“Prompt Corrective Action” Program Applied to Japanese Life Insurers

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On January 13th 1999 the Japanese government announced details of the regulations that would make up the “Prompt Corrective Action” set of measures to be introduced from April 1st 1999. These measures provide for “corrective action” to be ordered on companies according to their solvency margin ratios, and also allow the government to order companies to suspend business or cease trading if carrying excess liabilities.

1 “Prompt Corrective Action” Based on Solvency Margin Ratios

The solvency margin ratio was first introduced as an index of a company’s health 3 years ago in the Revised Insurance Business Law of 1996 as a regulatory tool for the relevant supervisory agency, but without specifying required levels etc. it was unclear how it would be applied. With the introduction of the Prompt Corrective Action program however, it has for the first time been made clear how the solvency margin ratio is to be applied in the supervision of life insurance companies.

Initially insurance companies did not publicly announce their solvency margin ratios in order to avoid causing investor concern or misunderstanding. However, since fiscal 1997 many companies have been publicizing their figures which have also appeared in magazines etc., so consumers have become extremely familiar with them.

In essence, the solvency margin ratio shows how prepared an insurance company is to cope with unforeseen risk. Risks anticipated by insurance companies are already factored into the calculations used to set premiums, and barring unforeseen eventualities, insurance payouts will be amply covered by policy reserves held by the company for that purpose. Several measures are used in the calculation of insurance premiums, including the “expected mortality rate” (a predicted rate of mortality for people of a given age), the “assumed rate of expense” (used to determine the expenses required for insurance business operations), and the “assumed rate of interest” (used to predict the amount of profit that can be achieved with the investment of collected insurance premiums). These assumptions are usually adjusted so that they are slightly favorable to the insurer, i.e. so that the company makes a profit. These profits are then later paid out in participating insurance where this exists.

However, depending on the circumstances, actual results may be worse than expected, i.e. the company might make a loss. The possibility of the actual results being worse than the prediction can be mathematically expressed as a risk, and against this put how much extra funds outside the policy reserves are available(the solvency margin), then the resulting ratio is the solvency margin ratio (c.f. Figure 1, or the Appendix for further details).

The Prompt Corrective Action program to be introduced on April 1st specifies separate actions to be taken by the supervisory agency against 4 bands of solvency margin ratio: under 0%, 0% to 99%, 100% to 199%, and 200% and over. The bands and their corresponding measures are detailed in Table 1.

Figure 1 The Solvency Margin formula

$$\text{Solvency Margin Ratio}\ (\%) = \frac{\text{Solvency Margin}}{\text{Total Risk Amount} \div 2}$$

Table 1 Prompt Corrective Action measures

Band	Solvency Margin Ratio	Measures
Exempt Band	200% or over	
Band 1	100% to 199%	Drawing up and execution of a business recovery plan
Band 2	0% to 99%	Drawing up and execution of a plan to strengthen ability to make insurance payouts Ban or restrictions on dividend payouts and executive bonuses Ban or restrictions on dividends to policyholders (or members) Revised insurance premiums for new policies Reduction of business costs Restriction of asset management Reduced operations at branch and sales offices, or closure Reduced subsidiary operations or selling off their interests Reduction in secondary businesses or sidelines, and prohibition of entry into new businesses Other measures deemed necessary by the Financial Supervisory Agency
Band 3	under 0%	Deadline by which either all or a certain part of business operations must cease

Source: Enforcement Regulations of Insurance Business Law, Section 88

According to the solvency margin ratio figures announced at the end of March 1998, Toho Mutual Life Insurance with 154.3% is the only company that falls foul of the Corrective Action requirements. With the steep drop in share prices at the end of September there were fears of a fall in solvency margin ratios at several companies, but at the end of the fiscal year a recovery in prices left the Nikkei average only 691 points down on the previous year at 15,836. The wild fluctuations in equity prices of the previous year reminded everyone of how the net worth of life insurance companies depends on share prices (c.f. Table 2).

Many insurance companies are trying to hold or boost their solvency margin ratios using subordinated loans or Foundation Fund, or capital increases. However, at the same time banks and other financial institutions are undertaking large-scale fund procurement making the environment for fund raising particularly difficult. If the funds cannot be invested profitably however, which depends of course on the costs of the funds, they will additionally suffer from negative spread of cash flow between assets and liabilities.

