Improvement of Life Insurance Policyholders' Protection Corporation with Emphasis on Consistency with the Vietnamese Market

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Abstract

What is needed for the Life Insurance Policyholders' Protection Fund in Vietnam is to review and improve its system so that it is consistent with any anticipated changes of the insurance market in Vietnam, by taking advantage of the experience of the Life Insurance Policyholders' Protection Corporation in Japan where large scale bankruptcies have occurred in series. More specifically, the key points are: (i) introducing a scheme where contract transfer is proceeded with even in the event that no savior insurance company steps forward, and placing emphasis on the indemnification of coverage-based insurance products in which the market is expected to grow, (ii) increasing the burden on policyholders of conventional deposit-based products, for example, a reduction of assumed interest rates, in an effort to increase necessary financial resources, (iii) developing professionals who are specialized in evaluating the values of bankrupt insurance companies and (iv) promoting thorough information disclosure and validating the soundness index.

1. Introduction

The life insurance market in Vietnam is comprised of 14 companies, and sustains rapid growth, although its size is yet small. Since the nation's population as of 2013 is 92 million, its potential market size is quite large. The market is overwhelmingly dominated by foreign affiliated companies, with the exception of just one Vietnam capitalized insurance company (71% owned by the Ministry of Finance), which presents a largely different structure from that of China where the market is dominated by nationally capitalized companies.

Although there is no single known case of bankruptcy of a life insurance company in Vietnam, in preparation for potential life insurance company bankruptcies a life insurance policyholder protection system will be required in the future because the nation's life insurance market is rapidly expanding in line with the increasing national income. Coincidentally, the Law on Insurance Business was amended in December 2011 in Vietnam, and the bill concerning the establishment of the "Insurance Policyholders' Protection Fund" passed (effective on February 16, 2012).

This paper discusses, from the viewpoint of consistency with the life insurance market in Vietnam, whether the system of the Life Insurance Policyholders' Protection Fund of the country will work sufficiently in 10 years time when the market grows significantly. The need for a system of the Life Insurance Policyholders' Protection Fund is at present not so large, as the life insurance market in Vietnam is small in size and the majority of the policyholders in the market are relatively high income earners. In the future however, when a large number of common people, who do not have as much information as that owned by insurance companies, purchase insurance policies and the Vietnamese life insurance market opens to the general public, the Life Insurance Policyholders' Protection Corporation will play an important role. In the country, an insurance policy is regarded as one of saving products, and the Life Insurance Policyholders' Protection Corporation is so designed that its focus is placed on protection of "deposit-based insurance" at the present. In terms of insurance, in advanced Asian countries such as Japan and Taiwan in contrast, "coverage-based products" which protect households in the event of loss of earners have become the mainstream of the life insurance market in accordance with an increase in national income. The Life Insurance Policyholders Protection Corporation in Japan is designed mainly to protect coverage-based insurance policies.

The Japanese government hastily established the "Life Insurance Policyholders Protection Fund" after the bankruptcy of an insurance company was anticipated, and its system failed partly due to lack of resources. The government newly set up the "Life Insurance Policyholders' Protection Corporation."

The lack of resources of the former organization was attributable to the adopted approach where all policyholders were equally protected. The structure of an insurance policyholder protection corporation differs depending on whether protection is provided to policyholders of coverage-based insurance or deposit-based insurance policies.

Therefore, in order to discuss the Life Insurance Policyholders Protection Corporation in

Vietnam, it is necessary to assess the future of the life insurance market in Vietnam, more specifically the coverage-based insurance market. What is important for the Life Insurance Policyholders' Protection Corporation is to pursue high consistency with the market.

The purpose of this paper is "pointing out problems of the current Life Insurance Policyholders' Protection Fund in Vietnam and proposing solutions based on the prediction of the life insurance market in Vietnam in 10 years time and the experience of the operation of the Life Insurance Policyholders' Protection Corporation in Japan."

This paper is composed of seven sections: Section 1: Introduction; Section 2: Outline of Insurance Policyholders' Protection Funds in Vietnam and Japan; Section 3: Bankruptcy proceedings taken by the Insurance Policyholders' Protection Corporation of Japan; Section 4: Current state of the life insurance market in Vietnam; Section 5: Prediction for the life insurance market in Vietnam; Section 6: Improvements in the Life Insurance Policyholders' Protection Corporation in Vietnam and Section 7: Conclusion.

2. Outline of Insurance Policyholders' Protection Funds in Vietnam and Japan

The framework of Insurance Policyholders' Protection Fund in Vietnam (hereinafter referred to as the "Protection Fund") is prescribed in the "Provision No. 123" which was established on December 28, 2011 in association with the amendment of the Insurance Business Act. The details of the Protection Fund, including the scheme and indemnification, are specified in "Order No. 101" dated July 30, 2013. This order was implemented on September 15, 2013, and the Protection Fund was officially established in Vietnam. The operation and management of the Protection Fund is conducted separately for life insurance businesses and nonlife insurance businesses, both under the Vietnam Insurance Association. All insurance companies are obliged to participate in the fund.

The Protection Fund is used to protect the rights of policyholders if an insurance company becomes insolvent or bankrupt. When insurance contracts are transferred from a bankrupt insurance company to a company that bails out the bankrupt insurance company (hereinafter referred to as the "savior insurance company"), the Protection Fund provides necessary financial support to the savior insurance company. The Protection Fund covers 90% of the policy reserves for life insurance, with a limit of 200 million dong per contract. Depending on the type of insurance products, any of the following payment rules apply: (1) if an insurance benefit is not paid in spite of the occurrence of an insured event, the amount corresponding to the right specified in the insurance contract to the extent of the upper limit; (2) for an insurance contract which has a high saving propensity or cash surrender value, the cash surrender value at the time of the announcement of insolvency or bankruptcy; (3) for a coverage based insurance contract without any cash surrender value, the amount corresponding to the paid premium; and (4) for an investment based insurance contract in force, the balance in the account of the policyholder as of the time specified in (2) above shall be paid.

The Protection Fund is financially supported by contributions that are paid by insurance

companies in advance. The upper limit of the contribution for each year is 0.3% of the total amount of direct writing premiums received by an insurance company during the previous fiscal year, and the amounts to be paid by respective insurance companies are announced by the Ministry of Finance by April 30 each year. This pre-funded system is continued until the capital of the Protection Fund reaches the levels of 5% of the total assets of all nonlife insurance companies and 3% of the total assets of life insurance companies. Insurance companies are supposed to pay 50% of the contribution by June 30 and the remaining 50% by December 31.

The core functions of the Protection Fund are the management committee, the steering committee and the audit committee. The management committee primarily acts as the decision-maker of the Protection Fund. The chair of the committee is assumed by the chairperson of either of the Insurance Associations, and committee members are representatives of the Ministry of Finance and the top three companies of both life insurance and nonlife insurance businesses.

The steering committee is mainly engaged in calculations and payments of insurance benefits and cash surrender values to policyholders and savior insurance companies. The chairperson of the committee is a vice chairperson of an Insurance Association and members are the executive secretary of an Insurance Association and representatives of the fourth to sixth largest insurance companies from both life insurance and nonlife insurance businesses.

The audit committee is mainly responsible for auditing the activities of the Protection Fund. The chairperson of the committee is se-lected by the votes of member companies and the management committee. Committee members are representatives of the seventh and ninth largest companies from both life insurance and nonlife insurance businesses.

The insurance policyholder protection system in Japan formally started with the "Insurance Policyholders' Protection Fund" which was established when the new Insurance Business Act was implemented in 1996. The Insurance Policyholders' Protection Fund was designed to provide financial support to insurance companies which act as saviors for bankrupt insurance companies, and its system has a better transparency than the former relief system (established in 1940) by which the government ordered compulsory relief. However, the following three problems emerged in relation to the protection fund when Nissan Mutual Life Insurance Co. (hereinafter referred to as "Nissan Life") went bankrupt in 1997: (i) the financial support to a savior company is limited to 200 billion yen and no other support; (ii) if no company comes up as a savior company, no financial support is provided; and (iii) participation in the Insurance Policyholders' Protection Fund is not mandatory.

