banks and conduct currency swaps with banks to meet corporate funding needs and maintain foreign currency liquidity in the domestic banking system. In 2013, the turnover amounts of the Taipei foreign currency call loan and interbank USD/NTD currency swap markets were US$1.36 trillion and US$1.13 trillion, respectively, and the outstanding of both markets at the end of the year registered US$24.2 billion and US$158.8 billion, respectively.

4.1.6 Continually developing financial stability assessment tools

To strengthen its function of financial stability assessment, the CBC continued to collect and study the new assessment tools developed around the world, and explored the possiblities to incorporate them into the domestic financial system for reference. Among them, the Bank Health Index (BHI) and Health Assessment Tool (HEAT), developed by the IMF,[70] have the merits of easy operation and effectively testing bank soundness.

Referring to HEAT, the CBC conducted a practice run using domestic banking data from 1998 to 2013. The result showed that, in general, the HEAT assessment tool could capture the influences of severe financial events and banking M&A on banks' soundness. Meanwhile, it should be noted that the BHI index only reflected the relative but not absolute soundness or weakness of individual banks. In addition, HEAT may have some room for improvement when implemented in Taiwan, such as including more financial indices and considering the appliance of different weights on individual banks based on their importance to the whole banking sector.

4.2 Measures undertaken by the FSC to maintain financial stability

From 2013 onwards, the FSC launched several policy measures to facilitate financial development and financial deregulation, including, among others, expedited promotion of a Taiwan-centric wealth management platform, development of financial services with cross-strait characteristics, and inclusion of the financial industry in the government's free economic pilot zones plan. Concurrently, the FSC continually revised financial laws and regulations and undertook supervisory reforms to preserve financial stability.

[70] Li Lian Ong, Phakawa Jeasakul and Sarah Kwoh, (2013) "HEAT! A Bank Health Assessment Tool, "*IMF Working Paper*, WP/13/177, August.

4.2.1 Strengthening surveillance of the risks related to banks' real estate loans

Continued supervision of the banks overly concentrating in real estate lending

For those banks with higher concentrations in real estate loans, the FSC consistently urged them to set aside additional provisions for loan losses based on the principle of differentiated supervision. Moreover, the FSC required that banks should not increase the loans to real estate development projects in the name of working capital financing or other types of loans by way of pledge or transfer of the beneficiary rights of real estate asset trusts. In 2013, there were nine banks under close surveillance, less than the 17 in 2011, showing that the surveillance of those banks was effective.

Implementing stress testing to evaluate banks' ability to respond to house price declines that could cause potential losses

In order to address potential risks resulting from house price declines, the FSC required domestic banks to carry out stress tests in April 2014 using financial data as of the end of 2013. The tests focused on credit exposures associated with housing loans and lending to the construction industry based on three risk factors including a fall in house prices, a rise in the interest rate, and a decrease in borrowers' incomes under adverse scenarios in differing degrees.[71] The test result showed that all banks' capital adequacy ratios were higher than the minimum standard of 8% under the stress scenarios, indicating that banks were still able to react to potential losses arising from house price declines.

4.2.2 Persistently enhancing banks' risk bearing and managerial ability

Raising banks' regulatory capital ratios and loan loss provisions

Domestic banks have implemented the Basel III requirements since 2013, raising capital and improving its quality year by year. The FSC issued the *Regulatory Measures to Strengthen the Credit Risk Management of Domestic Banks* in January 2013, adopting differentiated incentive rewarding and supervision to guide banks to raise the loan loss provision ratios for credit assets classified as category one (i.e., normal credit assets), to be at or above the 1% minimum. Subsequently, the FSC, in January 2014, revised the *Regulations Governing the*

[71] The adverse scenario assumes a 20% drop in house prices and a one-percentage-point increase in the interest rate while the more adverse scenario assumes a 30% drop in house prices and a rise of two percentage points in the interest rate. Both scenarios additionally assume a decrease in borrowers' incomes to make the stress testing effects stronger.

