Final Draft

Fixing Japanese Life-Insurance Companies

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1. Introduction

After the devastation of World War II, 14 Japanese insurance companies started insurance business again in the late 1940s. These companies are Nippon, Daiichi, Kokumin (Sumitomo), Meiji, Asahi, Yasuda, Mitsui, Taiyo, Daido, Fukoku, Chiyoda, Nihondantai (Nchidan), Tokyo and Heiwa Life. Except for Heiwa Life that was organized as a joint stock company, 13 companies took the form of mutual company under the encouragement of SCAP (Supreme Commander of the Allied Powers) that ruled Japan until its re-independence in 1951. Kyoei Life started its business in 1947 as a new joint-stock company. Postal life (Kampo) continued its operation that started in 1916 and agricultural cooperatives (JA Kyosai) started its insurance business in 1948.[1] Although some of them have failed and/or merged with other companies, these players still dominate the insurance business in Japan.

New entries are relatively limited but increased gradually. American Life Insurance (Alico) and American Family Life (AFLAC) were allowed to enter the market in 1973 and 74 respectively. Seibu Group and Allstate Insurance started Seibu-Allstate Life Insurance (renamed as Saison Life and acquired by GE Edison in 2002) in 1976 and a few other foreign life-insurance companies also started business in the mid 1970s. In 1996, eleven subsidiaries of Japanese nonlife insurance companies started life-insurance business in return for the entry of six subsidiaries of Japanese life-insurance companies into nonlife insurance business. As a result, there are 40 life insurance companies as of April 2004.

Japanese life-insurance companies have been quite successful to build up their business until early 1990s. Most companies sold endowment plans with term rider in early post-war years but they shifted to sell whole-life insurance with term rider. Their competition was limited due to the regulations on pricing of insurance premiums. The insurance premium of similar policies was close among companies. However, unlike regulated deposits with controlled interest rates, there were certain competitive elements in insurance policies. Most policies were participating plans and insurance companies distributed dividend to policyholders. Better run companies could distribute more dividend than weaker companies to attract customers.

Private life-insurance companies that are regulated by Ministry of Finance

[1] See Tone and Kitano (1993) and Maehara (2000) for a brief history of Japanese life-insurance industry.

(MOF) and Financial Services Agency (FSA), more recently, have to compete with Postal Life Insurance (Kampo) and JA Kyosai. Kampo is a huge government-run insurance company. The policy holders are explicitly guaranteed by the government although the maximum insurance coverage is limited by the regulation on Kampo. While private insurance companies cannot combine banking and postal services, Japanese postal system has been running life-insurance, banking, and postal services in unified post offices. Kampo used to be regulated by Ministry of Post and Telecommunications but it is now under the control of Ministry of Public Management, Home Affairs, Posts and Telecommunications. While Mr. Koizumi is pledging to privatize entire postal system, its outcome is very unclear given the very strong opposition within the Liberal Democratic Party. JA Kyosai is an insurance company run by politically strong agricultural cooperatives and regulated by Ministry of Agriculture, Forestry and Fisheries. Its full name is National Mutual Insurance Federation of Agricultural Cooperatives and is also known as Zenkyoren. While private life-insurance companies cannot sell nonlife insurance policies directly, JA Kyosai can sell both life-insurance and nonlife insurance policies. Moreover, Japanese agricultural cooperatives are also running banking and other businesses to support farmers. Although JA Kyosai is run by agricultural cooperatives, any person can buy insurance policies by becoming a nominal member of any agricultural cooperative.

Exhibit 1 shows the market share of major players of Japanese life-insurance market. Kampo is by far the biggest life-insurance company with asset of JPY 126 trillion, which is about one-quarter of Japanese GDP. The largest private insurance company is Nippon Life with JPY 44 trillion. JA Kyosai's asset is close to Nippon Life although JA Kyosai's asset includes that for nonlife business. Ten major Japanese companies dominate the market run by private insurance companies including "other Japanese companies" and "foreign companies." Therefore, in this paper, we mostly analyze these 10 major Japanese companies and Kampo.

Since the second half of 1990s, 7 private life-insurance companies failed. Weak control of interest-rate risk, excessive exposure to stock market, and very weak supervision by the regulatory authorities contributed these failures. The failed companies were reorganized and were bought by foreign and domestic companies. Foreign investors bought five of them and four of them, AIG Edison (renamed from GE Edison), Manulife, AIG Star, Gibraltar (subsidiary of Prudential), are trying to expand their insurance business in Japanese market. Aoba Life (former Nissan Life) was

bought by a French investor and is operating as a care-taking company for policyholders without any sales force. Taisho Life was bough by Yamato Life, and Tokyo Life was bought by T&D Financial. Although the recovery of stock prices since the spring of 2003 improved the soundness of the remaining companies, some of them are still very weak. In order to stabilize the sector, it is necessary to improve the quality of supervision and the management. Financial Services Agency still lacks the will and the expertise to supervise big and complicated life insurance companies with significant political power. The weak corporate governance structure of mutual companies has to be significantly improved.[2]

2. Financial Conditions of Major Japanese Life-Insurance Companies

2.1 Negative Carry

Life-insurance companies had enjoyed fairly good profit due to limited competition under strict regulations and robust Japanese economy throughout the postwar period until early 1990s. Since then, their financial health has deteriorated significantly. While banks have suffered massive losses from bad-loans, life-insurance companies have lost dearly from high-yield debt problem and falling stock prices. In order to understand the problem that life-insurance companies have been facing, it is necessary to understand the basics of the insurance business in Japan.

Until mid 1990s, Japanese life-insurance companies have succeeded to sell whole-life insurance policies with a term rider to salaried male workers who wanted to obtain protection for their housewives and children. The life-insurance premium paid by policyholders is used for the following three purposes: (i) the insurance benefit for the policyholders who lost lives, (ii) the cost of operating the company, and (iii) the fund for the future protection for the policyholders. While the parts (i) and (ii) are paid out from the company, the part (iii) is the saving component of the policy and it is used for investment by the company. The Japanese insurance companies set the life-insurance premium by guaranteeing a fixed minimum return from that investment. In other words, the insurance premium had been discounted by the amount of estimated future return from the saving component of the outstanding insurance contracts. Most insurance policies had been participating plans. Insurance companies have to pay dividend to policyholders of participating plans when the insurance premium exceeded

[2] In preparing this paper, the author relied heavily on the past analysis of life-insurance companies at the Japan Center for Economic Research including Fukao and Japan Center for Economic Research (2000, 2002, 2003a, 2004).

the actual cost of discharging the contractual obligations. The minimum return is not notified to policyholders but implicit in the insurance policy that describes the insurance premium, the surrender value for cancellation, the maturity insurance amount and so forth.

Since the maturity of most life-insurance policies are quite long and insurance companies has to keep risk buffers for adverse changes in mortality rates and interest rates, the guaranteed rate of return and mortality rates were set conservatively. Minimum returns are kept low and mortality rates for death insurance are kept high. These basic rates were set by the Ministry of Finance. Because of these safety margins, even uncompetitive insurance companies could earn some profits and, after deducting operating expenses, most of the profits were distributed to policyholders. However, this system involved a perverse incentive for the management of insurance companies to increase operating expenses. Moreover, since the distributable profit is measured by the historical cost accounting, the management of insurance companies could keep a large amount of unrealized capital gain in their equity portfolio undistributed.

The Exhibit 2 shows the guaranteed minimum return for new policies since 1970s. Private insurance companies used to set the return at 4 percent until mid 1970s. The rate was lower than one-year bank deposit rate at the time. However, when Japan experienced a rising inflation rate and higher nominal interest rates in 1972-74, many large companies were blamed for their profiteering by raising sales prices. Life-insurance companies were no exceptions and they faced strong political pressures to reduce insurance premium. In this atmosphere, Kampo raised minimum return first and private companies followed because they could not ignore pricing policy of giant postal insurance system.

The rate reached 6 percent at the time of bubble boom period of late 1980s but it declined rapidly in the 1990s when Japanese economy experienced a protracted stagnation and the Bank of Japan cut policy rates repeatedly. In spite of the rapid cut in the guaranteed rates, the average guaranteed return did not fall rapidly. This is because the policies have long lives and most of them are sold as installment plans. Insurance companies guaranteed a certain minimum return on all the future cash inflows of polices. For example, if a person signed a contract of life-time annuity or whole-life insurance in 1992, the life-insurance companies are guaranteeing 5.5 percent return on all the past, the present and the future premium over the entire life of this policy.

