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Financial situation of insurance sector for example, a Stock – Exchange Company PZU

Abstract: The insurance system is a very important element of the financial system of a country. As institutions of public trust, insurance companies play a crucial role in the process of transforming savings into investments, which directly affects the country's economic development. Maintaining the insurance sector in a good financial condition guarantees stability of the financial system and economic development of Poland.

The article aims to present the essence of operations of insurance companies as financial institutions, present their role in the economy, and describe various methods of appraising their financial condition.

In order to fulfil the above goals, a research hypothesis is put forward stating that the financial condition of the insurance sector in Poland deteriorated in the analysed period as a result of an adverse impact of turbulence in financial markets and problems in financial systems in the European Union countries.

Key-words: Insurance system, Financial ratio, Financial condition analysis, Economic value added, Stock – exchange companies.

Introduction

The insurance system is one of the key elements of the financial system of a country. Insurance companies, being institutions of public trust, play a vital role as financial intermediaries. They enable processes of converting savings into investments – both tangible and financial ones.

This study aims to characterize the functioning of insurance companies as financial institutions, present their role in the economy, and describe methods of appraising the financial condition of those institutions according to various concepts offered by specialist literature.

In order to fulfil the above goal, the author puts forward a research hypothesis according to which the financial condition of the stock – exchange insurance company PZU deteriorated in recent years as a result of adverse economic phenomena, turbulence in financial markets, and problems experienced by financial markets in some EU countries.

Financial situation of PZU Company, which is the largest insurer in market in Poland strongly, determines the efficiency of insurance sector in Poland.

1. Essence of Insurance Companies' Operations and Their Role in the Financial System of the Country

Collective investors influence the national financial system and economic development. They form a crucial element of the demand side of the financial market. Accumulated capital is invested in financial instruments, contributing to the development of the monetary market, and particularly the capital market. Both of these markets are used by companies when financing current business activities or investment ventures. Demand for capital from companies depends on various factors such as macroeconomic, line of industry and internal issues. When making a decision to finance business through the financial market the company must take into account the fact that the capital obtained must be repaid and interest must be paid in return for using this capital. Such decision should, therefore, be preceded by a survey of the market and based on reliable economic calculus.

Pursuant to the Polish applicable law insurance company is defined as "enterprise businesses for permission for personal insurance, property reinsurance contract that commits to provide in the event of the effects of random events" [The Act of 22 May 2003 on Insurance activities, Journal of Laws [Dz.U.] of 2003, No. 124, item 1151.].

Insurance took its origin from the ancient times. At the beginning of the resulting seeds called insurance business. The funds have been collected to use them to compensate for the loss of chance, which were related to the economic activity (including the risk of sinking). Next, develop a personal insurance, which were associated with security measures due to the loss of life, health or age. And the beginning of Social Security was created in medieval features and fraternities, where one of the main objectives was to provide assistance to its members due to random events. The emergence of modern social insurance is associated in particular with the nineteenth-century industrial revolution [Liszc 1997, p. 14].

According to the Annex to the Insurance Activities Act distinguishes the apportionment of risk divisions, groups and types of insurance:

- Section I – life insurance;
- Section II – other personal insurance and property insurance.

There are five groups in life insurance system [Monkiewicz 2002, p. 31]:

- life insurance (e.g. term life and endowment, for life),
- endowment insurance,
- insurance related to insurance capital fund,
- annuities,
- accident and sickness insurance to complement the previously mentioned groups.

The insurance property and casualty stands out among other things [Monkiewicz 2002, p. 31]:

- accident insurance, including accidents at work and occupational diseases,
- illness insurance,
- casco insurance (land vehicles, rail and aircraft),
- insurance of sea and inland shipping,
- goods in transit insurance,
- insurance against damage caused by natural disasters,
- other damage to property insurance not included in other groups,
- liability insurance,
- credit insurance,
- insurance guarantees,
- insurance of financial risks,
- legal expenses insurance,
- insurance assistance.

