer term. P&C insurers' claims are more variable, whereas L&H insurers' claims are more predictable. These two types of companies make up the main part of both Russian and global insurance services market (Insurance and Financial Stability, 2011; Analysis of Financial Institutions, 2019). Most researchers, who analyze company performance in this sector and its stability, note that for both types of insurance companies, important areas for analysis include business profile, earnings characteristics, investment returns, liquidity, and capitalization. In addition, analysis of P&C companies' profitability includes analysis of insurance reserves and loss likelihood. Another distinctive feature of financial institutions (compared to manufacturing or merchandising companies) is that their productive assets are predominantly financial assets, such as loans and securities, creating greater direct exposures to a variety of risks, such as credit risk, liquidity risk, market risk, and interest rate risk. In general, the values of their assets are relatively close to fair market values (Insurance and Financial Stability, 2011; Deloitte, 2019; Grmanova and Pukala, 2018; Belas et al., 2012; Belas et al., 2016).

Analytical reports and reviews of leading research organizations (such as CFI and Bloomberg) label CAMELS a universal approach to assessing financial stability of a financial intermediary. This approach considers organization's Capital adequacy, Asset quality, Management capabilities, Earnings sufficiency, Liquidity position, and Sensitivity to market risk. This approach is used mainly to analyze banks. However, sustainability studies over the past few years show that components of CAMELS rating are applicable to insurance organizations. Thus, CAMELS rating systems recently apply to companies that provide the broadest range of insurance services (including L&H and P&C). Rating systems of financial indicators that are used within the framework of CAMELS include the margin of solvency (MOS), risk-based capital (RBC) and claim paying ability (CPA) rating. Findings show that the CAMELS rating system is a promising approach to assessing financial stability of insurance companies (Bryman and Bell, 2003; Committee on the Global Financial System, 2011; Analysis of Financial Institutions, 2019; Yakob, 2019).

A number of researchers include some other components with the strength evaluation system – defaults, reinsurance mechanisms, capital structure and value in the insurance market (Bell, 2005; Bernanke, 2007; Haldane, 2009). International Association of Insurance Supervisors defines another approach to assessing financial stability of insurance companies. This approach includes the analysis of claims settlement and insurance technical reserves in accordance with applicable laws and regulations, the analysis of investment policy (including derivative policy), assets covering technical reserves. It also analyzes the value of insurer's property and investment, judicial and off-balance sheet obligations, future balance sheets, profit and loss forecasts. For strength and capital cost, evaluation standards require scenario approach and approaches that focus on systemic risk and on sensitivity to external and internal risks (Massey et al., 2002; Bernanke, 2007; IASB.org, 2019; Valaskova, et al., 2018; Kliet et al. 2018; Kovacova and Klietstik, 2017)

There are several groups of indicators to evaluate the internal efficiency and strength of a company (in particular, profit ratio and profitability, capital structure, liquidity, etc.). A separate group consists of external influences – measures of company's sensitivity to market changes, investment returns within the country, inflation risks, exchange rates, etc. This study focuses on internal factors and their influence on financial stability of an organization providing insurance

services. These factors allow evaluating internal efficiency and long-term strength of an insurance company. The study aims to:

- analyze insurance market in the world and Russia;
- rank Russian insurance market among Western markets;
- define prospects of insurance market in Russia;
- explore relevance and effectiveness of rating systems used to assess financial stability of insurance companies;
- assess strength of companies (e.g. “Bask” Insurance Company and Insurance Business Group (IBG) JSC) on Russian market;
- determine the impact of internal/external factors on the efficiency and strength of an insurance company;
- determine the relationship between company’s ownership form (corporate affiliation) and its financial stability.

The research is also aimed to confirm or refute the hypothesis that CAMELS rating system can be applied for evaluation of financial stability of specific Russian insurance companies.

1. METHODS

To analyse strength and efficiency of an insurance company, approach in this study tackles specific dimensions. Capital adequacy, described in terms of the proportion of the bank’s assets that is funded with capital, indicates that a bank has enough capital to absorb potential losses without severely damaging its financial position. The following are measures analysed for this dimension:

- Net premium written to equity;
- Reserves to equity;
- Possesses percentage of total gross premium;
- Fixed assets to equity;
- Financial independence ratio;
- Autonomy degree;
- Return on capital.

Asset quality, which includes the concept of quality of the bank’s assets – credit quality and diversification – and the concept of overall sound risk management. However, unlike the productive sector, where raised funds play an important role in short-term production financing, insurance companies have their funds from a less relevant source. According to the core principles of insurance, the insurer must initially form an insurance fund so that use it to satisfy claims of policyholders. In conjunction with the insurance premium, the insurer receives resources for administrative expenses (such as the purchase of current assets necessary and insurance expenses). The following are measures analysed for this dimension:

- Equity to total assets;
- Fixed assets to total assets;
- Capital to total assets;
- Net operating revenues to total assets.

Management capabilities that refer to the bank management's ability to identify and exploit appropriate business opportunities and to simultaneously manage associated risks. The following are measures analysed for this dimension:

- Change of total premium receipts;
- Change of reserves;
- Turnover rate of fixed assets;
- Changes of total assets;
- Changes of operating revenues;
- Payout ratio.

Earning, which refers to the bank's return on capital relative to cost of capital and also includes the concept of earnings quality. The following are measures analyzed for this dimension:

- Return on equity;
- Return on assets;
- Return on investment; etc.