Table 2 Decline in Latent Profit/losses on Equity and its Lowering Effect on Solvency Margin Ratios (estimates)

Units:¥100 million

	Solvency Margin ratio (end Mar)	end Sept.98 (Nikkei 225 Index 13,406)	Nikkei 225 = 14,000	Nikkei 225 = 14,500	Nikkei 225 = 15,000	Nikkei 225 = 15,500	Nikkei 225 = 16,000	(Remarks) Steps taken to Boost Capital Adequacy during fiscal 1998
Nippon	940	-211	-160	-117	-74	-31	12	
Daiichi	632	-200	-152	-114	-75	-37	1	Funds ¥150 bn., Subordinated loans ¥100 bn.
Sumitomo	526	-167	-129	-97	-65	-33	-2	Subordinated loans ¥170 bn. (perpetual)
Meiji	720	-264	-215	-177	-139	-102	-64	Funds ¥60 bn.
Asahi	655	-210	-169	-135	-101	-67	-33	Subordinated loans ¥73 bn. (perpetual)
Mitsui	492	-184	-140	-103	-66	-31	2	Subordinated loans ¥50 bn. (perpetual)
Yasuda	648	-171	-143	-119	-95	-71	-47	Subordinated loans ¥100bn.
Taiyo	873	-271	-243	-219	-195	-171	-147	Subordinated loans ¥85 bn. (¥35 bn. Perpetual, ¥50 bn. fixed-term)
Daido	1,017	-6	14	32	49	67	84	
Kyoei	301	-74	-61	-50	-39	-28	-17	Private placement ¥10 bn, Subordinated loans ¥30bn.
Chiyoda	314	-120	-89	-63	-37	-11	15	Subordinated loans, Subordinated debt ¥70bn.
Fukoku	722	-223	-188	-159	-130	-103	-77	Subordinated debt ¥32.5bn. (perpetual)
Nippon Dantai	309	-67	-34	-8	18	44	70	Private placement ¥27bn. (preference shares ¥21bn., ordinary shares ¥6bn.)
Toho	154	-64	-48	-35	-21	-8	6	Sale of real-estate ¥20bn.
Daihyaku	295	-209	-168	-134	-100	-66	-32	Sale of goodwill (several billion yen)
Tokyo	432	-149	-116	-89	-61	-34	-6	Subordinated loans ¥14bn. (¥10bn. Perpetual, ¥4bn. Fixed-term)
Total	671	-187	-144	-111	-78	-45	-13	

Notes 1: We have assumed that equity holdings remain unchanged from end-September 1998, the equity portfolio is perfectly linked to the Nikkei Average, and the only latent profit/losses is changed on calculating Solvency Margin ratio.
Source: Nomura Research Institute

The several changes were introduced to the calculation of the solvency margin ratio at the same time. One major change is the increased "risk factor to assumed rate of interest." The current changes, increase the risk factor even for contracts which were made after the bubble economy with a lowered assumed rate of interest, with a resulting increase of around 10% in the denominator for the solvency margin ratio (total risk amount) for each company. This is probably the reason why the measures to boost equity capital are for each company way above the effect that the fall in share prices alone would have had (c.f. Table 3).

Also, for price fluctuation risk, the risk factor for foreign equities has been lowered from 15% to 10%, while the risk factor for real estate has been raised from 2% to 5%. These changes may be thought to reflect the recent investment environment, but the risk factor for domestic equities (10%) and for foreign currency bonds (5%) remain unchanged. In the light of recent performance in the foreign exchange and equity markets these factor should probably also be revised. Especially in the case of equities, with some companies holding over a 20% hidden loss ratio due to having opted for cost-based valuation, the risk factor are widely divergent from reality.