A special role in the indirect transformation process is played by the financial market where supply of and demands for financial resources are matched. The supply side of the financial market is represented by entities having a financial surplus (savings): the financial market enables them to increase their financial resources. Those entities are referred to as suppliers of capital or investors [Wypych 2000, p. 114].

The demand side of the financial market is represented by entities seeking capital to meet their production or investment needs. Thus, they express their need for additional funds they want to use against payment for a precisely specified period of time. Those entities are referred to as recipients of capital or issuers and mainly include enterprises as well as local and central government units [Pietrzak, Polański (Eds.) 2006, p. 18].

According to specialist literature, financial intermediaries can be divided into two principal groups [Owsiak 2002, p. 224]:

- institutions accepting deposits and creating money based on those deposits (including banks),
- institutions, that create financial instruments not being money or act as non-deposit financial institutions.

The aim of the insurance societies is to provide financial protection to insured people, which enables limiting negative effects of risk. These institutions gain capital in the form of insurance premium paid by clients. The insurance holders pay premium as a way of financial protection of themselves and other people insured in case action committed takes place [Nowak 1998, pp. 151–152].

Insurance companies must be solvent. This involves their having own capital at the adequate level and conducting investment deals complying with the statutory requirements and limitations. The main aim of their investment activity is to achieve profitability with the maximum high level of safety and maintaining asset liquidity [Sułkowska 2001, p. 119].

The safety requirement makes it necessary for insurance companies to reduce the risk by diversification of the investment portfolio and high content of safe investment. Through investment the accumulated insurance capital returns to the financial system of the country and performs productive, pro-supply role.

2. Methods of Appraising Insurance Companies' Financial Situation and Sources of Data for Analysis

A reliable appraisal of the financial condition of every entity, insurance companies included, requires using financial data that provide figures necessary to calculate financial ratios suggested by specialist literature.

The fundamental legal act that specifies principles of accountancy in Poland, inclusive of insurance accounting, is the Accounting Act [The Accounting Act of 29 September 1994, Journal of Laws [Dz.U.] of 2002, No. 76, item 694, as amended]. The act lays down the principles of accountancy and the manner of the auditing of financial statements by auditors as well as rules for providing bookkeeping services. The provisions of the act are of a general nature; hence, they apply to all business entities keeping account books, while templates provided in attachments to the act differentiate between financial statements of insurance companies and those of other entities.

Next Law, concerning insurance accounting is Regulation of Minister of Finance of 28 December 2009 of the specific accounting policies of insurance and reinsurance companies [Regulation of Minister of Finance of 28 December 2009 of the specific accounting policies of insurance and reinsurance companies, Journal of Laws [Dz.U.] of 2009, No. 226, item 1825].

Financial statements of an insurance company consist of the following parts [The Accounting Act of 29 September 1994, Journal of Laws [Dz.U.] of 2002, No. 76, item 694, as amended]:

- a) Profit and loss account,
- b) Technical insurance account,
- c) Statement of financial situation (balance sheet),
- d) Statement of cash flows,
- e) Statement of changes in equity,
- f) Explanatory notes.

In practice, the appraisal of an insurance company financial situation uses two documents that provide necessary information, i.e. the profit and loss account and the balance sheet.

Specialist literature classifies methods of appraising insurers' financial situation into two groups:

- a) Classical methods based on financial ratios,
- b) Non-classical methods based on the concept of economic income.

According to M. Capiga, the five crucial areas of insurers' financial analysis include [Capiga 2010, p. 87]:

- a) Level of management efficiency,
- b) Profitability evaluation,

- c) Level of capital adequacy (solvency),
- d) Appraisal of financing structure,
- e) Financial liquidity analysis,
- f) Dividend Yield that is crucial information for capital market investors.

Other author of specialist literature share the above – mentioned point of view. They include M. Marcinkowska who in her book *Ocena działalności instytucji finansowych* introduces the above classification too.