Liquidity, which refers to the amount of liquid assets held by the bank relative to its near-term expected cash flows. Under Basel III, liquidity also refers to the stability of the bank's funding sources. The following are measures analyzed for this dimension:

- Cash to total assets;
- Net operating expenses to operating revenues;
- Net operating expenses to net premium written;
- Management expenses to net premium written; etc.

Sensitivity to market risk, which pertains to how adverse changes in markets (including interest rate, exchange rate, equity, and commodity markets) could affect the bank's earnings and capital position (Yakob, 2019). Aside from these components, important areas are government support, mission of the subject, corporate culture and competitive environment, off-balance sheet items, segment information, currency risks, and risk disclosure (Analysis of Financial Institutions, 2019)

1. Results

1.1 Global and Russian insurance markets

To identify the impact of external factors on strength of an insurance company, let us analyze the situation on Russian and world's insurance services market over recent years, related trends and outlooks for periods that may affect company's strength. Thus, between 2016 and 2018, global business was less interested in financial intermediaries, although alternative sources of financing and non-bank financial institutions occupy an increasing market share. Insurance companies, pension funds and private credit unions provide direct lending services. Instruments, such as bonds, mini-bonds, blended finance, private investment, etc. increase their share in local markets.

Insurer hopes for accelerated growth and improved bottom-line profitability were tempered throughout 2017 by the emergence of major speed bumps, both natural and man-made, although there seems to be cautious optimism for improving conditions in the year ahead. US insurers saw underwriting losses more than double, to \$5.1 billion, for the first half of 2018 compared with the year before. This downturn is even more dramatic, considering that this industry was in the black on underwriting by \$3.1 billion during the same period two years ago. Soaring

loss costs, led by higher catastrophe and auto claims, drove net income down 29 percent in the first half of 2018.

Life insurance and annuities could be a harder sell in the United States in 2018, given the potential impact of new fiduciary standards set by the US Department of Labor on the sale of retirement-related products. While the final form of the fiduciary rule is still being debated following the change in US presidential administrations, many insurers have already made substantial changes in their business model to accommodate the regulation. A similar challenge faces carriers in the United Kingdom, where “pension freedom” was established two years ago, allowing pensioners to draw down their retirement accounts at will. Life insurance fees 2017-2018 in Russia broke records among other insurance services, whereas general insurance fees slightly decreased. Many large segments of general insurance market, like Casco (voluntary motor insurance), OSAGO (Russian version of Obligatory Motor Third Party Liability Insurance), property insurance, and liability insurance, experienced a decline in sales. Losses were partially compensated through the accident insurance service, which became more popular at the time. On the contrary, sales of life insurance, with an investment component in it, grew in number.

Insurers believe that life insurance will remain a market driver in the next year or two. They also expect an increase in insurance tariffs for OSAGO. The expected growth in car sales will positively affect the sales of general insurance. This is achievable through the introduction of new technologies, which, despite numerous obstacles, are a real plan. Unprofitability in OSAGO increased, as expected, due to impact of new regulations, whereas Casco remains at the optimum profitability level, which was reached a year before. The most profitable segments are property insurance, construction risk insurance, freight liability insurance, and other corporate insurances (Temkina, 2019).

Looking ahead and abroad, emerging markets – particularly China – appear to be a better bet for rapid growth, at least on a percentage basis, especially for P&C insurers. A report by Swiss Re’s sigma research unit found that emerging market P&C premiums rose 9.6 percent in 2016, compared with overall global growth of 3.7 percent – with China, now the world’s third-largest insurance market, seeing non-life premiums soar 20 percent (Deloitte, 2019). Below are data on real growth of direct premiums written in non-life insurance for 2014/2018.

Table 1. Real growth of direct premiums written in non-life insurance, %

Country/region	2014	2015	2016	2017	2018
USA	3.0	3.6	2.3	2.6	3
Canada	1.9	4.1	0.8	3.4	5.2
Japan	1.2	1.3	-1.0	2.4	4.4
Australia	1.3	0.5	-0.4	1.2	2.8
UK	-1.7	1.3	1.5	0.6	2.8
Germany	1.8	3.3	2.5	1.8	2.2
France	0.3	1.0	0.8	0.8	5.6
Italy	-3.0	-2.9	-1.8	0.6	4.6
Spain	-0.2	3.0	4.6	8.2	8.6
Russia	-0.7	-0.2	1.2	1.4	3.6
Advanced markets*	1.8	2.5	1.7	2.6	3.8
Emerging markets	6.4	4.9	5.3	11.4	13.4
World	2.7	3.0	2.4	4.4	6

*Advanced markets include North America, Western Europe, Israel, Oceania, Japan, Korea, Hong Kong, Singapore, and Taiwan.

Source: (Swiss Re Institute Global insurance review 2016 and outlook 2017/18)

From data in Table 1, it becomes evident that the insurance market hit a high in 2018. During 2014-2017, growth rates were negative in most countries, primarily due to global crisis in the insurance market and low demand. In general, delays in loan repayment in 2015 reached a maximum since 2009. Amid growing interest rates on loans in the USA, credit and bond funds are experiencing outflows. In 2016-2018, the situation turns to better. However, demand for life and non-life insurance remains low due to crisis. Other problems – high claims payouts and low rate of return on investments – also remain acute. The pre-crisis return on assets, typically 5%, which covered negative composites, are unachievable under current conditions. The number of bankrupt insurance companies grows and their clients have troubles with receiving insurance payments, which indicates a disturbing financial situation. Although these problems are unlikely to threaten strength of the entire system, they may entail negative social consequences. New minimum capital requirements, which entered into force in 2012, impose additional pressure on insurance companies (Committee on the Global Financial System, 2011; laisweb.org, 2019)

