論保險監理之改革－就財務監理方面

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中文摘要

近二十年來，因經濟上之卓越表現，我國已逐漸成為新興工業國家之一。為開創另一階段之經濟奇蹟，政府積極致力於產業升級並參與國際事務，以提升台灣之整體競爭力。此外，由於國際間貿易與服務之多元化、自由化乃全球之趨勢，建設台灣成為亞太金融營運中心以促進經濟發展，已成為政府當前重要的財經政策之一。

尋求金融市場之發展，自由化與國際化乃不可或缺之基本方針。相較於銀行業與證券業之蓬勃興盛，台灣保險市

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場自由化與國際化之速度仍嫌緩慢，且與經濟成長之幅度不相稱。雖然，政府已著手修訂相關法並開放市場，但市場之規模與技術，仍難與歐美先進國家及若干亞洲新興國家相提並論。細究其原因之一，乃現行保險監理體系未臻完備，形成與國際市場接軌時之障礙。因此，如何針對監理上之缺失進行改革，促使市場發揮應有之機能，實為刻不容緩之工作。

本文除介紹台灣保險市場與監理現況外，主要置重於保險財務監理方面之二項重要課題：即資本適當性(Capital Adequacy)與資金運用之監理(Investment Regulation)。就前者而言，如何決定保險經營所需之適當資本，向來是各國保險監理機關所關切之問題。我國現行保險法令所規定之最低期初資本，其額度之高，舉世罕見，常為人詬病。又採取傳統之定額資本概念，無法因應保險業之經營現況與其涉及之各種風險，故常造成實務上之困擾。本文先就保險資本之意義與功能加以分析，再比較美國保險監理官協會(National Insurance Commissioners Association, NAIC)制定之「風險基礎資本」(Risk Based Capital, RBC) 與歐洲共同體之「清償能力邊際」(Solvency Margin)制度之內容，進而檢討我國現行法令上之疏失。

就後者而言，保險資金之運用非但關係保單持有人之權益與經營成效之良窳，甚至影響一國之財政收支與金融安定，故為保險財務監理之重要環節。本文首先介紹保險資金運用監理之目標及其可能造成之反效果，次依學理剖析保險資金之結構與性質，並參考美國紐約州與歐洲共同體之相關法令，藉此檢視現行保險法令中未盡合理或不合時宜之處。

最後，作者歸納文中之各項論點而成結論，並針對前述保險法令上之疏失，提出可行之改進建議。

Introduction

In the past two decades, Taiwan, the Republic of China, has emerged as one of the most successful newly industrialized economies in the world.[1] Following this unprecedented economic accomplishment, Taiwan intends to transform its industrial structure for developing further this economic success, and to take part in international affairs. More than that, it is an important policy of the government to construct Taiwan to be an operational centre in the AsianPacific region, including its financial market. Under such scenario, liberalization and internalization have become the guide-

1) In 1995, Taiwan's GNP reached US$ 263.6 billion, GDP about US$ 260.8 billion, and GNP per Capita US$ 12,439. The real economic growth rates from 1993 to 1995 are 6.32%, 6.51% and 6.06% respectively.

line for the regulation of financial markets in Taiwan.

Compared with the prosperity of the banking and security industries, Taiwanese insurance market is still far behind the growth of the economy. Although some new domestic and foreign insurance undertakings have been established, some published statistics concerning world insurance[2] show that this market has not been well developed. Under such circumstances, regulatory reform in insurance sector becomes an extremely important task for Taiwan.

This article focuses on the insurance regulatory reform in Taiwan and explores certain issues in practice from two aspects of financial regulation, namely capital adequacy and investment regulation. After examining the current regulatory requirements and making reference to the relevant systems in developed models, certain suggestions will be provided as possible solutions for these issues.

I. Insurance Market in Taiwan

A. Current Market Structure

In Taiwan, the main pieces of legislation related to insurance regulation are the Insurance Law 1992 and its relevant by-laws and regulations such as Enforcement Rules of the Insurance Law 1995 and Insurance Under- takings Regulation 1993. The Ministry of Finance (hereinafter MoF), authorized by the aforesaid legislation, is appointed as the competent authority of insurance regulation. Under the MoF, the Department of Insurance takes charges of most insurance regulatory affairs.

According to the Insurance Law 1992, insurance business in Taiwan is divided into life insurance and non-life insurance business. Each of them is further divided into classes, such as life, health, personal accident and annuity insurance in the life sector, and fire, marine, liability, bond and other property insurance in the non-life sector. Any insurance business in the territory of Taiwan must be authorized by the MoF. Under the current regulatory regime, no composite insurance undertakings will be authorized. The licenses for life insurance and for non-life insurance are issued separately, but certain single-class business such as accident or health insurance can be authorized alone.

In 1995, the total premium income of the life insurance industry reached US$ 11.5

2) In 1994, the world rank of Taiwan in the insurance intensity overview premium per capita was 25, and the rank in the insurance penetration premium as a percentage of GDP was 24. *See generally* Sigma , No.4/1996, Swiss Reinsurance Co.

billion[3], representing an increase of 13.50% over 1994. Of this total, 21.96% was the first-year premium income and 78.04% was renewal premium income. Among the classes of life insurance business in the market, pure life insurance accounted for 84.34% of the total premium income, accident insurance, 9.36%, and health insurance, 6.30%.[4]

In the non-life insurance sector, the total direct written premium reached US$ 2.8 billion[5], representing an increase of 9.25% over the previous year. Among the major classes of non-life insurance business in the market, motor insurance was far ahead of the others in terms of premium income, accounting for 58.57% of the total premium. The shares of the other insurance classes were: fire insurance, 21.14%, marine cargo insurance, 5.82%, engineering insurance, 4.39%, marine hull insurance, 2.92%, aviation insurance, 2.52%, and other casualty insurance, 4.64%. The gross loss ratio for the whole industry was 72.65% which was attributed to the deterioration of the motor business. Even a slight drop of 0.56% from 73.21% in 1994, it was still on the high side of the business cycle.[6]

B. Evolution of the Market Opening-Up

During the last decade, Taiwan has conducted a series of reforms with respect to the insurance sector. The most significant among them might be the opening-up of the insurance market to both domestic and foreign market entrants.

During the period 1945 to 1953, Taiwan only had 5 non-life and 2 life insurance undertakings in total. In the 1950s, to cope with the economic development, the MoF lifted the restriction on application for establishing new insurance undertakings. By 1962, the number of domestic non-life insurers had increased to 14, and life insurers to 9. After 1962, however, the MoF banned such an application based on some unknown reasons.

In 1986, under the pressure from the USA, Taiwan was forced to open its insurance market to US insurance undertakings as a means to balance the trade deficit between the USA and Taiwan. Through their established branches, certain US insurance undertakings subject to specified requirements, could carry on insurance business in Taiwan. During

3) 310,238 million in New Taiwan Dollar (NT$) (the approximate exchange rate of US$ to NT$ was 1:27).

4) *See* Life insurance business in Taiwan -- Fact Book 1995, The Taipei Life Insurance Association.

5) The actual amount was NT$ 74,864 million.

6) *See* Non-life insurance in Taiwan R.O.C. -- Fact Book 1995, The Taipei Insurance Association.

the period 1986 to 1991, more than 10 US insurance companies set up their branches in Taiwan. By the end of 1996, the total number of the admitted foreign insurer was 23, comprising 14 life insurers and 9 non-life insurers.

Although the market entry control to foreign insurers had been liberalized to a certain extent, the prohibition upon the applications from domestic insurance companies still remained. This policy was severely criticized because the established insurance undertakings had been overprotected for a long period of time. Finally, in 1992, the Criteria for Establishing an Insurance Company was stipulated to allow new local participants to enter into this market. At that time, another 9 new domestic insurance companies were authorized to carry on business. By the end of 1996, there were 33 domestic insurance undertakings, comprising 16 life insurance companies, 15 non-life insurance companies, 1 professional reinsurance company, and 1 fishing vessels mutual insurance cooperative. From then on, the Taiwan insurance market became more competitive.

As mentioned above, only US insurance undertakings, which are subject to certain limitations could enter this market. Other countries had not yet been granted such treatment. To cope with the requi- rements of the GATT (the WTO after 1997)[7] and to promote the insurance market to a more competitive level, Taiwan had to open its market to non-US countries. Under such circumstances, the Regulation and Admission Criteria of Foreign Insurance Under- takings 1994 (hereinafter RACFIU 1994) was conducted. Not only did it allow non-US insurance undertakings to enter the market as US insurers, but it also liberalized the conditions of admission. According to the RACFIU 1994, a foreign insurance undertaking may apply an admission to set up its branch in Taiwan for carrying on insurance business if it can meet the following requirements:

(1) The applicant has had sound business operation performance and a secure financial capacity during the 3 years immediately prior

7) It figured among the objectives of the Uruguay Round negotiations, conducted under the auspices of the General Agreement on the Tariffs and Trade (GATT), that was conducted in December 1993 with the adoption of the General Agreement on Trade in Services (GATS). Insurance was included in the GATS in the context of financial services. Further, it was agreed that the World Trade Organization (WTO) be established, which would compass the GATT, as modified by the Uruguay Round, all agreements and arrangements conducted under its auspices and the complete result of the Uruguay Round. *See* Insurance in developing countries: Privatization of insurance enterprises and liberalization of insurance markets, United Nations Conference on Trade and Development, May (1994) p20 UNTRAD/SDD/INS/3/Rev.1

to its application;

(2) The applicant has no record of penalties imposed on it as a result of material violations of the law within the last five years, and such fact needs to be verified by the competent authority of its home country; and

(3) The minimum working capital for such a branch shall be no less than NT$ 50 million.