Analyses in this study apply ratios of the first two groups described by specialist literature.

Indicators of group management efficiency, enabling it to assess the level of asset turnover, turnover of the equity and the ratio of gross claims and benefits paid out to collected gross written premiums.

Profitability ratios are a group of ratios defining efficiency of the insurers operations. Profitability assesses the surplus of revenues from operations over costs, i.e. the insurance company ability to generate profit. As a criterion for the insurer's appraisal, profitability is a basic method to measure efficiency of the insurers' operations.

Return on equity (ROE) – allows determining the profitability of equity, i.e. the rate of return [Iwanicz–Drozdowska 2010, p. 72].

$$ROE = \frac{NP}{E} \times 100\%$$

Where:

NP – Net Profit;

E – Equity.

The higher the ratio, the greater the ability to pay dividends and increase the solvency ratio, and the better the chance of developing the insurer's operations.

Return on assets (ROA) – The ratio indicates the rate of return on assets being the measure of operating efficiency that allows assessing the profit-earning capacity of assets held by the insurance company [Marcinkowska 2007, p. 323].

$$ROA = \frac{NP}{A} \times 100\%$$

Where:

NP – Net Profit;

A – Assets.

Return on sales (ROS) – The ratio allows determining what part of gross written premium remains in the company in the form of net profit [Orechwa–Maliszewska, Worobiej 2008, p. 85].

$$\text{ROS} = \frac{\text{NP}}{\text{GWP}} \times 100\%$$

Where:

NP – Net Profit;

GWP – Gross Written Premium.

Dividend Yield (DY) – presents relation between dividend per share and market price of the share. This ratio is one of the most popular indicators used by capital market investors [Wypych 2000, p. 188]:

$$\text{DY} = \frac{\text{DpS}}{\text{SMP}} \times 100\%$$

Where:

DpS – Dividend per Share,

SMP – Share Market Price.

Second group of indicators used during analyzes are management efficiency ratios.

They inform about company's performance in the area of collected and paid premiums.

First indicator is Gross claims ratio that is relation between gross claims paid and gross written premium. The lower level of the ratio means the better performance by the company [Marcinkowska 2007, p. 372]:

$$\text{GCR} = \frac{\text{GCP}}{\text{GWP}} \times 100\%$$

Where:

GCP – Gross claims paid,

GWP – Gross written premium.

Second indicator from efficiency group is Claims ratio – net of insurance. The ratio shows relation between amount of claims incurred and earned premiums – net of insurance. The lower level of the ratio informs about better performance of the company [Monkiewicz, Gąsioriewicz, Hadyniak, 2000, p. 234]:

$$\text{CRNoR} = \frac{\text{CI}}{\text{EPNoR}} \times 100\%$$

Where:

CI – Claims Incurred,

EPNoR – Earned Premiums – Net of Reinsurance.

Specialist literature offers opinions critical of the ratio analysis as the most objective method of appraising the financial condition of enterprises.

The principal objection is that the analyses use the book profit, which impacts on the way in which obtained results are perceived. It is not an economic but only a bookkeeping point of view.

Numerous objections were made concerning the weakness of the book profit and its application in the ratio analysis of enterprises' financial position. According to A. Rappaport, the most important of those include [Rappaport 1998, p. 13]:

- Impact on the financial result of alternative accounting methods used,
- Disregarding incurred risk,
- Disregarding changes in the value of money over time, which prevents the comparison of obtained results in real terms,
- Disregarding the dividend policy; hence the cost of equity in enterprises,
- Disregarding investment outlays made.

Coinciding critical comments are also offered by other authors of specialist literature. A. Rappaport's views can be found in the books by T. Dudycz entitled *Finansowe narzędzia zarządzania wartością przedsiębiorstwa* and by A. Ehrbar *Strategia tworzenia wartości przedsiębiorstwa*.