In fact, due to the absence of savior companies, the Life Insurance Association of Japan had no choice but to establish "Aoba Life" as its own subsidiary company in order to have it take over the insurance contracts from Nissan Life. The shortfall of Nissan Life exceeded 300 billion yen, which forced the protection fund to exhaust its funds as it paid the upper limit of 200 billion yen to support the insurance company. Furthermore, foreign affiliated companies did not participate in the Insurance Policyholders'

Protection Fund, and Japanese companies were required to make larger contributions.

Subsequently, the "Insurance Policyholders' Protection Fund" was abolished in December 1998 and replaced by the "Insurance Policyholders' Protection Corporation (hereinafter referred to as the "Protection Corporation"). The Life Insurance Policyholders' Protection Corporation and the Non-life Insurance Policyholders' Protection Corporation are different organizations, and both are intended to protect policyholders by providing financial support so that insurance contracts and other activities of bankrupt insurance companies are transferred, in each of which every insurance company was mandated to participate.

The financial support applies to all domestic direct insurance contracts, except those that have accounts of performance-linked investments and reinsurance contracts. The calculation method of the indemnification rate varies depending on whether the assumed interest rate of an insurance contract is high or not. The indemnification rate for the latter is 90% of the policy reserve of the relevant contract. The rate for the former is to be calculated by deducting the exemption rate from 90% (with a lower limit) of the policy reserve.

Under the new system, if no insurance companies assume insurance contracts of a bankrupt insurance company, (1) the Protection Corporation itself takes over the transfer of insurance contracts of the bankrupt insurance company, or (2) the Protection Corporation sets up a succeeding insurance company and causes it to take over the contracts from the bankrupt company. The main purpose of the succeeding insurance company is to take over insurance contracts through a transfer of contracts or a merger of the bankrupt insurance company, and manage the transferred insurance contracts. The succeeding insurance company is a subsidiary of the Protection Corporation, which owns 50 percent or more of the voting rights. The bankrupt insurance company may request financial assistance from the Protection Corporation (through donation of money or purchase of its assets) simultaneously when it requests the transfer. The financial assistance may be provided even when insurance contracts are transferred after a succession or takeover (re-succeeding or re-transfer) is performed.

In the case where an insurance company serves as a savior, the Protection Corporation provides financial assistance in relation to the transfer of insurance contracts from a bankrupt insurance company to the savior insurance company and other activities to cover the policy reserves of the relevant insurance contracts up to the specified percentage. This includes "transfer of insurance contracts," and "merger" or "acquisition of a bankrupt company's shares by a savior insurance company or others (subsidization)."

The financial assistance is provided by donation of money, purchase of assets and other methods. The amount of the financial assistance is calculated from: (i) the policy reserves, etc. of the bankrupt company multiplied by the applicable indemnification rate, (ii) minus the assets (including goodwill) which are determined by the Protection Corporation to correspond to the policy reserves, etc. of the bankrupt insurance company, and (iii) plus the amount corresponding to estimated costs needed for the transfer, etc. of insurance contracts that are approved by

the Protection Corporation.

The Protection Corporation is funded by contributions by member insurance companies which are obliged to continue paying them each fiscal year until the contributions reach the amount specified in the articles of incorporation of the protection fund. The financial resources are contributions paid in advance, and the limit of the accumulated amount of the protection funds and the amount of the annual contributions are stipulated to be 400 billion yen and 40 billion yen, respectively. If the cost required for the financial assistance, etc. exceeds the accumulated amount, the Policyholders' Protection Corporation is able to borrow from financial institutions the necessary amount up to a ceiling of 460 billion yen upon approval from the Prime Minister or the Minister of Finance. Government guarantees are also available as appropriate.

Furthermore, in preparation for cases where the cost in question and the loan balance of the Protection Corporation exceeded 460 billion yen, a system was established to allow the Protection Corporation to receive financial support from the government in the amount corresponding to all or part of the cost required for bankruptcy proceedings for a member insurance company during the period from April 2006 to March 2012, to the extent of the amount set by the budget, upon approval from the Prime Minister or the Minister of Finance, for legal requirements.

The protection fund had a system in which a shortfall of a bankrupt insurance company was basically covered by a savior insurance company and the protection fund, however, under the new system, the Protection Corporation covers a shortfall in cooperation with a savior insurance company and policyholders, which allows the Corporation to take reorganization proceedings and include ordinary reorganization claims and labor claims into its financial resources.

3. Bankruptcy proceedings taken by Policyholders' Protection Corporation of Japan

Due to the sharp decline and long-term downturn of interest rates and stock prices, seven life insurance companies, including Nissan Life went bankrupt in series during a period from 1997 and 2001. In October 2008 after Lehman's Collapse, Yamato Life also failed. The bankruptcy proceedings of these eight companies are outlined in Table 1. Because of space limitation, this section only discusses the cases of Nissan Life, the first company for which bankruptcy proceedings were taken under the Insurance Business Act, and Chiyoda Life, a company treated under the Court-guided Rehabilitation Law.

Nissan Life was ordered a suspension of operations and collapsed in April 1997 as a result of the massive sales of personal pension products with high assumed interest rates and failure in asset management including excessive stock investment. The shortfall amounted to about 302.9 billion yen. Since no companies took over the insurance contracts of Nissan Life, The Life Insurance Association of Japan established "Aoba Life" as its own subsidiary, to which the protection fund provided financial assistance in the amount of 200 billion yen. While the reserves for the policies in force were fully protected, assumed interest rates for all personal pension and personal insurance plans were reduced to 2.75%. As an attempt to pre-

Table 1: Bankruptcy proceedings for Japanese life insurance companies

Unit: 100 million yen

Name	Nissan (Mutual)	Toho (Mutual)	Daihyaku (Mutual)	Taisho (Stock)	Chiyoda (Mutual)	Kyoei (Stock)	Tokyo (Mutual)	Yamato (Stock)
Proceedings		Under Insurance Business Act				Under the Corporate Reorganization Act 2002			
Date of bankruptcy	Apr.25, 1997	June 5, 1999	June 1, 2000	Aug. 29, 2000	Oct. 13, 2000	Oct.23, 2000	Mar 31 2001	Oct. 17, 2008
Assets	18,227	21,900	13,000	1,545	22,330	37,250	6,900	1,949
Liabilities	21,256	28,400	16,176	1,910	28,280	44,145	7,632	2,592
Solvency	▲3,029	▲6,500	▲3,177	▲365	▲5,950	▲6,895	▲731	▲643
Goodwill	1,232	2,400	1,470	70	3,200	3,640	325	32
Financial ad	2,000	3,663	1,450	267	0	0		277
Succeeded by	Prudential	AIG Edison	Manulife	Yamato Life	AIG Star	Gibraltar	T&D Financial	Prudential
Reduction of policy reserve	None	90%	90%	90%	Lowered to 90%	Lowered to 92%	None	Lowered to 90%
Assumed rate	2.75%	1.50%	1.00%	1.00%	1.50%	1.75%	2.60%	1.00%
Early cancellation reduction	For 6.5 years	For 8 years	For 10 years	For 9 years	For 10 years	For 8 years	For 10.5 years	For 10 years

Note: "Mutual" shows mutual life insurance company; "Stock" shows stock life insurance company.
Source: Finance Service Agency (2008).

vent the funds from flowing out, a system was also introduced, by which, for early cancellations, the cash surrender value was reduced.

The burden of policyholders was reduced up to the 100% protection of the policy reserves and to the assumed interest rate of 2.75%, which is not so low compared to the prevailing level of interest.

Chiyoda Life, in contrast, was subject to reorganization proceedings, instead of the conventional bankrupt proceedings under the Insurance Business Act. With respect to liability reduction, in addition to the policy reserves, ordinary reorganization claims and labor claims that are usually prioritized were also cut down. To cover the shortfall of approximately 595 billion yen, the policy reserves were reduced to 90% and the assumed interest rates to 1.50% and a 100% cut of ordinary reorganization claims and a 25-38% cut in labor claims followed. Since the goodwill was determined as 320 billion yen, no financial assistance was provided by the Protection Corporation. In this case, a great burden was imposed on policyholders while efforts were exerted so that the shortfall was made up with money from various sources.