Factors that hinder development of insurance organizations are the lack of a broad base of investors, the relative underdevelopment of pension companies, and insufficient disclosure of information by issuers. Over the past few years, non-bank financial institutions dropped in number do to consolidation trend and the insurance sector improves on a slow pace. Insurance spending accounts for about 1% of GDP minus compulsory health insurance, or only a third of average in OECD countries in 2018. As in many other countries, Russia also has non-bank credit organizations that have the right to conduct a limited set of banking operations under the license issued by the Central Bank of the Russian Federation. These organizations make up a very small segment in the financial system (less than 0.5% of total assets). Car insurance dominates the Russia market with a share of about 50%. The second important area is real estate, which brings 25% of premium income. Life insurance, which is traditionally associated with large reserves, accounts for less than 2% of all insurance services compared to world's average of about 50%.

In the Russian Federation, minimum capital requirements were increased fourfold in 2012-2013 to meet international standard. The government adopted a medium-term development strategy to remove regulation obstacles, promote competition, and create favorable conditions for insurance business. Insurers can take advantage of growth opportunities, operational improvement, and expense reduction in 2020-2022 if they can overcome a host of internal and external obstacles standing in their way. The following are among the options they should consider to potentially improve their top and bottom lines, as well as stay ahead of the competition in the year ahead (Deloitte, 2019; Yakob, 2019; Vbrr.ru, 2019; Vestifinance.ru, 2019).\

1.2 Evaluation of financial stability of insurance companies

Based on dimensions characterizing internal efficiency and financial stability of insurance companies, identified in the Research Design section, let us select general indicators to accurately characterize financial stability of an insurance company and relate it to company's value and credit rating at a certain point in time during a definite period. The integrated indicator marked "g" consists of coefficients characterizing capital structure and effectiveness of its utilization, company's efficiency, and insurer's payment policy. Coefficients/factors are:

$$\frac{NP}{TC} - \text{return on investment } (k_1), \quad (1)$$

Where:

NP– net profit;

TC – total cost;

$$\frac{ER}{A} - \text{autonomy degree (independence) } (k_2), \quad (2)$$

Where:

ER – equity and insurance reserves;
A – assets;

$$\frac{E}{IR} - \text{reserve utilization efficiency } (k_3), \quad (3)$$

Where:

E – equity;
IR – insurance reserves.

$$\frac{IR}{TEP} - \text{changes of dynamics and quality in insurance operations } (k_4), \quad (4)$$

Where:

TEP – total earned premiums;
IR – insurance reserves.

$$\frac{TEP}{TL} - \text{profitability } (k_5), \quad (5)$$

Where:

TEP – total earned premiums;
TL – total losses paid out in claims plus adjustment expenses;

$$\frac{TL}{NP} - \text{payout policy effectiveness } (k_6), \quad (6)$$

Where:

NP – net profit;
TL – total losses paid out in claims plus adjustment expenses;

$$\frac{S}{TWC} - \text{working capital productivity } (k_7), \quad (7)$$

Where:

S – sales
TWC – total working capital.

Formula for integrated indicator is as follows:

$$g = k_1 * k_2 * k_3 * k_4 * k_5 * k_6 * k_7 \quad (8)$$

Based on this indicator and using absolute differences method, factor analysis will assess the impact of included factors ($k_1 \dots k_7$) on the result. The change of each component will lead to the change of the integrated indicator. For example, increasing returns on investment will affect the value of the insurance company:

$$\Delta g * (k_1) = \Delta k_1 * k_{2_0} * k_{3_0} * k_{4_0} * k_{5_0} * k_{6_0} * k_7$$

$$\Delta g(k_2) = k_{1_1} * \Delta k_2 * k_{3_0} * k_{4_0} * k_{5_0} * k_{6_0} * k_7$$

$$\Delta g * (k_3) = k_{1_1} * k_{2_1} * \Delta k_3 * k_{4_0} * k_{5_0} * k_{6_0} * k_7$$

$$\Delta g * (k_4) = k_{1_1} * k_{2_1} * \Delta k_3 * k_4 * k_{5_0} * k_{6_0} * k_7 \quad (9)$$

$$\Delta g * (k_5) = k_{1_1} * k_{2_1} * k_{3_1} * k_{4_1} * \Delta k_5 * k_{6_0} * k_7$$

$$\Delta g * (k_6) = k_{1_1} * k_{2_1} * k_{3_1} * k_{4_1} * \Delta k_{5_1} * \Delta k_6 * k_7$$

$$\Delta g * (k_7) = k_{1_1} * k_{2_1} * k_{3_1} * k_{4_1} * \Delta k_{5_1} * k_6 * \Delta k_7$$

Where:

kX_0 - coefficient as at the start of year;
 kX_1 - coefficient at the ends of the year;
 ΔkX - change throughout the year.

Let us apply this approach to data in financial records 2012-2017 of two insurance companies: “Bask” OJSC (Belovo) and “Insurance Business Group (IBG)” JSC (Voronezh). Input and calculation results are presented in Tables 2 and 3.