All the authors consider the method of appraising the financial situation of an enterprise based on the concept of economic income, which forms the basis for a measure called the Economic Value Added (EVA®), to be more objective.

The EVA® measure uses the Residual Income concept by Alfred Marshall. He was the first to draw attention to the defectiveness of bookkeeping measures that, when applied in determining the net profit, take only financial costs into account while completely disregarding equity costs borne by an enterprise. The Residual Income is defined as the sum of an enterprise's net profits reduced by shareholders' remuneration costs (cost of equity) [Dudycz 2002, p. 177].

The concept of the Economic Value Added was first presented by the Stern – Stewart & Co consulting company at the end of 1980 based on the earlier presented Residual Income mechanism by Marshall [Helfert 1982, p. 505].

The EVA is a measure that adjusts the earned book profit for incurred costs of equity, providing the actual value added for an enterprise.

When discussing the use of the EVA measure in the appraisal of insurers' financial situation, M. Marcinkowska emphasizes the specificity of their operations consisting in a considerable share of external capital in their financing structure. Contentious issue is the method of estimating the cost of capital. The reason is the high level of technical provisions – insurance, which is the dominant component of the liability of the insurance companies. They are associated with the portfolio of insurance and reflect the risk profile of the company. Professional recommends applying to them the same rate as the cost of equity. [Marcinkowska 2003, p. 512].

Taking into account the above-mentioned assumptions, the formula of the Economic Value Added for the Insurance Company would be as follows [Marcinkowska 2003, p. 512]:

$$EVA = NOPAT - (TEaL * Ec)$$

Where:

EVA – Economic Value Added,

NOPAT – Net Operating Profit after Tax,

TEaL – Value of the company's Total Equity and Liabilities,

Ec – Cost of the company's equity calculated as a price to book value ratio.

3. Appraisal of Financial Situation of the Warsaw stock – exchange insurance company PZU from 2009 to 2012

The first area of the analysis is the appraisal of profitability of the PZU Company. Values of the ratios discussed in the methods part of this study are presented below.

Table 1. Profitability ratios of PZU Company from 2009 to 2012

Ratio	2009	2010	2011	2012
ROS	14,65%	16,83%	15,29%	20,04%
ROE	18,12%	20,32%	18,29%	24,03%
ROA	4,37%	4,73%	4,58%	6,03%

Source: own calculations based on www.pzu.pl.

Figure 1. Graphic presentation of profitability ratios of PZU

Source: own work based on data in Table 1.

There was an upward trend observed in the profitability of PZU in the analysed years. It was only 2011 that saw a fall in the profitability, which was confirmed by all the applied ratios.

It should be emphasized, however, that the profitability level can be regarded as moderate as the results received for the ratios are not still above than those recommended by specialist literature.

Another area of the analysis is the appraisal of the company's management efficiency. It employs ratios presented in the preceding chapter. Results of the analysis are shown in the table and figure below.

Table 2. Efficiency management ratios of PZU Company from 2009 to 2012

Ratio	2009	2010	2011	2012
GCR	77,04%	75,23%	67,89%	76,16%
CRNoR	75,12%	73,06%	68,64%	76,34%

Source: www.pzu.pl/relacje-inwestorskie/informacje-finansowe.

Figure 2. Graphic presentation of efficiency management ratios

Source: own work based on data in Table 2.

Table 3. Ratios comparison for PZU and Insurance market from 2009 to 2012

Ratio	2009		2010		2011		2012	
	Mar- ket	PZU	Mar- ket	PZU	Mar- ket	PZU	Mar- ket	PZU
ROS	12,91%	14,65%	12,45%	16,83%	10,72%	15,29%	10,59%	20,04%
ROE	20,48%	18,12%	22,53%	20,32%	19,83%	18,29%	19,59%	24,03%
ROA	4,79%	4,37%	4,75%	4,73%	4,21%	4,58%	4,29%	6,03%
GCR	81,90%	77,04%	73,58%	75,23%	74,68%	67,89%	69,65%	76,16%
CRNoR	82,62%	75,12%	71,50%	73,06%	74,30%	68,64%	68,89%	76,34%

Source: own calculations based on www.pzu.pl and www.knf.gov.pl.