The revenue from insurance premiums of these eight companies accounted for 18% of the total revenue of the market and their failures brought a great impact on the entire population of Japan. When insurance companies went bankrupt, the nation and industry were faced with the serious challenge of determining which life insurance policies should be protected with the limited resources. Since death coverage products, which are designed to support remaining family members in the event of death

of heads of households, were massively sold in Japan, the government developed the scheme to protect not the insurance products, with their emphasis on deposit, but those with emphasis on coverage. The framework of a policyholder protection corporation is determined by the characteristics of the life insurance market and the type of insurance products to be preferentially protected in the country. The Life Insurance Policyholders' Protection Corporation in Vietnam should be also operated consistent with the size of the Vietnamese life insurance market in the future; in particular, that of the market of death coverage insurance products.

The authors would like to discuss a Life Insurance Policyholders' Protection Corporation that is suitable for the life insurance market in Vietnam, based on the experience of Japan which addressed failures of many large life insurance companies. Let's look at the current and future life insurance market in Vietnam in the next section.

4. Current state of the life insurance market in Vietnam

The life insurance business in Vietnam started when Bao Viet, a non-life insurance company expanded its business to the life insurance market in 1996 (privatized in 2007 and 18% stock acquired by Sumitomo Life in 2012). Foreign-affiliated domestic companies and 100% foreign companies started to rush into the market in 1999. As of March 2014, there are only two 100% domestic and foreign-affiliated domestic life insurance companies, and all the remaining eleven companies are fully owned by foreign life insurance companies. In the background of a market dominated by foreign life insurance companies, there is consideration

that (1) it is not easy for Vietnamese domestic companies with small capital bases to enter into the life insurance business which requires large capital bases, and (2) foreign companies have superior capabilities in product and sales channel development, which contribute to the growth of the life insurance market in Vietnam. In fact, foreign companies that entered into the life insurance market in 2000 and thereafter contributed to the growth of the market, including the diversification of life insurance products. As shown in Table 2, the premium revenue, or sales of insurance companies, in 2012 is 880 million dollars, which account for 0.03% of the total premium revenue in the world. The per capita premium revenue is 9.8 dollars, one-four hundredth of that of Japan. The revenue of the Vietnamese insurance market is one-tenth of the China market that is also in the developing stage, and yet small in size compared with markets in other Asian countries. However, the increase in the premium revenue in Vietnam during the decade from 2003 to 2013 is significant; 2.66 times larger than that in 2003 on a dollar basis, and 2.96 times on a local currency basis, whereas Japan, the U.S. and Europe grew about 1.5 times larger than the same year. The insurance market in Vietnam is highly likely to rapidly grow as its economy size expands.

As illustrated in Figure 1, the premium revenue of Vietnam in 2012 is 18.4 trillion dong and steadily grows at an average annual growth rate of 13.8% from 2006 to 2012. A double-digit increase continued except in 2005 and 2006. The reasons for the slowdown in those two years are that (1) the interest rates of insurance products dropped below the interest rate level of bank deposits, and real assets such as gold,

**Table 2: International comparison of Vietnam life insurance market**

		Premium revenue (P:100m$)	Share (in world market, %)	Against nominal GDP (%)	Per capita (dollars)	Premium change (1)	Premium change (2)
2012	North America	619,538	23.64	3.57	1776.8		1.23
	Europe	876,444	33.44	3.89	996	-	1.50
	Asia	957,712	36.54	4.09	229.8		1.83
	Japan	524,372	20.01	9.17	4125.5	1.01	1.38
	China	141,208	5.39	1.70	102.9	3.31	4.36
	Vietnam	882	0.03	0.63	9.8	2.96	2.66
2003	North America	503,759	30.12	4.25	1565.7		
	Europe	584,705	34.96	4.64	726.9		
	Asia	522,340	31.23	5.74	140.1		
	Japan	381,335	22.8	8.61	3002.9		
	China	32,422	1.94	2.30	25.1		
	Vietnam	331	0.02	0.87	4.1	—	—

Note: Premium change (1) shows times increased from 2003 on a local currency basis; Premium change (2) shows times increased from 2003 on a dollar basis.
Source: Swiss Re (2004, 2013)

when insurance policies with a high saving propensity signed around 2000 reached maturity, and consequently enormous numbers of existing contracts were cancelled in those years, and (2) embezzlement of premiums by an insurance sales person was discovered, which spread distrust of insurance companies among consumers. The proportion of premium revenue from endowment insurance and pension products in the total premium revenue declined below the level of 50% for the first time in 2007. This fraud case, however, contributed to the shift from sales of conventional deposit-based products to coverage-based insurance products such as whole life insurance and term insurance, and also led to the establishment of an information sharing system for sales personnel by the Insurance Association. Thus, the Vietnamese life insurance market is young, and the product composition and sales channel will be subject to dramatic change. This is why looking at the future market of life insurance products is so important when the system of the Life Insurance Policyholders' Protection Corporation is explored.

The trend of product diversification is demonstrated more clearly by the figures of product sales of each company. Figure 2 shows the trend of the coverage index of leading insurance companies in Vietnam. The ratio of security to premium is calculated by dividing the total value of insurance coverage (total amount of insurance in force) by total premium revenue. A larger index value indicates the growing needs of coverage-based products. The indexes of the three companies, ACELife, AIA and Dai-ichi Life, have sharply increased since 2008, which denotes that they have focused on

Figure 1: Changes in insurance premium paid-in and product line in Vietnam
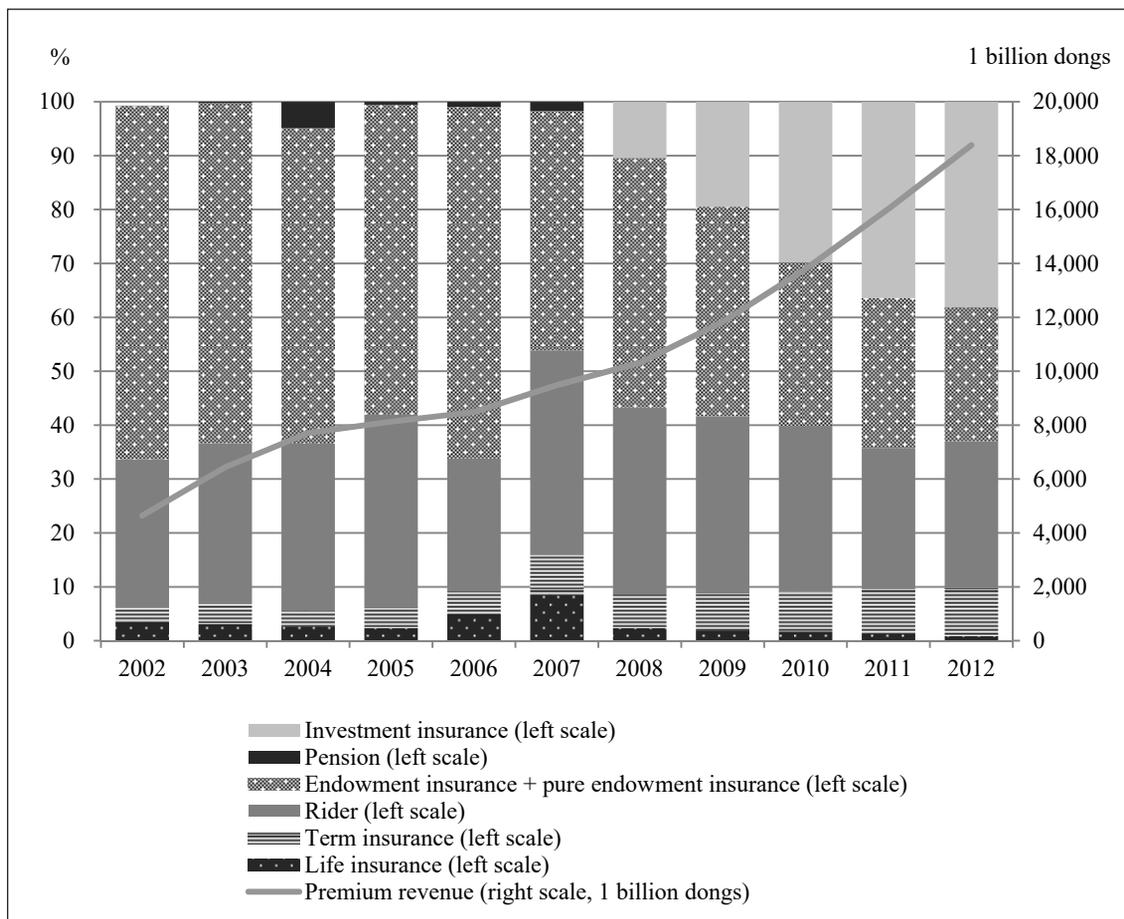
Source: Data compiled from The Life Insurance Association of Japan; Life Insurance Fact Book (1979-2012).