Table 2. Financial stability of Bask Insurance Company

Indicator Year	2012	2013	2014	2015	2016	2017
<i>Official data, thousand RUB</i>						
Total earned premiums	403347	409141	516957	533469	559523	403347
Equity	426 089	552956	615097	900673	964726	426089
Assets	872 323	820212	1071950	1324193	1417362	872323
Insurance reserves	331625	244708	360068	397255	365552	331625
Total losses paid out	362756	347773	383437	449240	460337	362756
Total working capital	236774	203095	231146	300630	289295	236774
Net profit	27864	286	154572	328650	77683	27864
Sales	123598	107004	145102	127542	112273	123598
<i>Integrated measure of strength, calculated</i>						
K ₁	1.77	0.23	0	2.58	0.69	0.23
K ₂	0.28	0.49	0.67	0.68	0.68	0.49
K ₃	7.1	2.63	3.35	3.33	3.88	2.63
K ₄	0.5	0.91	0.7	0.88	0.79	0.91
K ₅	1.98	1.53	1.71	1.49	1.59	1.53
k ₆	1.13	8.5	710.12	0.91	3.72	8.5
k ₇	1.06	0.95	0.74	0.59	0.58	0.95
<i>Integrated measure of strength, calculated difference</i>						
Δk ₁		-1.55	-0.22	2.57	-1.88	-0.47
Δk ₂		0.2	0.19	0.006	0.0004	-0.19
Δk ₃		-4.47	0.72	-0.02	0.54	-1.25
Δk ₄		0.41	-0.21	0.18	-0.09	0.12
Δk ₅		-0.45	0.18	-0.22	0.09	-0.06
Δk ₆		7.37	701.62	-709.21	2.81	4.77
Δk ₇		-0.12	-0.21	-0.14	-0.01	0.37
<i>Effect on the return on investment</i>						
Δg ₁ ²⁰¹³		-3.71	-3.22	1.52	5.06	-3.06
Δg ₂ ²⁰¹⁴		0.39	0.01	-0.23	1.59	0.0007
Δg ₃ ²⁰¹⁵		-0.59	0.01	-0.15	-1.22	0.18
Δg ₄ ²⁰¹⁶		0.28	-0.02	0.39	-0.67	-0.13
Δg ₅ ²⁰¹⁷		-0.14	0.006	-0.05	-1.07	0.076
Δg ₆ ²⁰¹⁸		3.18	4.83	-1.49	-3.76	3.84
Δg ₇ ²⁰¹⁹		-0.41	-1.09	0.0004	-1.75	-0.11
Calculated Increase in ROI		-0.99	0.56	-0.26	0.62	0.8
Official Increase in ROI		-0.99	0.56	-0.26	0.62	0.8

Source: financial records of the Bask insurance company (Bask Insurer's Balance Sheet, 2013; Bask Insurer's Balance Sheet, 2014; Bask Insurer's Balance Sheet, 2015; Bask Insurer's Balance Sheet 2016; Bask Insurer's Balance Sheet, 2017) and original calculations

From data in Table 2, it is evident that major problems in the Bask insurance company are (1) low rate of change in dynamics and quality of insurance operations, (2) unfriendly payout policy, (3) reduction in returns on operating capital, and (4) the overall decline in financial indicators for the period analyzed. Despite this, company's autonomy tends to grow and insurance reserves are utilized with greater effectiveness.

Table 3. Financial stability of IBG

Indicator Year	2012	2013	2014	2015	2016	2017
<i>Official data</i>						
Total earned premiums	1109546	1495213	1725720	1581273	1408084	1109546
Equity	801394	841101	953366	1063720	1086977	801394
Assets	1614954	181738	2219625	2171064	2819359	1614954
Insurance reserves	315942	469153	696712	645116	939172	315942
Total losses paid out	658209	885913	929982	1286651	1018233	658209
Total working capital	77581	110030	176072	334076	359988	77581
Net profit	31772	13226	107578	38709	48858	31772
Sales	128817	205934	449951	716798	351574	128817
<i>Integrated measure of strength, calculated</i>						
K ₁	0,21	0,25	0,06	0,24	0,05	0,13
K ₂	0,46	0,49	4,63	0,43	0,48	0,38
K ₃	8,28	5,11	0,34	3,19	3,36	3,001
K ₄	0,32	0,48	0,53	0,75	0,5	0,92
K ₅	8,42	8,48	8,05	5,28	3,85	2,82
K ₆	1,67	2,44	8,32	1,64	8,63	7,36
K ₇	1,21	1,38	1,78	1,81	1,49	1,29
<i>Integrated measure of strength, calculated difference</i>						
Δk ₁		0,03	-0,18	0,17	-0,18	0,08
Δk ₂		0,04	4,13	-4,19	0,06	-0,1
Δk ₃		-3,17	-4,72	2,79	0,17	-0,36
Δk ₄		0,16	0,05	0,22	-0,24	0,42
Δk ₅		0,07	-0,43	-2,77	-1,43	-1,02
Δk ₆		0,78	5,88	-6,68	6,99	-1,26
Δk ₇		0,18	0,39	0,03	-0,32	-0,19
<i>Effect on the return on investment</i>						
Δg ₁ [*]		0,68	-6,37	19,77	-2,97	3,47
Δg ₂ [*]		0,41	18,67	-24,52	0,12	-1,21
Δg ₃ [*]		-2,09	-19,33	18,12	0,056	-0,48
Δg ₄ [*]		1,69	0,16	8,55	-0,34	3,34
Δg ₅ [*]		0,04	-0,08	-10,03	-0,19	-1,94
Δg ₆ [*]		2,38	3,99	-15,37	2,17	-0,78
Δg ₇ [*]		1,19	1,61	0,06	-0,48	-0,59
Calculated Increase in ROI		4,22	-1,35	-3,43	-1,63	1,8
Official Increase in ROI		4,2	-1,35271	-3,43	-1,63	1,8

Source: financial records of the IBG (Insurance Business Group. Insurer's Balance Sheet, 2016; Insurance Business Group. Insurer's Balance Sheet, 2017) and original calculations

Below is a graphic interpretation of data regarding specific components, which the approach in this study considers (Figures 1, 2) As Bask, IBG company experienced losses throughout 2013-2015. Its payout policy turned out to ineffective and the operating capital was utilized with low effectiveness. Period since 2016 is slightly better but not enough to affect the overall financial performance of the company. Both the efficiency of these companies and their strength may be boosted through the improvement of payout policy and capital utilization strategies. Additionally, these companies may want to draw more attention to issues surrounding human resources management. At this point, the study returns to strength rating systems, specifically to Fitch, Moody's and Standard & Poor's ratings (Addition 1).

