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Growth Opportunity of Insurance Industry and its Determinants in the Selected Countries of Asean

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Abstract: Insurance industry as part of the financial institutions is crucial as it plays essential roles to promote economic growth and development of the country by ensuring financial resources are allocated efficiently. Well-built financial essentials combined with industry strength are imperative for insurance-based companies to constantly perform healthy in their business. This study analyses the growth opportunity and its influencing factors of the insurance-based companies in the three regions of ASEAN namely Malaysia, Singapore and Indonesia covering a period from 2009-2013 to investigate the relationship between growth opportunity for the insurance industry with total investment income, net premium earned, claims and loss reserves, premium reserves, total assets and total liabilities as the specific factors of an insurance firm. Significant positive relationship are net premium earned and total assets to growth opportunities for the insurance industry, but there is negative relationship on total liabilities. This study suggests that, in collaboration with the integration under the Asean Economic Community (AEC), the preparation of Asean Insurance Council (AIC) to implement a 2 years master plan to drive the insurance industry's growth ought to implement a policy to ensure transparency in total liabilities such as claims liabilities by the insurance companies to ensure the soundness growth of the insurance industry.

Key words: Insurance industry growth, net premium earned, total assets, total, liabilities

INTRODUCTION

The expansion of the financial services industry has led the growth in developing countries due to its financial services for households and businesses as well as employment opportunities (Alhassan and Biekpe, 2015). Risk management services such as insurance which is able to guarantee households and businesses to minimise the uncertain downside risks is vital for a country to ensure its healthy growth in the economic. The significance of insurance service is not only narrowed to risk transfer, allocation and absorption but also the mobilisation and reinvestment of funds for the utilisation by financial markets to encourage the investment and growth induction (Alhassan and Fiador, 2014). The importance of insurance in China, Europe, Turkey, Korea and, etc., in the sectors of power, agriculture, property, health and liability suggested by Jin *et al.* (2014), Xing *et al* (2013), Wang *et al.* (2012), Janasova and Ardielli (2011), Brown *et al* .(2010), Gulcubuk and Gunes (2010) and Hong (2008) have undoubtedly shown that insurance plays crucial role to promote a stability of a country. Despite the apparent advantages of the insurance services to an economy, the penetration of the insurance among ASEAN countries still remain low.

Insurance industry had overcome many obstacles in their operating environments after the major reforms worldwide for over few decades. As insurance saturation in Asia is forecasted to increase, in collaborating with the integration under the Asean Economic Community (AEC), the Asean Insurance Council (AIC) is preparing to implement a 2 years master plan to drive the insurance industry's growth in the region 2.4% in 2013 to 7%. It was also claimed that the larger markets such as Singapore, Malaysia, the Philippines and Indonesia are more aggressive in approaching young talent. According to Julie Ng, Head of Insurance Ratings in RAM Rating Services, total premiums in life insurance have been enhanced by 10%, whereas general insurance had boosted 13% in the emerging Asia for the last decade. According to IMF, insurance industry in Malaysia reported for approximately 6% of Malaysia's total financial assets which is equivalent to 15% of national GDP. Furthermore, in terms of insurance penetration by

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premiums as a percentage of GDP, Malaysia ranks second in South East Asia, after Singapore. This has shown the fact that insurance industry in ASEAN could grow healthily and assisted by AIC with better master plan in the near future.

The objective of this research aims to analyse the growth of the insurance sector in Malaysia, Singapore and Indonesia and the factors that affect its growth. Three motivations give rise to this research. Firstly, studies such as Chang *et al*. (2014) and Lee (2011) were examining on the role of insurance towards finance and economics growth. They claimed that despite insurance is also part of the financial institutions that ensure stability of the economics, there is paucity literature study on the performance of insurance industry. Since, insurance industry in ASEAN has proven progressive expansion, there should be an investigation on the growth of the insurance sector and its determinants in the sample of ASEAN countries. Secondly, the research by Cheng and Lee (2013) studied the insurance-specific determinants that affect the growth of insurance industry Malaysia and found out that 2008 crisis did impact the performance of this industry. This paper is an extension of previous study to include the selected countries in ASEAN such as Malaysia, Singapore and Indonesia. Thirdly, ASEAN Insurance Council (AIC) is preparing to implement a two-year master plan to drive the insurance industry's growth in the region 2.4% in 2013 to 7%. This paper might provide an insight to AIC to consider the significant factors that influence the growth of insurance industry in ASEAN and as a consequence, it could implement an effective master plan to ensure the success of the insurance growth in the region.