Unless policyholders cancel old policies, the insurance companies have to pay 5.5 percent returns on those polices. The Exhibit 3 shows the average guaranteed return of 10 major Japanese companies. The average guaranteed return on fixed-rate contracts is about 4 percent in 2002 when 10-year bond rate yields less than 2 percent. The floating rate contracts are mostly group annuity plans and their yields are about 1 to 1.5 percent in fiscal years 2001 and 02. While the share of floating rate contracts differs among companies, the average share is about one quarter of total reserves.

Because insurance companies did not invest in long-term assets that can match the long-duration of their liabilities, they started to incur losses in the second half of the 1990s. Generally, the average duration on the asset side has been about 5 years while the average duration on the liability side has been 15 to 20 years.[3] The average return of their liabilities exceeded that of their assets. This gap of two returns is the so-called "negative carry" or "gyakuzaya" in Japanese. Most Japanese life-insurance companies could not cover this negative carry from other sources of profit and some companies that suffered the large negative carry depleted their capital quickly. On the other hand, Kampo, JA Kyosai, Daido Life and Taiyo Life did not sell very long-term contracts. These companies sold endowment plans up to 10 years and the maturity gap was limited.

The Exhibit 4 shows the market-value return ("fair-value return" in FASB terms) of the asset of 10 major life-insurance companies. The average return over the five-year period from fiscal year (FY) 1997 to 2002 (fiscal year 2002 starts in April 1st, 2002) was only 0.81 percent. In spite of the massive negative carry, all the 10 companies have reported positive "basic profit" ("kiso rieki" in Japanese) in recent years because this concept of profit does not take account of the most capital gains and losses in their equity and foreign security portfolio. About 15 percent of their asset was invested in stocks in the late 1990s and they incurred heavy losses due to the falling equity prices until the spring of 2003.

2.2. Profitability of Life-Insurance Companies

In order to measure the profit, I collaborated with the Financial Study Group of Japan Center for Economic Research (JCER) and estimated the economic profit of those companies. The Exhibit 5 shows the decomposition of the economic profit of 10

[3] On the asset structure of private life-insurance companies, see Exhibit 16.

major companies based on the estimated market-value accounting. The economic profit is decomposed into the following three components: gross profit from insurance, operating expenses, and negative carry. The gross profit from insurance is the notional economic profit if the market-value return on asset was equal to the minimum guaranteed return, and the operating expenses were zero. The negative carry is the gap between the market-value return on assets and the average guaranteed return on debts. This Exhibit shows that the 10 companies could have earned JPY 5.7 trillion from their insurance contracts if the market-value return were equal to the average guaranteed return and the operating expenses were zero in FY 2002. Subtracting the actual operating costs of JPY 2.7 trillion, they could have earned about JPY 3.0 trillion yen before deducting the negative carry. Since the negative carry was JPY 4.6 trillion, the net economic loss was about JPY 1.6 trillion.

The profitability of a life-insurance policy depends on the following factors:

(i) The gap between the assumed rate of return and the actual return;
(ii) The gap between assumed death rates and the actual rates;
(iii) The gap between assumed operating cost and the actual cost.

Since the assumed death rates and the operating costs tends to be higher than the actual rates, a limited negative gap between the actual return and the assumed return can be covered by the positive gaps in death rates and the operating costs. For example, Japanese life insurance companies are required to use the standardized death rate table of 1996 for regulatory accounting purposes. Since the death rates are gradually falling in Japan, the long time lag will generate a profit margin. However, for many large Japanese life-insurance companies, the negative gaps of asset returns were too big to be covered by the positive gaps in death rates and the operating costs. Some companies were operating with little or no equity by the late 1990s. When they finally filed bankruptcy, most firms were deeply insolvent (see section 4.3).

Reflecting the continuing negative carry, the net asset position of most Japanese life-insurance companies had been eroded fairly rapidly until early 2003. The Exhibit 6 shows the time-series data of the net assets of 10 major companies. The net asset is the broadly defined capital of life-insurance companies based on the

market-value accounting but it does not include subordinated debts.[4] The table also shows the capital-asset ratio and the amount of deferred tax asset within the net asset at the end of March 2003. The net asset of some companies has been declining fairly rapidly. While Nippon Life maintained the capital ratio of more than 10 percent, Mitsui Life's ratio was less than 2 percent. Moreover, weaker life-insurance companies show relatively high deferred-tax asset. The deferred tax asset is the net present value of the tax shelter caused by the loss carry forward rule. In the Japanese tax rules, no loss carry backward is allowed and loss carry forward is limited up to 5 years. Therefore, unless a company is expecting to earn taxable income in the near future, the company cannot realize the value of this tax shelter.

One important factor that decides the fate of the companies is the outstanding amount of insurance contracts. The Exhibit 7 and 8 show the outstanding personal insurance contracts and the insurance premium received in the past 4 years. The falling income of Japanese workers under deflation and the declining needs for traditional life-insurance policy with aging population, the sales of new contracts has been stagnant. The death benefit of a husband is important when children are small and his wife has no income. As children grow up and his wife participates in the labor market, the traditional life-insurance policies with large death benefits are no longer necessary. Most fragile companies, Mitsui Life and Asahi Life, have also experienced a rapid cancellation of existing contracts. The received insurance premium of these two companies declined more than 30 percent in this period.

This dire situation became brighter in 2003. Because of the sharp recovery of Japanese stock prices in fiscal 2003, the net asset of life-insurance companies have recovered somewhat. The Nikkei 225 index rose from 7973 at the end of March 2003 to 11715 at the end of March 2004. Although the financial results for the fiscal 2003 will not be available until early July, we are reasonably sure that the financial conditions of major Japanese life-insurance companies have recovered. The average share of

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[4] Subordinated debts are included in the net asset to calculate official solvency margin ratios. The subordinated debt does play a limited role of capital because insurance policy contracts are senior than such debts in a bankruptcy procedures. However, when an insurance company runs out genuine capital, the company is regarded as insolvent in bankruptcy courts and it usually loses going-concern value. This loss of going-concern value is often very large and policy holders incur heavy loss in bankruptcies. Moreover, the company tries to pay interest on subordinated debts to avoid default even when its financial conditions are bad. Therefore the subordinated debts are less qualified as capital. In our analysis of Exhibit 6, subordinated debts are excluded from the net assets.

equity portfolio of the 10 life-insurance companies was 10.3 percent at the end of March 2003. Since the Nikkei index rose 47 percent, the capital-asset ratio have rebounded by almost 4 points. However, we also have to note that they still have large amount of high-yield debts. Unless they can earn more than 2 percent market-value return, their capital will be eroded.

3. The origin of the problem

In this section, we will look into the fundamental factors that caused the insurance crisis of late 1990s; the design of insurance policies, the absence of asset-liability management, and the weak governance of mutual companies. We will discuss supervision issues in section 4.

3.1. Negative Carry and the Failure of Asset-Liability Management

The Japanese life insurance companies mostly sold whole-life insurance policies with a term rider, 10 to 20 year endowment plans, and personal pension policies. In addition, they sold term insurance policies to corporate employees as group plans. Except for the group life insurance policies, most other contracts involved long-term saving component. In other words, life-insurance companies promised to earn more than the guaranteed minimum return over the contracted period.

In order to hedge such contracts, the insurance companies have to invest in very long-term bonds such as 20-year government bonds. Some foreign life-insurance companies in Japan did carry out such strategy and effectively hedged the interest rate risk. On the other hand, most Japanese companies did not hedge this risk probably due to the following reasons:

Firstly, they could not imagine that Japan would suffer from deflation and very low interest rates. Certainly, nobody had expected zero-interest policy of the Bank of Japan in the 1980s. As we have seen in the last chapter, life-insurance companies have about two-percent built-in margin in insurance policies even after paying the operating expenses (Exhibit 4). They may have felt that they had enough cushion to absorb negative carry in the future.

Secondly, they used to have massive unrealized capital gains in their equity portfolio. At the end of 1990, the book value of the stock portfolio of Japanese

life-insurance companies was 22 percent of their asset of JPY 127 trillion. According to my interviews with the industry, the market value of their stock portfolio was about three times of the book value at that time. The unrealized capital gain was as much as 40 percent of the book value of their gross asset. They probably felt that they had enough capital to absorb any interest rate risk of insurance policies.

Thirdly, the management structure of Japanese life-insurance companies was not prepared to manage such risk. The fund managers looked at the asset side of their balance sheet and competed with conventional benchmark indicators. On the other hand, the actuaries looked at the responsibility reserves and the distribution of surplus to the owners of participating insurance policies. Most directors came from the sales side of the company and were ill prepared to perform asset-liability management at the top level.