sales promotion of coverage-based products. In particular, Dai-ichi Life and AIA show double to triple increases. Coverage-based insurance products sharply increase when consumers begin to recognize the risks associated with their families in line with the increase in national income. Coverage-based products bring high profit, and thus are what insurance companies are willing to primarily and strategically promote when the needs emerge in the market. On the other hand, the remaining three companies

do not show the same trend, and therefore, the diversity of the sales strategies of the insurance companies is observed.

In the following paragraphs, let's look at the life insurance market in Vietnam in comparison with the insurance market in Japan in its long history.

Great differences are observed when the economy and market sizes of Vietnam are compared with those of Japan at present, but not so many differences are detected between

Figure 2: Trend of "Coverage Index" of life insurance company in Vietnam
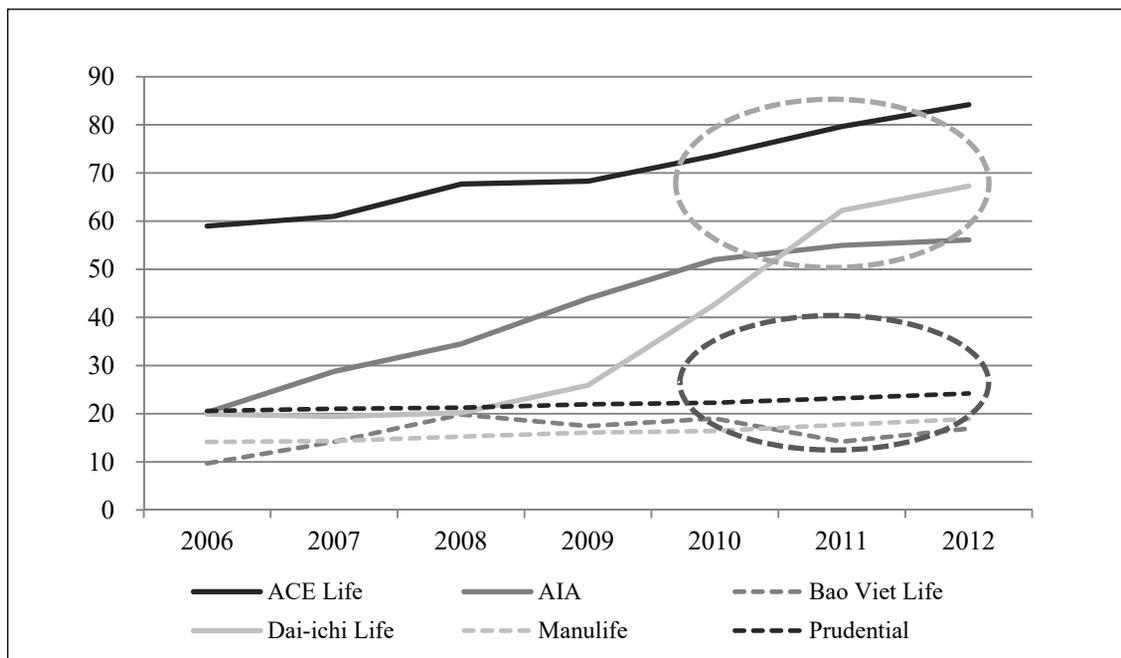
Note: The coverage index is calculated by dividing the total value of insurance in force by premium revenue. A larger index value indicates more preference for coverage based products.
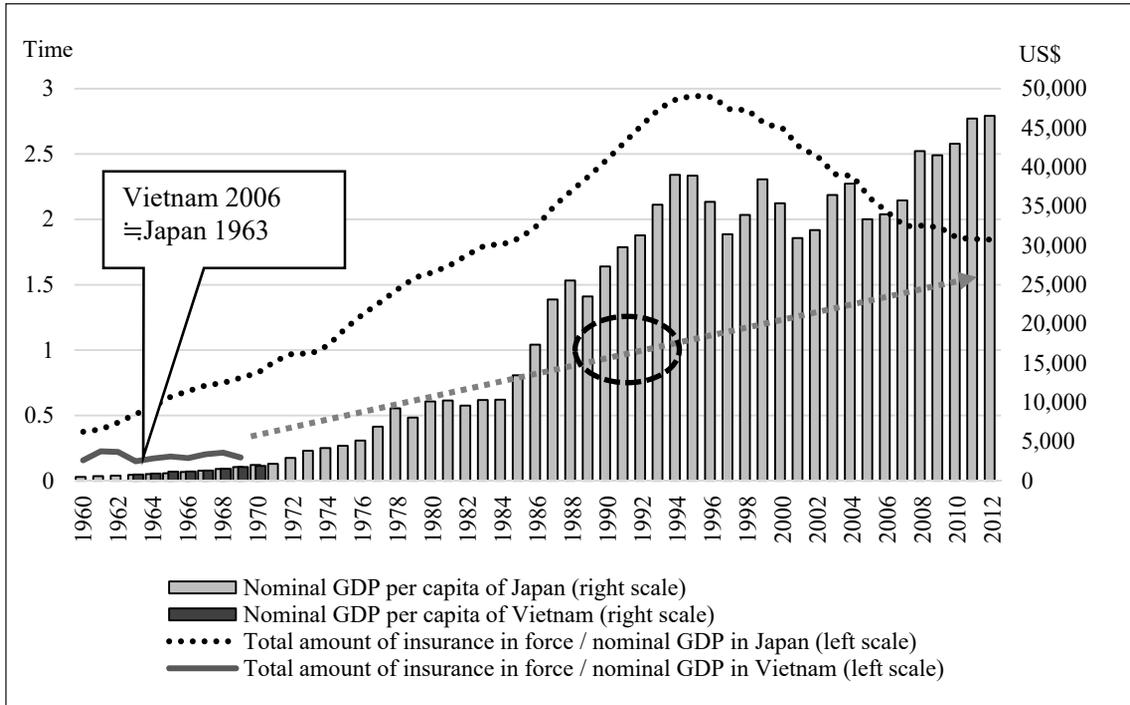*Source: Data compiled from Association of Vietnam Insurers.*

those of Vietnam at present and Japan in the 1960s. The nominal GDP of Vietnam in 2013 is 170.6 billion dollars, and the nominal GDP per capita is 1,896 dollars. The Japanese nominal GDP per capita increased from 758 to 2,017 dollars during the period of high growth from 1963 to 1970. The current Vietnamese economy corresponds to Japan's economy in this period. The total amount of insurance in force in 2012 is 580 trillion dong, approximately seven times larger than the figure in 2003, 84 trillion dong. Its average growth rate during the decade is 28.0%, almost 10 percent points above the growth rate of the nominal GDP during the corresponding period, 19.7%. Since the nominal GDP of Vietnam in 2012 is 3,245 trillion dong,

the amount of the coverage in comparison to the respective economy size (the total amount of insurance in force, from which the amount of state-operated postal life insurance is excluded, and then which is divided by nominal GDP: hereinafter referred to as the "macro coverage rate") is about 0.2 times.

