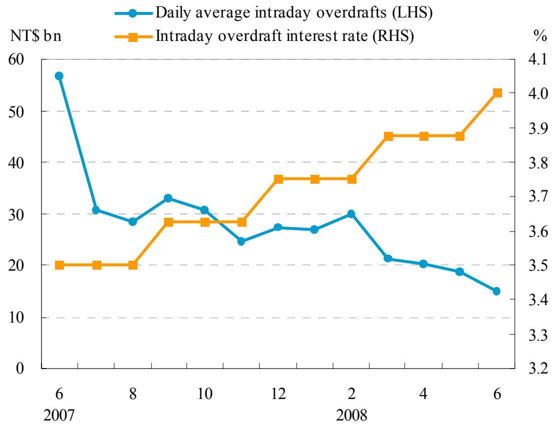
5. Financial infrastructure

5.1 Measures to increase efficiency of payment and settlement systems

CBC Interbank Funds-Transfer System

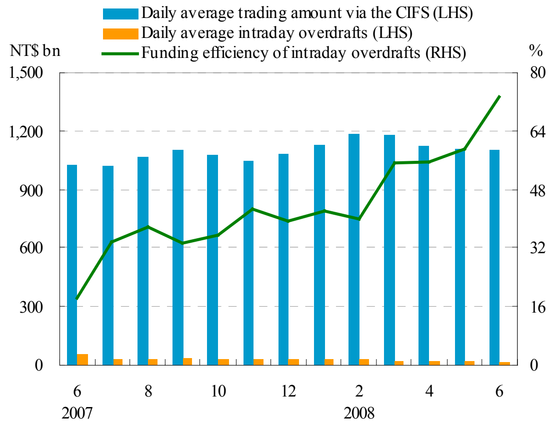
To ensure the sound operation of the CBC Interbank Funds-Transfer System (CIFS), the CBC adopted the Real-Time Gross Settlement (RTGS) mechanism in September 2002. Meanwhile, the CBC also provides intraday overdraft facilities to prevent financial institutions from temporary intraday liquidity shortage and thus to resolve gridlock[54] in the RTGS system.

Chart 5.1 Intraday overdraft amount and interest rate in the CIFS



Source: CBC.

Chart 5.2 Transactions and intraday overdraft via the CIFS



Source: CBC.

To avoid excessive use of intraday overdraft facilities and, in turn, prompt financial institutions to control intraday overdraft facilities and proactively manage daily funding, the CBC charges interests on intraday overdrafts.[55] The intraday overdraft usage of financial institutions gradually decreased with the rising interest rate, reflecting that the interest-charging policy has functioned as intended. The daily average overdrafts decreased from NT$56.7 billion in June 2007 to NT$15 billion in June 2008 (Chart 5.1). However, the decrease in intraday overdraft has not influenced the processing of transactions by the CIFS. The daily average trading amount via the CIFS increased from NT$1.03 trillion in June 2007 to around NT$1.1 trillion in June 2008. The ratio of daily average trading amount via the CIFS to daily average intraday overdraft amount indicates that the funding efficiency arising from intraday overdrafts has significantly increased (Chart 5.2).

[54] The RTGS processes payments in real time. When a financial institution fails to send funds in time (but funds will be sent before the book is closed) for its payable transaction, the transaction will be rejected or queued and, in turn, affect the receiving bank. If the delayed payment brings about insufficient funds in the receiving bank's account, the payable transaction of the receiving bank will also be put off. The chain reaction, resulting from deadlocks on funds between the sender and the receiver, is called "gridlock."

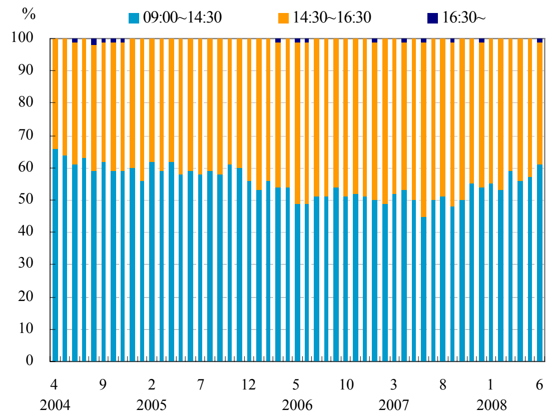
[55] The intraday overdraft interest is assessed at the CBC's rate on accommodations with collateral, on the amount of overdraft per minute.