Literature review: Hanson *et al.* (2011) and Born (2001) investigated that under different legal and regulatory monitoring, as a result of constrained on the functions of insurance companies, the regulatory policies which suppose to protect the insurance contract had turned into reverse consequences. This proposes that AIC should aware of the master plan to be implemented might have reverse consequences as the plan is for all the countries in ASEAN which these countries might not have the maturity or capacity in adapting the policy. Thus, this paper could be the preliminary study prior to the master plan implementation and contribute to AIC in making decision.

Research by Weib and Muhlnickel (2014) observed the relevant of to the stability of the financial institution. They also studied the company fundamentals and features of insurance business functions that grounded them to destabilise the entire financial sector. There was significant result that several insurers certainly donated to the U.S financial sector during the 2008 financial crisis. Christopher and coauthors studied the experience and contribution of international life and non-life insurers to systematic risk from 2000-2012. The result demonstrated that the contribution of insurance industry to the vulnerability of the financial system peaked during recent financial crisis. It concluded the big insurer players to be significant drivers of the insurance industry's exposure to systematic risk. These researches had confirmed that insurance industry did influence financial stability and strongly recommend us to study the growth of insurance industry.

Hamid and Osman had investigated the factors such as leverage, growth opportunities, expected bankruptcy costs, company size, managerial ownership, tax considerations and regulated effects are the determinants of corporate demand for takaful in Malaysia. However, there was insignificant result in growth opportunities of the corporations and the corporate decision on property takaful put a sign that takaful operators may wish to make better reflect of risk management needs of enterprises in their product innovation and market strategies. Therefore, in our study, the market to book value ratio will be used as a proxy for growth opportunities in line with previous studies. The market to book value ratio evaluates how much a company worth at present, in assessment with the amount of capital invested by current and past stockholders into it.

OECD Insurance highlighted that there are essential risks and challenges are facing the insurance industry. Some countries believe persistently low interest rates could be a main hazard for insurers. This pertains particularly to business with contracts providing guaranteed rates on contract basis, given the possible gap between interest income and guaranteed rates of return. This could result serious influence the solvency position of some insurers. Risks could be partially alleviated in countries when there is a ceiling guaranteed rate. Therefore, some insurers may choose to capture more risk in their investment portfolios. Hence, investment income could have a significant effect to the insurance industry growth.

Cummins (2000) said that capital allocation is of special attention to financial firms such as insurers. For such firms, the principal providers of debt capital (insurance reserves) are also the firm's principal customers. Unlike the holders of bonds and other (non-insurance) debt capital, insurance policyholders cannot protect themselves against the insolvency of specific debt issuers by holding a diversified portfolio.

Unlike the diversified bond investor, the typical policyholder relies upon one insurer for each type of protection purchased. Most insurance policies are purchased not as an investment but to protect against adverse financial contingencies. Thus, insolvency risk plays a special role in the insurance industry and capital is held to assure policyholders that claims will be paid even if larger than expected. It is also claimed that, capital allocation must consider both asset and liability risk and allow for co-variability between assets and liabilities. Hence, total assets and total liabilities could be the variables to determine the growth opportunity of insurance industry.

Chrysovalentis and coauthors explored the impact of regulations on profitability and risk-adjusted return on European insurer. They discovered an inverted U-shaped relationship between return on assets and regulations relating to capital adequacy, accounting and auditing requirements and disclosures to supervisors. These results were vigorous to manage for various country-specific qualities such as macroeconomic environment, stock market development, overall quality of institutions and legal origins. This provided an insight to a very large extent that the policy by regulator to oversight the soundness of insurance industry highly influence their performance to maintain their business at the same time to ensure the stability of the financial system.

In summary, our review on insurance industry in selected countries in ASEAN as in importance to ensure stability of financial system, approaches to determine the growth opportunity and its influencing determinants significance of the insurance companies' policies to the soundness of industry performance providing us the prospect to improve the past studies with their existed deficiencies. Therefore, our research by looking into the growth of insurance industry in the selected countries from ASEAN will add richly to the insurance studies literature.

MATERIALS AND METHODS

This study, is to investigate whether there is growth opportunity in Malaysia insurance industry. The data are obtained through Bloomberg and Annual Report of the companies. The data used are the public listed insurance companies in Malaysia (7 companies), Singapore (3 companies) and Indonesia (8 companies) for five years period from 2009-2013. These three countries are selected as IMF reported that these countries achieve the highest premium among the countries in ASEAN, IMF. This study would employ a cross-sectional and time-series regression model using panel data.

