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## THE ROLE OF BUSINESS INSURANCE IN NATIONAL ECONOMY IN POLAND

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**Summary.** The main aim of the study is to show the role of business insurance in the Polish national economy. The first part presents an overview of the insurance market. In the second part the importance of insurance in the national economy is discussed, based on calculated penetration rates, insurance density, activity monitoring, coverage ratio and solvency ratio. Finally the density and penetration rates in Poland were compared with those in other EU countries. The primary research method was descriptive method and the basic indicators of the importance of insurance in the national economy. The main source materials were data from the Central Statistical Office, the Polish Financial Supervision Authority and the Polish Insurance Association. This study covers the period 2006–2014. The study confirmed a good standing of the Polish insurance market and the fact that it systematically reduces the distance that separates the Polish insurance market from the largest European markets.

**Key words:** insurance, the national economy, ratio analysis, Poland

### INTRODUCTION

Insurance is an institution limiting the burden of certain fortuitous events, which risk we face at each stage of our lives. It provides an economic mechanism ensuring coverage of future material needs of individuals or entities caused by fortuitous events exhibiting certain regularities, by distributing this risk over many individuals or entities threatened with the same fortuitous events

(Łazowski, 1948). Insurance is an economic tool, which makes it possible for the insurance company – thanks to the paid premiums – takes over the risk of negative economic consequences of a specific fortuitous event from the insurant (Hadyński et al., 1999).

Insurance, constituting an instrument for compensation for damage or satisfaction of certain financial needs, is of considerable social and economic importance both from the point of view of the insured individuals or organisations and the society or the state. Benefits for the insurant may include e.g. maintenance of the standard of living during disease, disability or retirement, psychological comfort connected with financial security and protection for their family in case of death, their own financial security and stability. Insurance makes it possible for entrepreneurs to retain the same financial standing as before the damage thanks to financial means provided by damages<sup>1</sup>.

Insurance also operates as a macroeconomic means ensuring stability of the economy, as it alleviates shock connected with risk and contributes to GNP growth (Kawiński, 2013). Insurance releases financial means required for the maintenance of loss reserves and ensures financial security of individuals by protecting their property. By taking insurance individual members of the society transfer current consumer expenses to a later period, which results in increased savings and supplements the social security system. In turn, compulsory

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insurance constitutes an important protection system for collective risk (traffic accidents), relieve the state from the burden of aid in the case of natural disasters or damage of spectacular social impact (flood, environmental pollution). From the point of view of entrepreneurs insurance makes it possible to undertake riskier enterprises and introduce innovations in the range of products or services (Ronka-Chmielowiec, 2002; Sangowski, 2001).

## AIM AND METHODS

The primary aim of this study is to present the role of business insurance (personal and property) in the Polish national economy. The first part of this paper gives general information on the insurance market (the number of insurance companies, income, gross written premiums) in terms of the statutory division into Sections I and II. The second part discusses the importance of business insurance in the national economy, based on calculated penetration, density, activity monitoring and coverage ratios as well as the primary solvency ratio. Finally the density and penetration ratios in Poland were compared with those of the other EU countries. The primary research method was the descriptive method and basic indexes illustrating the role of insurance in the economy<sup>2</sup>. Basic source materials included data from the Central Statistical Office, the Polish Financial Supervision Authority and the Polish Insurance Association. The study covers the period of 2006–2014.

<sup>2</sup> The density ratio is calculated by referring the amount of gross written premium (the entire premium due in a given year for insurance protection) within a year per capita. In turn, the penetration coefficient is the share of the collected gross written premium in the GDP. The activity monitoring ratio is calculated by referring equity of an insurance company (available assets of the insurance company not encumbered with third party's rights, which are not allocated to coverage of accrued liabilities) to the solvency margin (the volume of assets unencumbered with any liabilities, which the insurer should have to secure continuous payment of insurance benefits) and guarantee capital (the capital required to run insurance activity) times 100%. The coverage ratio is calculated by dividing assets for the coverage of policy holders' fund (assets meeting the statutory investment limits) by the policy holders' fund (reserves connected with potential future liabilities of the insurance company resulting from contracted insurance policies) times 100%. The last calculated index was the solvency ratio, with equity was divided by the volume of the gross written premium in damage excess (the entire premium due in a given reporting period reduced by the reinsurer's share) times 100% (Kawiński, 2013).

