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The Capital Market and Credit Rating in Taiwan

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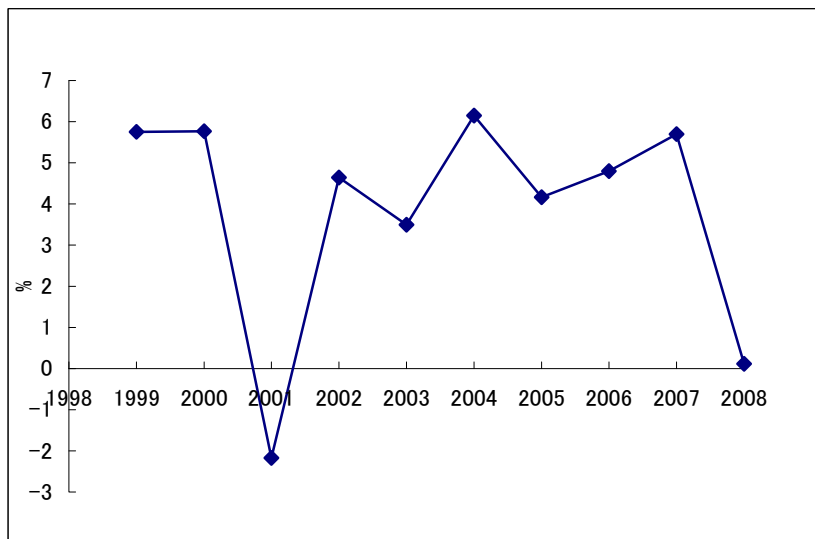
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A. The Capital Market in Taiwan

A-1 Introduction

During 1999-2007, except 2001 that was affected by the slowdown of foreign demands, Taiwan's real economy has grown steady (see Figure1). Although the

Figure 1 Growth Rate of Real GDP (1999–2008)



Source: CBC (2009)

economic environment was subsequently reshaped by the influence of a global downturn, this good economic performance continued until the first half of 2008. Growth in external trade, however, dropped markedly in the second half of the year due to global financial crisis. The Taiwan's overall economic performance exhibited a downward trend, and the growth rate of real GDP down from 5.70 percent in the previous year to only 0.12 percent in 2008.

Financial economy also extensively received the adverse impact. For example, in the stock market, the TAIEX (Taiwan Stock Exchange Weighted Stock Price Index) closed 2008 at 4,591 points, 46.0 percent lower than a year earlier. The daily average turnover for the year decreased by 21.6 percent compared with the previous year (Central Bank of the Republic of China, Taiwan, hereafter CBC 2009).

A-2 Financial Channel of non-Financial Sector

Table1 indicates financial channel of Taiwanese non-financial sector (flow base).

Table1 Indirect Finance vs. Direct Finance (NT\$ Billion)^a

| Year | Total Funds Raised | Indirect Finance ^b | | | Direct Finance ^c |
|------|--------------------|-------------------------------|--------|-------------|-----------------------------|
| | | Subtotal | Loans | Investments | |
| | | | | | |
| 1999 | 1289.1 | 1041.3 | 954.0 | 87.3 | 247.8 |
| 2000 | 1377.1 | 1203.2 | 1053.2 | 150.0 | 173.9 |
| 2001 | 665.2 | 594.5 | 200.6 | 393.9 | 70.7 |
| 2002 | 807.5 | 424.8 | 71.7 | 353.1 | 382.7 |
| 2003 | 1677.1 | 716.0 | 711.5 | 4.5 | 961.1 |
| 2004 | 2129.3 | 1815.9 | 1569.7 | 246.2 | 313.4 |
| 2005 | 1961.7 | 1780.3 | 1458.5 | 321.9 | 181.4 |
| 2006 | 1223.6 | 1374.8 | 837.8 | 537.0 | -151.2 |
| 2007 | 1044.2 | 961.8 | 733.2 | 228.6 | 82.4 |
| 2008 | 892.6 | 1230.5 | 647.5 | 583.0 | -337.9 |

^a Measured in terms of flow data.

^b Refers to loans and investments (measured on a cost basis) made by depository institutions, trust and investment companies, and life insurance companies, after taking account of their non-accrual loans reclassified and bad loans written off.