3.2. Weak Governance Structure of Mutual Companies

The corporate structure of mutual companies may have weakened the governance of insurance companies. Most large Japanese life-insurance companies used to be organized as mutual companies. All the 10 companies in our data set used to be organized as mutual companies. Over the past few years, Daido (April 2002), Taiyo (April 2003) and Mitsui (April 2004) reorganized as joint-stock companies. Five of the seven failed companies also used to be mutual companies but reorganized as joint-stock companies after the bankruptcy procedure.

In Japanese mutual companies, a meeting of representative policy holders elects the board of directors. The representative policy holders are chosen from all the policyholders by the nominating committee. The member of the nominating committee are nominated by the sitting board and ratified by a policyholders meeting. In this circular decision process, the sitting board has a decisive role. The board nominates the member of nominating committee and it prepares a short list for representative policyholders.

(1) Board of directors nominates the members of nominating committee
(2) Representative policyholders ratify the members of nominating committee
(3) Nominating committee nominates new representative policyholders based on the short list prepared by the board of directors
(4) Policy holders get the list of names of the new representative policyholders and

votes for ratification (removed if more than 10 percent of policy holders vote "no")[5]

(5) Representative policyholders elect new board of directors

(6) Go to (1) of this process

Many representative policyholders are top managers of other companies. Often, the life-insurance company owns a significant portion of outstanding stocks of the companies of such managers. Many "housewives" among representative policyholders are often wives of such managers. Sometimes, the pianists and organists of a theater owned by the insurance companies are asked to become representative policy holders. Some representative policy holders bought insurance policies after being asked to become a representative policyholder by the insurance company. In this process, it is easy to imagine that the governance of mutual companies tends to be weak.

Certainly, the corporate governance system of Japanese joint-stock companies is not particularly strong. In many cases, the directors and the presidents are selected from senior managers of a company. Major shareholders are often silent because of the extensive cross shareholdings. As a result, the governance of Japanese banks is very weak. [6] The point is that the major private life-insurance companies are major shareholders of banks and other listed companies. The very weak governance of life-insurance companies also weakens the governance of other Japanese companies. The necessity for good prudential supervision was even more important.[7]

Until the major revision in the Law on Insurance Industry in 1995 (implemented in 1996), there were some emergency measures to prevent a failure of a company. These were very strong measures to prevent a failure of insurance companies and legislated in 1939 based on the then German insurance law.

Under that law, mutual life-insurance companies used to be a 100 percent equity company. Theoretically, all the policy holders of a company are owners of the company with an equal right. If a company had a severe financial problem, it can reduce its insurance obligations to all the policy holders through a resolution of a

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[5] Certainly, this is extremely unlikely when policy holders can only see the names, the prefecture of the address, and the profession of the nominated representative policyholders. I am not aware of any rejections by such votes.

[6] See Fukao (1998) on the governance of Japanese banks.

[7] I would like to thank Professor Hugh Patrick on this point.

representative policyholders meeting. Nippon Life has more than 10 million policyholders and most of large companies have more than one million. Most policy holders don't read the articles of incorporation of the insurance company and they don't imagine that their insurance policies are actually equity stake of the company. Under the old law, the Minister of Finance could also invoke an executive order to reduce insurance obligations of a company. For example, the Minister could reduce the guaranteed return of all the outstanding policies. This reduction of the guaranteed return is applied to the future return and the Minister cannot reduce the past accrued returns.

This executive power was invoked only once in 1946. In order to save failing life-insurance companies under war-time devastation, the Ministry of Finance raised the insurance premium of existing policy holders. Some policyholders sued the government saying that this measure violated the protection of property right under the Meiji Constitution (effective until May 1947) because the government changed the existing private contracts by an executive order. This case went to the Supreme Court of Japan and the Court ruled that the measure is constitutional in 1959. However, many jurists questioned the constitutionality of this executive power even after this ruling.

Given these strong safety nets, the top management may have been too complacent in taking actions against their huge interest-rate risks. These two measures had been controversial among experts. The executive order of this kind is regarded unconstitutional by some jurists. In the major overhaul of the law in 1995, these measures were repealed. After this change of the law, insurance policies were converted from equity contracts to debt contracts. Representative policyholder meeting is no longer able to reduce insurance benefits by its resolution. The Minister of Finance lost its power to change the insurance contracts by a decree. Effectively, the mutual companies were converted from 100 percent equity company to ordinary limited liability company with small equity.[8]

[8] Even after these changes, policyholders are residual claimants. When a mutual company wants to reorganize as a joint-stock company, the company has to distribute new shares to policyholders. The distribution is based on the estimated contribution of individual policyholders to the total net asset of the company.

4. Weak Supervision of Insurance Companies

The life insurance industry's crisis has been exacerbated by the forbearance policy of its supervisory authorities, the former Ministry of Finance and now the FSA. The MOF and FSA both had very strong regulatory power. However, the high officials of these authorities have been very reluctant to use such power. I suspect that they do not want to face very strong political head wind unless strong actions are absolutely necessary. Because of extremely lenient capital requirements and reluctance to shut down unhealthy insurance companies, most failed life insurance companies have had large negative equity by the time of their failures.

4.1. Implementation of Solvency Margin Requirements

The capital requirement on life-insurance companies is measured by the solvency margin ratios, which relates net assets to estimated risk. The net assets are defined as capital + risk reserves + general loan loss reserves + 90% of unrealized capital gains - 100% of unrealized capital losses + excess reserves over surrender value of polices + half year of future profits + tax effect + subordinated debt. In this calculation, deferred tax asset from loss-carry-forward is already included in the first item, “capital.” The “tax effect” is calculated from the “possible future tax saving when the company has to use retained earnings to cover future losses.” In other words, the nest asset used for solvency margin calculation counts future profit in **three** ways; ordinary deferred tax asset, half year of future profit, and this tax effect.

The estimated risk equals $[(\text{insurance risk})^2 + (\text{interest rate risk} + \text{asset value risk})^2]^{½}$ + management risk. Insurance risk is related to the adverse movements in death rates. The net assets are divided by the estimated risk and multiplied by 200 to obtain the solvency margin. The minimum ratio for sound companies is 200. Below 200, regulators are required to take corrective actions.

This capital requirement was imported from the United States regulations, but Japanese regulators have made a number of modifications that had weakened the rule considerably. The Exhibit 9 illustrates the major differences. Japanese rule sets the trigger levels for prompt corrective action much lower. For a number of reasons the solvency ratios of Japanese companies are overstated. Especially worrisome is the inclusion of a large deferred tax asset and future profits. Japan generously includes assets with no liquidation value, although the US standard excludes most of them.

Regarding the denominator side, Japanese risk weights are considerably lower than those of the United States. Thus, for publicly traded corporate equity (stock), the risk weight is about one-third the US level. For real estate and foreign currency assets, the risk weights are one-half the US levels.

The Financial Studies Group of the Japan Center for Economic Research, which I head, has tried to adjust for the differences in the solvency margin requirements in Japan and the United States. The quality of disclosure by life insurance companies has improved considerably since the mid 1990s, so we can do this from publicly available data.

Exhibit 10 shows the results for the end of March 2003. Based on what they disclose, all the major companies are above the 200% level, implying that they are all healthy. We have made three types of adjustments. The first uses US risk weights and adjusts for unrealized capital gains and losses, but allows inclusion of assets with no liquidation value. The results are indicated as "Adjusted 1" in the Exhibit. With these adjustments, all the points move downwards but all the companies remain above 200. The second is closer to – but still somewhat less stringent than – the US standard. In addition to the first set of adjustment, we removed assets with no liquidation value such as deferred tax asset and future profits. The dots of "Adjusted 2" indicate that one company is insolvent (negative solvency ratio) under this definition and three other companies are less than 200%. This Adjusted 2 figures indicates that these four companies would have to face prompt corrective actions under the US rule. The third approach, in addition to the above two adjustments, involves removing subordinated debt from the capital base because its quality as capital is less than that of retained earnings and surplus notes (which are similar to the non-voting redeemable preferred shares of joint stock companies).[9] "Adjusted 3" indicates the result and they show further downward migration of the ratios

Exhibit 11 shows the recent historical movements of "Adjusted 2" figures. We can clearly observe that the solvency margin ratios of most companies have been declining fairly rapidly. Two factors are contributing this declining trend; falling stock prices and high guaranteed return on their insurance contracts. For example, the stock-asset ratio of 10 major Japanese companies was 14.1 percent at the end of March

[9] See footnote 4 on the role of subordinated debts in bankruptcy procedures.