## CHARACTERISTICS OF THE BUSINESS INSURANCE MARKET IN POLAND

At the end of 2014 a total of 59 Polish insurance companies were licensed to conduct insurance activity in Poland, of which 28 were insurance companies of Section I<sup>3</sup> (life insurance) and 30 were insurance companies of Section II (other personal insurance types and property insurance) and 1 was a reinsurer (PTR S.A.). Functioning of the insurance market in view of globalisation and competition reflects the degree of market concentration defined by the concentration index CR<sub>x</sub>, i.e. the market share of *x* successive insurers (GUS, 2014). At the end of 2014 CR<sub>5</sub>, i.e. the share of five largest companies in the gross written premium of Section I was 56.7% and it was practically the same as in 2013 (56.7%). For several years now the largest share has belonged to PZU ŻYCIE S.A. (28.54%), followed by OPEN LIFE TU ŻYCIE S.A. (8.11%), METLIFE TUŻiR S.A. (7.37%), AVIVA TUŃŻ S.A. (7.19%) and COMPENSA TU NA ŻYCIE S.A. (after merger with BENEFIA TU na ŻYCIE S.A.) (5.49%). In Section II the concentration index CR<sub>5</sub> at the end of 2014 was 68.24%, amounting to an increase by approx. 2.0 percentage points in relation to 2013. Similarly as in Section I the largest, over 31.0% share belonged to PZU SA, followed by STU ERGO Hestia S.A. (after merger with MTU Moje TU S.A.) – 13.12%, TUiR Warta S.A. – 12.76%, TUiR ALLIANZ POLSKA S.A. – 6.73% and COMPENSA TU S.A. Vienna Insurance Group – 4.16% (KNF, 2015). At the end of 2014 a total number of 612 foreign insurance companies from the EU member countries and other regions of the European Economic Area notified their intention to operate in Poland, and it was by almost 30 more than in 2012 (KNF, 2015).

Next solvency ratios were analysed for insurance companies specified in the Act on insurance activity (Table 2).

<sup>3</sup> The statutory division of insurance was based on the type of fortuitous events covered by insurance and the subject of insurance. Thus we distinguish two areas of insurance:

– Section I covering only life insurance (life, dowry and children's maintenance insurance, retirement annuity, accident protection and sickness insurance, if they supplement the insurance types mentioned above),

– Section II, which comprises the other personal insurance types and property insurance (sickness, motor, overland insurance, etc.) (Act..., 2003).

**Table 1.** Number of insurance companies offering insurance in Poland in 2014

**Tabela 1.** Liczba zakładów ubezpieczeń oferujących ubezpieczenia w Polsce w 2014 roku

Specification Wyszczególnienie	Total Ogółem	Joint-stock company W formie spółki akcyjnej	Mutual insurance company W formie towarzystwa ubezpieczeń wzajemnych	Companies which have notified its activity in Poland Zakłady, które notyfikowały swoją działalność w Polsce
Section I – Dział I	28	26	2	612
Section II – Dział II	30	24	6	
Reinsurer Zakład reasekuracji	1	1	x	
Total – Ogółem	59	51	8	

Source: KNF, 2015.

Źródło: KNF, 2015.

