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PERFORMANCE DETERMINANTS OF GENERAL INSURERS IN PAKISTAN

The study investigates the performance determinants for general insurers in Pakistan over the period 2004 to 2009. Performance of general insurers is measured as return on assets (ROA) and return on equity (ROE), whereas size, investments, leverage, risk, past year performance and age are chosen as explanatory variables. The results suggest that size, investment, past performance and age are positively related, whereas leverage and risk are negatively related with the performance of general insurers. Moreover, it was also found that the recent economic uncertainty has adversely affected the performance of general insurers in Pakistan.

Keywords: *determinants; general insurers; Pakistan; performance.*

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ДЕТЕРМІНАНТИ ЕФЕКТИВНОЇ ДІЯЛЬНОСТІ ЗАГАЛЬНИХ СТРАХОВИКІВ ПАКИСТАНУ

У статті вивчено детермінанти ефективної діяльності загальних страховиків у Пакистані за період з 2004 по 2009 рік. Ефективність діяльності загальних страховиків визначається як рентабельність активів (ROA) і рентабельність власного капіталу (ROE), тоді як розмір, інвестиції, левеespecially, ризик, результати попереднього року і досвід роботи беруться як пояснювальні змінні. Результати показують, що розмір, інвестиції, діяльність у минулому і досвід роботи пов'язані позитивно, тоді як леверидж і ризик негативно пов'язані з ефективністю діяльності загальних страховиків. Також виявлено, що економічна невизначеність недавнього часу негативно позначається на ефективності діяльності загальних страховиків у Пакистані.

Ключові слова: *детермінанти; загальні страховики; Пакистан; ефективність діяльності.*

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ДЕТЕРМИНАНТЫ ЭФФЕКТИВНОЙ ДЕЯТЕЛЬНОСТИ ОБЩИХ СТРАХОВЩИКОВ ПАКИСТАНА

В статье изучаются детерминанты эффективной деятельности общих страховщиков в Пакистане за период с 2004 по 2009 год. Эффективность деятельности общих страховщиков определяется как рентабельность активов (ROA) и рентабельность собственного капитала (ROE), тогда как размер, инвестиции, леверидж, риск, результаты предыдущего года и стаж берутся как объясняющие переменные. Результаты показывают, что размер, инвестиции, деятельность в прошлом и возраст связаны положительно, в то время как леверидж и риск негативно связаны с эффективностью деятельности общих страховщиков. Также обнаружено, что экономическая неопределенность недавнего времени отрицательно сказывается на эффективности деятельности общих страховщиков в Пакистане.

Ключевые слова: *детерминанты; общие страховщики; Пакистан; эффективность деятельности.*

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1. Introduction. General insurers protect business entities from various risks associated with them inheritably. They also provide technical knowledge to businesses to improve their safety and quality standards of production through their experienced advice. Moreover, they also strengthen the capital market as an institutional investor because they invest their premiums to pay claims and to earn high returns on it. In addition, they also play their role as a motivator which encourages local production and innovation. Therefore, we can conclude that general insurers are essential for economic, technological and social progress of the economies. Particularly, they have more precise role in developing economies as the financial and technological uncertainties are higher in developing economies as compared to developed economies. Therefore, it is really essential for emerging economies like Pakistan to have a well-structured and well-performing general insurance sector for continuous growth and development.

There are 32 general insurers in Pakistan, out of which 30 are private limited companies, one is a foreign insurance company and there is also one state owned general insurance company. Private firms have almost 85% of the market share whereas 11% is held by the state-owned and the remaining 4% is possessed by the sole foreign insurer (State Bank of Pakistan-SBP, 2008; Insurance Association of Pakistan-IAP, 2008). The insurance sector has shown a significant progress from 2003 to 2007 and it is mainly the result of various positive regulatory moves made by the government of Pakistan, such as insurance ordinance 2001, increase in minimum capital requirements and structural right sizing of the general insurance sector (Afza & Jam-e-Kausar, 2010a).