Bills Central Depository and Clearing System

Aiming at the immobilization of physical bills, Taiwan launched the Bills Central Depository and Clearing System (BCDC) in April 2004, replacing physical delivery of bills by way of book-entry. Also, in order to effectively eliminate settlement risk, a delivery versus payment (DVP) mechanism was implemented by linking up the BCDC and the CIFS.

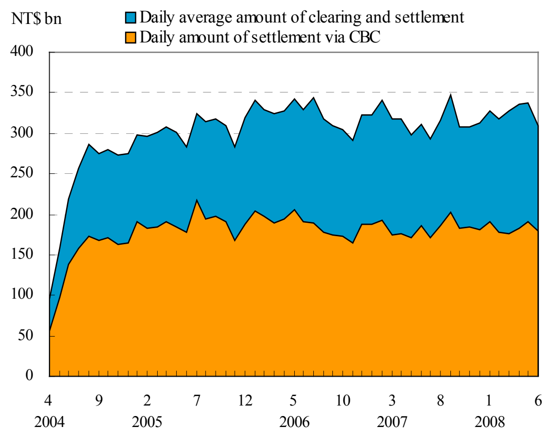
Before implementation of the BCDC, most transactions in the secondary bills market were settled after 3:30 p.m. since market participants formerly procured funding after noon. After the adoption of the BCDC, thanks to the linkage of the BCDC and the CIFS that allows transactions to be settled on a DVP basis, the share of settlements completed before 2:30 p.m. has reached 56% (Chart 5.3), and thus the efficiency of bills settlements has effectively improved.

Chart 5.3 Distribution of bills settlements completion time



Source: Taiwan Depository & Clearing Corporation.

Chart 5.4 Transactions via the BCDC



Source: Taiwan Depository & Clearing Corporation.

The BCDC also contains the bundling module,[56] aiming to ease funding pressure on bills finance companies. The daily clearing and settlement of bills via the BCDC averaged around NT$320.1 billion in 2007, among which NT$183.8 billion was settled by the CBC. Since daily funds settled by the CBC only accounted for 57% of the total trading amount (Chart 5.4), the BCDC did have the benefit of conserving liquidity.

[56] The bundling module allows bilateral net settlement positions settled between every bilateral combination (i.e. bills finance company vs. investor, bills finance company vs. clearing bank, and bills finance company vs. bills finance company).

5.2 A series of policy tools for financial stabilization and economic vitalization launched

The subprime debacle in the US triggered global financial crisis and the risk of economic slowdown, which spilled over into Taiwan's domestic financial system and, in turn, macroeconomic activity. In order to stabilize the local financial system and boost the economy, the government actively implemented the Economic Vitalization Package (detailed in Box 2), which is comprised of numerous measures to secure financial stability and invigorate the economy. Among these measures, the policy tools related to financial stabilization have exerted positive effects that led the financial system to gradually recover from instability, whereas it takes time for the desired outcomes promoted through the tools targeting economic stimulation to emerge. The major measures for stabilizing the financial system are listed as follows:

5.2.1 Implementation of eased monetary policy

Lowering policy rates and deposit reserve ratios

For the sake of lifting domestic demand and ensuring sufficient market liquidity, the CBC loosened its monetary policy stance and successively lowered its policy rates (i.e. discount rate, accommodation rate with collateral, and accommodation rate without collateral) four times from September to November 2008, with a range totaling 0.875 percentage points. In the same period of time, the reserve ratios for banks' demand deposits and time deposits were also reduced by 1.25 percentage points and 0.75 percentage points respectively, releasing a fund of approximately NT$200 billion into the banking system. Domestic banks are also allowed to pledge certificates of deposit (CDs) issued by the CBC or re-deposits with the CBC as collaterals to get accommodations from the CBC whenever they are in need of funding, or to early terminate the deposits/re-deposits.