II. Financial Regulation of Insurance in Taiwan and Associated Problems

A. Financial Regulation of Insurance in Taiwan

In addition to the opening-up of the market, the revision of the Insurance Law 1992 and the relevant secondary legislation in recent years has had a significant effect on the development of the insurance market, particularly in financial regulation. To facilitate the discussion in the main issues of this article, it is essential to examine the context of the current insurane regulation. Under the current regulatory regime, the financial requirements of insurance regulation in Taiwan can be categorized into following items:

1. Minimum Capital or Surplus

The minimum required capital (for an insurance company) and initial fund (for an insurance cooperative) for each kind of insurance undertakings are to be approved by the Executive Yuan upon recommendation of the competent authority, by reference to the actual condition of local economy and the characteristics of each insurance business line. For establishing a domestic insurance company, the required minimum paid-in capital is NT$ 2 billion.[8] For a foreign insurer, it shall appropriate a minimum working capital for each of its branch offices in an amount no less than NT$ 5 million.[9]

2. Solvency Margin

Where the balance of the admitted asset less the liability of a domestic insurance undertaking falls below the required minimum capital or initial fund, or the balance of a foreign insurance undertaking's branch below the required minimum working capital, the competent authority shall order this domestic or foreign insurer to make up the difference in cash within a designed period of time.[10]

3. Mandatory Deposit

8) Sec. 139 of the Insurance Law 1992, Sec.2 of the Criteria for Establishing an Insurance Company 1992.

9) Sec. 137(5) of the Insurance Law 1992, Sec. 8 of the RACFIU 1994.

10) Sec. 143 of the Insurance Law 1992 and Sec. 26 of the RACFIU 1994.

An insurance undertaking shall lodge a mandatory deposit, in an amount equal to 15% of the total amount of the paid-in capital or initial fund, at the National Treasury. Such deposit will not to be returned until the cessation of business has been declared and the liquidation has been completed, pursuant to the relevant laws.[11]

4. Stabilization Fund[12]

To protect policyholders' interests and benefits and maintain financial stability, non-life insurance industry and life insurance industry shall separately set up a stabilization fund. Each insurance undertaking shall make a contribution to the fund. The percentage of each contribution and the total amount of the fund shall be determined by the competent authority, by referring to economic and financial development situation and actual need of insurance business. In addition, the use of the stabilization fund shall be limited to the following:

(1) as a loan to an insurance undertaking which suffers from an operational difficulty,

(2) as a low-interest loan to an insurance undertaking which suffers losses arising from purchasing the valid contracts of an bad-operated insurance undertaking, or from a valid merger or change of organization,

(3) when an insurance undertaking becomes insolvent, as the compensation to the policyholders for the unpaid portion that they are entitled to claim based on a valid contract, and

(4) as a tool to protect policyholders' interests or benefits, in any method approved by the competent authority.

5. Premium Rate Control

The premium rate formulas, which are used by insurance undertakings to calculate premium, shall be subject to approval by the competent authority.[13]

6. Technical Reserves

At the end of each business year, following the percentages or formulas determined by the competent authority, an insurance undertaking shall calculate and lodge various technical reserves for each class of insurance business.[14]

7. Investment Regulation[15]

Except otherwise provided by any other laws, the funds owned by an insurance undertaking, comprising owner equity and

11) Sec. 141, 142 of the Insurance Law 1992.
12) Such funds are known as "guarantee funds" in the USA. *See* Sec. 143-1~143-3 of the Insurance Law 1992.
13) Sec. 144 of the Insurance Law 1992.
14) Sec. 145, *ibid.*
15) Sec. 146~146-5, *ibid.*

various kinds of reserves, shall be restricted to the following investments:

(1) Deposit

The amount of deposit in each financial institution may not be over 10% of total insurance funds.

(2) Marketable Securities

a. Government bond, treasury bill, saving bond;

b. Financial bond, transferable certificate of deposit, banker's acceptances, banker's guaranteed commercial promissory notes, and other marketable securities permitted by the competent authority. The aggregate amount may not be over 35% of total insurance funds;

c. Publicly issued corporate stocks and corporate bonds with at least 6% of average net profit rate after tax over the most recently three years. The aggregate amount of any insurance undertaking may not be over 35% of total insurance funds; and the aggregate amount of stock and bond issued by any one company may neither be over 5% of total insurance funds, nor 5% of the capital of such an issuing company.

d. Publicly issued beneficiary certificate of securities investment trust funds. The aggregate amount of such investment may neither be over 5% of total insurance funds, nor 5% of the gross amount of any issued certificate.

(3) Real Estates

Investment of real estate shall be limited to those can be used immediately and from which profits can be derived. The aggregate amount may not be over 19% of total insurance funds except those held for the insurer's own-use. But the real estate for own-use shall not be over total amount of owner's equity. In addition, every acquisition and disposal of real estate shall be appraised by a legitimate real estate appraisal organization.

(4) Loans

Loans shall be limited to the following items: loans guaranteed by banks, loans secured by real estate, loans secured by marketable securities (as defined above), and loans secured by life insurance policies (only for life insurance undertakings)

For the loans of specific items, the amount to each borrower may not be over 5% of total insurance funds; and total amount of such loans may not be over 35% of total insurance funds.

For the loans of specific items which are lent to the responsible officers or employees, or to the persons who have interest connection with such officers or the employees in charge of loans, the relevant requirements in the Banking Law shall be applied *mutatia mutandis*.

The total amount of the investment in the corporate stocks or bonds of any one company, plus the loans secured by the same corporate stocks or bonds, may neither exceed

10% of total insurance funds, nor exceed 10% of the capital of the said company.

(5) Foreign Investments

The scope and contents of foreign investment shall be determined by the competent authority. The total amount of investments may not be over 5% of total insurance funds. The competent authority may adjust this percentage by reference to the operation of insurance undertakings, but shall not be over 20% of total insurance funds.[16]

(6) Special Project or Public Investment

After being approved by the competent authority, insurance funds may be used for special project and public investment.[17]

8. Net Retention Control

The sum insured to each single risk, after deducting the amount of reinsurance arranged therefrom, shall not exceed 10% of the total amount of the capital or initial fund, surplus, special reserves and retained profits of the insurance undertaking.[18]

B. Problems Arising from the Current Financial Regulation

From the financial regulations mentioned above, certain problems may occur, then hamper the development of the market. These issues can be generalized under two major aspects: namely, capital adequacy and investment regulation.

1. Capital Adequacy

(1) As the current capital requirements adopt a fixed capital mechanism, actual business risks related to the operation of an insurer can not be recognized. It has been severely criticized because there is no flexible mechanism to decide or adjust the real adequate capital needed for an insurer.

(2) Regardless of the actual operation or performance, unfair competition conditions

16) Under the current Order stipulated by the MoF, foreign investment shall be limited to: 1) foreign currency deposit, 2) purchase of foreign marketable security and 3) loan to foreign governments or to the entities guaranteed by foreign banks. The total amount of foreign investment may not exceed 5% of total inusrance funds. Recently, to promote the internalization and liberalization of insurance market, the MoF intends to raise the percetage from 5% to 10% and to expand the scope of foreign investment to permit insurers' investment on foreign insurance undertakings.

17) Under the current regulatory Order stipulated by the MoF, most of such investment are guided to support governmental policies such as investment in the high technology industries, investment in public construction or development projects and loans to those without own-use residences.

18) Sec. 147 of the Insurance Law 1992.

may arise from the different capital standards, particularly between the new insurers and the established ones. In practice, it is ironic that, while the established insurers are taking the majority of the business volume, their capital level is far below the high standard applied to new insurers.

(3)The requirement of the solvency margin, representing the balance of the admitted assets less liabilities, causes a practical problem to new insurance undertakings. For example, because the admitted assets do not cover certain assets, such as office facilities, as soon as a new insurance undertaking sets up its office, even though no business has been written, its solvency margin will fall below the amount required.

(4) It should be considered whether or not the requirement of mandatory deposit, which intends to provide an additional safety margin for policyholders, is necessary. It has been argued that such a high deposit level, 15% of the paid-in capital, might hamper the primary functions of insurance capital.