In the of globalization, immense competition and uncertainty, it is now really hard for general insurers to perform well. Recently, years 2008 and 2009 were difficult for the general insurance sector of Pakistan due to macroeconomic problems in the country which result in dramatic fall of profits. These problems include rising inflation rate, double digit interest rate, electricity shortage etc., which eventually raise the cost of doing business. Therefore, business entities do not apt to be insured as before, therefore the insurance premiums grew just by 3% in 2008 and 2009 as compared to 17% growth from 2003 to 2007 (IAP, 2009). Moreover, the investment incomes also turn into investment loss due to bearish trend at Karachi Stock Exchange (KSE) in the same years. Therefore, the general insurers in Pakistan, despite their size or market share, are trying to compete and survive to perform well in such worsened and uncertain economic conditions.

Present study investigates the determinants of performance of general insurance sector in Pakistan. This study can contribute to empirical literature in the following ways: firstly, it will help the management of insurance companies in identifying the factors which determine the success for general insurers in a developing country like Pakistan. Secondly, the management of general insurers will also be able to analyze the affect of recent macroeconomic uncertainties on their performance, such as political change after elections, rising inflation rate and high banking interest rate etc., which arise in uncertainty situation amongst local and foreign investors regarding government's economic policies. Thirdly, it will also guide the regulators to make policies to raise the performance level of the general insurance sector of Pakistan. Last but not the least, it will also assist investors at the stock market in identifying the real factors of performance which will help them to earn higher returns as studies has found positive relationship between stock prices and their performance level (Sufian & Majid, 2007). The remaining paper is arranged as follows: Section II will talk about the literature on the issue of performance. Methodological issues will be discussed in Section III. The results are given in Section IV and the paper ends with some concluding remarks along with some policy implications in Section V.

2. Literature Review. Empirical studies have examined several issues related to the performance of insurance companies. For instance, there are studies which have analyzed the performance and the organization structure of insurance companies (Lai & Limpaphayom, 2003), whereas some other studies have investigated the relationship between market liberalization and insurer's performance (Oetzel & Banerjee, 2006). There are also few studies which have investigated the determinants of performance for insurance companies. For instance, Al-Shami (2008) investigated the determinants of performance in the insurance companies of the UAE over the period 2004 to 2007. This study measured performance by dividing profits before tax by the total assets (ROA). It was found that the size and volume of capital were positively related with profitability, whereas the leverage and loss ratio were negatively related with the profitability of the insurance companies. Moreover, the study failed to find any significant relationship between profitability and the age of an insurance company.

Adam & Buckle (2003) investigated the determinants of performance in 47 Bermuda registered insurance and reinsurance companies over the period from 1993 to 1997. It was found that leverage and company type were positively related, whereas risk and liquidity were negatively related with the performance of the insurance companies. Moreover, size and scope variables were found negatively related with the performance of the insurance companies, but these results were insignificant. Another study by Hrechaniuk et al. (2007) examined the determinants of performance in Ukrainian, Lithuanian and Spanish insurance companies over the period from 1998 to 2005. It was found that investments, past performance and growth were positively related with the performance of non-life insurers whereas leverage was found negatively related with the performance of the insurers. But the study found mixed results for size and loss ratio.

There are studies which have examined the efficiency of insurance companies in Pakistan with the data envelopment analysis (Afza & Jam-e-Kausar, 2010a; Afza & Jam-e-Kausar, 2010b; Afza & Jam-e-Kausar, 2012). Instead of applying a mathematical programming technique, the present study will investigate the determinants of performance in the general insurance sector of Pakistan with the profitability ratios, as most of the managers and investors prefer profitability ratios as a performance measure instead of various parametric and nonparametric approaches due to lack of knowledge of such technical methods. Moreover, Nguyen (2006) considered profitability as one of the most important objectives of the firms because the goal of managers is to maximize their shareholder's wealth and the profitability is one of its important determinants. In addition, the present study will also investigate the impact of economic uncertainties in the country which have adversely affected the performance of non-life insurers in recent years.

3. Methodology. Present study measures the performance of general insurers in return on assets (ROA) and return on equity (ROE). The explanatory variables based on the empirical literature are size, investment, leverage, risk, past performance and age. Size has a significant importance in determining the profit of an insurer as large size allows insurers to diversify their risks effectively. Moreover, Hardwick (1997) suggests that large insurers are probably in a superior position to perform better as compared to small insurers because they can reduce the unit cost through an increase in their production. Therefore, present study is expecting a positive relationship of insurer's size with their performance. Size is measured as the natural log of total assets of an insurer by the following (Adam & Buckle, 2003).