**Table 2.** Statutory parameters and solvency indexes of insurance companies in total in Poland in the years 2012–2014 (%)

**Tabela 2.** Wskaźniki ustawowe i współczynniki wypłacalności zakładów ubezpieczeniowych ogółem w Polsce w latach 2012–2014 (%)

Specification – Wyszczególnienie	31.12.2012	31.12.2013	31.12.2014
Total – Ogółem			
Activity monitoring ratio Wskaźnik monitoringu działalności	411.11	357.90	345.56
Coverage ratio of reserves Wskaźnik pokrycia rezerw	116.38	114.59	115.78
Solvency ratio Współczynnik wypłacalności	54.96	52.96	63.8
Section I – Dział I			
Activity monitoring ratio Wskaźnik monitoringu działalności	355.81	298.31	299.00
Coverage ratio of reserves Wskaźnik pokrycia rezerw	111.24	110.91	112.2
Solvency ratio Współczynnik wypłacalności	39.17	38.22	45.9
Section II – Dział II			
Activity monitoring ratio Wskaźnik monitoringu działalności	467.19	416.87	398.00
Coverage ratio of reserves Wskaźnik pokrycia rezerw	126.88	121.71	123.5
Solvency ratio Współczynnik wypłacalności	79.81	72.86	83.7

Source: own elaboration based on data from the Polish Financial Supervision Authority on the insurance market (KNF, 2015).

Źródło: opracowanie własne na podstawie danych Komisji Nadzoru Finansowego dotyczących rynku ubezpieczeń (KNF, 2015).

In accordance with art. 146.1<sup>4</sup> of the Act on insurance activity insurance companies are obliged to have equity in the minimum amount of their solvency margin and at least equivalent to their guarantee capital. In 2014 the activity monitoring index was satisfactory, amounting to 345.56%, although from 2012 it was decreasing. In Section I this index was approx. 300.0%, while in Section II it was almost 400.0%. The next analysed index was the coverage ratio. In accordance with Article 154.1 of the Act on insurance activity insurance companies are obliged to have assets meeting conditions specified in the Act in the minimum amount equivalent to the gross value of the policy holders' fund. In particular it is assumed that assets need to be adequately diversified and dispersed<sup>5</sup>. In the analysed period the coverage ratio remained comparable. In 2014 it was 115.78%, while in Section I it was 112.2% and in Section II – 123%, respectively.

Maintenance of a satisfactory coverage ratio by Polish companies confirms the good standing of the Polish insurance market. Financial supervision should control such indexes so that they are kept at a safe level, which at the same time makes it possible to offer insurance with acceptable premiums. In turn, the total solvency index in 2014 increased in relation to the previous years to 63.8%, of which it was greatest in Section II at 83.7%.

## THE IMPORTANCE OF BUSINESS INSURANCE IN NATIONAL ECONOMY

Insurance companies in 2014 earned over 71.6 billion PLN. The most significant part of this income comprised gross written premium (76.7% total revenue), revenue from investments (12.4%) and unrealised gains from investments (4.26%) (KNF, 2015). Table 3 presents changes in the volume of gross written premium in terms of Sections I and II in the years 2006–2014. At the end of 2014 total gross written premium was almost 55 billion PLN. While it was more than in 2006 (by 17.4 billion PLN), starting from 2010 a decrease in its value was observed annually (in the analogous period of 2013 the premium was approx. 5.0% – 3.0 billion PLN higher). This results from the observed decrease in gross written premium in Section I. To 2008 premium

in the Section of life insurance was rapidly increasing, while in 2009 the decrease was over 20.0% in relation to the previous year. After that period a slight increase was recorded; nevertheless, in the last analysed years gross written premium again decreased in relation to the previous year. In Section II in the last analysed year the value of premium decreased by 1.3%, still over the entire analysed period its moderate increase was observed. As a result of these changes in 2014 gross written premium in the Section of the other life insurance types and property insurance was by only 2.5 billion PLN (26.3 billion PLN) lower than in Section I, while in 2006 this difference was almost 5.0 billion PLN. In the structure of life insurance (Section I) in 2014 life insurance connected with an insurance capital trust – Group 3 predominated (43.98% total premium). Over the entire analysed period the share of this group increased systematically. Life insurance (group 1) ranked second at 37.08%; however, in this case the share of this group was decreasing. Accident and sickness insurance ranked second (group 5) with a practically identical share over the entire analysed period (18.14%). The two next groups – 4 (retirement annuity) and 2 (dowry insurance) account for a small 1% share<sup>6</sup>. In turn, in the structure of the other personal and direct property insurance types in 2014 motor insurance predominated (groups 3 and 10). They accounted jointly for almost 52.0% (31.4% indemnity insurance for vehicles and 20.4% comprehensive motor insurance) gross written premium in Section II. It was followed by property insurance (groups 8 and 9) – almost 21.0%, followed by financial (groups 14 and 16) at 8.2%, accident and sickness insurance (groups 1 and 2) at 7.8% and other indemnity insurance (groups 11–13) at 7.7%<sup>7</sup>.