Carrying out expansion of repo facility operations

Referring to foreign central banks' responses to market liquidity issues, the CBC passed a resolution to expand repo facility operations at the Board of Directors' Meeting on 25 September 2008 with a view to sufficiently providing financial institutions with the funds they require. Major contents of the mechanism include:

- Participating counterparties in repo facility operations are broadened to include all securities firms and insurance companies.

- The term of facility is extended to within 180 days from 30 days.
- CBC-issued CDs are recognized as an eligible operational instrument.
- Financial institutions can submit the application for repo facility operations based on their funding demand in addition to participating in the operations pursuant to the CBC's announcement.

5.2.2 Adoption of interim blanket deposit guarantee

With an aim to stabilize the local financial system, anchor depositors' confidence, and enhance the soundness of financial institutions, the government announced a measure to provide a blanket guarantee of deposits on 7 October 2008, which is effective from 1 November 2008 until the end of 2009. Under this measure, deposits with financial institutions participating in the deposit insurance scheme (such as banks and community financial institutions) are fully covered. The scope of coverage has been broadened to involve foreign-currency deposits, interbank deposits, as well as interbank call loans, which were not insured previously. The Financial Supervisory Commission (FSC), along with the Ministry of Finance (MOF) and the CBC, jointly issued the Measures to Support Blanket Guarantee of All Bank Deposits, which set forth, among others, relevant legal foundation, applicable counterparties, insurance coverage, and special premium charge. In step with the package approach, the FSC will strengthen the supervision of the financial conditions and business operations of financial institutions. The institutions shall be punished seriously if their operations violate relevant laws and regulations during the implementation. Those which do not comply with supervisory authorities' improving requirements within a specific period of time will be duly disposed of in accordance with the Banking Act and relevant laws.

5.2.3 Initiation of the approaches to stabilizing stock markets

The local stock market dropped under the influence of the global stock calamity. To help reverse the market's slump, the government launched multiple approaches, which mainly consist of:

- Halving the securities transaction tax;
- Temporarily resuming the ban on short-selling 150 listed shares below the previous

day's closing price, suspending from short-selling for borrowed and margin stocks, and narrowing the sagging range of share prices;[57]

- Encouraging TWSE- or OTC-listed companies to buy back their shares as treasury stocks, and their directors to purchase their company's shares; and
- Urging state-owned financial institutions and the four government-managed funds (i.e. the Civil Service Pension Fund, the Labor Pension Fund, the Labor Insurance Fund, and the Postal Savings Fund) to purchase under-valued low-priced stocks of well performing companies.

5.2.4 Aiding enterprises and individuals to get loans from banks

With a view to facilitating enterprises and individuals to obtain loans, various measures have been undertaken as follows:

- The Ministry of the Interior carried out the Allocating an Additional NT$200 Billion for Preferential Home-Purchase Loans Program and raised individual borrowers' credit line and increased the subsidy of interest payments.
- The MOF, CBC, FSC, the Ministry of Economic Affairs (MOEA), and the Council for Economic Planning and Development (CEPD) jointly organized a Task Force on Facilitating Enterprises to Obtain Operational Funds, which helps solve financing problems for SMEs and large enterprises.
- Borrowers who are granted preferential housing loans promoted by the Executive Yuan (Cabinet) can apply for the extension of the terms of their loans or for the deferred payment on their principals. The Bankers' Association also published a guideline for banks coping with the postponed repayment of housing loans by involuntarily unemployed workers.
- The SMEG adopted numerous approaches that include but are not limited to increasing the percentage and line of guarantees in order to share banks' credit risk. The government will additionally appropriate at least NT$6 billion to replenish the credit guarantee fund in 2009.

[57] Please refer to Box 2 with regard to the period of implementing the approaches related to the stock market.

Box 2
Economic Vitalization Package in Taiwan

Impacted by the global financial crisis, the growth of the local economy slowed perceptibly. In order to revive the domestic economy and solidify the foundation of long-term economic development, the government launched the Economic Vitalization Package in September 2008. This package is drawn up from three basic policy directions on "stimulating consumption," "vitalizing investment and accelerating construction," and "stabilizing financial markets and promoting exports." The government is pushing forward ten concrete policy measures which comprise: (1) looking after the disadvantaged; (2) encouraging consumption; (3) promoting employment; (4) offering preferential housing loans; (5) strengthening public construction; (6) promoting private investment; (7) stabilizing financial and stock markets; (8) enhancing financing to SMEs; (9) expanding exports; and (10) pursuing tax reform. It is forecasted that the package can spur domestic investment and consumption totaling at least NT$1 trillion. Moreover, focusing on the policy of "stimulating consumption," in November 2008, the government further put forth a new measure to distribute consumer vouchers to reverse the flagging economy and increase domestic demand. These measures have been implemented successively, key items of which are summarized as follows:

1. Stimulating consumption

1.1 Looking after the disadvantaged

- Implementing subsidy measures to continue caring for the disadvantaged.