Based on the analysis of the above data, it should be stated that the management effectiveness of PZU was improving during 2009 – 2011 period, and deteriorated in 2012 year. Despite this, the ratios level should be considered as satisfactory. The situation of analyzed company is good in management

effectiveness area. Despite turbulence in financial markets of the European Union countries as well as of other parts of the world, the Polish insurance sector proved resilient to adverse effects of those events. It should be emphasized and appreciated that the Polish insurance sector is characterized by high stability and safety levels in the period of deep trouble in other EU countries (e.g. Cyprus, Greece or Spain).

Analyzing the indicators for the company to the whole of the insurance market can be noted that the level of effectiveness ratios was characterized by volatility was the fact that in the coming years once more presented to the market, and once the company PZU. Profitability ratios with the market for PZU in the period 2009–2011 were worse, but in 2012 reversed that trend and all the analyzed ratios for PZU were at a higher level than the average for the insurance market.

Another financial indicator that has been analyzed is Dividend Yield. This ratio informs about relation between dividend per share and market price of share. The level of the DY indicator is shown in figure below.

Figure 3. Graphic presentation of Dividend Yield ratio from 2009 to 2012

Source: own work based on www.gpw.pl.

The dividend yield paid by a company PZU increased by more than 4 percentage points within three years. This is positive information, which indicates that company shares are more attractive for stock – exchange investors. Increasing the dividend yield is also the result of a decision of the main shareholder during Annual General Meeting. PZU dividend is an important part of income in the Polish budget.

The last measure to be used to appraise the PZU Company condition is a measure alternative to financial ratios. The mechanism and essence of the Economic Value Added (EVA) were presented in the previous part of the study. Calculated results are shown in the figure below.

Table 4. Selected financial data for PZU Company

Data	2009	2010	2011	2012
NOPAT	4 565 811	3 088 085	2 956 727	4 080 198
TEaL	53 176 209	50 533 832	52 129 282	55 909 560
Ec	2,46%	2,07%	2,40%	3,04%
Net Profit	3 762 911	2 439 229	2 343 947	3 253 826

Source: www.pzu.pl/relacje-inwestorskie/informacje-finansowe.

Figure 4. Economic Value Added for the PZU Company

Source: own calculations based on data from Table 3.

Data presented in the above figure indicate that the financial condition of the company appraised by means of the EVA shows a downward trend during 2009 – 2011 period, and finally improved in 2012 year. However in the analysed period the Economic Value Added in PZU Company has decreased by nearly 1 billion PLN, which means a decrease by 27%. The ratio of the EVA to the net profit of the company should be regarded as average as it runs at the level under 80% in last two years.

4. Concluding Remarks

The insurance sector is a one of key elements of the financial system of every country. Insurance companies are institutions of public trust and play an important role in the process of transforming savings into investments.

The aim of the study, set in the introduction, was fully met. The study presented the essence and role of insurers in the financial system. It also discussed methods of appraising their financial condition as well as performed the analysis of situation from 2009 to 2012.

The research hypothesis put forward at the beginning of the study was not positively verified. Effects of the financial crisis, turbulence in financial markets, and problems experienced by insurers in the European Union countries did not significantly influence the financial situation of the PZU Company.

The level of management effectiveness should be considered good; profitability of the company runs at a moderate but satisfactory level; Dividend Yield has increased to acceptable level by investors, while the appraisal of the

financial condition employing the EVA measure enables to draw a conclusion that the financial condition of analyzed insurance company increased significantly over the studied period.

This situation strongly influences insurance sector in Poland due to the fact that analyzed entity is the largest company in the insurance market in Poland.

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