Gross written premium is the most significant value characterising the insurance market. Insurance companies in Poland purchase shares and stocks of banks, enterprises and other economic entities and they invest some of the insurance fund in bank deposits. By making funds available to banks, they facilitate crediting for economic entities and households. The insurance system does not generate money by itself, in contrast to the bank system, it determines – particularly through life insurance – transformation of some savings into investments. If we deal with an increase in premium in

<sup>4</sup> Refers also – in accordance with Article 223 of the Act – to reinsurer companies (Act..., 2003).

<sup>5</sup> Ibidem.

<sup>6</sup> Ibidem.

<sup>7</sup> Ibidem.

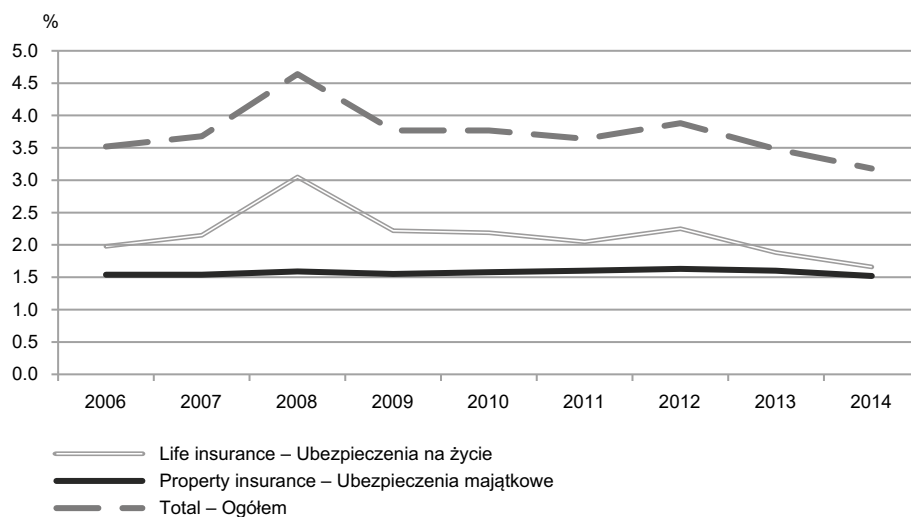
**Table 3.** Gross written premium life insurance (Section I) and property insurance (Section II) in Poland in the years 2006–2014 (billion PLN)

**Tabela 3.** Składka przypisana brutto ubezpieczeń na życie (dział I) i ubezpieczeń majątkowych (dział II) w Polsce w latach 2006–2014 (mld zł)

Specification – Wyszczególnienie	2006	2007	2008	2009	2010	2011	2012	2013	2014
Life Insurance – Section I Ubezpieczenie na życie – Dział I	21.1	25.5	39.0	30.3	31.4	31.8	36.4	31.3	28.7
The previous year = 100% Rok poprzedni = 100%	37.69	20.9	52.83	–22.33	3.77	1.73	14.23	–14.05	–8.31
Property insurance – Section II Ubezpieczenie majątkowe – Dział II	16.4	18.2	20.3	21.1	22.7	24.8	26.3	26.6	26.3
The previous year = 100% Rok poprzedni = 100%	4.89	10.95	11.43	3.72	7.99	14.2	3.81	1.31	–1.31
Total Ogółem	37.5	43.7	59.3	51.3	54.2	56.6	62.6	57.9	54.9
The previous year = 100% Rok poprzedni = 100%	20.9	16.5	35.7	–13.5	5.7	4.4	10.6	–7.5	–5.2

Source: own elaboration based on data from the Polish Financial Supervision Authority (KNF, 2015).