^c Refers to the total amount of new issues of various marketable securities, including government bonds, corporate bonds, listed stocks offshore bonds, depository receipts, short-term bills and asset-backed securities held by the non-financial sectors.

Source: CBC (Taiwan) (2009), *Annual Report 2008*, originally *Financial Statistics Monthly*, CBC.

The total amount of funds raised during the year 2008 decreased from the previous year's NT\$1,044.2 billion to NT\$892.6 billion. Funds raised through indirect financial channel increase from the previous year's NT\$961.8 billion to NT\$1,230.5 billion. On the contrary, funds raised through direct financial channel decreased from the previous year's NT\$82.4 billion to negative NT\$337.9 billion, mainly due to the decreased issuance of offshore bonds and domestic securitized beneficiary certificates. In Taiwan, the dependency on indirect finance (i.e. borrowing from financial institutions) is high.

A-3 Stock Market in Taiwan

There are two main stock markets, the Taiwan Stock Exchange (TSE) and the GreTai Securities Market (GTSM), an over-the-counter market. TSE established in 1962. At the end of 2008, the number of listed companies in the TSE market stood at 718, an increase of 20 from the end of 2007. The par value of shares issued amounted to NT\$5.7 trillion, rising by 2.4 percent from the end of the previous year. The total market capitalization was MT\$11.7 trillion, contracting by 45.6 percent form the end of 2007.

GTSM established in 1994. The number of listed companies in the GTSM is 539 at the end of 2008. This figure is 8 less compared to the end of the previous year. At the year-end, the par value of total shares amounted to NT\$703.1 billion, 1.6 percent less than the end of last year. Market capitalization reduced drastically by 58.7 percent form the previous year-end to NT\$772.1 billion.

A-4 Bond Market in Taiwan

In 2008, despite of big financial crisis, because investors sought a safe haven in bond markets, new issues of bonds reached NT\$1,346.1 billion, a slight decrease of 2.69 percent from the previous year (CBC 2009, p.75). Among them, as the credit rating spread widened, state enterprises and other highly rated enterprises increased corporate bond issues to lock in low issuing costs.

Table2 describes the numbers and outstanding by each instruments in the end of

Table2 Bond Issue Outstanding in Taiwan (Billion NT\$, end of 2008)^a

| | Number | Outstanding | % of Outsdg. |
|----------------------------|--------|-------------|--------------|
| Total | 2610 | 5864.03 | 100.0 |
| Government Bond | 91 | 3735.17 | 63.7 |
| Financial Debenture | 929 | 806.2 | 13.7 |
| Beneficiary Securities | 82 | 144.28 | 2.5 |
| Corporate Bond | 1411 | 1133.38 | 19.3 |
| Straight | 1142 | 947.61 | – |
| with Warrant | 0 | 0 | – |
| Convertible & Exchangeable | 269 | 185.77 | – |
| Foreign Bond | 97 | 45 | 0.8 |

^a International Bond is not included.