2. Investment Regulation

(1)According to current investment regulation, an insurance fund is defined as the total of the owner's equity and various kinds of reserves. However, no separation is made between the "liability based funds" and the "capital base funds" which shall be subject to different investment restrictions because of their nature. It has been argued that it might cause an obstacle to the flexibility of the investment of the insurance funds. If the return of investment can not be achieved as it should be, policyholders might have to pay more for their insurance products because of a low rate of investment return.

(2) In terms of the nature of insurance liabilities, life insurance differs greatly from non-life insurance. Thus, investment regulation shall be required respectively regarding life insurance funds and non-life insurance funds. However, no such distinction can be found in the current requirement.

With respect to the above problems, it is intended that some acceptable solutions can be submitted for further insurance reforms in the future. Thus, in the following context, certain fundamental principles related to these issues will be scrutinized, and the relevant requirements in the two most developed models, the EC and the USA, will be introduced respectively.

III. Issues Related to Insurance Capital Adequacy

A. Meaning of Insurance Capital

Before discussing the capital adequacy issue, it is essential to define the meaning of capital and surplus as they are applied in the insurance sector. Following the Generally Accepted Accounting Principles (GAAP),

capital and surplus which are combined as net worth in the balance sheet and represent the excess of assets over liabilities. Nevertheless, with respect to the insurance sector, the capitalization structure of an insurance undertaking depends on its legal corporate form.

In practice, stock companies and mutual companies are two most common legal corporate forms used in an insurance market. By definition, a stock company raises its capital by issuing stocks and its net worth consists of a capital stock account and a surplus account. For a mutual insurer, no stocks are issued. It means that there is no capital stock account at all. Its capital component, therefore, is only represented by the amount in its surplus account.

On the other hand, in terms of insurance capital, the terminology may vary from country to country. For instances, in the USA, total net worth is often referred as the "policyholders' surplus" because the excess of asset over liabilities is available to pay policyholders' claims. In the EC, although the net worth is stated as "capital and reserves" on the harmonized balance sheet among the Member States, the mechanism of "solvency margin" is designed to ensure the capital adequacy of an insurance undertaking. In Taiwan, the statutory requirements of "capital and initial fund" are applied to stock companies and cooperatives respectively.

To avoid unnecessary confusion, except in the occasions of discussing specific regulatory regimes, the term of "capital" will be used in this article to describe the concept of insurance capital which has various terminology under different jurisdictions.

B. Functions of Insurance Capital

Capital adequacy requirements can be treated as one of the most important components of the financial regulation in insurance. The strength and long-term viabi- lity of an insurance undertaking is determined by its capital. In general, insurance capital has the following functions in the operation of insurance business:

1. Financial capacity at the initial stage

The primary function of insurance capital is to provide the financial capacity at the initial stages of the operation of an insurance undertaking.[19] Like other industries, insurance undertakings have to raise a certain amount of capital to support the costs and expenses of their establishment, such as the costs of new facilities, office furniture and computer systems. The greater an insurer's capital, the more flexibly it can possess to

19) Kimball S.L., Insurance and Public Policy, (1960) p75.

cope with the changing demands in a competitive market.

2. Safety margin against unforeseen events

Even though an insurance undertaking can grow in size from its business, the insurance capital still functions as a financial buffer against unexpected increases in liabilities and decreases in the value of assets. This is because there is the possibility of unforeseen loss events, such as catastrophes, investment failures, reserving errors, and price inadequacy. Insurance capital can cover the expenses and costs occurred in the process of an insurer's rehabilitation or liquidation, and, therefore, reduce the damages to the policyholders and the claimants to the minimal extent.[20]

3. Supports for insurers' growth and underwriting activities

Insurance capital can support growth and underwriting activities of an insurance undertaking. The most typical form in this respect is the growth in the written business volume. What is unique a in an insurance transaction is that, under the specific statutory accounting principles (SAP) which adopts a conservative approach, the acquisition ex- penses must be recognized at the time of sale, rather than being proportioned into the duration of the insurance period. Under such circumstances, an insurance undertaking has to realize an operating loss on each policy as soon as it is sold. Insurance capital then becomes an essential part of an insurance undertaking to support its expansion and growth in its underwriting activities.[21]

C. Relevant Systems in the Developed Models

1. The EC Model

Under the framework of EC insurance regulation, the supervisors in home Member States must ensure that their insurance undertakings meet three minimum prudential standards regarding the financial regulation: namely, technical provision, solvency margin and guarantee fund. On one hand, technical provisions need to be calculated and reserved by an insurer to meet all its known liabilities to the policyholders. On the other, solvency margin and guarantee fund, which are designed to maintain adequate insurance capital for both the initial establishment stage and business operational stage, are the most important components of the capital adequa-

20) *See generally* Klein R.W., Structural Change and Regulatory Response in the Insurance Industry, (1995) NAIC.

21) Ettlinger K.H., Hamilton K.L. & Krohm G., State Insurance Regulation, (1995) pp131-132.

cy requirements. They can be concluded as below:

(1) Solvency Margin[22]

Solvency margin represents those assets, in addition to technical provisions, which an insurance undertaking must maintain as a measure against its business fluctuations. It consists of any insurance undertaking's assets that are free of all foreseeable liabilities, less any intangible items. Generally speaking, the level of solvency margin is linked to the overall business volume of an insurance undertaking conducted in the previous year throughout the EC, based on the experience of on premium or claims. In non-life insurance, the minimum solvency margin is determined on the basis either of the annual amount of premium or contributions, or of the average burden of claims for the past three financial years. The amount of the solvency margin is equal to the higher of the premium basis result and the claim basis result.[23] In life insurance, it is determined according to the classes of insurance underwritten, by reference to capital at risk and mathematical provisions and taking into account reinsurance cessions to a certain extent.[24]

(2)Guarantee Fund

Besides the dynamic structure of solvency margin, the so-called guarantee fund[25] is provided to assist the operation of the solvency margin system. In effect, a guarantee fund constitutes one part of the solvency margin and represents the minimum capitalization requirement that insurance undertakings must possess before obtaining authorization to conduct business. An insurance undertaking must maintain its guarantee fund at a level corresponding to the higher of either one-third of the required solvency margin or a specified absolute level (minimum guarantee fund), which is denominated in European Currency Units (ECU) and determined subject to the classes of the risk it is licensed to underwrite.[26]

The objective of the guarantee fund is to ensure not only that an insurance undertak-

22) The requirement of solvency margin corresponds roughly to policyholders' surplus (defined as total assets less total liabilities) maintained by US insurance companies, as an additional protective measure for policyholders in the event of unexpected or catastrophic losses.

23) For the details, *See* Art.16 of the First Non-Life Insurance Directive (73/239/EEC).

24) For the details, *See* Art.19 of the First Life Insurance Directive (79/267/EEC).

25) The EC guarantee fund does not correspond to the guarantee fund in the USA which is provided by some states to protect claims against insurance insolvency. Instead, it corresponds more closely to the minimum capital and surplus standards imposed on insurance companies by the state insurance laws.

26) In details, *See* Art. 17 of the First Non-Life Insurance Directive (73/239/EEC) and Art. 20 of the First Life Insurance Directive (79/267/EEC).

ing possesses adequate capital when it is established, but also that in the subsequent course of business its solvency margin shall in no event falls below a minimum level of security.

(3) Control Action of Supervisory Authority[27]

If the solvency margin of an insurance undertaking falls below the statutory minimum level, for the purpose of restoring its financial situation, the supervisory authority of the head office Member State shall require a plan for the restoration of a sound financial position for its approval.

If the solvency margin falls less than the guarantee fund, which is defined as the greater of one-third of the solvency margin or the minimum guarantee fund, the supervisory authority shall require the insurance undertaking to submit a short-term finance scheme for its approval. The supervisory authority may restrict or prohibit free disposal of the assets of this insurer, and shall inform the authorities of other relevant Member State, and may request them to take the same measures.

In any of the above occasions, the competent authorities may further take all measures necessary to safeguard the interests of the policyholders. In implementing these control actions, the supervisory authorities of other Member States should collaborate.

2. The USA Model

(1) Fixed Capital Requirement

In the USA, the fixed capital requirements have been specified in different state insurance laws to ensure that applicants seeking a license to conduct insurance business within the state jurisdiction have sufficient capital to support underwriting activity. The requirement of minimum capital and minimum surplus varies primarily according to three factors: 1) the company legal form, 2) the lines of insurance that the company intends to underwrite, and 3) the state where the company is seeking for a license.[28] Traditional fixed minimum capital and surplus standards typically range from US$500,000 to US$ 6 million for those seeking multiple-line authorization.[29]

Generally speaking, in the capital requirements of most states, minimum capital and minimum surplus are provided separately. In addition, minimum surplus requirements for new insurers are usually stated separately from minimum surplus for existing insurers.