Źródło: opracowanie własne na podstawie danych Komisji Nadzoru Finansowego (KNF, 2015).



**Fig. 1.** The share of collected gross written premiums for life insurance (section I) and property insurance (section II) in GDP (penetration index) in Poland in the years 2006–2014 (%)

Source: own calculations based on data from the Polish Financial Supervision Authority (KNF, 2015) and from Eurostat (n.d.).

**Rys. 1.** Udział zebranej składki przypisanej brutto ubezpieczeń na życie (dział I) i ubezpieczeń majątkowych (dział II) w PKB (współczynnik penetracji) w Polsce w latach 2006–2014 (%)

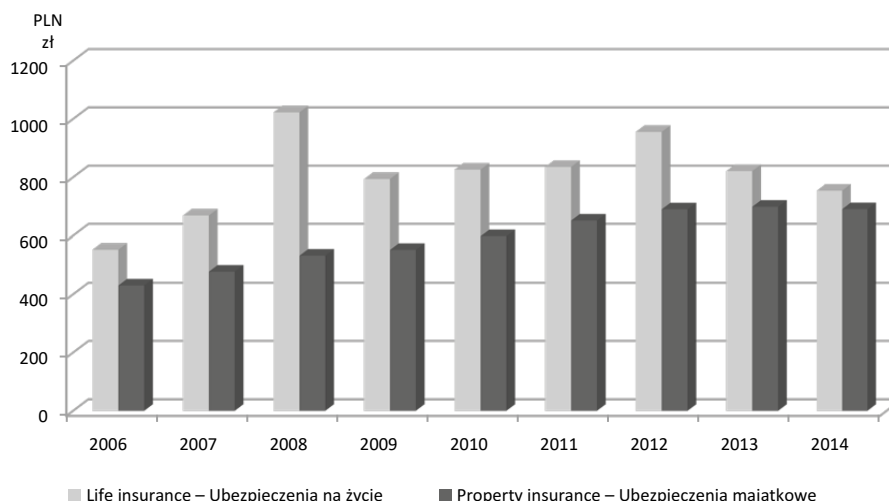
Źródło: obliczenia własne na podstawie danych Komisji Nadzoru Finansowego (KNF, 2015) i Eurostatu (b.d.).

the GDP, we have an increase in saving propensity and the resulting willingness to invest (Wierzbicka, 1997). While determining the development trend for the insurance market it needs to be stated that as a rule an increase in premium is correlated with economic growth. In the years 2006–2014 the insurance penetration index, measured by the relation of the value of gross written premium to gross domestic product (GDP) (Fig. 1), was stable in the group of property insurance. In life insurance this index decreased in 2014 by 0.2 percentage points in relation to the previous year, reaching 1.66%. Changes in gross written premium in the Section of life insurance reflect the situation over the entire insurance market. In 2014 the total penetration index was 3.19% and it was by 3.0 percentage points lower than in 2013.

A measure of maturity of the insurance market is provided by the index referring the amount of premium to the number of inhabitants (Fig. 2). In Section I (life insurance) the average premium index per capita in Poland fluctuated in the analysed period. In the years 2006–2008 this index increased from 550 PLN to over

1000 PLN. Next in 2009 it decreased to approx. 800 PLN, while to 2012 it again increased to 955 PLN. In 2014 the collection of premiums from those insurances decreased, which resulted in a reduction of this index to 754 PLN per capita. In the Section of the other personal insurances and property insurances we observed a stable increase in the average premium per capita in Poland from 430 PLN in 2006 to 690 PLN in 2014. Summing up, due to the maintenance of the upward trend for the density index (with slight fluctuations in the crisis years) the relative value of the Polish market in relation to the country development level is rather good.