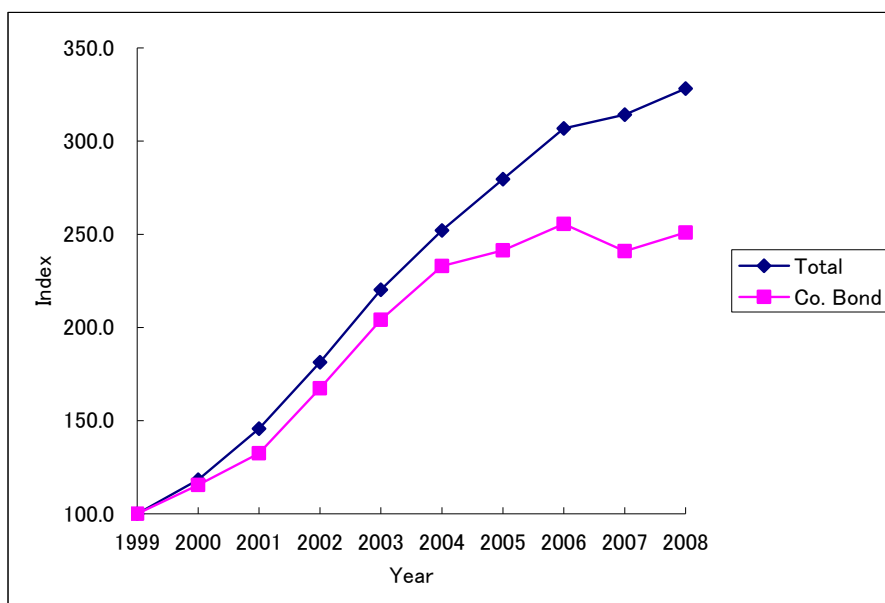
Source: FSC

2008. Total numbers are 2,610 and total outstanding is NT\$ 5,864.03 billion. Government bonds outstanding accounted for the largest share with 63.7 percent of the total. Corporate bonds followed with 19.3 percent, financial debentures with 13.7

percent, beneficiary securities on asset securitization with 2.5 percent, and foreign bonds (NT dollar-denominated bonds issued by a foreign entity) with 0.8. In corporate bonds, straight bonds accounted for the large share with 83.6 percent. The share of convertible and exchangeable bonds in corporate bonds' total is 16.4 percent.

Figure 2 shows the trend of the outstanding of total bonds issuance and corporate bonds issuance (indexes, 1999=100). The total bonds issuance is steady increasing, on

Figure 2 Trend of Bond Issue Outstanding in Taiwan (Index, 1999=100)



Source: FSC

the other hand, corporate bonds issuance is stagnating after 2004.

A-5 Regulation to Capital Market

The Financial Supervisory Commission (FSC), Taiwan is the main regulatory authority for capital markets. The FSC was officially established on July 1, 2004. The FSC is in charge of the several affairs pursuant to Article 2 of the FSC Organic Act, more basically *Securities and Exchange Law*. These affairs include development, supervision, and regulation of financial markets; enforcement of financial law and regulations, punishment of violators, and handing of matters related thereto; etc.

The FSC comprises four departments, four offices, and four bureaus. Among others, Securities & Futures Bureau supervises and regulates the securities and futures

markets as well as securities and futures enterprises, and formulates, plans, and implements policies, laws, and regulations connected therewith.

A-6 Cross-border Financial Transaction

Following the establishment of the Taipei Foreign Exchange Market in February 1979, a flexible exchange rate system was formally implemented. Since then, the NT dollar exchange rate has been determined by the market except CBC stepping in when the market is disrupted by seasonal or irregular factors.

Currently, capital movements are also completely liberalized. However, settlements of short-term capital movement exceeding the accumulated remittance amount annually shall obtain prior approval from the CBC. Foreign investors investing in domestic securities are classified into “Foreign Institutional Investors (FINI)” and “Foreign Individual Investors (FIDI)”. There is no limit on the total investment amount of any FINI. Once registered with the Taiwan Stock Exchange Company, capital flows relating to foreign portfolio investment in Taiwan are completely liberalized (see CBC Website for more detail).

Recently the FSC expects to increase the issuance of international bonds i.e. foreign currency-denominated bonds issued in Taiwan. By July 2009, three international bonds are issued. The outstanding accounts to US\$ 0.73 billion.

B. The Credit Rating System in Taiwan

B-1 Supervisory Authorities and Appointments

On April 17, 2002, “Rules Governing the Administration of Credit Rating Enterprises” is amended, new rules became effective. The new rules consists of 26 articles. These rules are prescribed in accordance with Paragraph 2 of Article 18 of the *Securities and Exchange Law* (Article 1). According to “Rules”, an enterprise engaging in the credit rating business shall be approved by the Securities and Futures Commission of the Ministry of Finance (after 2004, Securities and Futures Bureau of FSC, Taiwan) (Article 3).

B-2 Taiwanese Credit Rating Industry

Taiwan Ratings Corporation (TRC) as a subsidiary of S&P serves credit ratings in

Taiwan's financial market. Although other internationally renowned credit rating agencies, Moody's and Fitch also conduct the credit rating business in Taiwan, it can be said that TRC is only "Taiwan's" credit rating agency. So we will mainly mention TRC.