Table 3 Main Changes to Risk Weightings

(old) (%)

Assumed Rate of Interest	Risk Factor
over 0.0% up to 3.0%	0.01
over 3.0% up to 4.0%	0.1
over 4.0% up to 5.0%	0.4
over 5.0% up to 6.0%	0.8
over 6.0%	1.0

(New) (%)

Assumed Rate of Interest	Risk Factor
over 0.0% up to 2.0%	0.01
over 2.0% up to 3.0%	0.2
ver 3.0% up to 4.0%	0.4
over 4.0% up to 5.0%	0.6
over 5.0% up to 6.0%	0.8
over 6.0%	1.0

(old) (%)

Asset	Risk Factor
Domestic Equities	10
Foreign Equities	15
Foreign currency Bonds / Loans etc.	5
Real Estate (Domestic)	2
Gold	20
Trading Securities	1

(New) (%)

Asset	Risk Factor
Domestic Equities	10
Foreign Equities	10
Foreign currency Bonds / Loans etc.	5
Real Estate (Domestic)	5
Gold	20
Trading Securities	1

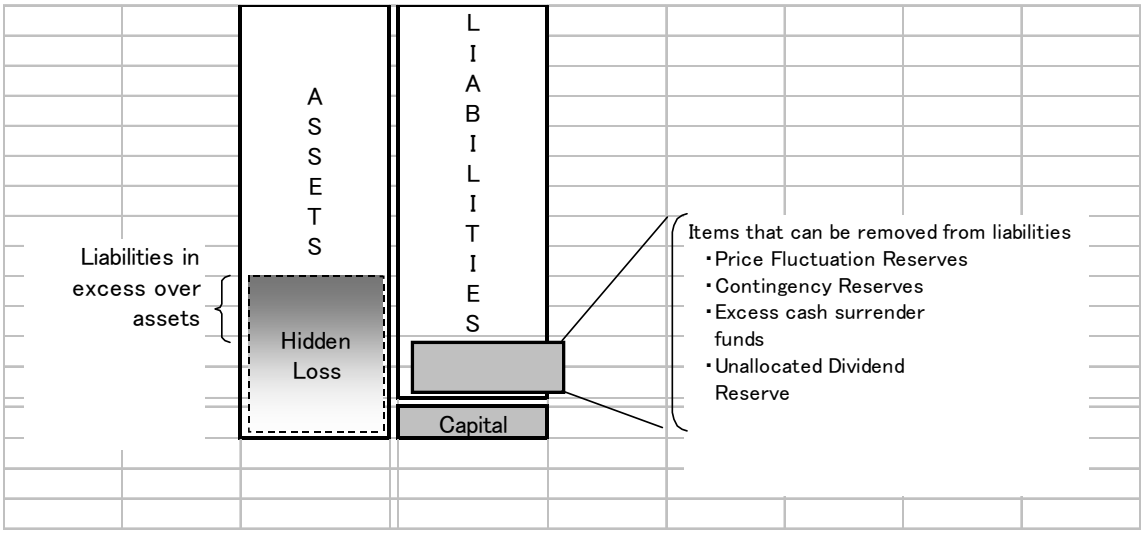
Source: compiled by Nomura Research Institute based on government ordinance figures)

2 Introduction of Criteria for Effective Excess Liabilities

The Prompt Corrective Action measures introduce a new supervisory index in addition to the solvency margin ratio, the so-called “Effective Excess Liabilities”. If assets, valued at market prices, are below liabilities, then regardless of the solvency margin ratio, the measures corresponding to Band 3 of the Prompt Corrective Measures will be applied (entire or partial suspension from business activities). Also if a company’s assets exceed its liabilities but it would fall into Band 3 due to its solvency margin ratio, then it will be treated as falling into Band 2.

Figure 2 shows a simplified procedure for calculating excess liabilities. As with the calculation of the solvency margin ratio, liabilities which are regarded as capital issues such as Price Fluctuation Reserves or Contingency Reserves are excluded from total liabilities, but the number of items excluded in this way is fewer than the solvency margin. Subordinated loans for example are not deducted. The prohibition on subordinated loans was lifted in 1997, and many companies rushed to use them in order to boost their solvency margin ratios. A similar type of liability fund procurement is Foundation Funds, but these are required to be amortized from profits at a set rate every financial term, so especially companies with few hidden gains that are not in a position to boost earnings by realizing hidden profits are heavily dependent on subordinated loans and would have been seriously affected by the new rules.