The macro coverage rate of 0.2 times in Vietnam is comparable to the level in the late 1950s in Japan.

The macro coverage rate of Japan started to show a sharp increase in 1963 (0.51 times) when the GDP per capita exceeded 700 dollars, and jumped above the level of 2 times higher than the nominal GDP in 1987. Endowment insurance with a high saving propensity ac-

Figure 3: Long-term outlook of Vietnamese market based on market trend in Japan

Source: Data compiled from Association of Vietnam Insurers; The Life Insurance Association of Japan; Life Insurance Fact Book (1979-2012).

counted for almost 80% of the total amount of personal insurance in force in the early 1960s, while insurance products with high coverage, such as term insurance accounted for only 1%. Later, however, the share of endowment insurance decreased to about 9%, and both term insurance and whole life insurance increased up to 12% in 1980. The endowment insurance products with high coverage as term riders accounted for about 7% of the total amount of personal insurance in force in 1961, but became main products in 1980, occupying the majority share.

The focus of the life insurance market in Japan basically shifted from deposit-based products in the early 1960s to coverage-based products in the 1980s with the exception of a period where single premium endowment life insurance sold well, taking the opportunity of the decline of interest rates after the Plaza Accord in 1985. After the collapse of the bubble economy, the macro coverage rate peaked in 1995 (2.94 times, excluding postal life insurance products in order to show the long-term series), and then continued declining in the 2000s. As economic growth slowed down and population aging was accelerated, consumers decreased their spending, and demanded pension and health insurance products more than death coverage. Consequently, the macro coverage rate declined to 1.85 times in 2012.

In Figure 3, the economy size and macro coverage rate of Japan are plotted for the period from 1960 to 2012, on which the corresponding data of Vietnam from 2006 to 2012 are superimposed. Since the GDP per capita of Japan in 1963 is almost equal to that of Vietnam in 2006, 758 dollars and 797 dollars, respectively, these are taken as the starting points. Although the amount of coverage of Vietnam is unlikely to overshoot so much as that of Japan, it is no wonder if the macro coverage rate of Vietnam will increase to the level of one time, or 100%, when viewed in a time span of around the next three decades (in around 1990 in Japan and 2040 in Vietnam in the graph).

It is not certain whether the Vietnamese insurance market will follow the model of Japan and for Vietnam to become a superpower of insurance in future, however, the coverage market undoubtedly will continue growing in line with the increase in income.

5. Prediction of the life insurance market in Vietnam

As stated above, the Life Insurance Policyholders' Protection Corporation in the future depends on how much the market of coverage-based insurance will grow. It is not easy to predict the market of coverage-based insurance because it is determined, as shown in Figure 1 and Figure 2, by several factors, including those of suppliers such as marketing strategies of insurance companies, those of demanders who take out insurance policies, such as income level, and the positioning of the public pension scheme (the public pension determines the number of personal pensions sold, and coverage-based products decrease as personal pension products increase). In addition, some

factors other than economic and social ones such as avian influenza, SARS and other infectious diseases may exert influence. However, the growth of the life insurance market was not largely affected by the outbreak of avian influenza in China from 2005 to 2006 and the premium revenue of life insurance policies actually increased by more than 10%. Therefore, we believe that economic and social factors have far much greater impact on the market than illness.

As a matter of course, economic development substantially differs from country to country, depending on the industrial structure and other influential factors. However, human beings have a universal desire to protect their families from economic risks arising from the death of earners, illness of family members or longevity. So, the life insurance markets in the world may appear to have different characteristics and to be peculiar to respective countries but in fact they have much greater common ground than general industries in the world when viewed from different time points.

The life insurance markets in the world are roughly divided into two groups, one centered on conventional deposit-based insurance products and the other on coverage based-insurance products in which emphasis is placed on death coverage and medical coverage for earners. As a characteristic trait, many of Western countries' markets belong to the former group and Asian countries' markets rather to the latter group. At the emerging stage, however, no life insurance market has a concept of "protecting family members" at all, in any countries at this stage; conventional deposit-based products are preferred (this situation was observed in the

Japanese market in the 1960s and is currently observed in the Vietnamese).

The profit margins of conventional deposit-based products are significantly different from those of coverage-based insurance products (the latter is 10 to 20 times greater than the former), and therefore insurance companies are eager to sell coverage-based insurance products, if the market accepts it. In other words, their desire to market products with higher profit margins is the common attitude around the world, and the question is whether the markets accept such a marketing strategy or not. Therefore, the "amount of coverage" (more specifically, amount of death coverage) serves the most significant indicator to predict the life insurance market.

The "macro coverage rate," a simple indicator, which is obtained by dividing this death coverage amount by nominal GDP is capable of explaining the insurance market straightforwardly. Furthermore, this indicator allows for the comparison of life insurance markets throughout the world just because of its simplicity.

This can be resolved by the equation as presented in the box below.

The first term of this identical equation in-dicates how much demanders, or consumers, spent for purchasing life insurance products out of their income, that is, household expenditure propensity for life insurance (i.e. selecting not other consumer goods or financial products but life insurance products). The second term represents the merchandise strategy determined by suppliers or life insurance companies on what coverage they include in their products. The third term indicates the ratio of the premium revenue from personal insurance to the sum of the premium revenue (P) of personal insurance products (attaching a relatively heavy weight to coverage) and the revenue from personal pensions (attaching a relatively heavy weight to deposits), which denotes the preference for coverage-based products or pension/deposit based products. In advanced countries where public pension programs have not yet been established, they are substituted by personal pensions, and therefore this value tends to increase. The fourth term represents the ratio of household budget to the total economic value. Thus, the macro coverage rate may be said to be an indicator that consists of the elements of demanders and suppliers in the market and macroeconomic elements. The first term, second term, third term and fourth term on the right-hand side are called "Preference for Life

$$\text{Macro coverage rate} = \frac{\text{Amount of personal insurance}}{\text{Nominal GDP (local currency basis)}}$$

$$= \frac{(\text{Personal Insurance P} + \text{Personal Pension P})}{\text{Personal disposal income}} \times \frac{\text{Amount of personal insurance}}{\text{Personal Insurance P}}$$

$$\times \frac{\text{Personal Insurance P}}{(\text{Personal Insurance P} + \text{Personal pension P})} \times \frac{\text{Personal disposal income}}{\text{Nominal GDP}}$$

Insurance," "Ratio of Security to Premium," "Preference for Insurance over Pension" and "Ratio of Household Budget," respectively.

According to Kubo (2005), this indicator shows that the life insurance markets around the world are linked when viewed from different time points. Figure 4 indicates the results of the contribution analysis on the changes of the macro coverage rate of Japan for 25 years from 1982 to 2004 for each of the four factors as stated above. Although not discussed in this paper due to the limited space, the authors also analyzed the changes of the indicator for the markets in Taiwan, Korea and the United States.

The macro coverage rate of Japan dramatically elevated in the mid-1980s. During this period, bold monetary easing measures were taken to address the economic downturn following the sharp appreciation of the yen after the Plaza Accord. The interest rate of 7% or more of long-term government bonds dropped to 4% at that time. In the Taiwanese financial market, the official discount rate was lowered from mid-5% in 1997 to below 2% in 2003 due to the measures taken against the IT recession and influence of the world-wide decline of interest rates. This is similar to the Japanese environment in the mid-1980s. The structure (contribution composition) of the macro coverage rate in Taiwan from 1999 to 2003 closely resembles the structure in Japan during a period from 1982 to 1987 as shown in Figure 4 (Circle 1).

Since then, Japanese life insurance companies have dramatically changed their business strategies in which they increased the amounts of their personal insurance products by raising the ratio of security to premium in the early 1990s. This is similar to the strategy taken by Korea around 2000 in which they focused on coverage-based insurance products. The Korean structure of the macro coverage rate from 1999 to 2005 resembles that in Japan from 1989 to 1994 as shown in Figure 4 (Circle 2).