2002 when Nikkei 225 index was 11025. The index fell to 7973 in one year and solvency margin ratios deteriorated sharply. We estimated that a 20% fall in the index from 7973 would pull the solvency margin (adjusted 2 figures) of weaker companies down by about 100 points.

4.2. Double-Gearing among Banks and Life-Insurance Companies

Major Japanese life insurance companies are major shareholders of Japanese banks – collectively owning 10% or more of each city bank during the 1990s. Moreover, banks and life insurers have relied on each other to raise broadly defined capital. Most major life-insurance companies are mutual companies. Mutual life insurance companies raise core capital by issuing surplus notes that are similar to non-voting preferred shares of joint-stock companies. Between March 2000 and March 2001 the bankruptcies of Chiyoda, Kyoei, and Tokyo Life reduced the double-gearing, but it is still significant.

Exhibits 12 and 13 show the status of double-gearing between life-insurance companies and banks. Exhibit 12 shows the amount of shares and subordinated debts of banks held by major life-insurance companies. Exhibit 13 shows the amount of surplus notes, shares and subordinated debts of life-insurance companies held by major banks. At the end of March 2003, 10 life insurance companies collectively held JPY 1.7 trillion of bank stocks and JPY 4.2 trillion yen of bank subordinated debts. In exchange, banks held JPY 1.4 trillion of capital notes and JPY 1 trillion of subordinated debts of 7 life insurance companies. The amount of bank shares held by life-insurance companies declined rapidly from JPY 7.7 trillion in March 2000 to JPY 1.7 trillion in March 2003. This decline is mostly due to the falling stock prices of major Japanese banks rather than the sales of bank shares by insurance companies.

The double-gearing generates two important problems: weak capital structure in Japan's financial system, and weaker governance in banks and life-insurance companies than other listed companies. As regards systemic risk, suppose a major life insurer filed for bankruptcy. The banks that hold the company's subordinated loans and surplus notes lose money. The price of the stock of these banks falls to reflect the write-offs, which reduces the value of bank stocks held by insurance companies. It may even trigger a chain reaction of failures among Japanese financial institutions.

Regarding the corporate governance structure, the cross holding of capital tends to weaken the level of shareholders' oversight. Often, top executives of banks become representative policyholders of life-insurance companies with cross-holding relationship. At the same time, the life-insurance companies are often silent shareholders of banks with the same relationship.

The FSA should restrict double gearing among banks, life-insurance companies and bank customers. In the effort to increase their capital, many banks resorted measures dangerously close to double gearing.

Mizuho Financial Group raised JPY 1,082 billion preferred equity in March 2003. The equity was mostly subscribed by its Japanese customers and friendly life-insurance companies. There were 75 large subscribers that bought more than JPY 3 billion. Mizuho Bank and Mizuho Corporate Bank are among top three shareholders of 32 of the 75 large subscribers. Top three subscribers are Daiichi Life, JPY 45 billion, Yasuda Life, JPY 33 billion, and Sompo Japan Insurance (nonlife insurance company created by a merger of Yasuda Fire and Marine Insurance and Nissan Fire and Marine Insurance in July 2002), JPY 31.5 billion. Mizuho Corporate Bank is among the top two shareholders of the three companies.

The FSA should pay careful attention to the capital structures of big financial groups rather than superficial BIS ratios. Without the restoration of sound financial sector, we cannot expect market forces to discipline banks in a constructive way.

4.3. Policyholder Protection Policy

The Law on Insurance Industry in 1995 also changed the policyholder protection policy. Under the old law, regulators tried to support even the weakest company by limiting competition and strong regulatory power. Under the old law, the Minister of Finance could reduce guaranteed minimum return by an executive order. The Minister could also force a sound company to rescue a failing company. The new law tried to change this regime to a more transparent one. The law introduced a capital requirements called solvency margin rule and created a Policyholder Protection Fund. This fund was supposed to assist a failing company up to JYP 200 billion with the future contribution from other life-insurance companies. The membership of this Fund was not mandatory but all companies contributed to the Fund. However, when Nissan Life failed in April 1997, this fund was depleted completely. Moreover, the scope of

policyholder protection was not clearly defined. As a result, a new organization, Policyholder Protection Organization, was created in December 1998 and all the life-insurance companies, including foreign companies that had license of insurance business in Japan, were required to participate in the Organization. The contribution to the Organization from each company is determined by the amount of responsibility reserves and the amount of annual premium received. The scope of the policyholder protection was clarified but still contains a large room for maneuver. The life-insurance companies were required to contribute JPY 460 billion over 10-year period and the Organization could borrow money for immediate use of the money. When Toho life failed in June 99, JPY 380 billion was used and the Organization lost most of the future 10-year contribution. Once again, FSA asked the industry for more contribution. The industry promised to provide additional JPY 100 billion to the Organization.

The Exhibit 14 shows the financial conditions of failed seven life-insurance companies. Five of the seven failed ones were mutual companies. Although the failed companies disclosed fairly high solvency margin ratios just before their failures, all the companies were found to be insolvent after their bankruptcy (Exhibit 15). As a result, five companies have to cut their insurance obligations (reserves) by 8 to 10 percent. In other words, policyholders of failed companies lost about 10 percent of the saving components of their contracts. Guaranteed returns were cut from about 4 percent to 1 to 2 percent in most cases. Moreover, fairly heavy early withdrawal charges were levied on the cancellation of insurance policies underwritten by rehabilitated company. For example, a policy holder of Chiyoda Life had to face a 20 percent hair cut in his saving for immediate cancellation in addition to 10 percent hair cut in his saving due to the reduction of reserves or he has to wait for 10 years to cancel his policy without early withdrawal charge. If he was healthy and he could have canceled his contract before the failure of the company, he could have realized the surrender value of his policy quite easily.

Because of this cut in the saving component of insurance policy, it is usually better for a healthy person to cancel his policy of a failing company before the start of the bankruptcy procedure and to get a new insurance policy from elsewhere rather than to stick to his existing policy. Since this is not possible for an unhealthy person to obtain a new insurance policy with the surrender value of the old policy and the existing premium, the burden of a failure would be heavier for the people who need the

insurance most. Such a resolution also tends to encourage "run" on weakened life-insurance companies. For example, Asahi Life and Mitsui Life had low solvency margins in recent years and experienced a rapid fall in the outstanding personal contracts and the insurance premium (see Exhibits 7 and 8).

When an insurance company becomes undercapitalized, an intervention by the FSA is desirable. Most life-insurance policies are very long-term contracts and last more than 20-30 years. Many people who ate not financially literate rely on life-insurance companies to keep their saving. Since insurance policies are less liquid than deposits, the run on policies are fairly slow and a weakened insurance company can operate for a long time with a low or negative equity by window dressing their financial statements. Most failed life-insurance companies aggravated their situations through this process.

Too sum up, the cost of resolution of failed life-insurance companies had been very high for their policyholders due to the excessive forbearance by the FSA. The cost of the resolution had been borne by the healthier life-insurance companies through their contribution to the Protection Organization and policy holders.

4.4. Resolution Process of Failing Life-Insurance Companies

FSA improved the cumbersome bankruptcy procedure of life-insurance companies under the Law on Insurance Industry. It introduced the Law on Reorganization Order of joint-stock companies (Kaisha Kosei Ho) for life-insurance companies in June 2000. This Law is similar to Chapter 10, Corporate Reorganization, of US Bankruptcy Act of 1898. The three companies that went through this bankruptcy procedure, Chiyoda Life, Kyoei Life and Tokyo Life, did not use the money of Policyholder Protection Organization in spite of the significant negative equity at the time of failures (see Exhibit 14). By the time of these failures, the money of the Organization had been used up to take care of Toho Life. In order to use more money for these three companies, FSA has to go to the Diet to get a new resolution for authorization. Because such a procedure involves a lot of uncertainty, the administrator of failed insurance companies did not want to use the Organization. The process of rehabilitation of Chiyoda Life is well documented in a book by its administrators (Chiyoda Seimei Kosei Kanzainin Dan (2002)). Under this procedure, the administrators can use innovative procedures to minimize the cost of bankruptcy for policyholders and Policyholder Protection Organization. Both the core capital and the

subordinated debts were wiped out properly in this process.