27) *See generally* Art. 20 of the First Non-Life Insurance Directive (73/239/EEC) and Art. 24 of the First Life Insurance Directive (79/267/EEC).

28) Ettlinger K.H., Hamilton K.L. & Krohm G., Supra note 21, pp156-157.

29) Klein R.W., *supra* note 20.

For example, a new stock insurer must provide an "initial free surplus" which represents a specified amount of surplus above the "minimum statutory capital", but an existing stock insurer only needs to maintain a "minimum statutory basic surplus" to continue its insurance business. On the other hand, for a mutual insurers, because of no capital stock account, the concept of "minimum statutory capital" is therefore replaced by a "minimum statutory basic surplus". Nevertheless, except the "minimum statutory basic surplus", an additional "initial free surplus" must be provided by a new mutual insurer.[30]

(2) Risk-Based Capital System

As insurance business involves assumption of risk, the business risk on insurance is much more severe than on other business. The effect of market and financial risk on insurers are compounded by the additional risks they assume in their underwriting activities.

As mentioned earlier, insurance capital can support the growth of an insurance undertaking, and work as a buffer against risk and uncertainty. A new insurance undertaking is not exposed to the compound effect of market, financial and underwriting risks. Thus, fixed capital requirements should be adequate for its operation. However, recognizing the increasing risks accompanied with the business growth, an insurance undertaking must increase its capital to a certain extent to ensure capital adequacy for its business. Because fixed capital requirements can not respond to various risks inherent in the business, insurance capital under such standards may be inadequate on certain occasions.[31]

Addressing the problems inherent in traditional fixed capital requirements, the NAIC adopted model minimum risk-based capital (RBC) requirements for life insurers in 1992 and for property/casualty insurers in 1993, which are designed to correct the deficiencies of fixed capital standards. The objectives of the RBC requirements are to provide a standard of capital adequacy that: 1) is related to risk, 2) raises the safety net for insurers, 3) is uniform among states, and 4) provides authority for regulatory action when actual capital falls below the standard[32]

The RBC model develops an insurauce capitalization requirement based on the risk characteristics inherent to that insurer unique operations. For example, the RBC model for property/casualty insurers addresses four major categories of risk:[33]

30) Ettlinger K.H., Hamilton K.L. & Krohm G., *supra* note 21, pp15-18.

31) *Ibid.*, pp157-158.

32) Klein R.W. *supra* note 20.

33) The risks addressed in the life/health RBC model are similar to the property/casualty model in some aspects and different in others, including: 1) asset risk; 2) insurance or pricing risk; 3) interest risk ; and 4) business risk.

1) Off-balance sheet risk -- which includes the risk associated with abnormal premium and reserve growth, investment in affiliates, and financial guarantees made on behalf of an affiliate.

2) Asset risk -- which presents the risks associated with market volatility that can affect the value of an insurer's invested assets and the security of those investment.

3) Credit risk -- which is related to the collectibility of the insurer receivables, including reinsurance recoverables and agents' balances due the insurer.

4) Underwriting risk -- which consists of a component for the net written premium risk which represents those risks associated with price inadequacy, when the loss exposure of assumed risks is deliberately (because of competitive pressure) or unintentionally mispriced. The underwriting risk also includes a net loss reserve and a loss adjustment expense risk component recog- nizing those risks associated with reserving errors.[34]

These risk categories are combined in accordance with a specific formula to determine the total RBC amount. A covariance adjustment is made to account for diversification among major risk categories. The resulting adjusted total RBC amount is compared to an insurer's actual total adjusted capital (TAC) to determine its RBC position. Insurers are required to report their RBC and TAC in their annual statements but the details of their calculations are filed in a confidential report.[35]

Under the Risk-Based Capital (RBC) for Insurers Model Act, specific duties are provided for both the insurer and the regulators based upon the figures generated by the RBC formulas. Certain company and regulatory actions are required if an insurer's TAC falls below a certain levels of RBC. Under such a scenario, four different RBC levels have been established, including: 1) company action level, 2) regulatory action level, 3)authorized control level, and 4) mandatory control level. The respective actions are also required by the Act to meet each position between these levels. If an insurer's actual capitalization is between the highest level (company action) and the second level (regulatory action), the insurer has to submit a comprehensive financial plan to the regulator containing proposals to correct the company's financial problems. If an insurer slips between the second level and the third level (authorized control), the regulator can perform an examination or analysis as deemed necessary and the insurer also needs to file a comprehensive

34) Ettlinger K.H., Hamilton K.L. & Krohm G., *supra* note 21, pp158-159.

35) Klein R.W., *supra* note 20.

financial plan. If the actual capitalization is between the third level and fourth level (mandatory control), the regulator can place the insurer under regulatory control but is not required to do so. If actual capitalization falls below the lowest threshold, the regulator is required to place the insurer under regulatory control. The authorized control level is considered as the minimum capitalization level that an insurer should maintain.[36]

Several benefits can be found within the RBC capitalization system. Firstly, it provides consistency among the states with respect to the insurance capitalization requirements. Secondly, it reflects an estimation of actual risks to which an insurer is exposed rather than to apply a fixed capitalization level regardless of the insurer's specific operations. Thirdly, it establishes specific responsibilities for both regulators and insurers if the required capitalization levels are not maintained.[37]

D. Suggestion

Under the current regulatory regime introduced earlier, the capital requirements in Taiwan consists of three main components, namely the minimum statutory capital or initial fund, the solvency margin, and the mandatory deposit.

According to the Insurance Law 1992 and the related By-laws or Regulations, the minimum statutory capital for setting up a new domestic insurance company is NT$ 2 billion (about US$ 74 million); for a foreign insurer's branch, a minimum working capital of NT$ 50 million (about US$ 1,850,000) is required. All authorized insurance undertakings must lodge mandatory deposits, in an amount equal to 15% of the total paid-in capital or initial fund, at the National Treasury. On the other hand, at the operational stage, the solvency margin, which represents the balance of the admitted assets less the liability of an insurance undertaking, must be maintained by each insurer. For a domestic insurer, the solvency margin can not fall below the required minimum capital or initial fund, i.e. NT$ 2 billion; for a foreign insurer, not below its working capital, i.e. NT$ 5 million.

However, in the real world, certain practical problems have already occurred or might stem from these capital requirements, such as the inflexibility of the fixed capital requirements, the unequal treatments among different types of insurance undertakings, and the controversy of a mandatory deposit. After examining two most developed models in the world, the following suggestions are submitted as possible solutions to these problems.

36) Ettlinger K.H., Hamilton K.L. & Krohm G., *supra* note 20, pp160-161.
37) *Ibid.*, p161.

1. Various dynamic business risks should be recognized in the capital requirements.

Regarding the capital adequacy requirements in the EC and the USA, statutory fixed capital requirements can no longer adequately respond to the actual business situation of an insurance undertaking. Thus, certain dynamic risk factors associated with the operation of the insurance business have been recognized in these requirements.

If we judge the relevant requirements of Taiwan from their appearance, it seems that Taiwan has constructed a comprehensive system to ensure the capital adequacy of insurance undertakings because it contains a minimum statutory capital and a solvency margin. However, if we examine the mechanism of the solvency margin, we can find that the solvency margin, which needs to be maintained to a specific fixed level, is equal to the minimum capital, rather than flexibly reflecting the actual business situation in which an insurance undertaking is involved. This is why many newly established insurance companies encounter a dilemma that they have to increase their capital at the initial stage although they have comparatively few business written.

To cope with the practical situation in the insurance market, by referring to the models of the EC or the USA, the current fixed capital system has to be supplemented with a flexible capital mechanism.

2. Certain capital requirements need to be revised or repealed.

Certain capital requirements have to be revised or repealed, such as that the amount of minimum statutory capital has to be reduced, that the minimum required capital of each insurance class shall be provided respectively and that mandatory deposits shall be repealed.

Although insurance capital can ensure financial security and contribute significantly to the growth of an insurance undertaking, high quantity of insurance capital does not definitely guarantee the safety and efficiency of an insurance undertaking. If the insurance capital can not be operated to achieve its primary functions, the associated costs tend to be transferred indirectly to the policyholders. It means that, through the increased costs of buying insurance, policyholders' interests might be impaired by some unnecessary governmental regulation.

The minimum capital for a new insurance company in Taiwan reaches to NT$ billions (around US$ 74 million). In other major countries of Asia, the absolute minimum

capital per company - translated at 1995 exchange rates - are well below US$ 4 million, except in China (where it is approximately US$ 20 million) and South Korea (around US$ 10 million).[38] On the other hand, compared with other developed countries, such as New York State or the EC, where the market scales are much larger than Taiwan, the amount is still much higher, no matter in what business classes.

In fact, the amounts of insurance capital were determined by the MoF based on an extremely conservative and conventional approach. From the viewpoint of the regulators, as long as the level of minimum statutory capital is high, financial solidity can be secured and policyholders' interests can be protected.