Figure 2　Calculation of Excess Liabilities

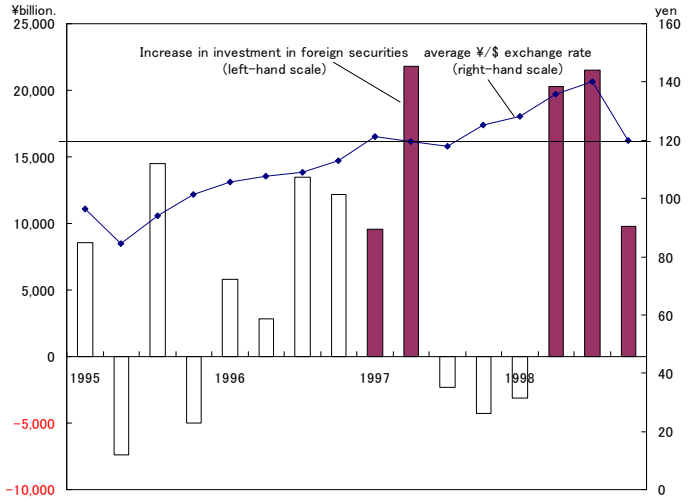


Source:　Nomura Research Institute

Furthermore, whereas previously only real estate and equities assets were valued at current-value for solvency margin ratios, in the calculation of excess liabilities other marketable securities or assets that have undergone a significant decline in value are now valued at market prices.

Since 1996 in reaction to the widening difference in domestic and foreign interest rates and the fall in the value of the Yen the life insurance companies had been expanding their investment in foreign currency denominated assets, but with the rapid rise in the Yen since October of last year there are fears that they are holding large foreign exchange hidden losses on their recent investments.　The current Yen/Dollar rate has fallen below ¥120, but during the period when the Yen was over ¥120 to the dollar (the Yen was cheaper than now) the life insurance industry as a whole increased its holdings of foreign securities by over ¥7 trillion (c.f. Figure 3).

Figure 3 Status of Investment in Foreign Securities by the Entire Life Insurance Industry



Source: Compiled by Nomura Research Institute based on figures supplied by the Life Insurance Association of Japan)

Of course the companies have pursued their own various investment strategies with regard to foreign currency securities, but there is some concern that certain of them may have overstepped their internal risk allowances in pursuit of investment opportunities (c.f. Figure 4). Some companies have made flexible use of derivatives etc. to hedge their exposure, but this is difficult to ascertain given current disclosure requirements, and in order to give policyholders a fair idea of the status of the company, the disclosure of the average acquisition cost of foreign currency denominated assets (including hedge costs) should be considered.

Table 4 Investment in Foreign Currency Denominated Assets by the Major Life Insurers