However, in 2003, FSA introduced a new law that allowed life-insurance companies to cut promised return to policyholders. A change of existing insurance contracts is an act of default. However, under the new law, the management of a weakened life-insurance company may take the following steps to do so:

(i) The management asks FSA to allow it to change the contents of existing policies so as to improve its financial situations.
(ii) After the FSA's approval, the management asks policyholders meeting (mutual companies) or shareholders meeting to ratify the plan by a special resolution.
(iii) FSA checks the plan by dispatching life-insurance examiner to protect policyholders from an excessive reduction of their saving.
(iv) The company notifies the plan to all the policyholders. Unless more than 10 percent of policyholders object the plan, the plan will be approved.

The existing directors of the company may retain their post even after the process. It is not necessary to write off the surplus notes and the subordinated debts of the company. Since insurance policies are the most senior debt of life-insurance companies, this procedure clearly violates the absolute priority rule of bankruptcy procedures. As such, if one weak company invokes this procedure, credit rating agencies may start to regard the "capital" of all life-insurance companies as sham and irrelevant. Since most of the surplus notes and subordinated debts are held by major banks, this law tends to protect banks that provide capital to life-insurance companies at the cost of policyholders.

In my opinion, this new law is clearly unnecessary and the regular reorganization order is better suited for fair and quick resolution of insolvent life-insurance companies. Fortunately, this law has not been invoked at the time of writing (August 2004) because of the recovery of stock prices and the likely loss of reputation for the invoking company.

5. Postal Life-Insurance (Kampo) System and its Market Distortion

Japanese Postal Life-Insurance System (Kampo in Japanese) is the world largest insurance company. Since private insurance companies have to compete with this giant government insurance company, the presence of Kampo distorts the Japanese

insurance market.

Exhibit 16 compares the size of Kampo with the total asset of 10 major private life-insurance companies. The asset of Kampo in March 2002 was JPY 126 trillion and it is more than 80 percent of 10 major private insurance companies combined. Kampo is a huge government sponsored financial institution. Most of its fund is channeled to Fiscal Loan and Investment Program to finance budget deficits, fund government lending agencies and fund public investment projects. As Exhibit 17 shows, both of the book-value and market-value returns of Kampo has been significantly higher than those of private companies. The cause of this superior performance of Kampo over private insurance companies is its conservative investment strategy. As Exhibit 16 shows, the share of equity in Kampo asset is less than one-third of the average of private companies. Kampo did not invest in real estate either. Kampo held most of its assets in long-term bonds and loans. This asset mix performed much better than that of private companies under prolonged deflation and low interest rates.

Kampo also received explicit and implicit subsides from the government. The estimated value of such subsides for fiscal year 2001 can be summarized as follows:[10]

(i) Kampo is exempted from all the central and local government taxes; it does not pay any corporate income tax, real estate tax or stamp duties. This tax benefit is estimated to be about JPY 389 billion a year.

(ii) The policy holders of Kampo have been fully protected by explicit government guarantees and this guarantee has been provided without any charges. If Kampo has to pay a fee to the Policyholder Protection Fund that provides guarantee to private insurance companies, the cost would be about JPY 28 billion a year. Moreover, this government guarantee is much more comprehensive than the private sector Policy Holder Protection Organization. While the government fully guarantees all the benefits of Kampo policies, the Policyholder Protection Organization that guarantees policies of private insurance companies protects only 70-90 percent of the principal and the accrued interest. The Organization does not protect un-accrued future interests on the insurance policies.

(iii) Finally, Kampo has been getting subsidized return from its loans to the government amounting JPY 78 billion a year. The interest rate of these loans has been

[10] This estimation is based on Fukao and Japan Center for Economic Research (2003).

higher than the government bond yield even though the loans are fully guaranteed by the government. Although the government stopped to provide this subsidy since FY 2001, Kampo still enjoys the above-market yields from past long-term loans.

The total subsidy from the government is about JPY 495 billion a year. This subsidy is amount to 0.39 percent of gross asset, indicating a significant advantage over private companies.

Kampo also gets benefit from more lenient regulations on cross selling of postal deposits and life-insurance policy through its more than 24000 post offices all over Japan. Mailmen and the clerks of postal saving windows routinely sell life-insurance policies. On the other hand, Japanese commercial banks can sell only a very limited line of life-insurance policies. Banks can sell only annuities and term insurance for housing-loan customers.

As an Insurance company, Kampo has a fairly sound balance sheet. The capital-asset ratio of Kampo at the end of March 2002 was 11.2 percent (Exhibit 20). This ratio was somewhat lower than the best private insurance company. Nippon Life showed 13.2 percent. However, the estimated solvency margin ratios of Kampo were much higher than those of best private company due to much lower risk exposure to the stock market (see Exhibits 10 and 19).

Thus, Kampo distorts the insurance market by the unequal treatment of taxes, policyholder protection scheme, and the regulations on cross-selling.

6. Stabilizing the Life-Insurance Industry in Japan

In order to stabilize Japanese life-insurance companies, it is necessary to restore its profitability with more effective risk control mechanism.

Firstly, the operating cost of major life-insurance companies is still high. Especially, the cost of the sales force has been enormous although it has been declining in recent years. The industry maintains about 250,000 sales persons and one sales person sells only 3 contracts a month. Moreover, about one-third of the sales person quits the job within one year. It is necessary to modernize this outdated sales strategy with sheer manpower.

Secondly, the risk-control mechanism has to be improved. The top management of the industry should pay much more attention to the market risk and insurance risk over a long period of time. The asset-liability management procedure has to be strengthened.

Thirdly, FSA should beef up the existing regulations. Dysfunctional solvency margin requirement should be tightened considerably. At least, FSA should remove deferred tax from the definition of solvency, prohibit double-gearing among financial institutions and raise the risk parameter on stock portfolio.

Fourthly, it is necessary to remove unfair competitive advantage of Postal Life Insurance System (Kampo) over private insurance companies due to tax, government guarantee and cross-selling of deposits and insurance.

Finally, the corporate governance of life-insurance companies has to be improved. Ideally, mutual companies should be reorganized as joint-stock companies. If it is not possible to do so in the short run, the selection procedure of representative policyholders has to be changed. By choosing only independent policyholders without financial relationships with the life-insurance company, we can expect more effective oversight of the top executives of life-insurance companies.

The soundness of remaining major life-insurance companies has improved considerably due to the recovery of stock prices since the spring of 2003. If they can earn 2 percent mark-to-market return on their asset, they can cover their negative carry from the mortality gap and other profits of insurance contracts. Therefore, if interest rates go up to 2 percent and stock prices remain stable, major life-insurance companies can avoid erosion of their equity capital. However, this is not the end of the story. Since most major life-insurance companies maintain a number of old contracts with large negative carry, they have to subsidize old contracts with high guaranteed return by the profit from new contracts with low guaranteed returns. As a result, they face a competitive disadvantage against new foreign owned competitors without such legacy contracts. New life-insurance companies can provide more attractive prices to their customers than old companies.

Because of the very long duration of most insurance contracts, the guaranteed return will fall only very slowly. As we have seen in our analysis, it is necessary to

earn about 4 percent return on asset to end the negative carry problem. In order to realize such return from bond portfolio, long-term interest rates has to rise by about 2 to 3 percentage points from the current levels. The only way to realize such prospects is to end the deflation Japanese economy has been suffering since mid 1990s. Higher interest rates would reduce the value of bond portfolio of insurance companies. However, the reduction of the net present value of their debts is much larger than the loss from their asset because the duration of the debt is much longer than that of their asset.