As discussed earlier, the major purpose in requiring a minimum statutory capital is to cover the costs and expenses at the initial stage and to support its underwriting to a certain extent. As to the other relevant associated risks at the operational stage, they could be dealt by means of dynamic capital mechanisms, such as the solvency margins in the EC and the RBC in the USA. If a flexible capital mechanism is adopted suggested, it appears awkward to require an insurer to tender a "huge" capital for its initial establishment. Therefore, it seems necessary to reduce the amount of fixed-sum capital to the extent that it can carry out the basic functions and will not deviate far from the international level.

In addition, under the Insurance Law 1992, an insurance company which carries only on a specific class of business can be authorized. As each class of insurance business involves a different market and business risks, particularly in the non-life sector, it seems more reasonable if the minimum capital for each insurance class can be provided respectively. This is why the minimum capitals for the insurers in the EC and the USA are subject to the insurance classes they are authorized. Thus, it is submitted that the quantitative amount of minimum capital should be required respectively in accordance with the classes of insurance business.

Moreover, in the EC, mandatory deposits are no longer required by the insurance legislation. The necessity of a mandatory deposit is not as important as before for the same reason as discussed with respect to the adequacy of insurance capital. In effect, the requirement of mandatory deposits can no longer provide any significant policyholder protection, but might actually impair the interests of policyholders. This is because such deposits are usually to be reserved in the places required by laws or appointed by the competent authority and, therefore, the basic

38) Swiss Re., Sigma No.6/1996.

functions of insurance capital are hampered. To some extent, the costs related to such misallocation of resources will probably be imposed invisibly on the policyholders. Accordingly, it is suggested that the current requirements in respect to mandatory deposit should be repealed.

IV. Issues Related to Investment Regulation

A. Objectives and Possible Adverse Effects of Investment Regulation

1. The objectives of investment regulation

There are three distinct purposes behind the regulation regarding the investment of insurance undertakings: (1) to protect policyholders (consumers), (2) to direct the flow of insurance funds towards what governments perceive as economically desirable ends, and (3) to prevent insurance companies from exercising undue influence within the financial sector as a whole.

(1) Policyholders protection

Following the justification of public interest, it is generally agreed that the basic principle of investment regulation imposed on insurance undertakings should be tc maximize yield so far as is consistent witl the absolute safety of the insurance funds.[39] The restrictions on the investment choices o insurance undertakings are implemented so a: to reduce the probability of insolvency, and t minimize the costs to the policyholders i insolvency does occur. This is becaus insurance premiums are paid by policyholder in advance and, there- fore, the prudentia management of insurance funds is essentia before contingent insurance payment is re ceived by the policyholders. This concern particularly significant in the life insuranc sector because of the longer term nature i life insurance contracts, the larger size (investment funds, and the nature of the: funds representing the long-term saving of tl public to a certain extent.

(2) Directing the flow of insurance fund

Insurance possesses the function of capit accumulation and mobilization, especially the life insurance sector. Since insuran undertakings can control a sizable proporti of capital, many countries seek to influen the direction of these funds in the pursuit some public policies.

This sort of investment regulation m have a variety of particular purposes, su as ensuring that an adequate flow of fur is available to finance public and priv

39) Kimball, *supra* note 19, p129.

capital expenditure programs, keeping funds invested in the domestic economy, and financing the budgetary deficits of government. Under such circumstances, the large accumulation of an insurance fund is thus harnessed to the achievement of public objectives, rather than the original objective of the safety and maximum yield for the fund itself.[40]

(3) Reducing a potential concentration of power within the financial sector

In this century, the assets of insurance industry have had a significant impact on the process of capital formation and the capital structure of enterprise. Therefore, the investment of an insurance fund must be controlled with careful concern against its potential serious distortion.[41]

In order to prevent insurance undertakings from abusing their considerable financial resources to influence the financial markets, in most countries, the limitations regarding the investment of insurance undertakings have been imposed by the governments. These restrictions not only have curtailed the ownership of non-insurance financial enterprises, but also inhabited diversification within the insurance sector itself. However, most countries allow insurance undertakings to bypass these restrictions by way of a holding company mechanism.[42]

2. The possible adverse effects of investment regulation

While the imposition of the constraints on investment choices of an insurance undertaking may help to reduce the probability of insolvency, it should be realized that some costs may be associated with these constraints. Most of the associated costs occur in the life insurance sector and can be summarized as below:[43]

(1) To impose the costs on policyholders

If investment regulation causes insurance undertakings to adopt verified investment policies which are significantly different from what they would otherwise adopt, the lower rate of return of such investment holdings may cause a higher price of insurance. It means that the associated costs of investment regulation may be transferred to insurance consumers, directly or indirectly, through the sale of insurance products.

(2) To undermine the security of an insurance undertakings

40) *Ibid.* p143.
41) *Ibid.* p250.
42) Dickinson G.M., "The Regulation of Investment Policies of Insurance Companies within the OECD: An overview", *in* Policy Issues in Insurance, Organization for Economic Co-opeartion and Development (OECD) (1993) p218.
43) *Ibid.* pp245~246.

In some countries, unnecessary restrictions on the investment of the capital base funds[44] will undermine the long-term security of an insurance undertaking. This arises because the capital base will tend to grow at a lower rate than would otherwise have been the case. This problem that is compounded by the fact that the cost of raising new external capital will also increase as expected profitability will be lower.

(3) To obstruct the innovation of life insurance products

Product innovation in life insurance is closely linked to the flexibility of the investment of insurance funds. The greater the flexibility, the greater will be the potential scope for product innovation. In other words, more investment choices can usually give life insurance undertakings the flexibility to supply a wider range of savings products to their consumers according to their preferences. If strict investment regulation is adopted, life insurance under- takings may be exposed in a disadvantageous position while competing with other suppliers of long-term savings or investment products such as investment banks or mutual investment funds.

(4) To impact the mobilization of long-term saving

The life insurance industry is an important vehicle for mobilizing long-term personal savings in an economy. Such an ability comes from three characteristics: "First, life insurance is usually actively marketed. Second, the contractual nature of the life insurance arrangement means that consumers are more likely to maintain their saving commitment for a long period of time, especially since there are penalties for early withdrawal. Third, life insurance contracts are aimed at segments of population which are less likely to invest directly in the capital market, either because the size of their funds are available for investment is small and/or because their financial awareness is limited." [45]

If investment regulation reduces the ability of life insurance undertakings to offer attractive saving products, the mobilization of long-term saving in life insurance may therefore be impaired.

To achieve the aforesaid objectives and reduce unnecessary associated costs, it is essential to analyze the nature of an insurance fund before we examine the issues regarding investment regulation. In the following discussions, the relationship between the nature of insurance funds and the investment regulation

44) A detailed discussion with respect capital base funds will be addressed in the following section.

45) Dickinson G.M., *supra* note 42, p246.

l be examined respectively in the non-life l the life sectors.

. Nature of Insurance Funds

An insurance fund, which can be used investment by an insurance undertaking, mes from two main sources: the policy-lder liabilities and the capital base.

Policyholder Liabilities

Whether in the non-life sector or the life ;ctor, the portion representing policyholder abilities forms the majority of an insurance ınd. These policyholder liabilities are owed y insurance undertakings to their policy-olders, and are prepared to meet future laims from either the policyholders or their eneficiaries. Generally speaking, this kind of nsurance funds can be perceived as thers' unds" because they have to be reserved for olicyholders rather than being owned by the nsurance undertakings.

(1) Non-life Insurance

In the non-life insurance sector, policy-holder liabilities consist of three major types of technical reserves, namely, unearned premium reserves, loss reserves, and voluntary reserves.

1) Unearned premium reserves

Unearned premium reserves, which equal the unearned portion of the gross premiums of all outstanding policies at the time of valuation, arises because most insurance premiums are paid by policyholders in advance.

2) Loss reserves

"Loss reserves measures the insurer estimated liability for unpaid claims and settlement expenses as of the valuation date. It includes the amount of liability for the claims reported and adjusted but not yet paid, the claims filed but not yet adjusted, and the claims incurred but not yet reported (IBNR)".[46]

3) Voluntary reserves

Unlike the previous two types of reserves which are required by law, voluntary reserves are voluntarily lodged by insurance undertakings. In the non-life insurance sector, equalization reserves or claim fluctuation reserves, which are used to counter the fluctuation of loss experience, are good examples. In some countries, equalization reserves, which usually bear some relationship to the size of policyholder liabilities, are required by legislation. This kind of reserves can be perceived as "a form of quasi-capital, having a financial character between that of policyholder liabilities and the capital base."[47]

With regard to the funds representing these reserves, a reasonable non-life insurance undertaking, will have a significant proportion

46) Mehr R.I., Cammack E. and Rose T., Principles of Insurance, 8th ed. (1985) p693.
47) Dickinson G.M., *supra* note 42, p212.

of their investments with a fairly high degree of liquidity. The reason is that the level of the future claim payments in non-life insurance can not be accurately predicted, and therefore an non-life insurer may encounter extraordinary underwriting fluctuation, both in terms of timing and in the amounts of settlement. Under such circumstances, adequate amounts of cash need to be available because either it must indemnify the losses promptly or its "net cash flows"[48] may be breached due to catastrophe or loss accumulation.