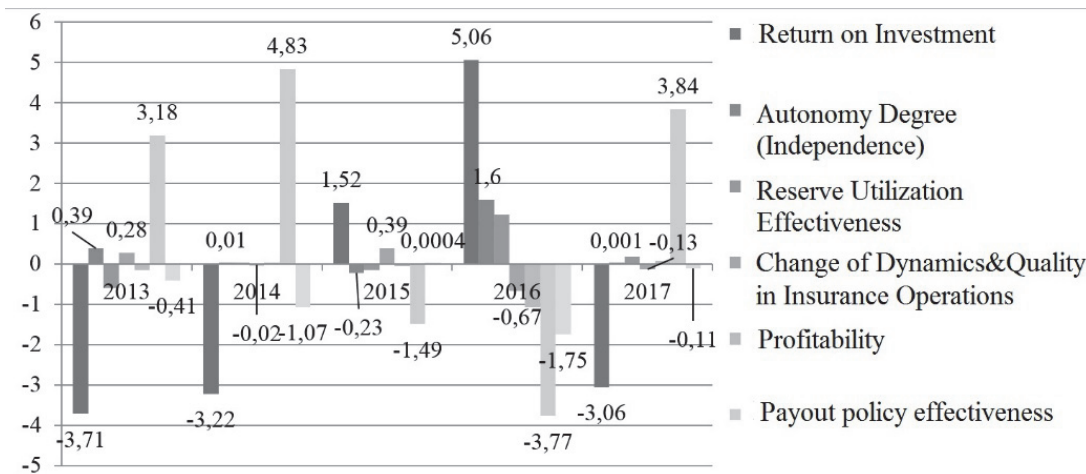


Figure 1. The Effect of Changes in Coefficients on Bask Company's Strength, 2013-2017
 Source: author's calculations based on the date from Bask Insurer's Balance Sheet (2013-2017)

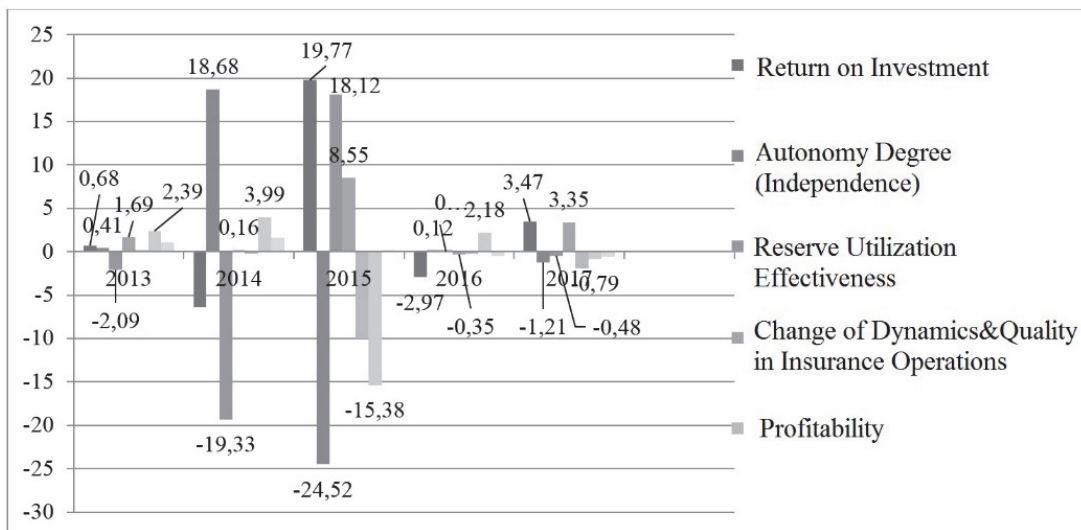


Figure 2. The Effect of Changes in Coefficients on IBG Company's Strength, 2013-2017
 Source: author's calculations based on the date from Bask Insurer's Balance Sheet (2013-2017)

In this study, rating for an individual insurance company is an opinion as to its financial stability and ability to pay claims in the future. When evaluating a company, a rating agency may consider a company's balance sheet strength, operating performance and business management and strategies. When using ratings to evaluate a company, consider several issues. First, ratings do not provide information on cost, customer service or satisfaction or the quality of an individual policy. What they provide is the information about company's strength, consumer confidence in it, and company's value. In the western region, particularly in Europe and North America, rating for an insurance company is tied to license possession; in Russia, ratings vary depending on market stability, foreign investment inflows, population welfare, inflation, etc. In recent years, the ratings for Russian insurance companies, as well as for other financial intermediaries, felt an adverse effect of western sanctions, which keep the ratings reduced (Vestifinance.ru, 2019).