Procedures for Banking Institutions to Evaluate Assets and Deal with Non-performing/Non-accrual Loans, which stipulated that the minimum loan loss provision and guarantee reserve shall be the sum of 1% of the outstanding claim balance of category one credit assets by the end of 2014. The *Regulations* added a requirement that, the FSC, if necessary, may require banks to raise loan loss provisions and guarantee reserves of specific credit assets, so as to strengthen the ability of banks to bear risks and ensure their loss absorbency.

Reinforcing the oversight of banks' exposures to Mainland China

By way of total investment control, capping risk exposures and imposing a ceiling on credits undertaken by OBUs or overseas branches of financial institutions (Box 4), the FSC strengthened its oversight of banks' exposures to Mainland China and urged banks to earnestly fulfill risk management.

4.2.3 Strengthening the supervision of the insurance industry

Improving the financial structure and loss absorbency of insurers

In order to improve the financial structure of life insurance companies, the FSC required that the special reserve set aside for the real estate revaluation increment under the IFRSs in 2013 should first of all offset any shortfall after the reserves for in-force business have been calculated on the assigned basis of fair value. If there is a remainder after the offsetting, it should be recognized as a special surplus reserve under stockholders' equity and should not be distributed without approval.

In February 2014, the FSC further issued rules that allow insurers to opt for subsequent measurement of investment property at fair value and set out the relevant package measures, such as requirements on outsourced professional appraisal, case-by-case reviews by certified public accountants (CPA), and appropriation of special surplus reserves for related capital gains along with limiting their distribution for the purpose of offsetting any subsequent liabilities that might arise due to a shortfall in reserves.

Moreover, in order to raise insurers' loss absorbency, the FSC revised regulations in October 2013, requiring them to set aside sufficient provisions for loan losses not lower than 1% of their outstanding loan assets.

Broadening the channels for insurers' uses of funds

In order to raise insurers' capital efficiency and broaden the channels for the uses of funds, the FSC successively promoted and guided their funds towards investments in public infrastructure projects and long-term care facilities. Furthermore, the FSC loosened restrictions, allowing insurers that meet certain conditions to be eligible to invest in foreign corporate bonds, offshore (covering Mainland China) real estate, and RMB-denominated financial products.

Enhancing the resolution regime for troubled insurers

In order to strengthen the resolution regime for and supervision of troubled insurers, the FSC put forward a draft for partial revision to the *Insurance Act* in 2013, which was passed by the Legislative Yuan on 20 May 2014. The focal points of the revisions include enhancement of supervisory measures on insurers experiencing operational difficulties: for example, ordering them to submit a plan to improve their finances and business and take disciplinary actions. The revisions also include the strengthened resolution regime for troubled insurers, which contains that a receiver may deliberate a bridge plan for recovery and resolution of a failed insurer.

4.2.4 Improving securities market order and facilitating its development

Strengthening the supervision of backdoor listings

To protect the rights of shareholders, the TWSE and the GTSM have been implementing the enhanced supervisory measures for backdoor listings since December 2013. For example, in the case of listed companies which underwent a transfer of management rights and significantly changed the scope of their operations within one year before or after that transfer, their stocks may be suspended from trading for up to a maximum of six months. Such companies will also be required to fully disclose all information pertaining to the transfer of management rights, the change in the scope of business, and their future business plans. Furthermore, the Market Observation Post System (MOPS) set up a specific compilation table related to changes in management rights (namely, information about major shareholdings of directors, supervisors and high-ranking managers) in December 2013, providing investors with the relevant information.

Promoting the RMB Formosa Bond Market and creating GISA

In order to promote the development of the offshore RMB bond market in Taiwan, the FSC, subsequent to the first public listing of Formosa Bonds in March 2013, announced policy measures in November on the expansion of the scale of issuance and scope of participation in the Formosa Bond market. Mainland Chinese banks and their overseas affiliates or branches, overseas branches of Taiwanese financial institutions in Mainland China, and Taiwan's listed companies' affiliates in Mainland China are allowed to issue RMB-denominated common corporate bonds that can only be sold to professional institutional investors. Moreover, to enable micro and small innovative companies to raise needed capital, the FSC approved the GTSM's *Regulations Governing the Go Incubation Board for Startup and Acceleration Firms* (GISA) in November 2013, which enabled the GISA to start operation from January 2014.