(2) Life insurance

The most important reserve for policyholder liabilities of an life insurer is the policy reserve. "It measures the amount which together with future net valuation premiums and interest will produce the exact amount needed to pay all policy obligations as they become due if the mortality experienced and interest earned precisely as assumed."[49]

Other kinds of reserves for policyholder liabilities include the reserves for the claims reported but not yet paid, plus those incurred but not yet reported. As life insurance claims are reported and settled promptly, these reserves are of secondary importance and relatively small.[50]

In general, the terms of policyholder liabilities in the life insurance sector have a much longer duration than those in non-life insurance, particularly in the business which relates to long-term saving and retirement provision. This means that the time horizon for investing policyholder funds can be much longer than that for non-life insurance. On the other hand, the expectation of cash flows is much more stable because premiums inflows can depend on a weighted average of past sales and claims and other cash outflows can be more actuarially predictable. In such a scenario, life insurance companies do not normally have a major concern with precautionary liquidity within investment portfolios.[51]

In some circumstances, however, there can be a concern for precautionary liquidity arising from other promises that they have made to their policyholders. This can arise if the insurance company has incorporated high guaranteed "surrender values"[52] into its contract, especially if there is also an option of

48) Net cash flow, which represents the difference between inflows (premium, investment returns and other incomes) and outflows (claims, expenses and other outgoes) of an insurance undertaking, is normally the insurer's first line of defense against the claims.

49) Mehr R.I., Cammack E. and Rose T., *supra* note 46, p695.

50) *Ibid.*, p699.

51) Dickinson G.M., *supra* note 42, p215.

52) The saving component of life insurance policies, called non-forfeiture value, is available to policyholders who want to surrender their policies. In such an event, the non-forfeiture value

"policy-loans"[53].

In recent years there has been a rapid growth of "linked-life"[54] contracts in a number of developed markets. Such contracts possess quite different characteristics from traditional life insurance contracts. As a matter of fact, insurance companies which supply such life insurance products face no investment risks at all because policyholders carry all of the risks themselves.

2. Capital Base

As discussed earlier, insurance capital represents the total net worth, i.e. the difference between assets and policyholder liabilities, of an insurance undertaking. In terms of fund source, the capital base of insurance funds can be termed as "own- funds" because it is owned by an insurance undertaking itself rather than other legal entities.

It should be noted that, since the capital base is the asset deducted by policyholder liabilities, its value will depend critically on the valuation basis used to measure assets and policyholder liabilities. In most countries, the statutory capital requirements provide that assets and policyholder liabilities should be valued in a more conservative method than other businesses are.

Generally speaking, whether in the non-life sector or in the life sector, the capital base can be divided into two main items, minimum statutory capital and free capital. Minimum statutory capital is the level of capital requirement that an insurance company must maintain under local legislation to ensure minimum financial security. Free capital, on the other hand, is the amount in excess of the minimum statutory level.[55]

Considering the nature of a capital based insurance fund, the investment regulations for such a fund are less constrained and defensive than those for policyholder liabilities in most developed countries. They can be invested in financial assets that are expected to yield higher rates of return, even though they may possess more default and liquidity risk. Nevertheless, the priority attached to earning a high rate of return needs to be considered because, as mentioned earlier, capital base

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can be termed as surrender value.

53) Policyholders can use their policies, the nonforfeiture value, as a guarantee to borrow from their insurers an amount which can be equal to around surrender value.

54) Link-life insurance means that a life insurance policy is linked with an investment portfolio from which policyholders, not insurers, assume the investment risks. For example, in variable life insurance policies, insurers permit policyholders to distribute their premium and cash value among two or more investment portfolios. Regardless of the investment performance, the insurers guarantee the minimum death benefits, rather than the amount of cash value. *See generally* Williams C. A. Jr. and Heins R. M., Risk Management and Insurance, 6th ed.(1989) McGraw-Hill, p540.

55) Dickinson G.M., *supra* note 42, p213.

also concerns with the ultimate buffer against very large potential claims and serves to finance the long term growth of the business.

C. Relevant Systems in the Developed Models

1. The EC Model

Under the framework of the EC insurance regulation, insurance funds consist of two kinds of assets, namely "the assets covering the technical provisions"[56] and "the assets covering solvency margin". The respective rules applicable to the valuation of these assets are also provided in the EC Insurance Directive[57].

Regarding the assets covering the technical provisions, the EC harmonizes the types of assets which may be used to cover technical provisions. Its context is to set out a list of permitted assets, to contain a set of basic rules on the spread, valuation, localization and matching of such assets, to ensure the diversity, safety, yield, and marketability of the investments by imposing limits in certain types of assets, and to remove a number of restrictions currently imposed by Member States.

On the other hand, the EC provides that the solvency margin is represented by the insurers' assets which are "free of any foreseeable liabilities less any intangible items." In other words, the assets in excess of those representing technical provisions are not subject to the same investment rules applied to the assets representing technical provisions, and they can be invested in a more flexible way.

(1) Assets Representing Technical Provisions

1) Acceptable Assets

With respect to the investment of assets covering technical provisions, the EC Insurance Directives[58] give board guidance on the investment of assets representing technical provisions. Such assets are to be invested in such a way as to achieve "safety, yield and marketability". These investments will also have to be "diversified and adequately

56) Insurance companies in the EC must maintain sufficient assets as technical provisions to cover all underwriting liabilities. The EC prescribes guiding principles rather than detailed rules for Member State supervisors to calculate technical provisions requirements. According to the Insurance Company Accounts Directive (91/674/EEC), technical provisions include following items: 1) Unearned premiums provision (Art. 25); 2) Life assurance provisions (Art. 27); 3) Claim outstanding (Art. 28); 4) Provision for bonuses and rebates (Art. 29); 5) Equalization provision (Art. 30); and 6) Other technical provisions (Art. 26).

57) *See generally* Art. 20~22 of the Third Non-life Insurance Directive (92/49/EEC) and Art. 20~23 of Third Life Insurance Directive (92/96/EEC).

58) Art. 20 of Third Non-life Insurance Directive and Art. 20 of Third Life Insurance Directive.

spread". Based on these principles, the EC Insurance Directives[59] provide that the home Member State must restrict acceptable assets to three categories: investment, debts and claims, and others. In the category of investment, there are five items can be treated as acceptable assets:

(a) debt securities, bonds and other money and capital market instruments;

(b) loans;

(c) shares and other variable yield participation;

(d) units in undertakings for collective investment in transferable securities (UCITS) and other investment funds;

(e) land, buildings and immovable property rights.

Notwithstanding the above categories of assets, the home Member State must lay down more detailed rules fixing the conditions for the use of acceptable assets. In this connection, it may require valuable security or guarantee, particularly in the case of debts owed by reinsurers. In the determination and the application of the rules which it lays down, the home Member State shall ensure the following principles are complied with:[60]

-- assets covering technical provisions shall be valued net of any debts arising out of their liquidation;

-- all assets must be valued on a prudent basis, allowing for the risk of any amounts' not being realizable. In particular, tangible fixed assets other than land and buildings may be accepted as cover for technical provisions only if they are valued on the basis of prudent amortization;

-- loans, whether to undertakings, to States authorities or, international organizations, to local or regional authorities or natural persons, may be accepted as cover for technical provisions only if they are sufficient as to their security, whether these are based on the status of the borrower, mortgages, bank guarantees or guaranteed granted by insurance undertakings or other forms of security;

-- derivatives instruments such as options, futures and swaps in connection with assets covering technical provisions may be used in so far as they contribute to a reduction of investment risks or facilitate efficient portfolio management. They must be valued on a prudent basis and may be taken into account in the valuation of the underlying assets;

-- transferable securities which are not dealt in on a regulated market may be accepted as cover for technical provisions only if they can be realized in the short term;

-- debts owed by and claims against a third party may be accepted as cover for

59) Art. 21 of Third Non-life Insurance Directive and Art. 21 of Third Life Insurance Directive.
60) *Ibid.*

technical provisions only after deduction of all amount owed to the same third party;

-- the value of any debts and claims accepted as cover for technical provisions must be calculated on a prudent basis, with due allowance for the risk of any amounts not being realizable. In particular, debts owed by policyholders and intermediaries arising out of insurance and reinsurance operations may be accepted only in so far as they have been outstanding for not more than three months;

-- where the assets held include an investment in a subsidiary undertaking which manages all or part of the insurance undertaking's investments on its behalf, the home Member State must, when applying the rules and principles laid down in this Article (Art. 21), take into account the underlying assets held by the subsidiary undertaking; the Member State may treat the assets of other subsidiaries in the same way;

-- deferred acquisition costs may be accepted as cover for technical provisions only to the extent that this is consistent with the calculation of the technical provision for unearned premium (or mathematical provisions).