Investments are measured as the ratio of total investments to total assets by the following (Hrechaniuk et al., 2007). This study is expecting a positive relationship of investments with insurer's performance because efficient utilization of higher investments leads to higher investment incomes which ultimately result in higher profitability of insurers. Leverage is measured as the ratio of total debt to total equity of an insurer by following (Al-Shami, 2008; Hrechaniuk et al., 2007). This study is expecting a negative relationship of leverage with the performance of general insurers because debt capital is more costly in Pakistan as compared to equity capital due to higher borrowing interest rate.

Diversification of risk is the prime objective of the general insurers to support business activities across the country and around the world. Insurers diversify their risk through pooling of their losses over a number of exposure units. If insurers have higher annual claims then it will not only increase the total cost as a result of an increase in loss ratio but also due to the higher claim's investigation and loss adjustment expenses. Therefore, we are expecting a negative relationship between risk and the performance of general insurers. This study has measured the risk as net claims to net premium ratio by the following (Adam & Buckle, 2003; Hrechaniuk et al., 2007).

Past performance is measured as last year's ROA and ROE ratios. This study included the lagged values with an aim to include the past performance of insurers because insurers with better performance in prior year are in a better position to be successful in the current year. Moreover, we also include the age of the firm in our study; it is measured as the difference between the year of establishment and year of study (2004-09). Present study is expecting a positive relationship of age with the performance of the insurers because more experience of an insurer gives it the opportunity to learn more from its past which results in more matured insurer. Finally, present study has also included a dummy variable to seize the effect of economic uncertainties in Pakistan in the year 2008 and 2009; dummy variable will be "1" for the year 2008 and 2009 and "0" otherwise. We are expecting a negative relationship of economic uncertainties with the performance of general insurers in Pakistan.

Model. To investigate the determinants of performance in the general insurance companies in Pakistan, this study has applied the two following models;

$$PR_{i,t} = \beta 1 + \beta 2SIZE_{i,t} + \beta 3INV_{i,t} + \beta 4LVRG_{i,t} + \beta 5RSK_{i,t} + \beta 6PPR_{i,t} + \beta 7\,AGE_{i,t} + \beta 8Decoun_{i,t} + \varepsilon_{i,t} \quad (1)$$

$$PR_{i,t} = \beta 1 + \beta 2SIZE_{i,t} + \beta 3INV_{i,t} + \beta 4LVRG_{i,t} + \beta 5RSK_{i,t} + \beta 6PPR_{i,t} + \beta 7\,AGE_{i,t} + \varepsilon_{i,t} \quad (2)$$

Dependent Variable (PR: performance measure):
ROA: Profit Before Tax/Assets (%)
ROE: Profit Before Tax/Equity (%)
Independent Variables:
SIZE: Natural log of Size
INV: Total Investments/ Assets (%)
LVRG: Debt/Equity (%)
RSK: Net Claims/Net Premiums (%)
PPR: (Past Performance)
LagROA: Lagged ROA (%)
LagROE: Lagged ROE (%)
AGE: Year of study - Year of establishment
Decoun: Dummy variable "1" for year 2008 & 2009 and "0" otherwise

Data. The financial data is collected from the annual reports of 30 general insurance companies in Pakistan over the period from 2004 to 2009. The study has included all the general insurance companies in Pakistan excluding the sole foreign and one private general insurer due to unavailability of the data. General insurers in our study represent more than 96% of both in terms of total assets and gross premiums. The descriptive statistics are given in Table 1.

Table 1. **Descriptive Statistics. General Insurance Companies in Pakistan**

Variable	Mean	S.D.
ROA	8.636	15.915
ROE	16.534	30.253
SIZE	13.836	1.393
INV	34.76	24.735
LVRG	136.801	117.32
RSK	46.287	19.625
LagROA	9.592	14.463
LagROE	19.185	27.679
AGE	36.524	21.525
n	166	

4. Empirical Results. The results for both models are presented in Table 2. It is found that size is positively and statistically significantly related with the performance of insurers which indicates that large size general insurers are performing better than small insurers. This result in consistent with the study of Al-Shami (2008) and it suggests that large insurers' higher access to market and lower costs make them more profitable. Investment is also found positively and statistically significantly related with the performance of the general insurers, this result is consistent with the study of Hrechaniuk et al. (2007). It indicates that the insurers with higher investment assets are in better positions to perform well as they can earn more returns on their invested assets.