TRC was established on May 31, 1997 as the result of the Ministry of Finance's efforts to introduce a formal independent credit rating agency in Taiwan. To introduce expertise and know-how, the Taiwan Stock Exchange, one of major investors to TRC, agreed to establish TRC in partnership with S&P. Later S&P purchased an additional one percent share of TRC, became the majority shareholder on October 5, 2005. Furthermore on March 28, 2008, TRC was officially included as rating affiliate of S&P.

The authorized capital of the TRC shall be in the amount of NT\$ 200 million, all of which is divided into 20 million shares. The main share holders are S&P (51%), Taiwan Stock Exchange Co., Ltd. (19.99%), Taiwan Depository & Clearing Corporation (19%), etc.

B-3 Rating Definition and Methodology

TRC provides both issue credit ratings, which apply to a specific debt instrument, and issuer credit ratings, which apply to an obligor (i.e., borrower, guarantor, insurer, or other provider of credit enhancement).

TRC credit rating symbols are accompanied by a "tw" prefix to denote Taiwan and the rating scale's focus on Taiwanese financial markets. As such, the TRC rating scale is not directly comparable to S & P's global scale. The symbols consist of four types, Long-Term Issue Credit Ratings which applies to obligations with an original maturity of one year and over, Short-Term Issue Credit Ratings which applies to obligations with an original maturity of less than one year, Long-Term Issuer Credit Ratings which applies to obligors' capacity to meet financial commitments over a time horizon of one year and over, and Short-Term Issuer Credit Ratings which applies to obligors' capacity to meet financial commitments over a time horizon of less than one year. Table3 indicates the definition of the credit rating symbol on Long-Term Issuer Credit Ratings.

Table3 TRC Rating Definition (Long-Term Issuer Credit Rating)^a

| | |
|-------|--|
| twAAA | An obligor has an extremely strong capacity to meet its financial commitments relative to other obligors in the Taiwan market. |
| twAA | An obligor differs from the highest-rated obligors only to a small degree, and has a very strong capacity to meet its financial commitments relative to other Taiwanese obligors. |
| twA | An obligor is somewhat more susceptible to adverse effects of changes in circumstances and economic conditions than higher-rated obligors. Still, the obligor has a strong capacity to meet its financial commitments relative to other Taiwanese obligors. |
| twBBB | An obligor has an adequate capacity to meet its financial commitments relative to other Taiwanese obligors. However, adverse economic conditions or changing circumstances are more likely to lead to a weakened capacity of the obligor to meet its financial commitments. |
| twBB | An obligor has a somewhat weak capacity to meet its financial commitments relative to other Taiwanese obligors. The obligor faces ongoing uncertainties or exposure to adverse business, financial, or economic conditions that could result in an inadequate capacity on the part of the obligor to meet its financial commitments. |
| twB | An obligor has a weak capacity to meet its financial commitments relative to other Taiwanese obligors. Adverse business, financial, or economic conditions will likely impair the obligor's capacity or willingness to meet its financial commitments. |
| twCCC | An obligor is currently vulnerable and is dependent upon favorable business and financial conditions to meet its financial commitments. |
| twCC | An obligor is currently highly vulnerable to defaulting on its financial commitments. |
| twR | An obligor is under regulatory supervision owing to its financial condition. During the pendency of the regulatory supervision, the regulators may have the power to favor one class of obligations over others or pay some obligations and not others. |
| SD | TRC believes that the obligor has selectively defaulted on a specific issue or class of obligations, but will continue to meet its payment obligations on other issues or classes of obligations in a timely manner. |
| D | TRC believes that the default will be a general default and that the obligor will fail to pay all or substantially all of its obligations as they come due. |

^a The ratings from 'twAA' to 'twCCC' may be modified by the addition of a plus (+) or minus (-) sign to show relative strength within the rating category.

Source: TRC web-site

TRC publishes its methodology and criteria so that user's of ratings are thoroughly informed of how rating are determined. The corporate rating methodology encompasses two basic components, business risk analysis and financial risk analysis. A large part of the rating process in TRC is based on subjective analysis and opinion. Business risk factors assessed include growth potential, competitive environment, operating characteristics, company position, and ownership. In assessment of financial risk factors (profitability, capital structure and cash flow), it is important to focus on trends and the quality of various financial measures as well as their absolute levels.

