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LIFE INSURANCE AND CAUSES OF DEATH

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Summary – *The paper analyses the impact of causes of death (number of people who died from different causes of death) on financial indicators of the life insurance market (total gross premiums and gross claim payments) in Ukraine. The research model of this study was developed by reviewing the previous studies and include the calculations of such indicators as insurance penetration, life insurance market share, gross claim payments rate, life insurance claim payments rate, share of deaths by causes. Correlation-regression analysis was also performed to test scientific hypotheses. The analysis shows that number of people who died from different causes of death has inversely proportional on total gross premiums and gross claim payments of the life insurance market in Ukraine.*

Introduction. Today in Ukraine insurance market faces with a lot of challenges like a economic and political instability, lower income levels of the population, corruption, bribery and more. In addition, there are many other factors that influences on life and non-life insurance market [2; 5; 9]. In this research we are going to start a completely new scientific research in which causes of death will be the main factors for investigation. Altogether, this paper will the first step for analysing the future applying of the genetic testing technologies [1; 3; 4; 6] for the life insurance market in Ukraine. Quantitative data was collected from official sites of the State Statistics Service of Ukraine (about the population and number of people who died from different causes of death) [7], and National Commission for the State Regulation of Financial Services Markets in Ukraine (information about the life and non-life insurance market: total gross premiums and gross claim payments) [8]. The purpose of this study is to empirically examine analyses the impact of causes of death (number of people who died from different causes of death) on financial indicators of the life insurance market (total gross premiums and gross claim payments).

Main part. This research develops the new model (as a case study of Ukraine) of interconnection of the total gross premiums, gross claim payments and number of people who died from different causes of death («Certain infectious and parasitic diseases», «Neoplasms», «Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism», «Endocrine, nutritional and metabolic diseases», «Mental and behavioural disorders», «Diseases of the nervous system», «Diseases of the eye and adnexa», «Diseases of the ear and mastoid process», «Diseases of the circulatory system», «Diseases of the respiratory system», «Diseases of the digestive system», «Diseases of the skin and subcutaneous tissue, «Diseases of the musculoskeletal system and connective tissue», «Diseases of the genitourinary system», «Pregnancy, childbirth and the puerperium», «Certain conditions originating in the perinatal period», «Congenital malformations, deformations and chromosomal abnormalities», «Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified» and «External causes of mortality»).

The research results of insurance market indicators show that insurance penetration has decreased from 2.8% in 2005 to 1.4% in 2018; life insurance market share has increased from 2.5% in 2005 to 7.9% in 2018; the life insurance claim payments rate also has increased from 3.0% to 18.0%.

Furthermore, the analysis of the mortality indicators shows decreasing the death share rate from 1.65% in 2005 and to 1.39% in 2018. In addition, the TOP-3 leading cause of death in Ukraine for 2005-2018 were the «Diseases of the circulatory system» (from 62.51% to 66.71%), «Neoplasms» (from 11.75% to 13.37%) and «External causes of mortality» (from 8.95% in 2005 to 5.25% in 2018).

The results of the correlation-regression analysis indicate that number of people who died from different causes of death has inversely proportional impact on total gross premiums and gross claim payments of the life insurance market in Ukraine. This means that as the number of deaths increases, the amount of gross insurance premiums and payments will decrease, and vice versa. A similar relationship is common to all persons who have died from almost all causes of death with the financial performance of the life insurance market in Ukraine.

The only exceptions are causes of death such as «Diseases of the eye and adnexa», «Diseases of the skin and subcutaneous tissue» and «Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified», because the correlation coefficients show «moderate» and «weak» levels of correlation.

Conclusion. Our paper has provided new research results about the impact of causes of death (number of people who died from different causes of death) on the total gross premiums and gross claim payments of the life insurance market in Ukraine. The findings reveal that causes of death (number of people who died from different causes of death) has inversely proportional impact on total gross premiums and gross claim payments of the life insurance market in Ukraine. So, as the number of deaths increases, the amount of gross insurance premiums and payments will decrease, and vice versa. Also, this research develops a new research direction for studying the interconnection between insurance marker, health care system and applying the genetic testing technologies for life insurance market.

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