Leverage is found negatively related with the performance of general insurers which suggests that higher leverage in firm reduces the profitability which ultimately results in lower performance of general insurers. This result is consistent with the study of Hrechaniuk et al. (2007) and Lai & Limpaphayom (2003). It suggests that debt capital is more expensive than equity capital as interest rates are grown in

Pakistan in recent years. Risk is found negatively related with the performance of general insurers but statistically insignificant. The negative relationship of risk is due to the higher loss as it results in lower profitability.

Past performance is found positively related with the performance of general insurers which is consistent with the study of Hrechaniuk et al. (2007). This result is as expected because the better past performance of general insurers leads to higher performance. Age is also found positively related with the performance of general insurers which indicates that higher past experience leads to higher present performance. Kashish & Kasharma (1998) also found a positive relationship between the age of insurance companies with their performance. The dummy variable "economic uncertainty" is found as expectedly negatively and statistically significantly related with the performance of general insurers. It suggests that uncertain conditions in Pakistan in the years 2008 and 2009 have adversely affected the performance of the general insurance sector of Pakistan.

For a more comprehensive analysis, present study has also analyzed the determinants of performance before the period of economic uncertainty (2004 to 2007) in Pakistan. Interestingly, it is found that the adjusted R-square of the regression model (2004 to 2007) is higher than the results of all the sampled period model. Moreover, the coefficients are also larger than the results of all the sampled period model. These results suggest that economic uncertain conditions in Pakistan have influenced the power of other conventional variables of performance. As almost all of the signs of the coefficients remain the same except the past performance for ROA which is statistically insignificant, it indicates that the relationship of size, investment leverage, risk, and age with the current performance of general insurers is the same in both study periods.

Table 2. **Determinants of Performance. General Insurance Companies of Pakistan**

Variable	(1)				(2)			
	ALL				2004-07			
	ROA		ROE		ROA		ROE	
	β	Sig	β	Sig	β	Sig	β	Sig
SIZE	0.223	0.011	0.211	0.017	0.235	0.010	0.158	0.086
INV	0.203	0.018	0.087	0.297	0.450	0.000	0.198	0.027
LVRG	-0.155	0.041	-0.015	0.843	-0.247	0.004	-0.034	0.674
RSK	-0.083	0.235	-0.045	0.524	-0.042	0.589	-0.059	0.469
PRR	-0.013	0.860	0.166	0.028	0.055	0.556	0.452	0.000
AGE	0.053	0.462	0.087	0.231	0.152	0.059	0.147	0.077
Decoun	-0.482	0.000	-0.457	0.000				
Adj R sq	0.333		0.335		0.516		0.506	
N	166		166		108		108	

5. Conclusion. Well performing general insurers is of significant importance for the development of any country. The main objective of general insurers is to protect businesses from various kinds of uncertainties which naturally arise due to their day-to-day business operations. Moreover, they also pool the savings of the policymakers and invest those in capital markets which ultimately contribute positively towards the development of any country. Therefore, general insurers have now become an integral part of the economy and it is very important to investigate the determinants of performance in the general insurance industry. Moreover, this study will also help managers to determine the overall performance of insurers. In addition, it will also assist the regulators in policy improvements for better performance of insurers.

In this paper, an attempt is made to know the real determinants of performance for general insurance companies of Pakistan over the period from 2004 to 2009. We find that insurers with large size, higher investments, more experience (age), lower leverage and improved past performance will perform better than those insurers with small size, lower investments, less experience in terms of their age, higher leverage and bad past performance. It is also found that higher risk decreases the performance of general insurers. Moreover, the results also suggest that the recent past is difficult for general insurers as the economic uncertainty has adversely affected their performance due to uncertain economic and political situation in Pakistan.

Based on the findings we suggest that general insurers have to recognize these problems which they faced in recent past. They can overcome these problems by introducing new and more innovative products for various promising sectors, such as agriculture sector, as the gross premium growth fell in recent years. Moreover, general insurers have to reduce their costs through cost effective measures, to revisit the way of doing business to identify the factors which have raised the costs. Furthermore, the government has to make some more positive steps to facilitate the general insurance industry, such as: reduction in interest rates, decrease in cession rate (reinsurance premium) etc. Finally, commercial banks need to facilitate those businesses which have insured assets to facilitate insurance industry in granting loans. In addition, it will also indirectly help banks to reduce their bad loans.

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