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1

Japanese Life Insurance Market
Financial Year Ended March 2003

	Gross asset JPY 100 million	Market Share %	Premium JPY 100 million	Market Share %
Major Japanese Companies				
Nihon Life	436,865	12.8	54,207	12.1
Daiichi Life	289,105	8.5	35,621	8.0
Sumitomo Life	219,115	6.4	26,989	6.0
Meiji Life	162,431	4.8	21,847	4.9
Yasuda Life	94,841	2.8	12,953	2.9
Mitsui Life	76,692	2.2	9,530	2.1
Asahi Life	65,968	1.9	7,686	1.7
Taiyo Life	65,280	1.9	8,879	2.0
Daido Life	60,072	1.8	9,894	2.2
Fukoku Life	47,329	1.4	7,626	1.7
Sub total	1,517,698	44.4	195,232	43.6
Other Japanese Companies				
Orix Life	6,532	0.2	1,213	0.3
Sony Life	19,819	0.6	4,916	1.1
Sompo Japan Himawari Life	5,120	0.1	1,828	0.4
Tokyo Marine Nichido Anshin Life*	11,610	0.3	4,034	0.9
Sub total	43,081	1.3	11,991	2.7
Foreign Companies				
ING Life	6,239	0.2	4,611	1.0
Axa Life	3,402	0.1	1,815	0.4
Axa Group Life	24,452	0.7	6,186	1.4
GE Edison Life (former Toho Life)	23,149	0.7	2,833	0.6
Gibraltar Life (former Kyoei Life)	35,932	1.1	3,848	0.9
Hartford Life	2,954	0.1	2,450	0.5
Prudential Life	8,220	0.2	2,599	0.6
Manulife (former Daihyaku Life)	9,232	0.3	1,440	0.3
American Family Life (AFLAC)	40,550	1.2	8,328	1.9
Alico Japan	18,415	0.5	5,993	1.3
AIG Star Life (former Chiyoda Life)	17,775	0.5	1,996	0.4
Sub total	190,320	5.6	42,099	9.4
Postal Life (Kampo)	1,257,494	36.8	143,117	32.0
Japan Agricultural Cooperative (JA Kyosai)	409,443	12.0	55,252	12.3
Total	3,418,036	100.0	447,691	100.0

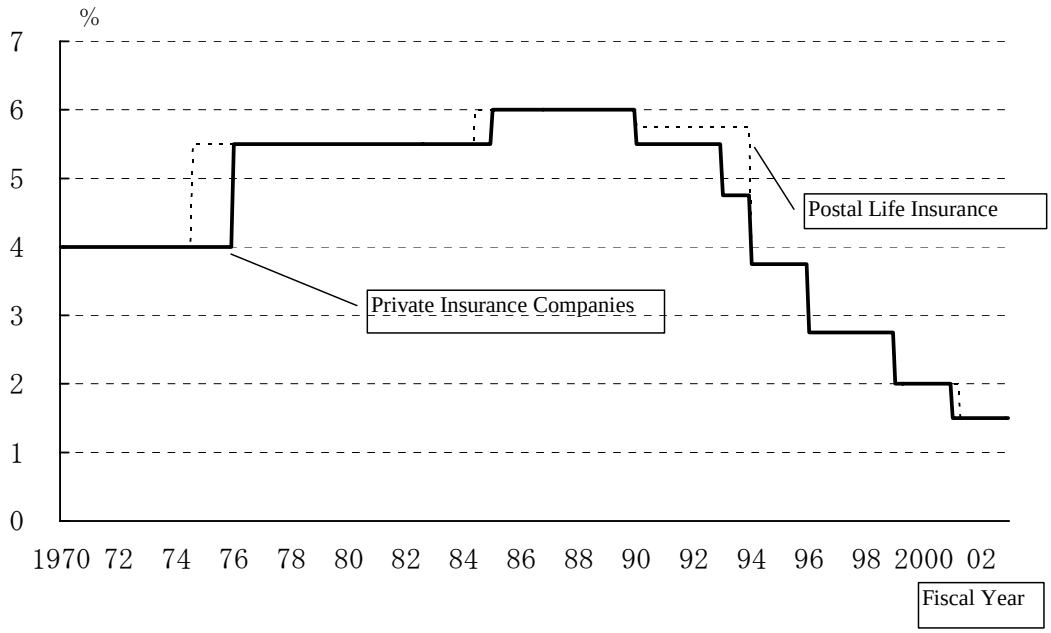
Source: Standard & Poor's (2004) and individual disclosure materials.

(1) Major Japanese companies, other Japanese companies, and foreign companies includes 26 companies that are rated by Standard & Poor's and AIG Star. These 26 companies covers about 96 % of total premium of the market excluding Kampo and JA Kyosai.

(2) Tokyo Marine Anshin and Nichido Life merged in October 2003 to create Tokyo Marine Nichido Anshin Life.

(3) JA Kyosai's full English name is "National Mutual Insurance Federation of Agricultural Cooperatives" and also known as Zenkyoren. JA Kyosai provides non-life insurace coverages. About one-third of its gross asset corresponds to non-life policies.

2 Minimum Guaranteed Return



Source: Fukao and Japan Center for Economic Research (2004).

3 Average Guaranteed Return

%

	FY 2001 (A)	FY 2002 (B)	B - A	Guaranteed return excluding floating rate contracts
Nihon	3.70	3.49	-0.21	4.16
Daiichi	3.59	3.38	-0.21	4.13
Sumitomo	3.60	3.40	-0.20	4.00
Meiji	3.20	3.06	-0.14	3.93
Yasuda	3.20	3.07	-0.13	4.42
Mitsui	3.63	3.62	-0.01	4.35
Asahi	4.00	4.17	0.17	4.25
Taiyo	3.62	3.17	-0.45	3.39
Daido	3.08	2.86	-0.22	3.87
Fukoku	3.15	2.92	-0.23	4.12

Source: Fukao and Japan Center for Economic Research (2004).

4 Market Value Return on Asset

%

	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	6-year Average
Nihon	1.69	1.29	5.04	-1.00	-1.27	-0.89	0.79
Daiichi	0.51	2.09	4.73	-0.65	-1.43	-0.50	0.77
Sumitomo	0.25	1.33	3.94	-0.60	-1.07	0.18	0.66
Meiji	0.13	0.64	2.43	0.58	-1.04	-0.38	0.39
Yasuda	0.99	1.39	4.73	-1.03	-0.21	-0.76	0.83
Mitsui	2.46	0.18	4.94	-1.74	-1.19	-0.72	0.63
Asahi	0.90	1.19	4.40	-1.76	-1.92	-0.68	0.33
Taiyo	0.03	1.13	3.89	0.45	-0.55	1.11	1.00
Daido	2.35	2.27	2.82	0.58	0.08	1.57	1.61
Fukoku	0.29	2.72	3.52	1.06	-0.61	-0.47	1.07
Average	0.96	1.42	4.04	-0.41	-0.92	-0.15	0.81

	FY 2000	FY 2001	FY 2002
JA Kyosai	-	0.54	5.17
Kampo	2.60	1.10	-

Source: Fukao and Japan Center for Economic Research (2004).

5 Economic Profit of Life Insurance Companies
Total of Ten Major Companies

Billion yen, Percent

	FY 2000	FY 2001	FY 2002
Gross Profit from Insurance (A)	6,171	5,997	5,663
	(3.72)	(3.79)	(3.73)
Operating Expenses (B)	2,853	3,023	2,669
	(1.72)	(1.91)	(1.76)
Negative Carry (C)	-5,753	-6,209	-4,573
	(-3.47)	(-3.92)	(-3.01)
Economic Profit (A - B + C)	-2,435	-3,235	-1,579
before tax and dividend	(-1.59)	(-2.06)	(-1.06)

Note: Numbers in the parentheses are the ratios against gross asset.

Source: Fukao and Japan Center for Economic Research (2004).

6 Net Asset of Japanese Life-Insurance Companies

Billion yen, %

	Net asset				Mar-03			
	Mar-00	Mar-01	Mar-02	Mar-03	Gross Asset Billion yen	Net Asset Ratio %	DTA Billion yen	Net Asset Ratio Excluding DTA %
Nippon	8,274	7,211	5,968	5,077	43,686	11.6	303	10.9
y-y change		-13	-17	-15				
Daiichi	3,940	3,151	2,410	2,062	28,911	7.1	282	6.2
y-y change		-20	-24	-14				
Sumitomo	1,930	1,520	980	844	21,911	3.9	262	2.7
y-y change		-21	-36	-14				
Meiji	2,170	1,937	1,628	1,362	16,243	8.4	248	6.9
y-y change		-11	-16	-16				
Asahi	1,051	571	394	236	6,597	3.6	99	2.1
y-y change		-46	-31	-40				
Yasuda	1,104	855	702	590	9,484	6.2	151	4.6
y-y change		-23	-18	-16				
Mitsui	730	379	278	118	7,669	1.5	77	0.5
y-y change		-48	-27	-58				
Taiyo	820	680	456	341	6,528	5.2	79	4.0
y-y change		-17	-33	-25				
Daido	728	619	471	515	6,007	8.6	52	7.7
y-y change		-15	-24	9				
Fukoku	522	471	375	316	4,733	6.7	52	5.6
y-y change		-10	-20	-16				

Note: DAT = Deferred Tax Asset

Source: Prepared by the author based on Fukao and Japan Center for Economic Research (2004).