The evaluation of the Polish insurance market should be compared to the other EU countries. The considerable development dynamics and the actual increase in gross written premium in Poland, as well as the relatively good other indexes indicate that the distance between the Polish insurance market and the largest European markets is decreasing systematically. However, it needs to be stressed here that this distance is still considerable and indicates the potential for this sector. Figure 3

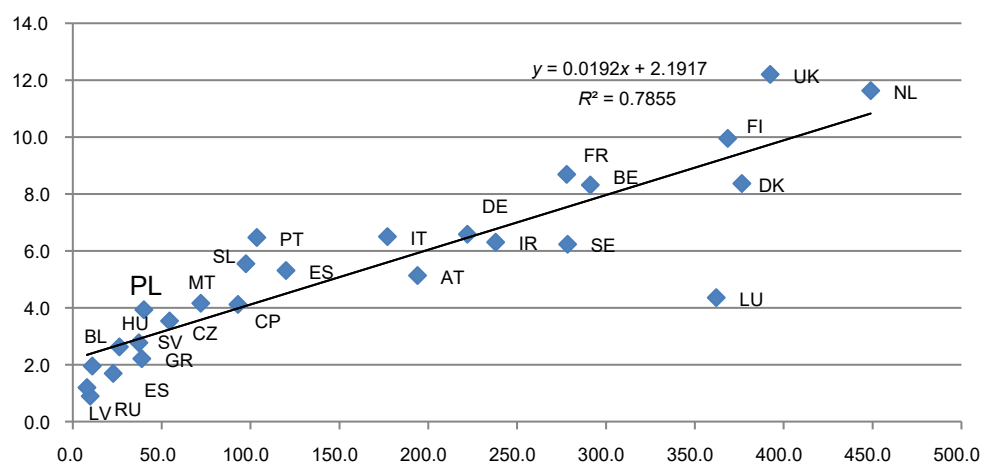


**Fig. 2.** The value of gross premiums written for life insurance (Section I) and property insurance (Section II) 1 inhabitant (ratio of the density) in Poland in the years 2006–2014 (PLN)

Source: own calculations based on data from the Polish Financial Supervision Authority (KNF, 2015) and Eurostat (n.d.).

**Rys. 2.** Wartość składki przypisanej brutto ubezpieczeń na życie (dział I) i ubezpieczeń majątkowych (dział II) w na 1 mieszkańca (współczynnik gęstości) w Polsce w latach 2006–2014 (zł)

Źródło: obliczenia własne na podstawie danych Komisji Nadzoru Finansowego (KNF, 2015) i Eurostatu (b.d.).



**Fig. 3.** Penetration rate ( $y$ , %) and density index ( $x$ , euro) for insurance in the European Union in 2012

Source: own calculations based on CSO data (GUS, 2014).

**Rys. 3.** Wskaźnik penetracji ( $y$ , %) i gęstości ( $x$ , euro) ubezpieczeń w krajach Unii Europejskiej w 2012 roku

Źródło: obliczenia własne na podstawie danych GUS (2014).

presents the penetration rate ( $y$ , %) and density rate ( $x$ , EUR) for insurance in EU countries in 2012. The dependence between these indexes is best described by a linear equation:

$$y = 0.0192x + 2.1917$$

where:

- $y$  – the share of gross written premium in GDP (%)
- $x$  – gross written premium per capita (EUR).

This means that the greater the share of premium in the GDP, the greater the premium per capita. This analysis shows that in the countries which joined the EU after 2004 both the density and penetration rates are low, while in the countries of the former EU-15 these values are much higher. Differences between individual countries result first of all from the standard of living in these countries. In those countries, where the GDP per capita is higher (Luxemburg, Denmark, Sweden, Great Britain, Holland, Finland, Belgium), the insurance penetration and density rates are much more satisfactory. A highly significant effect on these indexes was observed for the share of compulsory and quasi-compulsory insurance. In countries with a high standard of living voluntary insurance is gaining in popularity (e.g. in the case of

health insurance). Maintenance of high growth dynamics for private insurance to supplement the social security system depends on an active economic policy in this respect (see Kawiński, 2013).