In Japan, the sales of personal pension products over the bank counter sharply grew in fiscal year 2002, which dramatically changed the picture of the market. While the sale of personal pensions with a higher premium revenue boosted up the "preference for life insurance," it triggered the transfer in consumer spending from coverage-based products to personal pension products, and the "ratio of security to premium" further dropped. This structure of Japan from 2002 to 2004, as shown in Figure 4 (Circle 3), closely resembles that in the United States from 1999 to 2002 when the sales of personal pension products sharply increased in that country.

Thus, the "macro coverage rate" indicates that insurance markets in different countries are linked at different time points"

In the following paragraphs, the macro coverage rate in Vietnam is estimated. Kubo (2005) reported that the macro coverage rate of each country can be explained by a structural formula that uses (i) Nominal GDP per capita (USD basis) as an "income factor" and (ii) difference of labor force participation rates between men and women as a "social factor" (female independence factor), out of many economic or social factors that influence the macro coverage rate. Although they estimated the macro coverage rates not only for Asian countries but also for European countries and the United States in the earlier research, the authors limit their

Figure 4: Macro coverage rate in Japan and linkage with other countries
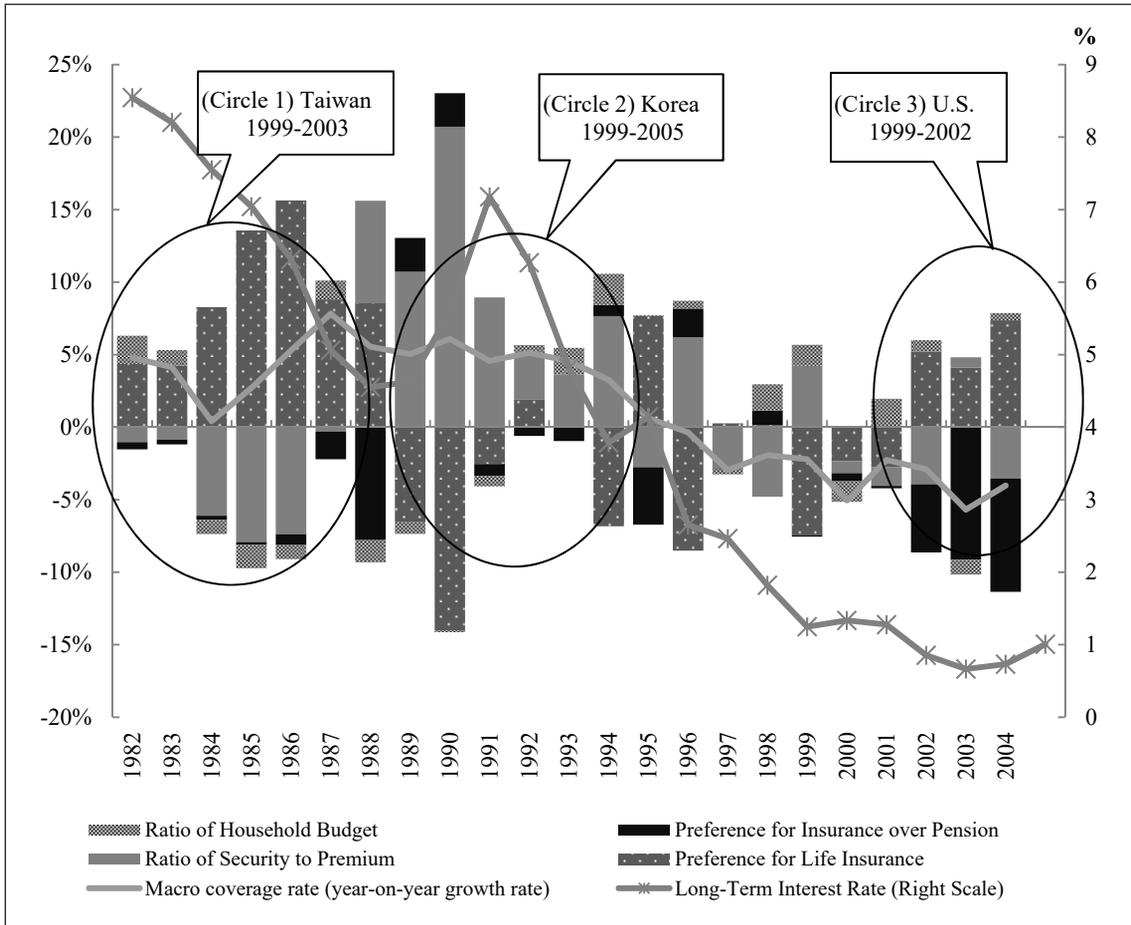
Source: Author' calculation based on data from: Swiss Re (2004, 2013); The Life Insurance Association of Japan; Life Insurance Fact Book (1979-2012).

estimation to Asian countries for this research. Since the analysis of only two countries, Japan and Vietnam, might produce biased results, the authors estimated the Asian average value of the macro coverage rate based on the data of five Asian countries that were in different stages of development, and then predicted the future coverage based insurance market in Vietnam with the use of the parameters of the structural formula. The analyzed five countries include Japan (including postal life insurance),

Taiwan, Korea, Thailand and Vietnam. The analyzed periods were 33 years from 1980 to 2012 for Japan, 11 years from 2001 to 2011 for Taiwan, 14 years from 1999 to 2012 for Korea, 8 years from 2004 to 2011 for Thailand and 12 years from 2001 to 2012 for Vietnam. The total number of samples was 78.

The analyzed products were personal insurance and personal pensions, and the following procedure was taken for the estimation.

Of the several candidate explanatory variables, the authors selected variables with higher accuracy as follows: We selected seven variables in total: three variables of "nominal GDP (dollar basis)", "nominal GDP (dong basis)" and "GDP per capita (dollar basis)" as economic factors, "rate of aging" (population rate of people aged 65 and older)" as a social factor, and another three variables of "labor force participation rate of men," "labor force participation rate of women" and "difference of labor force participation rates between men and women" as family factors (as the labor force participation rate of women increases, the need for coverage for families decreases).

First, we conducted a single regression analysis for each of the seven variables above. Then we considered possible combinations of the variables and combined the two variables which showed a higher explanatory capability as a result of the single regression analysis. We conducted a multiple regression analysis for the combined variables. To improve the estimation accuracy, single variable functions ($R^2$0.6 or more) of which the degree of freedom was adjusted and two-variable functions ($R^2$0.75 or more) of which degree of freedom was adjusted were logarithmically transformed, and functions that had a much greater explanatory capability were selected. These were transformed into three-variable functions and also used in a multiple regression analysis.

The single regression analysis indicated that "GDP per capita," "labor force participation rate of women" and "difference of labor force participation rates between men and women" were variables with a high explanatory capability. The multiple regression analysis with two combined variables suggested that (1) "population rate of people aged 65 and older" and "nominal GDP (dollar basis), (2) "labor force participation rate of women" and "nominal GDP per capita (dollar basis)," (3) "difference of labor force participation rates between men and women" and "nominal GDP (dollar basis)" and (4) "difference of labor force participation rates between men and women" and "nominal GDP per capita (dollar basis)" were variables with the highest explanatory capability.

From these candidate functions, we picked out those with a smaller value of R^2 and a smaller error for which the degrees of freedom was adjusted, and finally selected the following two functions: (1) Model 21 with "difference of labor force participation rates between men and women" and "nominal GDP per capita (dollar basis)" and (2) Model 22 with "labor force participation rate of women" and "nominal GDP per capita (dollar basis)."

Although we conducted the estimation with three-variables including a social factor of "population rate of people aged 65 and older" (Model 23 and 24), t-values of the variables were too low to adopt. Therefore, we finally selected the two functions above, which are comprised of two-variables.

Of all the models, the selected 24 models with a relatively high explanatory capability are shown in Table 3.