7 Outstanding Personal Insurance Contracts

Index Mar-99=100

	Mar-99	Mar-00	Mar-01	Mar-02	Mar-03
Nihon	100.0	96.7	93.6	90.2	87.1
Daiichi	100.0	97.3	95.1	92.4	89.2
Sumitomo	100.0	97.6	93.5	89.6	85.0
Meiji	100.0	94.3	92.6	89.6	84.0
Yasuda	100.0	96.9	94.6	90.6	85.8
Mitsui	100.0	95.1	90.1	83.5	79.1
Asahi	100.0	95.0	91.3	83.2	76.6
Taiyo	100.0	98.5	97.8	100.3	103.1
Daido	100.0	99.5	99.4	99.3	100.2
Fukoku	100.0	101.4	102.7	104.0	104.4
Total	100.0	96.8	93.9	90.3	86.5

Source: Fukao and Japan Center for Economic Research (2004).

8 Insurance Premium Received Personal Contracts

Index Mar-99=100

	Mar-99	Mar-00	Mar-01	Mar-02	Mar-03
Nihon	100.0	90.4	88.3	86.7	87.3
Daiichi	100.0	87.6	85.3	85.6	88.5
Sumitomo	100.0	92.8	88.0	83.1	78.7
Meiji	100.0	89.1	84.5	81.6	80.9
Yasuda	100.0	92.7	88.7	85.6	83.9
Mitsui	100.0	88.7	83.6	74.7	69.7
Asahi	100.0	89.7	84.9	73.9	62.2
Taiyo	100.0	91.4	84.8	79.9	74.1
Daido	100.0	97.4	97.4	93.9	96.0
Fukoku	100.0	91.2	91.3	88.6	90.4
Total	100.0	90.5	87.2	83.8	82.4

Source: Fukao and Japan Center for Economic Research (2004).

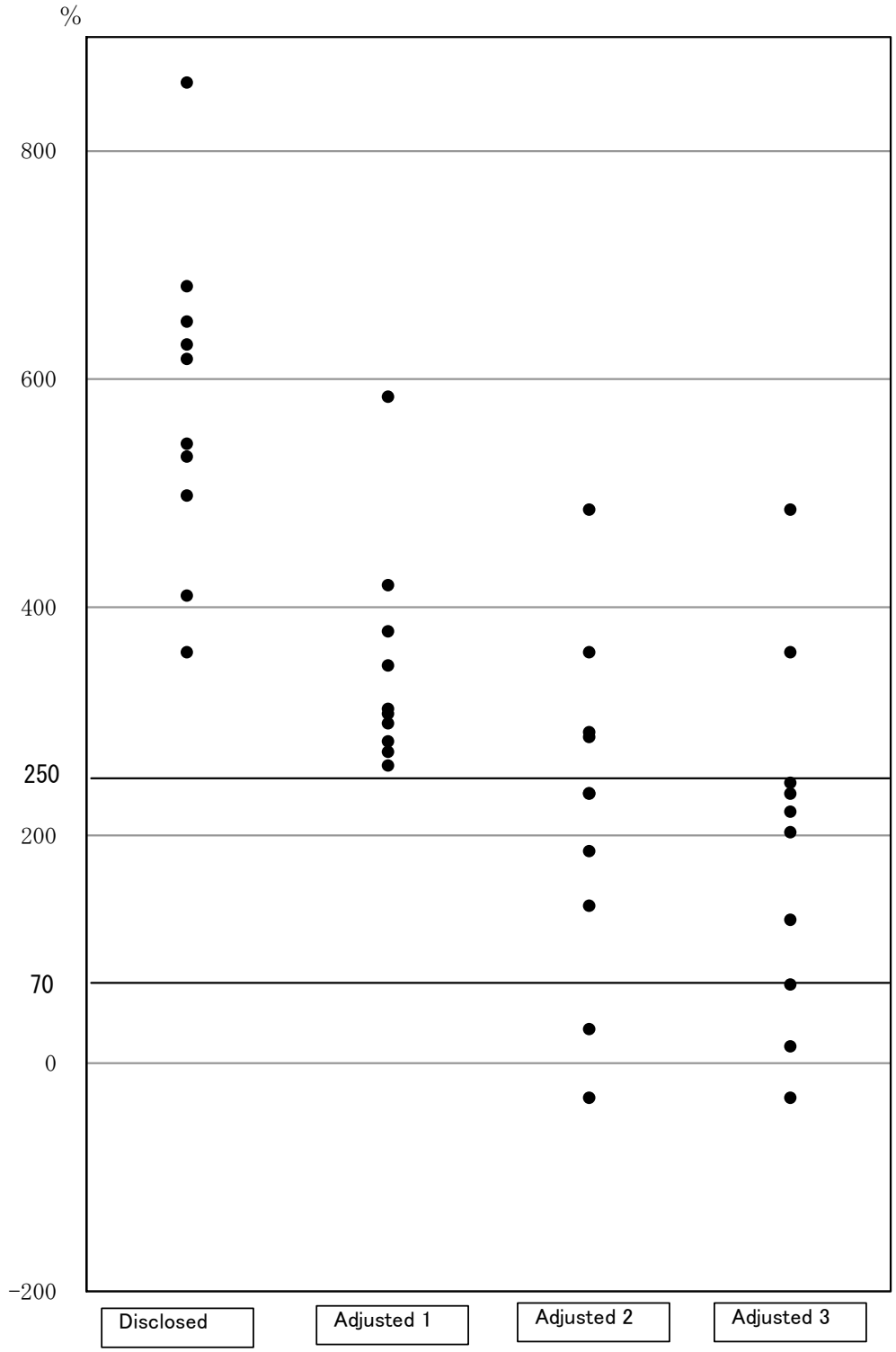
9

Comparison of US and Japanese Capital Requirements on Life-insurance Companies

	US RBC regulation	Japanese Solvency Margin regulation
Assets of no liquidation value in the net asset calculation		
Deferred tax asset	Not allowed	Allowed
Movable property	Not allowed	Allowed
Future profit	Not allowed	One year profit until March 2000 Half year profit is allowed since ther
Unrealized losses		
in domestic bonds	Deducted from asset	Not deducted from assets until March 2001
in foreign securities	Deducted from asset	Not deducted from assets until March 2001
Weights for market risk		
Stocks	22.5-45%	10%
Foreign bonds	10%	5%
Real estates	10%	5%
Trigger levels for prompt corrective actions		
No action	250%	200%
Submit plans for improvements	150-250%	100-200%
Stronger intervention	70-150%	0-100%
Authority takes over the control	Less than 70%	Less than 0%

Source: Prepared by the author.

10 Adjusted Solvency Margin Ratios, March 2003



Source: Fukao and Japan Center for Economic Research (2004).

11

Adjusted Solvency Margin Ratios (Adjusted 2)

Number of Companies in each solvency-margin ranges

	Less than 0	0 to 70%	70 to 100%	100 to 150 %	150 to 200%	200 to 250%	250～400%	More than 400%	Nikkei 225 index
Mar-00	0	0	0	0	0	3	6	1	20,337
Mar-01	0	0	0	1	2	1	5	1	13,000
Mar-02	0	0	1	2	0	2	5	0	11,025
Mar-03	1	1	0	1	1	2	3	1	7,973
Estimated Spt-03	0	0	0	0	1	1	6	2	10,219

Source: Fukao and Japan Center for Economic Research (2004).

12 Double-Gearing between Banks and Life-Insurance Companies I (March 2003)

Capital of Banks held by Life-Insurance Companies

100 million yen

Insurance Companies	UFJ HD	SMFG	Sumitomo Trust	Mitsui Trust HD	Mizuho FG	MTFG	Resona HD	Other banks	Sub Total	Sub-Debt of all Banks	Total
Nippon	171	392			183	654		2,631	4,032	5,400	9,432
Daiichi	41	76			338	396	67	2,263	3,181	6,975	10,156
Sumitomo	7	444	107		7	90		1,535	2,190	7,584	9,774
Meiji	61				12	221		3,352	3,645	5,385	9,030
Yasuda					85		29	1,490	1,603	4,523	6,126
Mitsui		163		38				298	499	3,801	4,300
Asahi					170		46	602	818	3,923	4,740
Taiyo	46	227						1,180	1,453	3,506	4,959
Daido	124						40	818	982	2,196	3,178
Fukoku								435	435	995	1,430
Total	450	1,301	107	38	795	1,361	181	13,226	17,461	42,383	59,844

Source: Fukao and Japan Center for Economic Research (2004). Data are taken from disclosure materials of individual financial institutions.

Shaded cell means the figures are not disclosed.

Daido Life was reorganized from mutual company to joint stock company on April 1, 2002. As a result, S notes for Daido are the value of shares at the time of listing.