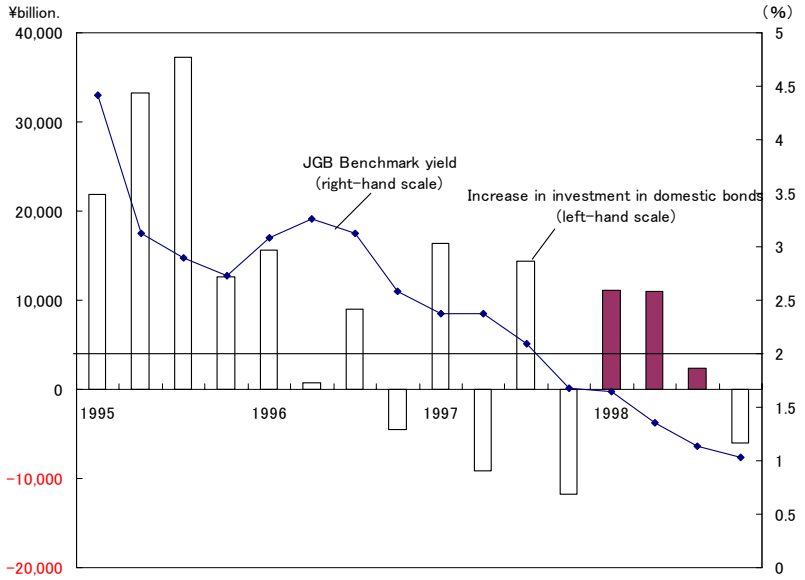
Units: ¥100 million, %

	1st half 1996	2nd half 1996	1st half 1997	2nd half 1997	1st half 1998	Cumulative increase from 2nd half 1996	Ratio to Solvency Margin of end March 1998
Nippon	1,281	4,834	1,249	3,120	5,942	15,145	27.7
Daiichi	1,166	5,212	239	-1,329	4,351	8,473	32.2
Sumitomo	1,720	1,893	-1,499	-3,577	3,632	449	3.3
Meiji	287	151	2,460	184	1,257	4,052	21.9
Asahi	541	-1,515	639	-701	1,324	-253	-2.5
Mitsui	-762	156	4,511	3,632	2,440	10,739	196.4
Yasuda	563	516	2,593	415	1,414	4,938	56.4
Taiyo	-45	151	502	337	1,676	2,666	33.7
Daido	-67	661	912	283	1,197	3,053	53.4
Kyoei	607	4,406	-1,016	-4,919	3,946	2,418	132.3
Chiyoda	-383	322	586	-2,196	2,126	838	45.6
Fukoku	520	-473	212	-571	277	-555	-14.1
Nippon Dantai	2,414	767	2,282	-5,528	2,778	299	25.2
Toho	1,377	518	434	-3,163	1,599	-613	-70.2
Daihyaku	92	1,086	206	-1,030	468	730	138.7
Tokyo	-122	219	426	-736	288	197	26.4
Total	9,189	18,903	14,738	-15,779	34,715	52,575	32.4

Note Does not take hedging by derivatives etc. into consideration
Source: Compiled by Nomura Research Institute from figures supplied by life insurers

Furthermore, early 1999 saw long-term interest rates temporarily rise over 2% so hidden losses on bonds should also be taken into account. With the continuing low interest rates and frequent realizing of hidden profits, the yields on bonds held by life insurers have fallen, and with the sudden rise in interest rates pushing the value of bonds lower, this will no doubt at least have an impact on the insurers. Also in recent years with the high-yielding bonds of the past coming to maturity, a further decrease in yields is unavoidable. Given the current state of interest rates, the life insurers are facing an extremely difficult investment situation for both new funds and reinvesting redemption amounts.

Figure 4　Corporate and Government Bond Investment by all Life Insurers



Source:　Compiled by Nomura Research Institute based on figures provided by the Life Insurance Association of Japan)

For the above reasons, in future life insurers will need to pay attention to “effective excess liabilites” by (1) boosting equity capital, and (2) taking investment risk in accordance with equity capital levels.　They will have to consider investing in not just equities, but other securities such as bonds traditionally viewed as low risk and foreign-currency denominated securities, as equity capital levels become a major management issue alongside increasing the solvency-margin ratio.　A sign of the change in management strategy is perhaps the rapid sale of foreign securities by life insurers after the announcement by the government of the new measures in January.

3　In Conclusion

According to the explanation given to life insurers by the Financial Supervisory Agency, the Prompt Corrective Action measures are not going to be rigidly applied immediately following their introduction.　It even explicitly allows for a fixed six-month grace period after its introduction where companies that submit a cogent revitalization plan will have their band rating increased.