Finally, two functions were left after following the procedure described above, and the estimation was made using these functions. The estimated and actual values of the macro coverage rate for each country are shown in Figure 5. Although the movements of these two estimated values look similar, the estimated value

Table 3: Estimation results of macro coverage rates

	model (1)	model (2)	model (3)	model (4)	model (5)
Dependent variable			Macro coverage rate		
Explanatory Variable 1	65 over	GDP(L)	GDP(D)	GDP(1)	Labor: M
Parameter	0.18112	0.00000	0.00051	0.00008	-0.12483
t-value	8.0811	1.0305	10.4027	13.9577	-4.6576
Explanatory Variable 2	–	–	–	–	–
Parameter	–	–	–	–	–
t-value	–	–	–	–	–
Constant term	0.02861	2.01463	1.17200	0.61130	11.57796
t-value	0.1030	12.1199	9.0618	4.6429	5.6773
Adjusted for degrees of freedom R^2	0.45508	0.00081	0.58202	0.71568	0.21183
Standard error of the mean	0.94584	1.28079	0.82839	0.68322	1.13753

	model (6)	model (7)	model (8)	model (9)	model (10)
Dependent variable			Macro coverage rate		
Explanatory Variable 1	Labor: W	L: M-W	65 over	65 over	65 over
Parameter	-0.11471	0.15044	-0.16074	-0.03869	0.08160
t-value	-12.9678	11.5139	-4.4481	-0.7838	4.3771
Explanatory Variable 2	–	–	GDP(1)	GDP(D)	Labor: W
Parameter	–	–	0.00013	0.00060	-0.09058
t-value	–	–	10.3277	4.8557	-9.3649
Constant term	8.35954	-1.11503	1.47921	1.45319	6.10987
t-value	17.0725	-3.8097	6.4886	3.8098	9.0313
Adjusted for degrees of freedom R^2	0.68464	0.63082	0.77203	0.57988	0.74546
Standard error of the mean	0.71954	0.77852	0.61178	0.83049	0.64644

	model (11)	model (12)	model (13)	model (14)	model (15)
Dependent variable			Macro coverage rate		
Explanatory Variable 1	65 over	L: M-W	Labor: M	Labor: W	L: M-W
Parameter	0.10105	0.10005	-0.02251	-0.06328	0.08196
t-value	5.6580	7.79461	-1.2323	-6.5908	7.1116
Explanatory Variable 2	L: M-W	GDP(D)	GDP(1)	GDP(1)	GDP(1)
Parameter	0.11521	0.00030	0.00008	0.00005	0.00005
t-value	9.10803	6.70106	11.70973	7.50780	9.38365
Constant term	-1.51732	-0.58961	2.39216	4.63807	-0.65720
t-value	-5.9110	-2.3982	1.6486	7.4807	-3.1951
Adjusted for degrees of freedom R^2	0.73781	0.76600	0.71760	0.81755	0.82792
Standard error of the mean	0.65608	0.61981	0.68090	0.54729	0.53151

LN (Macro coverage rate)

Dependent variable	model (16)	model (17)	model (18)	model (19)	model (20)
Explanatory Variable 1	GDP(1)	Labor: W	L: M-W	65 over	L: M-W
Parameter	0.83045	-6.93776	2.64781	-0.44824	1.90907
t-value	30.2997	-28.5529	20.6127	-2.8150	8.2970
Explanatory Variable 2	–	–	–	GDP(1)	GDP(D)
Parameter	–	–	–	0.93710	0.22863
t-value	–	–	–	20.33464	3.74757
Constant term	-3.20780	12.16110	-3.29630	-3.17932	-2.99785
t-value	-28.6803	28.8836	-19.5583	-29.5607	-17.1414
Adjusted for degrees of freedom R^2	0.92254	0.91361	0.84627	0.92901	0.86879
Standard error of the mean	0.13707	0.14476	0.19310	0.13122	0.17840

LN (Macro coverage rate)

Dependent variable	model (21)	model (22)	mode (23)	model (24)
Explanatory Variable 1	L: M-W	Labor: W	Labor: W	L: M-W
Parameter	0.97016	-3.40539	-3.23533	0.90111
t-value	6.2407	-7.5712	-6.7702	5.4428
Explanatory Variable 2	GDP(1)	GDP(1)	GDP(1)	GDP(1)
Parameter	0.57447	0.45650	0.50857	0.63360
t-value	12.2940	8.5197	6.9624	9.2951
Explanatory Variable 3	–	–	65 over	65 over
Parameter	–	–	-0.14036	-0.17194
t-value	–	–	-1.0480	-1.1885
Constant term	-3.43542	4.19992	4.19992	-3.43542
t-value	-34.928	4.2766	4.2766	-34.9283
Adjusted for degrees of freedom R^2	0.94834	0.95551	0.95557	0.94862
Standard error of the mean	0.11194	0.10388	0.10381	0.11164

Note: The name of explanation variables are simplified as below:

- *nominal GDP (local currency basis): GDP(L); nominal GDP (dollar basis): GDP(D)*
- *nominal GDP per capita (USD basis): GDP(1); labor participation rate of men: Labor: M*
- *labor participation rate of women: Labor: W, the difference in labor participation rate between men and women: L: M-W, ratio of over 65 people to population in nation: 65 over*

Source: Author' calculation based on data from: Swiss Re (2004, 2013); The Life Insurance Association of Japan; Life Insurance Fact Book (1979-2012).

Figure 5: Estimation of macro coverage rate
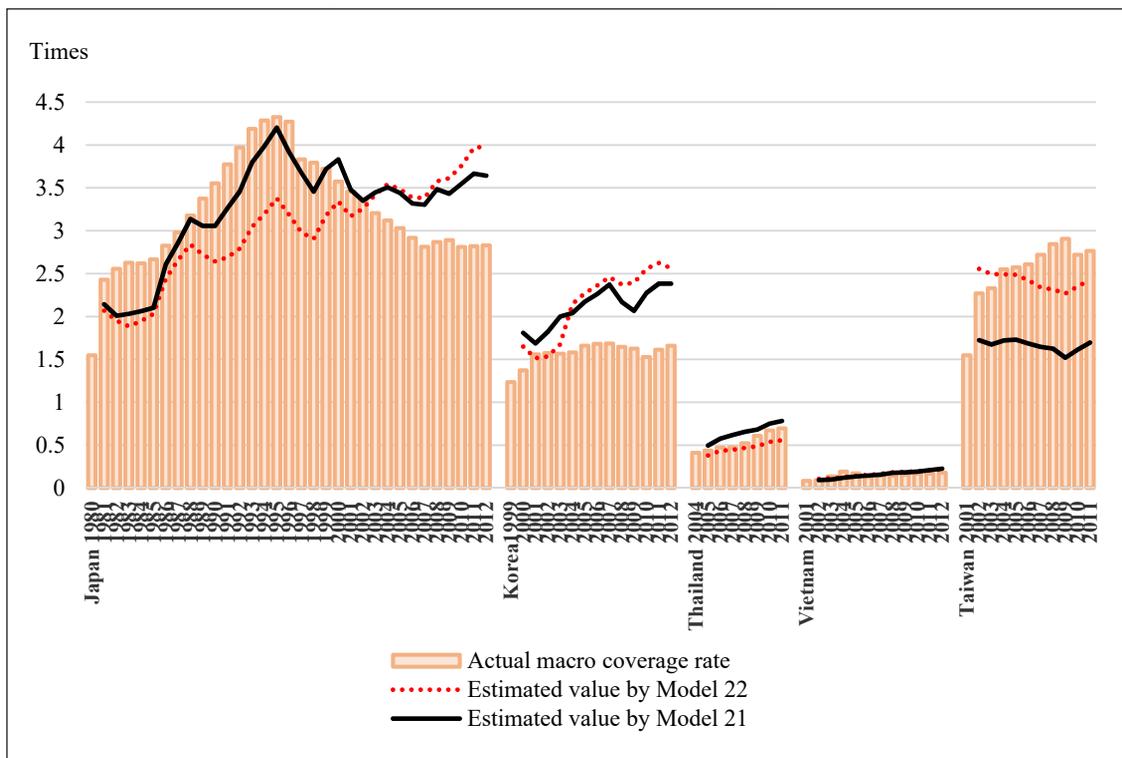
of Model 21 shows a higher similarity to the actual value than that of Model 22. The markets of coverage-based insurance in Japan and Korea are likely to grow as their estimated values exceed the actual values. On the other hand, the Taiwanese market may have become an excessively expanded market as its estimated value is lower than the actual value. Because the estimated value of Vietnam is almost equal to the actual value, the predicted value would be obtained by natural extrapolation.