The value of s-notes does not included those held by non financial companies based on the disclosure figures.

Example: Sumitomo Life holds 444 SMFG shares and 107 shares of Sumitomo Trust (in 100 million yen). Sumitomo Life holds 2190 shares and 7584 sub-debts of banks.

13 Double-Gearing between Banks and Life-Insurance Companies II (March 2003)
Capital of Life-Insurance Companies held by banks

100 million yen

	UFJ Group			Sumitomo-Mitsui		Sumitomo Trust	Mitsui Trust G		Mizuho Group			Mitsubishi-Tokyo			Resona Group			SPCs	Others	Sub Total	Sub-Debt of LI held by Banks	Total
Insurance Companies	UFJ HD	UFJ	UFJ Trust	SMFG	SMBC		Mitsui Trust HD	Chuo-Mitsui Trust	Mizuho FG	Mizuho CB	Mizuho	MTFG	BOTM	Mitsubishi Trust	Resona HD	Resona	Saitama Resona					
Nippon	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	3,000	0	3,000	0	3,000
Daiichi		176			176					264			88			88		800	708	2,300	1,000	3,300
Sumitomo		100			700	300				250			100					0	150	1,600	3,750	5,350
Meiji		170								90			260	150				0	275	945	0	945
Yasuda										100						50		300	450	900	1,000	1,900
Mitsui					811			415		30								0	169	1,425	2,030	3,455
Asahi										1,340						660		0	0	2,000	1,230	3,230
Taiyo		56	39		56													0	125	277	800	1,077
Daido	50	167	117													88		0	495	918	0	918
Fukoku	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	300	0	300	350	650
Total	50	670	157	0	1,743	300	0	415	0	2,074	0	0	448	150	0	886	0	4,400	2,373	13,665	10,160	23,825

Source: Fukao and Japan Center for Economic Research (2004). Data are taken from disclosure materials of individual financial institutions.

Shaded cell means the figures are not disclosed.

Daido Life was reorganized from mutual company to joint stock company on April 1, 2002. As a result, S notes for Daido are the value of shares at the time of listing.

The value of s-notes does not included those held by non financial companies based on the disclosure figures.

Example: SMBC holds 176 of Daiichi Life's capital, 700 of Sumitomo Life's capital, and 811 of Mistsui Life's capital.

14 **Failed Life Insurance Companies**
Situations at the time of Bankruptcy

Name	Nissan	Toho	Daihyaku	Taisho	Chiyoda	Kyoei	Tokyo
Corporate structure	Mutual	Mutual	Mutual	LLC	Mutual	LLC	Mutual
Date of Failure	Apr-97	Jun-99	May-00	May-00	Oct-00	Oct-00	Mar-01
Asset (trillion yen)	1.82	2.19	1.30	0.15	2.23	3.73	0.69
Equity (trillion yen)	-0.32	-0.65	-0.32	-0.03	-0.60	-0.69	-0.07
Disclosed solvency margin	N.A.	154	305	68	263	211	447
Date of solvency margin	N.A.	Mar-98	Mar-99	Mar-00	Mar-00	Mar-00	Mar-00
Reduction of reserves by bankruptcy	0%	10%	10%	10%	10%	8%	0%
Average guaranteed return before failure	3.75-5.5%	4.79%	4.46%	4.05%	3.70%	4.00%	4.20%
Guaranteed return after failure	2.75%	1.50%	1.00%	1.00%	1.50%	1.75%	2.60%
Aid from Protection Fund (billion ye	200	366	145	27	None	None	None
Early withdrawal charges (EWC)	15-3%	15-2%	20-2%	15-3%	20-2%	15-2%	20-2%
Period of EWC	7 years	8 years	10 years	10 years	10 years	8 years	10 years
Current names of reorganized compa	Aoba	AIG Edison	Manulife	Yamato	AIG Star	Gibraltar	T&D Finaicial

Source: Fukao and Japan Center for Economic Research (2004).
Note: LLC stands for limited liability company.

15 **Disclosed Solvency-Margin Ratios**

	Mar-98	Mar-99	Mar-00	Mar-01	Mar-02	Mar-03
Nippon	939.9	849.9	1,095.8	778.1	714.4	630.6
Daiichi	632.1	662.1	865.6	682.3	593.0	543.5
Sumitomo	526.2	589.5	675.7	551.3	534.5	497.9
Meiji	719.9	706.1	731.0	667.2	609.4	532.0
Yasuda	648.1	727.2	808.5	602.6	612.8	617.6
Mitsui	491.6	519.6	676.7	492.7	510.7	410.4
Asahi	654.8	688.8	732.7	543.4	417.6	360.4
Taiyo	873.0	869.1	1,050.3	806.8	767.0	681.5
Daido	1,016.8	998.0	1,004.2	757.6	772.0	860.2
Fukoku	722.4	820.6	906.5	779.3	708.2	650.5
Nichidan (AXA Group Life)	308.6	377.5	425.9	464.7	430.3	392.2
Tokyo (Failed in 2001.3)	431.6	478.6	**446.7**	0.0	0.0	0.0
Chiyoda (Failed in 2000.10)	314.2	396.1	**263.1**	0.0	0.0	0.0
Kyoei (Failed in 2000.10)	300.7	343.2	**210.6**	0.0	0.0	0.0
Daihyaku (Failed in 2000.5)	294.6	**304.6**	0.0	0.0	0.0	0.0
Toho (Failed in 1999.6)	**154.3**	0.0	0.0	0.0	0.0	0.0

Note: Bold figures are the solvency margin ratios just before the failure.
The definition of the ratio was tightened in March 2001 and has been applied thereaft
Source: Fukao and Japan Center for Economic Research (2004).

16 Comparison of the Asset Structure of Postal Life and Private Life Insurance Companies
March 2002

	Postal Life Insurance	Ten Major Private Companies
Deposits	7.6%	3.1%
Money in trust	0.0%	1.0%
Public Bonds	58.8%	30.3%
Stocks	4.5%	14.1%
Foreign Bonds	4.4%	9.1%
Foreign Stocks	1.6%	3.1%
Other securities	0.2%	1.0%
Loans	21.4%	29.1%
Real Estates	0.0%	4.8%
Other assets	1.5%	4.3%
Total	100.0%	100.0%
Amount in trillion yen	126.5	150.3
Notes		
Fixed income assets	87.8%	62.5%
Foreign assets	5.8%	9.4%

Source: Fukao and Japan Center for Economic Research (2003).

17 Comparison of ROA: Kampo vs 10 Major Private Companies

%

		FY1997	FY1998	FY1999	FY2000	FY2001	FY2002	5-year average
Book value return	Kampo	4.02	3.54	3.19	3.18	3.05	2.34	3.22
	10 Private Companies	2.34	2.18	2.38	2.24	0.95	0.99	1.80
Market value return	Kampo	N.A.	N.A.	N.A.	2.63	1.11	N.A.	N.A.
	10 Private Companies	0.96	1.42	4.04	-0.41	-0.92	-0.15	0.81

Source: Fukao and Japan Center for Economic Research (2003, 2004).
Note: Fiscal year starts on April 1 of the year. E.g., fiscal 2001 starts April 1, 2001.

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Estimated Benefit of Postal Life Insurance from the Governmen
Fiscal 2001

Items	Billion yen
Unpaid Tax	388.9
Unpaid fee to the Policyholder Protection	28.0
Excess Return from FILP Investment	77.8
Total	494.7

Source: Fukao and Japan Center for Economic Research (2003
Notes
FILP is the Fiscal Investment and Loan Program of the Japanes
Government
This table does not included the different level of guarantee for
policy holders. While the government fully guarantees all the
benefits of Postal Life policies, the Policyholder Protection Fur
guarantees about 70-90 percent of the principal and the accrue
interest and does note protect un-accrued interest.

19 Estimated Solvency Margin Ratios of the Postal Life Insurace Company

%

	March 2000	March 2001	March 2002
Disclosed	1146.9	1263.7	1328.1
Adjusted 1	791.2	924.8	934.1
Adjusted 2	780.5	912.3	920.0

Source: Fukao and Japan Center for Economic Research (2003)

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Kampo's Net Asset and Capital Asset Ratio

Billion Yen

	March 2000	March 2001	March 2002
Net Asset	14,879	15,325	14,045
Gross Asset	117,674	122,292	124,973
Net Asset/Capital	12.6%	12.5%	11.2%

Source: Fukao and Japan Center for Economic Research (2003)
Note: Gross assets are adjusted for unrealized capital gains and loss