## CONCLUDING REMARKS

Summing up, the position of the Polish insurance market is good both in terms of the number of companies offering insurance services and the generated revenue as well as the collected insurance premiums. A good situation of the analysed market is also confirmed by the activity monitoring index, coverage and solvency ratios. Studies showed that the distance between the Polish insurance market and the greatest European markets is systematically decreasing. However, it needs to be remembered in Poland compulsory insurance still predominates, which while serving a significant role, the extension of the insurance obligation is not the only effective method to develop the market. Increased use of voluntary insurance indicates insurance prudence and a more innovative market. It seems important to stimulate economic growth, which will probably be manifested in greater interest in voluntary insurance, e.g. sickness or financial insurance.



## REFERENCES

- Act of 22 May 2003 on insurance activity (2003). *The Journal of Laws. Dziennik Ustaw* no. 124, item 1151 with later amendments.
- Eurostat (b.d.). Retrieved from: [www.ec.europa.eu/eurostat](http://www.ec.europa.eu/eurostat).
- GUS (2014). *Polski rynek ubezpieczeniowy w 2013 roku*. Warszawa: Główny Urząd Statystyczny.
- Hadyniak, B., Monkiewicz, J., Gąsioriewicz, L. (1999). *Zarządzanie finansami ubezpieczeń*. Warszawa: Poltext.
- Kawiński, M. (2013). Ubezpieczenia w rozwoju społeczno-gospodarczym Polski. *Wiad. Ubezpiecz.* Spec., 2, 1–87.
- KNF (2015). *Raport o stanie sektora ubezpieczeń po IV kwartale 2014 roku*. Warszawa: Urząd Komisji Nadzoru Finansowego. Retrieved Aug 8<sup>th</sup> 2015 from: accessed at: [www.knf.gov.pl](http://www.knf.gov.pl).
- Łazowski, J. (1948). *Wstęp do nauki o ubezpieczeniach*. Warszawa: PZU.
- PIU (b.d.). Retrieved from: [www.piu.org.pl](http://www.piu.org.pl).
- Ronka-Chmielowiec, W. (2002). *Ubezpieczenia. Rynek i ryzyko*. Warszawa: PWE.
- Sangowski, T. (2001). *Ubezpieczenia gospodarcze*. Warszawa: Poltext.

## ROLA UBEZPIECZEŃ GOSPODARCZYCH W GOSPODARCE NARODOWEJ W POLSCE

**Streszczenie.** Głównym celem badań jest ukazanie roli ubezpieczeń gospodarczych w polskiej gospodarce narodowej. W pierwszej części przedstawiono ogólne informacje o rynku ubezpieczeń. W drugiej omówiono znaczenie ubezpieczeń w gospodarce narodowej, obliczając wskaźniki penetracji, gęstości, monitorowania działalności, pokrycia rezerw oraz współczynnik wypłacalności. Na koniec porównano wskaźnik gęstości i penetracji w Polsce z krajami UE. Główną metodą badawczą była metoda opisowa oraz podstawowe wskaźniki obrazujące znaczenie ubezpieczeń w gospodarce. Głównymi materiałami źródłowymi były dane Urzędu Statystycznego, Komisji Nadzoru Finansowego i Polskiej Izby Ubezpieczeń. Zakres czasowy badań objął lata 2006–2014. Przeprowadzone badania potwierdziły, że polski rynek ubezpieczeniowy cechuje się dobrą sytuacją i systematycznie zmniejsza dystans do największych rynków europejskich.

**Słowa kluczowe:** ubezpieczenia, gospodarka narodowa, analiza wskaźnikowa, Polska

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