Corporatization also plays its role. Companies belonging to integrated holdings and groups, especially international ones, are more competitive and stable in the market than their smaller legally independent competitors. These companies, however, are at the so-called “group” risk. The compensation is that companies may accumulate intra-group resources and redistribute assets within the corporation. This study analyzes ratings for Russian insurance companies were analyzed, including independent “Bask” OJSC (Belovo) and “Insurance Business Group (IBG)” JSC (Voronezh), and corporate business structures. The results are presented in Table 4 below.

Table 4. Insurance company financial stability ratings, 2018

№	Legal form of insurance company's ownership	Fitch	Moody's	Standart & Poors
Financial agency rating				
1.	Russian incorporated insurance companies for example, Metlife and AXA regional offices; Insurance Group MSK, OJSC; Alfastrakhovanie, OAO, etc.	B	B2	B
2.	Russian small and medium legally independent companies for example, as Bask, OJSC (Belovo), Insurance Business Group (IBG), JSC (Voronezh)	CCC	C	CCC

Source: companies' records (Web portal "Insurance today", 2019)

As it can be seen, corporate companies are financially stronger than small legally independent companies.

2. DISCUSSION

One of the main discussions on approaches to assessing financial stability of insurance companies focuses on leading practices. The rationale is that supervisors and insurance markets around the world are positioned at different levels of development, and in the near future, some insurers and some markets may be able to ensure full implementation of required standards and norms for assessing the strength of their financial position. However, according to most experts, organizations should implement practices and risk management procedures in good faith to ensure solvency. The choice of an approach to assessing strength of an insurance company should help build confidence in judgments (Couto 2002; Bryman and Bell, 2003; Diana, 2005; Brown, 2011). A number of researchers emphasize the importance of developing an effective mechanism of enterprise risk management that could accurately identify and quantify insurance risks. In their opinion, this will improve financial stability of companies in this sector. Such mechanisms should include approaches and techniques that correspond to the type, scale and complexity of arising risks, as well as risk and capital management tools to ensure solvency (Bergman 2004; Geroski and Gugler 2004; Cummins and Philips 2005; Grier 2007; Doff 2015).

A special attention is focused on approaches towards financial stability of insurance companies that are part of corporate business structures – holdings and groups. Scientific publications point to the existence of the so-called “group” risk threatening these companies. A “group” risk arises for insurance legal entities that are members of groups. Group risk also arises for an insurance group in respect of the widest group of which it is part. Group risk includes the risk that an insurance legal entity may be adversely affected by an occurrence (financial or non-financial) in another group entity. For instance, losses in one group member may create pressure to divert the financial resources of other members of the group to that entity or otherwise lead to a depletion of

those financial resources. Group risk also includes the risk that the financial stability of a group or insurance legal entities within the group may be adversely affected by an event in a legal entity, a group-wide occurrence or an event external to the group. For example, the positive aspects of being a member of a group might be lessened due to restructuring. Group risk may arise, for example, through contagion, leveraging, double or multiple gearing, concentrations, large exposures and complexity. Participations, loans, guarantees, risk transfers, liquidity, outsourcing arrangements and off-balance sheet exposures may all give rise to group risk. Many of these risks may be borne by stand-alone insurance legal entities and are not specific to membership of a group. However, the inter-relationships among group members including aspects of control, influence and interdependence alter the impact of risks on group members and should therefore be taken into account in managing the risks of an insurance legal entity that is a member of an insurance group and in managing the risks of that insurance group as a whole. To be effective, the management of insurance group risk needs to take into account risks arising from all parts of an insurance group including non-insurance entities (regulated or unregulated) and partly-owned entities (IAIS Insurance Core Principles, Standards, Guidance and Assessment Methodology, 2018).

Techniques that are appropriate and adequate for assessing financial stability and insurance company's cost include stress testing, scenario analysis, and capital risk modelling. For an insurer to be able to recapitalize in times of financial stress, it is critical to maintain market confidence at all times, through its solvency and capital management, investor relationships, robust governance structure/practices and fair market conduct practices. For example, where an insurer issues preferred stock without voting rights, this may affect the robustness of the governance structure and practice of that insurer. When market conditions are good, many insurers should be readily able to issue sufficient volumes of high quality capital instruments at reasonable levels of cost. However, when market conditions are stressed, it is likely that only well capitalized insurers, in terms of both the quality and quantity of capital resources held, will be able to issue high quality capital instruments. Other insurers may only be able to issue limited amounts of lower quality capital and at higher cost (Klein, 2012; IAIS Insurance Core Principles, Standards, Guidance and Assessment Methodology, 2018; Hsiao, 2019).

Some researchers emphasize that to assess financial stability of the financial sector (banks) and financial intermediaries one should use different components within the framework of approaches that are involved. Therefore, to determine the level of financial strength for an insurance company, it is necessary to consider the type of its business activity, insurance risks, as biometric data of people, mistakes and longevity (Prahalad and Hamel, 1990; Analysis of Financial Institutions 2019). For the risk of losses and drop in value to reduce, it is critical to develop a three to five year business plan. The plan should reflect business lines and a risk profile indicating projected expenses, capital requirements, solvency margin, reinsurance mechanisms, and risk management systems, including contracts with affiliated companies, outsourcing mechanisms, internal control systems, accounting policies, etc. (Singh and Whittington, 1975).

CONCLUSION

Thus, findings show that Russian insurance companies, especially those that are not part of integrated structures, currently are not in a strong financial position. Companies that are members of groups experience the so-called group risk but still are protected from the negative impact of external factors by the shared resource fund and the ability to attract domestic sources through stronger companies. For Russian insurance companies to become financially stronger, it is necessary to implement international business standards for insurance companies (such as those discussed in this article). Compliance with the requirements for the insurance business conduct help to:

- strengthen public trust and consumer confidence in the insurance sector;

- minimize the risk of insurers and intermediaries following business models that are unsustainable or pose reputational risk, thereby complementing the risk management framework of a solvency regime;
- and support a sound and resilient insurance sector by creating level playing fields in terms of the basis on which insurers and intermediaries can compete while maintaining business.