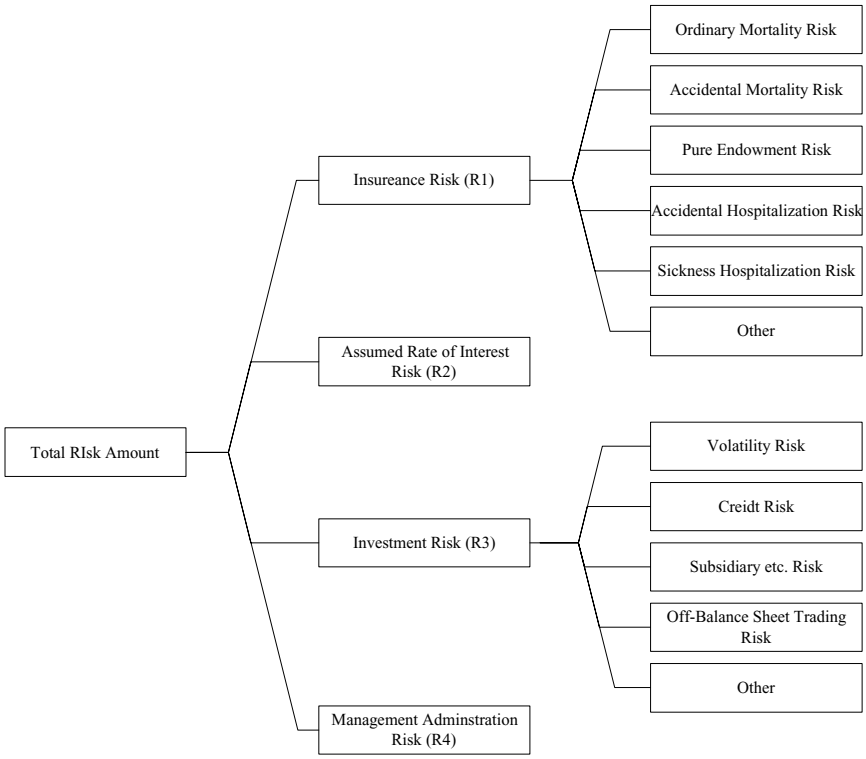
With the Prompt Corrective Action program and its partner system for Bankruptcy Administration (the Payment Guarantee system) there still remain several problems such as the small size of the maximum guaranteed amount, so at present a certain amount of bureaucratic discretion involved in the application of these measures is unavoidable. There are some serious difficulties with burdens of funds etc., but it is hoped that the Bankruptcy Administration System will be further improved, and that a higher level of transparency in the supervision of life insurers will be realized.

<APPENDIX>

The risk factors that make up the denominator risk for solvency margin ratio calculation are broadly divided into Insurance Risk, Assumed Rate of Interest Risk, Investment Risk and Management Administration Risk. These are then subdivided as per Figure 5. The major factor is Investment Risk which makes up 50 – 60% of the whole.

Each risk is calculated by the multiplication of the risk amount by a risk coefficient. For example, Insurance Risk is calculated by multiplying the (policies) insurance amount by the corresponding risk coefficient. For Assumed Interest Rate Risk, liabilities (policy reserves) are divided according to each assumed interest rate, and then a different risk coefficient applied to each one. Of course, the higher the assumed rate of interest, the higher the rate of return, so the risk coefficient is also higher. In the case of Investment Risk, the risk coefficient depends on the nature of the asset and its credit quality. The Assumed Rate of Interest Risk and Volatility Risk coefficients are shown in Table 3. The final risk amount is not a simple total, but calculated taking into account the relative weightings of each risk (Figure 6).

Figure 5 Risk Composition for Solvency Margin Ratio Calculation



Source: Nomura Research Institute

Figure 6 Calculation of Total Risk Amount

$$Total\ Risk\ Amount = \sqrt{(R_1)^2 + (R_2 + R_3)^2} + R_4$$

The numerator is the solvency margin that will be available as a buffer against unpredictable risk. This would be the total amount of the items set forth in Table 5.

Table 5 Items Included in the Solvency Margin

(1) Total Capital However this excludes disposal of profits or surplus funds (including surplus amounts distributed to employees for the next business year by mutuals).
(2) Price Fluctuation Reserves
(3) Contingency Reserves
(4) General Bad debt provisions
(5) 90% of latent profit on equities
(6) 85% of latent profit on real estate
(7) Excess of cash surrender value
(8) Unallocated Policyholder (Member) Dividend Reserves
(9) Future profits The lesser of the average price over the last 5 business years or the amount of the most recent business year's provision of Policyholder (Member) Dividend Reserves
(10) Loss provisions for trading securities
(11) Amount of debt capital procurement
(12) Fixed maturity subordinated debt
(13) Tax effect amount price fluctuation reserve, taxable policyholder reserves, taxable policyholder (member) dividend reserves, taxable bad debt provisions, loss provisions for trading security, taxable write-off on securities, taxable loan directed indirect charge off, contingency reserve funds (on capital account), dividend equalization reserve