B-4 Rating Distribution

TRC publishes the result of their credit ratings analysis in their periodical, *Commentary & Analysis*. We quote the reports by Andy Chang and Susan Chu from that periodical, 2009/06/25 in this and next sub-sections. Their report covers 220 issuer credit ratings assigned by TRC between 1998 and 2008. The study analyzes the movement of ratings on Taiwan-based obligors-industries, utilities, insurance companies, financial holding companies, banks, securities firms, and other financial institutions.

Table4 indicates the rating classification of new issuers (Table1 in Chang and Chu 2009, p.2). From this Table4, we can know that the credit quality of rated obligors in

Table4 Rating Classification of New Issuers

| | Initial rating (%) | | | | | | |
|------------|--------------------|-------|-------|-------|-------|-------|----------|
| | twAAA | twAA | twA | twBBB | twBB | twB | twCCC/CC |
| 1998 | 6.06 | 6.06 | 15.15 | 48.48 | 24.24 | 0.00 | 0.00 |
| 1999 | 3.57 | 17.86 | 17.86 | 25.00 | 21.43 | 14.29 | 0.00 |
| 2000 | 3.45 | 10.34 | 13.79 | 20.69 | 41.38 | 10.34 | 0.00 |
| 2001 | 4.17 | 12.50 | 25.00 | 29.17 | 29.17 | 0.00 | 0.00 |
| 2002 | 5.56 | 19.44 | 38.89 | 2.78 | 19.44 | 13.89 | 0.00 |
| 2003 | 0.00 | 23.53 | 5.88 | 11.76 | 47.06 | 11.76 | 0.00 |
| 2004 | 0.00 | 6.67 | 40.00 | 20.00 | 26.67 | 6.67 | 0.00 |
| 2005 | 0.00 | 26.67 | 40.00 | 20.00 | 13.33 | 0.00 | 0.00 |
| 2006 | 11.11 | 44.44 | 22.22 | 22.22 | 0.00 | 0.00 | 0.00 |
| 2007 | 12.50 | 37.50 | 0.00 | 12.50 | 25.00 | 12.50 | 0.00 |
| 2008 | 16.67 | 0.00 | 50.00 | 16.67 | 16.67 | 0.00 | 0.00 |
| % of total | 4.55 | 16.36 | 23.64 | 22.27 | 25.91 | 7.27 | 0.00 |

Source: Chang and Chu (2009), p.2, Table1.

Taiwan showed a downward trend in 2008, particularly in the second half of the year, due to the negative impact of the global financial crisis and economic slowdown.

B-5 Rating Performance

Although there are several distinct anomalies such as no default for 'twAA' rated or higher credits, the findings of Chang and Chu's default study generally support the existence of a positive correlation between rating level and default probability (see Table5).

Table5 Taiwan Cumulative Average Default Rates, 1999–2008^a

| | Year1 | Year2 | Year3 | Year4 | Year5 | Year6 | Year7 | Year8 | Year9 |
|-----------|-------|-------|-------|-------|-------|-------|--------|-------|--------|
| twAAA | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| twAA | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| twA | 0.32 | 0.70 | 1.15 | 1.15 | 1.15 | 1.15 | 1.15 | 1.15 | 1.15 |
| twBBB | 1.31 | 3.18 | 4.18 | 5.28 | 5.28 | 6.06 | 8.22 | 11.56 | 17.27 |
| twBB | 2.91 | 5.29 | 7.13 | 8.42 | 10.47 | 13.03 | 15.21 | 18.67 | 22.54 |
| twB | 3.33 | 10.24 | 13.69 | 13.69 | 18.01 | 23.13 | 38.50 | 59.00 | 100.00 |
| twCCC/C | 0.00 | 0.00 | 10.00 | 40.00 | 70.00 | 90.00 | 100.00 | N/A | N/A |
| All Rated | 0.93 | 2.08 | 3.05 | 4.06 | 5.32 | 6.96 | 9.34 | 12.54 | 16.66 |

^a N/A means Not applicable.

Source: Chang and Chu (2009), p.4, Table2.

Originally Standard & Poor's Global Fixed Income Research; Standard & Poor's CreditPro®7.72; Taiwan Ratings Corp.'s Database.