It should also be borne in mind that the conduct of business, including business practices, is closely linked with jurisdictions' tradition, culture, legal regime and the degree of development of the insurance sector. For this reason, supervisory approaches to the conduct of business also tend to vary, as evidenced by this study, which focuses mainly on indicators characterizing internal efficiency and stability of insurance companies.

The findings, in particular an approach to assessing financial stability of an insurance company through the relationship between changes in the value of the insurance company and its internal efficiency (integrated indicator). This approach may be used for business analytics at Russian insurance companies.

REFERENCES

- Barr, R.S., Killgo, K.A., Siems, T.F., Zimmel, S. (2002), "Evaluating the productive efficiency and performance of US commercial banks", *Managerial Finance*, Vol. 28 No. 8, pp. 3-25.
- Bask Insurer's Balance Sheet (2013), http://www.cbr.ru/static/fcsm/publication/2013-12-31/acc_518.xls (accessed 23 July 2019).
- Bask Insurer's Balance Sheet (2014), http://www.cbr.ru/static/fcsm/publication/2014-12-31/acc_518.xls (accessed 23 July 2019).
- Bask Insurer's Balance Sheet (2015), http://www.cbr.ru/static/fcsm/publication/2015-12-31/acc_518.xls (accessed 23 July 2019).
- Bask Insurer's Balance Sheet (2016), http://www.cbr.ru/static/fcsm/publication/2016-12-31/acc_518.xls (accessed 23 July 2019).
- Bask Insurer's Balance Sheet (2017),: http://www.cbr.ru/static/fcsm/publication/2017-12-31/osbu_518.xls (accessed 23 July 2019).
- Belas, J., Cipovova, E., Novak, P., Polach, J. (2012), „Impacts of the Foundation Internal Ratings Based Approach Usage on Financial Performance of Commercial Bank“, *E+M Ekonomie a Management*, Vol. 15, Issue 3, pp. 142-154.
- Belas, J., Vojtovic, S., Kljucnikov, A. (2016), „Microenterprises and Significant Risk Factors in Loan Process“, *Economics and Sociology*, Vol. 9, No. 1, pp. 43-59. DOI: 10.14254/2071-789X.2016/9-1/3
- Bell, J. (2005), *Doing Your Research Project: A Guide for First-Time Researchers in Education, Health and Social Science*, 4th Ed., McGraw-Hill International.
- Bergman, H. (2004), "FDIC Must Monitor Banks' Single-Exec Risk", *American Banker*, Vol. 169, No. 204, pp. 1-2.
- Bernanke, B. S. (2007), Central Banking and Bank Supervision in the United States. available at: <http://www.federalreserve.gov/newsevents/speech/bernanke20070105a.htm> (accessed 11 October 2011).
- Bryman, A., Bell, E. (2003), „Chapter 1 - Business Research Strategies“, *Business Research Methods*, Oxford University Press.
- CFA Institute (2019), *Analysis of Financial Institutions*, <https://www.cfainstitute.org/membership/professional-development/refresher-readings/2019/analysis-financial-institutions> (accessed 11 April 2019).
- Chen, Y. Wu, Y., Chen, L., Guo, L. (2018), "The Spatial Distribution of Financial Industry Ecosystem in Shanghai Little Lujiazui ", *Transformations in Business & Economics*, Vol. 17, No. 3C (45C), pp. 305-327