Kogan and Papanikolaou (2014) demonstrated the estimation of the growth opportunity with firm's asset composition in place which will vary over time. It also suggested that it is crucial to take into account of the fluctuation of the growth. The proxy used to measure the growth is market to book ratio where market book value ratio is the ratio of market value equity to the book value of the equity.

As proposed by Lee and Chang (2015) and Alhassan and Fiador (2014), a reasonable return from the investment instrument is necessary for the insurer to grow because insurers have the obligation to the insured. Thus, total investment income is used as independent variable to the insurers' growth.

Net premium earned, claims and loss reserves and premium reserves are insurance specific determinants and will distort the measurement of the pricing and indirectly affect the insurance business functionality (Liu *et al*., 2014; Pichler, 2015), the effect of these factors towards the growth of insurance are to be examined.

Cummins (2000) commented that, capital allocation must consider both asset and liability risk and allow for co-variability between assets and liabilities. Thus, total assets and total liabilities are to be employed to examine the growth opportunity of insurance industry.

The formulation of the model is insurance company growth opportunity = f (total investment income, net premium earned, claims and loss reserves, premium reserves, total assets, total liabilities). Hence, the following general model will be used to verify the factors affecting insurance growth opportunity. The general estimation model can be specified as follows: variable definitions:

$$\begin{aligned} MBVR_{it} = \alpha_0 + \beta_1 \ln TII_{it} + \beta_2 \ln NPE_{it} + \\ \beta_3 \ln CLR_{it} + \beta_4 \ln PR_{it} + \\ \beta_5 \ln TA_{it} + \beta_6 \ln TL_{it} + \varepsilon_{it} \end{aligned}$$

Where:

α_0	=	Intercept of mathematical model
β_1-β_6	=	Partial regression coefficients
MBVR	=	Market Book Value Ratio of insurance company as a proxy for growth opportunity
TII	=	Total Investment Income
NPE	=	Net Premium Earned
CLR	=	Claims and Loss Reserves
PR	=	Premium Reserves
TA	=	Total Assets
TL	=	Total Liabilities
ε	=	Error term

The hypotheses formed are as Table 1:

Table 1: Hypotheses of the models

Hypotheses	Variables	Null Hypotheses and Alternative Hypotheses
1	Total investment income	H_1: Total investment income encourages insurance growth. H_2: Total investment income does not encourage insurance growth (Lee, 2015; Alhassan and Chang, 2014)
2	Net Premium Earned	H_1: Net premium earned increases the size of insurance growth. H_2: Net premium earned does not increase the size of insurance growth (Diacon *et al.*, 2003)
3	Claims and Loss Reserves	H_1: Claims and loss reserves ensure the sufficient level of insurer's solvency to grow steady. H_2: Claims and loss reserves do not ensure the sufficient level of insurer's solvency to grow steady (Martin and coauthors
4	Premium Reserves	H_1: Premium reserves serve as conservative technique to ensure the growth stability of insurer. H_2: Premium reserves do not serve as conservative technique to ensure the growth stability of insurer (Vencappa *et al.*, 2013)
5	Total Assets	H_1: Increase in total assets of the insurer lead to enough capital to expand the business. H_2: Increase in total assets of the insurer does not lead to enough capital to expand the business (Cummins, 2000)
6	Total Liabilities	H_1: Increase in total liabilities cause the company insolvent and impede it from growing. H_2: Increase in total liabilities does not cause the company insolvent and impede it from growing (Cummins, 2000)

RESULTS AND DISCUSSION

Figure 1 shows the average MBVR is obtained from the sample of each country, it suggests that the growth of the insurance industry in ASEAN is growing. The return of the share of the companies could also attribute to its growth (Kogan and Papanikolaou, 2014). Meanwhile Singapore experienced drop from 2009-2012 but started to increase from 2012-2013. The drop may due to the financial crisis in 2008 and the recovery started from 2012 (Weib and Muhlnickel, 2014). Malaysia experienced fluctuation in the growth of insurance industry proposes that it is not expanding steadily. Prior to 2011, the fluctuation could probably due to catastrophe losses regionally and in 2012 Malaysia insurance industry started to improve. Based on the report by Marsh, it stated that the risk trend in Malaysia's insurance market firmed during 2012 following the catastrophe losses. The major event could probably due to heavy rain and caused flood disaster (Khalid, 2015; Chan, 1995). Besides, Indonesia's insurance industry showed a stable development. The figure also suggests that the growth in Singapore is the fastest and followed by Malaysia and Indonesia.