2) Investment Restrictions

To ensure diversification and spread of investment, EC Insurance Directives[61] further provides a set of admissibility rules which contains the principal restrictions on the investment of the acceptable assets. These rules specify the maximum percentage which is allowable for investment in a wide range of assets. Generally speaking, insurer should invest no more than:

-- 10% of total gross technical provisions in any one piece of land or building, or a number of pieces of land or building close enough to each other to be considered effectively as one investment;

-- 5% of total gross technical provisions in shares and other negotiable securities treated as shares, bonds, debt securities and other money and capital market instruments from the same undertaking, or in loans granted to the same borrower, taken together, the loans being loans other than those granted to a State, regional or local authority or to an international organization of which one or more Member States are members. This limit may be raised to 10% if an undertaking invests not more than of its gross technical provisions in the loans or securities of issuing bodies and borrowers in each of which it invest more than 5% of its assets;

-- 5% of total gross technical provisions in unsecured loans, including 1% for any single unsecured loan, other than loans granted to credit institutions, assurance undertakings

61) Art. 22(1) of Third Non-life Insurance Directive and Art. 22(1) of Third Life Insurance Directive.

and investment undertakings established in a Member State;

-- 3% of total gross technical provisions in the form of cash in hand; and

-- 10% of total gross technical provisions in shares, other securities treated s shares and debt securities, which are not dealt in on a regulated market.

In addition, the absence of a limit on investment of any particular category does not imply that assets in that category should be accepted as cover for technical provisions without limit. The home Member States shall lay down more detailed rules fixing the conditions for the use of acceptable assets. In particular it must ensure, in the determination and the application of those rules, that following principles are complied with:[62]

-- assets covering technical provisions must be diversified and spread in such a way as to ensure that there is no excessive reliance on any particular category of asset, investment market or investment;

-- investment in particular types of assets which show high level of risk, whether because of the nature of the asset or the quality of the insurer, must be restricted to prudent levels;

-- limitations on particular categories of asset must take account of the treatment of reinsurance in the calculation of technical provisions;

-- where the assets held include an investment in a subsidiary undertaking which manages all or part of the insurance undertaking's investments on its behalf, the home Member State must, when applying the rules and principles laid down in this Article (Art. 22), take into account the underlying assets held by the subsidiary undertaking; the Member State may treat the assets of other subsidiaries in the same way;

-- the percentage of assets covering technical provisions which are the subject of non-liquid investment must be kept to a prudent level;

-- where the assets held include loans to or debt securities issued by certain credit institutions, the home Member State may, when applying the rules and principles in this Article, take into account the underlying assets held by such credit institutions. This treatment may be applied only where the credit institution has its head office in a Member State, is entirely owned by that Member State and/or that State's local authorities and its business, according to its memorandum and articles of association, consists of extending, through its intermediaries or of loans to bodies closely linked to the State or to local authorities.

62) Art. 22(2) of Third Non-life Insurance Directive and Art. 22(2) of Third Life Insurance Directive.

(2) Assets Representing Solvency Margin

The EC Insurance Directives[63] provide that the solvency margin is represented by the insurers assets free of any foreseeable liabilities less any intangible items. Under such a scenario, the rules of the acceptable assets and investment restriction would not be applied to the investment of the assets representing the solvency margin of an insurance undertaking.

In particular, the solvency margin corresponding to the assets of an insurance undertaking free of any foreseeable liabilities, less any intangible items, shall include the following:

-- the paid-up share capital or, in the case of a mutual insurance undertaking, the effective initial fund plus any members' account which meet certain criteria;

-- one half of the unpaid share capital or initial fund, once the paid-up part amount to 25% of that share capital or fund,

-- reserves (statutory reserves and free reserves) not corresponding to underwriting liabilities,

-- any profits brought forward,

-- in the case of mutual or mutual-type association with variable contributions, any claim which against its member by way of a call for supplementary contribution, within the financial year, up to the specific limits,

-- at the request of and on the production of proof by the insurance undertaking, any hidden reserves arising out of the undervalue of assets, insofar as those hidden reserves are not of an exceptional nature,

-- cumulative preferential share capital and subordinated loan capital may be included but, if so, only certain limited amounts and subject to prescribed conditions.

2. The USA Model -- New York State

Investment regulation in the USA varies widely among the states, although the National Association of Insurance Commissioners (hereinafter the NAIC) seeks to reduce such variation.[64] Investment regulations in most states are concerned with both quantitative and qualitative restrictions, including classes of investment, portfolio distribution among approved items, amount of security required for authorized items, percentage of each invested items, percentage of admitted assets that may be invested in a single corporation, percentage of admitted assets in a single issue of a corporation, the source of investment funds, etc.

63) Art. 24 of Third Non-life Insurance Directive and Art. 25 of Third Life Insurance Directive.

64) In 1991, because of junk bond problems of Executive Life and several other insurers, the NAIC adopted a model regulation (the investment model law) restricting an insurer to no more than 20 percent of its assets in non-investment grade bonds, with additional restrictions on the proportions of assets in the lower grade categories. *See generally* Klein R.W., *supra* note 20.

Historically, the extraterritorial application of the New York Insurance Law has had a significant influence on investment regulatory practice. The relevant legislation of New York state can, perhaps, provide us with an illustration of the common structure of insurance investment regulation in the USA. Although still subject to specific limitations in different events, the assets which can be invested by an insurance undertaking can generally be categorized into the following groups:

(1) The investment of the required minimum capital or the minimum surplus is subject to the most severe restrictions.

According to the New York Insurance Law[65], before investing its funds in any other investment, every domestic insurer shall invest an amount equal to the greater of the minimum capital or the minimum surplus to policyholders only in investment of the types specified below which are not in default as to principal or interest. Investment equal in value to such amounts and of such types shall at all times be maintained free and clear from any security interest, other than as impressed upon a deposit with any government within the United States or upon trusted assets held in trust for the security of all policyholders and creditors of the insurers.

Not less than 60% of the amount of the required minimum capital or surplus investments shall consist of the classes specified in items (a) and (b) hereof:

(a) Obligations of the United States or any agency thereof if guaranteed as to principal and interest by the United States.

(b) Direct obligations of this state or of any county, district or municipality thereof.

(c) Direct obligations of any state of the United States.

(d) Specified mortgage loans.

(2) The investment of the required reserves is less strict than those assets representing minimum capital or minimum surplus.

In New York state, the reserve investments of a domestic insurer authorized to make an investment should consist of the following: (a) government obligations, (b) obligations of institutions, (c) preferred or guaranteed shares, (d) trustee' or receivers' obligation, (e) acceptances and bills of exchange, (f) mortgage loans, (g) real property, (h) foreign investments, (i) shares and obligations of housing companies and corporations acquiring income-producing property, (j) shares of a federal home loan bank, (k) development bank obligations, (l) shares or accounts in savings and loan, and building and loan, associations, (m) common shares, (n) postal services obligations or community facilities project guaranty fund, (o) production payments, (p) shares and obligations of

65) Sec.1402, *ibid.*

mortgage companies, (q) transportation equipment obligations and certificates, (r) personal property, and (s) adequately secured noncorporate obligations.[66]

In addition, regarding the investments which do not qualify or which are not permitted under the aforesaid items, a leeway provision may be applied as long as the aggregate cost of such investments do not exceed 4% of the admitted assets of the insurer at last year-end, and the investments on common share or voting shares are subject to the certain specific restrictions.[67]

(3) The investments of the assets of insurers apply different rules and limitations.

The assets of a domestic insurer that is authorized to make investment, in addition to investment otherwise authorized, may be invested in the following classes of investments, subject to specific limitations: (a) governmental obligations, (b) obligations and preferred shares of American institutions, (c) obligations secured by real property or interests therein, (d) real property or interests therein, (e) personal property or interests therein, (f) equity interests, (g) foreign investments, and (h) other investments.[68]

Beside the above restrictions upon the classes of investment, there exist certain limitation on the percentage of investment. For example, no domestic insurer shall have more than 10% of its admitted assets invested in, or loaned upon, the securities of any one institution. However, such limitation shall not apply to the classes of governmental obligation eligible for minimum capital or surplus investment, nor to investment in shares of other insurance companies.[69]

Furthermore, based on the different natures of life and non-life insurance funds, there are different rules applied to life insurers and non-life insurers respectively. Life insurers are largely restricted to investing in high-grade bonds and mortgages with a fixed rate of return. For example, a New York domestic life insurer can only invest the items categorized in the minimum capital or surplus investment (group 1), assets investment (group 3) and policy loan.[70] Nevertheless, such restrictions are not applied to non-life insurers.