- Cole, R.A., Gunther, J.W. (2000), "FIMS: A New Monitoring System for Banking Institutions", *Federal Reserve Bulletin*, Vol. 81, pp. 1-15.
- Committee on the Global Financial System (CGFS), *Fixed income strategies of insurance companies and pension funds*, CGFS Paper, No 44, Basel, Switzerland, July 11.
- Couto, R.L.R. (2002), *Framework for the assessment of bank earnings*, Bank for International Settlements, Financial Stability Institute.
- Cummins, J.D., Phillips, R.D. (2005), "Estimating the cost of equity capital for property-liability insurers", *Journal of Risk and Insurance*, Vol. 72, No. 3, pp. 441-478.
- Deloitte, C.I.S. (2019), *Forecast for the development of the insurance industry in 2018, Insurance and pensions*, <https://www2.deloitte.com/ru/ru/pages/financial-services/articles/gx-insurance-industry-outlook.html> (accessed 11 April 2019)
- Diana, T. (2005), "Basel II: a framework for measurement of bank loan risk", *Business Credit*, Vol. 107, No. 4, pp. 54-56.
- Doff, R. (2015), *Risk Management for Insurers* (3rd ed.), Risk Books, The Netherlands.
- Forinsurer.com (2011), *Insurance and Financial Stability*, <https://forinsurer.com/files/file00400.pdf> (accessed 11 Apr. 2019).
- Geroski, P., Gugler, K. (2004), "Corporate growth convergence in Europe", *Oxford Economic Papers*, Vol. 56, No. 4, pp. 597-620.
- Grier, W. A. (2007), *Credit Analysis of Financial Institutions*, 2nd ed., Euromoney Institution Investor PLC.
- Grmanova, E., Pukala, R. (2018), "Efficiency of insurance companies in the Czech Republic and Poland," *Oeconomia Copernicana*, Vol. 9, No. 1, pp. 71-85. <https://doi.org/10.24136/oc.2018.004>
- Haldane, A.G. (2009), *Rethinking the Financial Network*. Bank of England, <https://www.bankofengland.co.uk/speech/2009/rethinking-the-financial-network> (accessed 11 Apr. 2019).
- Hasik, W. (2018), "The Impact of a Debt Mix Changes on Quality of Financial Reporting of Public Holdings - Polish Evidence", *Transformations in Business & Economics*, Vol. 17, No. 2A (44A), pp.325-336.
- IAIS Insurance Core Principles, Standards, Guidance and Assessment Methodology (2018), <https://www.fsb.org/2018/11/insurance-core-principles-standards-guidance-and-assessment-methodology/> (accessed 11 Apr. 2019).
- laisweb.org (2019), <https://www.iaisweb.org/page/supervisory-material/archive-supervisorarchive-supervisory-material-superseded-by-icps-standards-guidance-adopted-in-2011/standards> (accessed 11 April 2019).
- Insurance Business Group. Insurer's Balance Sheet (2016), http://www.cbr.ru/static/fcsm/publication/2016-12-31/acc_3229.xls (accessed 11 April 2019).
- Insurance Business Group. Insurer's Balance Sheet (2017), http://www.cbr.ru/static/fcsm/publication/2017-12-31/osbu_3229.xls (accessed 11 April 2019).
- Klein, R.W. (2012), "Principles for insurance regulation: An evaluation of current practices and potential reforms", *The Geneva Papers on Risk and Insurance-Issues and Practice*, Vol. 37, No. 1, pp. 175-199.
- Kliestik, T., Vrbka, J., Rowland, Z. (2018), "Bankruptcy prediction in Visegrad group countries using multiple discriminant analysis", *Equilibrium. Quarterly Journal of Economics and Economic Policy*, Vol. 13, No. 3, pp. 569-593. <https://doi.org/10.24136/eq.2018.028>.
- Kovacova, M., Kliestik, T. (2017), "Logit and Probit application for the prediction of bankruptcy in Slovak companies," *Equilibrium. Quarterly Journal of Economics and Economic Policy*, Vol. 12, No. 4, pp. 775-791. <https://doi.org/10.24136/eq.v12i4.40>.
- Massey, R. et al. (2002). *Insurance Company Failure*, <https://www.actuaries.org.uk/system/files/documents/pdf/insurance-company-failure.pdf> (accessed 11 April 2019).
- Mentel, G., Brozyna, J., Szetela, B. (2017). "Evaluation of the effectiveness of investment fund deposits in Poland in a time of crisis". *Journal of International Studies*, Vol. 10, No. 2, 46-60.

doi:10.14254/2071-8330.2017/10-2/3

- Minh, N. V., Huu, N. H. (2016), „The Relationship between Service Quality, Customer Satisfaction and Customer Loyalty: An Investigation in Vietnamese Retail Banking Sector“, *Journal of Competitiveness*, Vol. 8, Issue 2, pp. 103-116.
- Prahalad, C.K., Hamel, G. (1990), “The core competence of the corporation”, *Harvard Business Review*, Vol. 3, pp. 1-15..
- Shu-Hua, H. (2019), *Financial Risk Management of Life Insurers by CAMEL-S Rating*, <http://www.jgbm.org/page/37%20Hsiao,%20Shu-Hua.pdf> (accessed 11 Apr. 2019).
- Singh, A., Whittington, G. (1975), “The size and growth of firms”, *The Review of Economic Studies*, Vol. 42 No. 1, pp. 15-26.
- Swiss Re Institute Global insurance review 2016 and outlook 2017/18. (2016), <https://www.swissre.com/institute/research/expertise-publication-insurance-review-2016-outlook2017-18.html> (accessed 11 Apr. 2019).
- Temkina, Yu. (2019), Overview of the Russian insurance market for 2017, <https://home.kpmg/ru/ru/home/insights/2018/07/insurance-survey-2018.html> (accessed 11 April 2019)
- Vbrr.ru (2019), https://www.vbrr.ru/corporate/credits/insurance/ot_insurance_comp.pdf (accessed 11 Apr. 2019).
- Vestifinance.ru (2019), *Raising the rating of Russia from Moody's is unlikely to significantly affect the level of investment*, <https://www.vestifinance.ru/articles/114582> (accessed 11 April 2019).
- Web portal "Insurance today". (2019), Ratings of insurance companies, <http://www.insur-info.ru/ratings/> (accessed 13 April 2019)
- Yakob, R.B. (2019), *Camel Rating Approach to Assess the Insurance Operators Financial stability*. ResearchGate, https://www.researchgate.net/figure/Reliability-Analysis-Results-The-Cronbachs-Alpha-test-Nineteen-variables-assigned-to_tbl2_236900920 (accessed 11 April. 2019).

Appendix

Table 1. Insurance companies' financial stability ratings

Financial agency rating	Fitch	Moody's	Standart & Poors
High level of financial stability (A group)	AAA AA+ AA AA- A+ A A-	Aaa Aa1 Aa2 Aa3 A1 A2 A3	AAA AA+ AA AA- A+ A A-
Medium (sufficient) level of financial stability (B group)	BBB+ BBB BBB- BB+ BB BB- B+ B B-	Baa1 Baa2 Baa3 Ba1 Ba2 Ba3 B1 B2 B3	BBB+ BBB BBB- BB+ BB BB- B+ B B-
Insufficient financial stability level (C group)	CCC	Caa Ca C	CCC
Low level of financial stability (D group)	DD		
Extremely low level of financial stability			