From Table 2, the maximum growth of insurer is from Singapore where its MBVR is 3.56, followed by Indonesia and Malaysia. Based on the result, Singapore obviously shows the highest value on total investment income, net premium earned, claims and loss reserves, premium reserves, total assets and total liabilities. It proposes that Singaporeans are aware of the importance of insurance and support insurance product which will assist the insurers in Singapore expand superior than Malaysia and Singapore. This could be due to the advanced country such as Singapore requires insurance to mitigate risk more than developing countries such as Malaysia and Indonesia. Although, the maximum of insurer's MBVR in Indonesia is higher than Malaysia, the other six factors

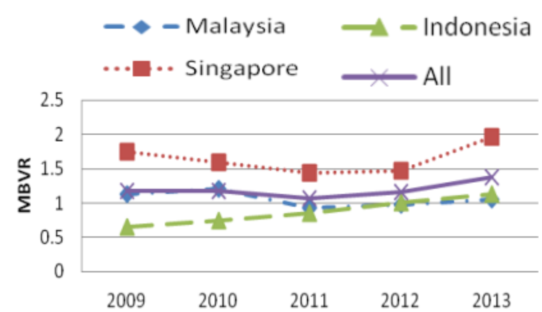

Fig. 1: Average of countries' MBVR

that influence the growth of insurer in Indonesia are lower compared to Malaysia. This proposes that the large populations (approximately 255 millions) in Indonesia compared to Malaysia (approximately 28 millions) are supporting the growth of insurance business rather than the stronger financial figure to support its growth.

As shown in Table 3, the factors that influence of the growth of insurance companies are varied for different countries. In Malaysia, total assets and total liabilities in insurance companies significant influence their growth. This result support the hypotheses that the larger the total assets, the more sufficient its capital to aid the expansion of insurance companies. Furthermore, the higher the total liabilities, it will cause the company to suffer insolvency problem which will impede it from growing further. In Singapore, the results do not show significant level of the variables to influence the development of the insurance companies. This could be probably due to other factors which are not involved in the study would affect its growth, as it can be seen that the constant is significant at 10%.

For Indonesia, net premium earned and total assets show significant result to control the escalation of the insurance industry. This outcome could further support that large population of Indonesian support the expansion

Table 2: Descriptive results

Countrties	Variables	N	Min.	Max.	Mean	SD
Malaysia	MBVR (ratio)	35	0.31	2.93	1.10	0.71
	TII (USD'mil)	35	1.94	92.62	34.81	26.40
	NPE (USD'mil)	35	74.36	906.77	277.83	216.55
	CLR (USD'mil)	35	0.05	667.15	224.70	212.77
	PR (USD'mil)	35	57.56	1,159.76	350.37	286.66
	TA (USD'mil)	35	228.48	3,278.61	1,328.34	835.94
	TL (USD'mil)	35	181.37	2,705.88	1,082.91	772.37
Singapore	MBVR (ratio)	15	0.69	3.56	1.64	0.79
	TII (USD'mil)	15	7.17	14,266.13	4,887.21	6,164.41
	NPE (USD'mil)	15	26.50	46,699.39	15,071.37	18,857.38
	CLR (USD'mil)	15	67.98	261,975.55	72,395.26	107,250.72
	PR (USD'mil)	15	22.50	23,349.69	6,748.12	9,936.95
	TA (USD'mil)	15	377.52	539,938.95	163,707.17	211,832.21
	TL (USD'mil)	15	238.55	523,951.10	157,938.75	205,722.21
Indonesia	MMBVR (ratio)	40	0.18	3.23	088	0.52
	TII (USD'mil)	40	0.21	7.66	2.29	2.44
	NPE (USD'mil)	40	5.81	75.51	25.83	19.09
	CLR (USD'mil)	40	0.01	39.52	4.96	8.48
	PR (USD'mil)	40	2.36	27.59	9.80	7.11
	TA (USD'mil)	40	10.63	179.72	66.72	49.24
	TL (USD'mil)	40	5.06	115.22	37.08	30.39
All three countries	MMBVR (ratio)	90	0.18	3.56	1.09	0.70
	TII (USD'mil)	90	0.21	14,266.13	829.09	3,051.01
	NPE (USD'mil)	90	5.81	46,699.39	2,631.42	9,341.67
	CLR (USD'mil)	90	0.01	261,975.55	12,155.46	50,431.78
	PR (USD'mil)	90	2.36	23,349.69	1,265.30	4,654.91
	TA (USD'mil)	90	10.63	539,938.95	27,830.76	103,890.45
	TL (USD'mil)	90	5.06	523,951.10	26,760.74	100,687.61