Let's have a rough estimate of the size of the coverage based insurance market in Vietnam for the next decade, using Model 21 and

Model 22. Nominal GDP, one of the explanatory variables is divided into GDP deflator and real GDP. From the viewpoint of suppliers, the growth rate of the latter is comprised of three elements: (1) growth rate of population; (2) growth rate of capital; and (3) technological innovation. To obtain extrapolation values, the author assumes that the total growth rate, consisting of the capital growth rate and the technological innovation will decline 0.1% each year from 4.5% to 3.5% 10 years later in 2022, because the total growth rate of Vietnam in 2011 is 4.8% and in a downward trend over the past decade. The population increase is as-

sumed to be at 1.1% each year, the same as the current level. The growth rate of the consumer price index is used as the GDP deflator. The deflator is assumed to increase by 8% because the consumer price index increased about 9% on average over the past decade. Consequently, the GDP growth rate of Vietnam in fiscal year 2022 will be 4.7% and the growth rate of the nominal GDP will be 12.5%.

The author expects that difference of labor force participation rates between men and women in Vietnam follows the pattern of Japan, and will widen by 0.1% each year based on the level of Vietnam (one-third of Japan) compared to the gap growth rate of Japan at 2.8% during the period from 1961 to 1971. Using these extrapolation values, the macro coverage rate of Vietnam will increase from 0.18 times in 2012 to a level of between 0.37 times (Model 22) and 0.42 times (Model 21, Estimation 2) 10 years later (in 2023). It is highly likely that the coverage-based insurance market will significantly expand in Vietnam in line with rising incomes. When considering the Life Insurance Policyholders' Protection Fund in Vietnam, its system should be designed on the premise that the coverage-based insurance market will grow in the future.

6. Improvements of the Life Insurance Policyholders' Protection Corporation in Vietnam

In the light of the experience of the Protection Corporation of Japan as stated in Sections 1 and 2, and the estimation of Vietnamese future life insurance market as stated in Section 4, the Policyholders' Protection Fund of Vietnam, at present, seems to have the following four issues.

Firstly, it should be ensured that the insurance contracts of a bankrupt insurance company are taken over by a savior insurance company so that those contracts are maintained. The indemnification levels at the time of bankruptcy are differently defined for the different types of products. The indemnification level for deposit based products is calculated as 90% of the policy reserves to be paid as cash surrender value at the time of the bankruptcy (the balance of account for investment-based insurance) whereas the indemnification for coverage-based products is the amount equivalent to the premium corresponding to the period from the time of the bankruptcy to the maturity date of the relevant policy. As for coverage-based products, it is highly likely that policyholders may not be able to purchase new products with the same coverage as before since the premiums would increase according to the aging population and health conditions even if the premiums for the remaining period are refunded. As discussed in the previous section, the focus of the household budget is going to shift from savings to coverage, and the market of coverage-based products is highly likely to rapidly increase in the future. A unique property of life insurance not found in other financial products rests not on deposit function but on coverage function, and, therefore, if a private insurance company fails to fulfill its coverage function, the government will eventually have to play the role of using its welfare policy as it is thought to be a public issue. The financial resources required for coverage-based products seem to be smaller than those for deposit-based products, so it is desirable to change to lay emphasis on the indemnification of coverage-based insurance products.

In Japan, the indemnification rate of policy reserves for contracts with higher assumed interest rates is set to be below 90% to give priority to the protection of coverage-based products

The second point is how to secure financial resources for the Protection Fund. Life insurance companies provide their contributions to the deposit system every year in advance until the total amount reaches 3% of their total assets. The funds deposited like this, however, are not enough if insurance companies fall into bankruptcy in series like those that happened in Japan. This is why new systems are needed to increase the burden of policyholders and borrow funds temporarily from external sources. Furthermore, it is important to enable the injection of public funds in preparation for the need of a larger amount of funds, although the probability of the occurrence is low. In Japan, during the period from April 2006 to March 2009 when the bankruptcy risk of insurance companies surged, a regulation was enforced to allow the Protection Corporation to receive financial support from the government in an amount exceeding 460 billion yen which was contributed by the private sector. Government guarantees were also available for private debts as appropriate.

Furthermore, policyholders of a bankrupt insurance company are certainly victims who should be relieved, but at the same time, are responsible for having selected the insurance company. It is necessary to not only reduce policy reserves but also to lower assumed interest rates which should be reflected in future amounts of coverage. The financial resource of the Protection Fund comes from policyholders of sound insurance companies, and their bur-

den should be lightened as much as possible, whereas an increase in the burden on policyholders of bankrupt insurance companies is unavoidable.

A reduction of assumed interest rates leads to a decrease in the coverage amounts of deposit-based insurance contracts, which consequently protect coverage-based insurance contracts rather than deposit-based insurance contracts. As analyzed in Section 4, the Vietnamese market of coverage-based products is likely to achieve explosive growth;, the focus of the Protection Corporation on the protection of coverage-based insurance contracts is highly consistent with the market in the future. In Japan, in order to squeeze down the costs required for bankruptcy processing, the assumed interest rates are cut from 3 to 5.5% of the original interest rates to about 1%, as shown in the line of "Assumed Interest Rates after Reduction" in Table 1.

As a matter of course, before imposing a heavier burden on policyholders including reductions in policy reserves and assumed interest rates, sufficient information must be made available to consumers so that they are able to select an appropriate insurance company. It is necessary to ensure that insurance companies disclose their information. In other words, a full-fledged information disclosure system applicable to insurance companies must be developed as a prerequisite to the establishment of a policyholder protection system under which policyholders are required to share the burden.

The Insurance Business Act of Japan imposes information disclosure on insurance companies, and they must prepare disclosure documents to describe their businesses and as-

sets each year. The disclosure documents are available not only on the websites of respective insurance companies but are also kept in their head offices, branches, field offices and other business sites so that the information is easily accessed by various policyholders. In order to encourage life insurance companies to disclose further information, the Life Insurance Association has established the "Disclosure Criteria" that require insurance companies to voluntarily disclose items that are deemed necessary as well as the items specified by the law.

Thirdly, to reduce the costs necessary for the contract transfer, the Protection Fund is required to have the skills needed for the evaluation of goodwill value and assets to the satisfaction of a savior life insurance company, which are to be performed after the calculation of the shortfall of the bankrupt insurance company and estimation of expected earnings that a savior insurance company would gain from the transfer. The Protection Fund should start now developing human resources with such expertise.

Fourthly, Vietnam must establish an effective system for judging the soundness of insurance companies in order to detect any bankruptcy of an insurance company in advance and respond to it at an early stage, while developing the system of the Protection Fund. Solvency margin requirements were established under the law in 2007 in Vietnam; still, the key point is to continuously validate the existing prudential regulations and reflect any changes in the market on the soundness index.

7. Conclusion

The life insurance market in Vietnam is small in size at present, however, it is highly likely to experience a rapid expansion, mainly in the coverage-based insurance market, in line with the future economic growth of the country. The current approach of the Protection Fund in which insurance contracts are terminated just by paying compensation to the policyholders should be replaced by a new one in which it lays emphasis on the characteristics of the market in the future and operates on the premise that it "takes over contracts" of bankrupt insurance companies. In particular, the establishment of a protection fund system based on the continuation of coverage is important for coverage-based products, and would enhance the confidence of consumers in life insurance.

This proposition is applicable not only to Vietnam but also to other Asian countries in which life insurance markets are going to show huge expansion. The author hopes that the Life Insurance Policyholders' Corporation of Vietnam will serve as a model for other countries and would be grateful if this paper makes some contribution to it.

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