D. Suggestion

In Taiwan, under the current investment regulation, an insurance fund consists of

66) Sec.1404, *ibid.*
67) *Ibid.*
68) Sec.1405, *ibid.*
69) Sec.1409, *ibid.*
70) Sec.1403(1)(a), *Ibid.*

equity (capital base) and various technical reserves (policyholder liabilities), and its investment is restricted to specific items and limitation. Obviously, the investment regulation adopts a conservative approach to protect insurance funds against management abuse. From the viewpoints of most regulators, insurance funds should be prudentially preserved for policyholders and should not be impaired by any imprudent investment. Under such a scenario, the whole system has been designed to prevent insurance insolvency, because such failing would cause chaos in the economic sector, or even in the social and political sectors.[71]

Indeed, financial security of an insurance undertaking is an important issue of insurance regulation because it is highly concerned with public interest. But it is not its only objective. As mentioned above, insurance investment regulation may achieve other objectives, it is the regulators' duty to reach a balance among these objectives to achieve maximum benefit and avoid adverse effects. If regulators focus only on one specific objective and ignore others, it will be difficult to achieve a comprehensive and efficient regulation.

Knowing this, it seems necessary that the current investment regulation should be revised in a more liberal approach to meet the practical needs of the business, and to cope with international trends. According to the discussion above, several suggestions are provided as below:

1. A distinction should be made between capital base and policyholder liabilities of insurance funds.

Regarding the developed models introduced above, the investment regulations distinguish between the investments those can be held against policyholder liabilities and those against the capital base of the insurance company. In the EC, the acceptable assets representing the technical provisions (policyholders liabilities) and the investment regulations for such assets tends to be more restrictive. Assets representing the solvency margin (capital base) is recognized in a more general way and, therefore, less or no restriction is applied to such investment. In contrast, in New York, the investment of the required minimum capital or the minimum surplus is subject to the most severe rules. The investment of policyholder reserves is comparatively less restricted.

Following the EC model, it seems more appropriate that the policyholder liabilities funds should be subject to the most restrictive investment rules as it comes from policyholders and is reserved for the payments of future claims. The capital base funds, with the

71) A similar evidence is that a huge fixed capital is required for a new insurance company without any adjustable reasons.

exception of its functions as insurance capital, can be invested with less restriction because such funds represent the equity of an insurer. In other words, an capital base fund can be invested more flexibly and liberally because it is owned by an insurer itself, not by others. Moreover, free capital, which represents the capital in excess of the minimum statutory level, should be given highly flexible investment because it is voluntarily reserved by an insurer.

In Taiwan, all insurance funds are commonly subject to the same investment regulatory rules, regardless of their nature and the source. For the reasons given above, it is suggested that a distinction between policyholder liabilities and capital base should be made and the concept of free capital should be recognized.

2. Investment regulation regarding life insurance funds and non-life insurance funds should be differentiated.

As discussed earlier, non-life insurance and life insurance business generate different types of financial liabilities and, hence, involve different types of investment risks. In countries with a more liberal investment regulation, such as the UK, there is no distinction in investment regulation between non-life and life insurance. It is logical that the governments of such countries consider that insurance companies will recognize such differences in their investment policies. In the countries with a detailed system of investment regulation, there are differential regulations with respect to the investment of life and non-life insurance funds.[72]

Currently, Taiwan applies the same investment regulations to both life insurance and non-life insurance. For the following reasons, it seems more appropriate to introduce differential investment regulations, in respect to life and non-life insurance funds, into the insurance regulatory regime:

(1) In practice, investment risks may vary dramatically in different classes of business. Normally, non-life and life insurers will adopt different strategies to deal with their investments because of the nature of their financial liabilities.

(2) Under the current regulatory structure, no composite insurance undertakings can be authorized and separation between non-life and life insurance business is strictly enforced. The purpose of such a separation is to prevent two kinds of insurance funds being mingled within an entity because of their different natures.

(3) Historically, Taiwan has always adopted a detailed regulatory system for

72) Dickinson G.M., *supra* note 42, p223.

implementing its insurance regulation. Therefore, it will be appropriate that the difference between non-life and life insurance funds is recognized by the government in regulation, rather than by the regulated insurance undertakings.

3. The investment choices available to the insurance industry should be liberalized.

During the past two decades there has been a trend towards a greater liberalization of the restrictions imposed on insurance company investment choice. This liberalization process has come about because (1) governments and supervisory authorities have recognized that insurance companies operate within changing commercial and capital market conditions; (2) governments are under the pressure from local insurance industries, who have successfully demonstrated that policyholders would gain rather than lose from liberal rules; (3) regulators have recognized that default risks can be reduced through well-diversified portfolios. As a result, the scope of admissible financial assets has been expanded and quantitative and qualitative limits in investment have been relaxed. Insurance companies have been allowed to invest more freely in various financial vehicles, including a limited degree of trading in futures and in other derivatives allowed in some developed markets.[73]

For an emerging market, the liberalization of investment restrictions in the insurance sector depends on three requisite factors: the local capital market, the investment skills and the strength of domestic currency. In the long-term, when a local capital market develops, investment skills increase and the domestic currencies strengthen, then the restrictions can be liberalized.[74] In Taiwan, the insurance market has already been able to match these environmental requirements to some extent. However, compared with the developed models, the investment choices of Taiwanese insurance undertakings are still very limited, particularly in the sector for the marketable securities and financial products.

Undeniably, some derivative financial products are not available in the local capital market at the current stage. However, since foreign financial derivative products have already been permitted to trade in the market[75], and developing the financial market to an international level is an important govern-

73) *Ibid.* p227.

74) *Ibid.* p248.

75) In July 1992, the Foreign Future Trading Law was promulgated and became effective in January 1993. Under the Law, a framework for the regulation of trading in both foreign financial and commodity derivative products was created.

mental policy, it can be expected that some local derivative financial products will be developed and traded as foreign ones in the immediate future.

On the other hand, certain new financial products in the developed financial markets can assist insurers to deal with the catastrophe risks which exceed the available underwriting capacity of the insurance and reinsurance markets[76]. It is also expected that such financial products will be introduced into the Taiwan insurance market, because they can be used to deal with the problems of the extraordinary underwriting results and the lack of underwriting capacity in the non-life insurance market.

Accordingly, in order to cope with international trends and bring the insurance market to a more developed level, it is suggested that, on a prudential basis, some derivative instruments such as options, futures and swaps may be used in an insurance investment if they can contribute to a reduction of investment risks or facilitate efficient portfolio management.

Conclusion

To continue the economic prosperity, Taiwan has to develop its insurance market and promote it to an international level. In the process of market internationalization, the liberalization of current requirements in insurance regulation is essential and inevitable. It means that insurance regulation should be reformed to meet the global trend of liberalization. Knowing this, Taiwan has conducted a series of insurance regulatory reforms, particularly in the aspect of market entry control.

Financial regulation in the insurance sector is intended to limit the degree of insolvency risk and protect policyholders and society in general. It might be the most significant but is not the only objective of insurance regulation. Insurance regulators, therefore, have a responsibility to justify different objectives in deciding upon the most appropriate regulatory policies. Due to the political, economic and social background, Taiwan used to apply an extremely conser-

76) In the USA, the potential losses from catastrophe risks such as storm and earthquake, currently exceed the available underwriting capacity in the insurance and reinsurance markets. Trading catastrophe risks can no longer remain limited to the insurance markets. It is now spreading to the broader financial markets. The first attempt was made by the Chicage Board of Trade (CBOT) which launched futures on catastrophe loss indices and related options at the end of 1992. In New York, several investment banks are currently developing models for securitization of catastrophe risks in cooperation with insurance companies in order to place such risks directly with investors in the form of securities. *See generally* Sigma No. 5/1996, Swiss Re.

vative approach to its insurance regulation, and emphasized too much on the objective of policy- holder protection. Regardless of the positive and adverse effects, many requirements in financial regulation stemming from such an approach cause problems in the market and become obstacles to internationalization and liberalization. As shown in this article, the issues relating to the aspects of capital adequacy and investment regulation are good examples for this respect.

After examining the relevant systems in the EC and the USA, some suggestions are provided. With respect to the capital adequacy issues, it is submitted that various dynamic business risks associated with the operation of insurance business should be recognized. A flexible capital mechanism, therefore, should be added to the current capital requirements. In addition, certain capital requirements need to be revised, including : 1) the minimum statutory capital has to be reduced to a reasonable level; 2) the minimum required capital of each insurance class shall be provided separately; and 3) mandatory deposits should be canceled.

On the other hand, regarding the investment regulation issues, it is suggested that 1) a distinction should be made between capital base and policyholder liabilities in the insurance funds; 2) investment regulations regarding life insurance funds and non-life insurance funds should be differentiated; and 3) that investment choices available to the insurance industry should be liberalized.

It is hoped that the discussions and suggestions provided in this article are able to contribute to the success of insurance regulatory reform in Taiwan.

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