Table 3: Regression result on the insurance companies' growth

Model	Malaysia	Singapore	Indonesia	All 3 countries
Constant	-2.4060	-22.8518	-2.8082	-1.7072
(t-value)	-0.5920	-2.0612	-0.8750	-1.5645
(Sig.)	0.5586	0.0732*	0.3879	0.1215
TII	0.1731	-0.9371	-0.0057	0.0905
(t-value)	0.9712	-0.7468	-0.0302	0.8024
(Sig.)	0.3398	0.4766	0.9761	0.4246
NPE	-0.3630	-3.0615	0.5480	0.2822
(t-value)	-0.8092	-1.6100	2.2359	2.1320
(Sig.)	0.4252	0.1461	0.0322**	0.036**
CLR	-0.0254	1.2042	-0.0062	0.0097
(t-value)	-0.2927	1.1541	-0.1172	0.2553
(Sig)	0.7719	0.2818	0.9074	0.7991
PR	0.2032	-2.2022	0.1160	-0.0234
(t-value)	0.5171	-1.2686	0.3885	-0.3295
(Sig)	0.6092	0.2402	0.7001	0.7426
TA	2.1804	5.7979	-0.8653	-0.2239
(t-value)	2.6802	0.9423	-2.1908	-0.6784
(Sig)	0.0122**	0.3736	0.0356**	0.4994
TL	-2.0118	-0.4780	0.4741	0.0419
(t-value)	-3.1364	-0.0844	-0.8750	0.1622
(Sig)	0.004***	0.9348	0.3879	0.8715
R^2	0.3303	0.8636	0.3218	0.3005
F-stat	2.3013	8.4404	2.6095	5.9435
(Sig)	0.0623*	0.0041***	0.0350**	0.0000***

*,**,***10, 5, 1% Sig. level 5

of insurer. This is because the more insurance products are sold, th net premium earned will increase as well which will ultimately improve the sustainability of the insurers. On the hand, result in Indonesia also supports that the insurance companies able to expand its business as its capital increases.

Taking these three countries as the representative of the insurers in ASEAN, the results show that net premium earned is strongly supports the growth of the insurance companies. This undoubtedly suggests that the premiums earned from the sales of the insurance product will powerfully support the growth of the insurance sector in ASEAN.

Overall, the six variables used in the study do affect the growth of insurance industry as the significance of the F-statistic for all the models such as each country individually (Malaysia, Singapore or Indonesia) and combination of three countries. Therefore, the policy makers should take into account of all these variables in their decision making for the business benefits.

CONCLUSION

This study examines the growth of insurance industry in selected countries from ASEAN, for instance Malaysia, Singapore and Indonesia. It also determine the factors that influence the growth of the insurance industry with the determinants of total investment income, net premium earned, claims and loss reserves, premium reserves, total assets and total liabilities.

Table 4: List of public listed insurance companies in Malaysia, Singapore and Indonesia

Countries	Insurance companies		
Malaysia	LPI	MAA	
Allianz	Manulife Takaful	MNRB	P and O
Singapore	Great Eastern	Prudential	Sing Reinsurance
Indonesia	Asuransi Bina Dana Arta	Asuransi Harta Aman Pratama	Asuransi Multi Artha Guna
	Asuransi Bintang	Asuransi Dayin Mitra	Asuransi Jasa Tania
	Asuransi Ramayana	Lippo General Insurance	

The discovery illustrates that Singapore is the fastest growing insurance industry among the countries in ASEAN. Thus, Asean Insurance Council could execute some policies to improve the insurance companies in other ASEAN countries in order to growth the insurance industry in ASEAN consistently.

Our findings recommend that the factors that affect of the growth of insurance companies are diverse for different countries. There are three factors out of six factors in the study provide significant result to influence the growth of insurance company, namely net premium earned, total assets and total liabilities. This is supported by Vencappa *et al.* (2013) and Cummins (2000).

Sincenet premium earned, total assets and total liabilities come into sight to play important roles in determining the growth opportunities of insurance industry in ASEAN, there should be execution of policy to have proper monitory on these factors. Furthermore, total liabilities which consist majority on claims liabilities show negative impact to the growth of insurance companies, therefore, in collaboration with the integration under the Asean Economic Community (AEC), the preparation of Asean Insurance Council (AIC) to implement a two-year master plan to drive the insurance industry's growth ought to implement a policy to ensure transparency in total liabilities such as claims liabilities by the insurance companies to ensure the soundness growth of the insurance industry. Lastly, the insurance companies themselves should also focus on the concern on claims liabilities and manage it with more conservative to ensure the stability of the insurance companies' growth at the same time to achieve shareholder wealth maximisation which stands as one of the main objectives of the public listed company.shown in Table 4.

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