Table6 is the result of average one-year transition rates. Observation shows that

Table6 Taiwan Average One-year Transition Rates, 1999–2008 (%)

| From/To | twAAA | twAA | twA | twBBB | twBB | twB | twCCC/CC | D | NR |
|----------|-------|-------|-------|-------|-------|-------|----------|------|-------|
| twAAA | 90.48 | 6.35 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 3.17 |
| twAA | 3.00 | 92.88 | 1.12 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 3.00 |
| twA | 0.00 | 8.74 | 83.50 | 2.59 | 0.32 | 0.00 | 0.00 | 0.32 | 4.53 |
| twBBB | 0.00 | 0.44 | 13.10 | 71.62 | 2.18 | 0.00 | 0.00 | 1.31 | 11.35 |
| twBB | 0.00 | 0.00 | 1.16 | 14.53 | 58.14 | 1.16 | 0.58 | 2.91 | 21.51 |
| twB | 0.00 | 0.00 | 0.00 | 0.00 | 13.33 | 43.33 | 10.00 | 3.33 | 30.00 |
| twCCC/CC | 0.00 | 0.00 | 0.00 | 0.00 | 40.00 | 0.00 | 60.00 | 0.00 | 0.00 |

Source: Chang and Chu (2009), p.7, Table5.

Originally Standard & Poor's Global Fixed Income Research; Standard & Poor's CreditPro®7.72; Taiwan Ratings Corp.'s Database.

higher-rated issuers tend to exhibit less ratings volatility than their lower rated counterparts. For example, the probability that an issuer rated 'twAA' at the beginning of a year will be rated the same class at the end of year is 92.9 percent, whereas the probability that an issuer rated 'twBB' at the beginning of a year will be rated the same class at the end of the year is only 58.1 percent.

B-6 Unsolicited Credit Rating

Taiwan Economic Journal Co., Ltd. (TEJ) serves unsolicited credit rating, Taiwan Corporate Credit Risk Index (TCRI). TEJ established in April 1990. The number of companies rated in TCRI is about 2,000, not including finance, security, investment, estate and media. TCRI comprises nine rating grades except default (D) including: Grade 1, 2, 3 (low risk), Grade 4, 5, 6 (middle risk), and Grade 7, 8, 9 (high risk). Table7 is TCRI average one-year transition rates, 1999-2008 published in the study by Chen and Lin (2009).

Table7 TCRI Average One-year Transition Rates, 1999–2008 (%)

| From/To | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | Default |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---------|
| 1 | 90.70 | 9.30 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2 | 0.43 | 84.05 | 11.64 | 3.02 | 0.86 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3 | 0.00 | 4.21 | 80.34 | 13.76 | 1.40 | 0.28 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4 | 0.00 | 0.15 | 3.46 | 83.09 | 10.37 | 2.43 | 0.37 | 0.07 | 0.00 | 0.07 |
| 5 | 0.00 | 0.00 | 0.15 | 7.30 | 76.32 | 13.18 | 2.49 | 0.37 | 0.11 | 0.07 |
| 6 | 0.00 | 0.00 | 0.00 | 0.42 | 8.96 | 75.68 | 12.08 | 2.29 | 0.32 | 0.25 |
| 7 | 0.00 | 0.00 | 0.00 | 0.12 | 1.30 | 15.28 | 65.28 | 12.53 | 3.14 | 2.36 |
| 8 | 0.00 | 0.00 | 0.00 | 0.00 | 0.20 | 3.01 | 15.49 | 64.05 | 12.22 | 5.03 |
| 9 | 0.00 | 0.00 | 0.00 | 0.00 | 0.07 | 1.17 | 4.18 | 8.84 | 75.19 | 10.56 |

Source: Chen and Lin (2009), p.99, Table1.

B-7 Response to Basel II

Taiwan has followed the BIS schedule and implemented Basel II from 2007. In particular, as for credit risk, the Standardized Approach, the Foundation Internal Ratings-Based Approach, and the Advance Internal Ratings-Based Approach are available. The FSC adopts an encouraging and fully supportive, but non-mandatory attitude towards the use of the Internal Ratings-Based Approach for risk assessment by banks. We can see the risk weight table on Taiwan's domestic credit ratings on SFC's web-site.

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