1.2 Encouraging consumption

- Subsidizing the purchase of energy-saving lights and home appliances;
- Relaxing restrictions on the use of National Travel Cards;
- Promoting the use of energy-saving LED lights;
- Subsidizing the purchase of electric-powered and low-polluting vehicles, and the replacement of old vehicles, by members of the general public; and
- Expecting to distribute consumer vouchers in January 2009.

1.3 Promoting employment

- Relaxing the Regulations for Subsidizing and Awarding Employers for Hiring

Unemployed Workers;

- Helping young people obtain employment;
- Conducting temporary special projects for raising living quality or promoting social welfare;
- Encouraging enterprises to invest in staff training; and
- Providing temporary work opportunities to increase employment.

2. Vitalizing investment and accelerating construction

2.1 Providing preferential housing loans

- Allocating an additional NT$200 billion for the provision of preferential home-purchase loans;
- Helping young families buy or change houses because of having a child or children with housing loans of zero interest rate for the first two years;
- Continuing the provision of interest subsidies for home-purchase and home-refurbishment loans; and
- Providing rent subsidies for those without the means to purchase a home.

2.2 Strengthening public construction

- Actively encouraging private participation in public construction and urban renewal;
- Acting with the utmost urgency to promote foreign and mainland Chinese investment in public construction projects in Taiwan;
- Specially executing and accelerating the implementation of an NT$240 billion budget for large-scale public construction projects; and
- Speeding up the execution of the Program for Strengthening Local Construction to Expand Domestic Demand.

2.3 Promoting private investment

- Implementing a five-year tax-exemption for new or increased investment before year-end 2009;
- Promoting a program for the preferential sale of land in industrial parks;

- Raising tax deduction rates for enterprises purchasing and installing energy-saving equipment or investing in new and clean energy technology;
- Increasing the funding, raising the upper limits, and extending the duration of preferential loans to encourage the upgrading of the tourism industry;
- Actively guiding the implementation of major private investment projects amounting to NT$4 trillion within four years;
- Encouraging insurance companies to participate in the national major construction projects;
- Rationally releasing government-owned land in order to reduce investors' land use costs; implementing the four years rent-free and six years at half-rent scheme for leasing out government-owned land;
- Expanding efforts to attract international investors, and planning the 2008 Taiwan Business Alliance Conference; and
- Pushing for the amendment to the Statute Governing the Establishment and Management of Free Trade Zones, setting up a single window, and strengthening inducements for foreign investors.

3. Stabilizing financial markets and promoting exports

3.1 Stabilizing financial and stock markets

- Halving the securities transaction tax for half a year with the draft amendment to the Securities Transaction Tax Act to be forwarded to the Legislative Yuan for deliberation;
- Coordinating the funding support needed by banks to continue conducting corporate financing operations and avoid tightening the supply of credit to companies that are operating normally but facing temporary difficulty;
- Organizing a Task Force on Facilitating Enterprises to Obtain Operational Funds to help those that are assessed to be viable to apply for participation in the disciplinary debt negotiation mechanism coordinated by the Bankers' Association;
- Giving the green light to Qualified Domestic Institutional Investors (QDIIs) from mainland China wishing to invest in Taiwanese securities and futures; and
- Continuing to implement the following measures for revitalizing the stock market:

  - Prohibiting short-selling below the closing price on the previous trading day (from 22 September to 3 October 2008) of 150 listed shares, suspending short-selling for borrowed and margin stocks (from 1 October to 31 December 2008), and narrowing the range of price fall to 3.5% (from 13 October to 24 October 2008), in order to mitigate stock market fluctuations;
  - Organizing numerous fora for policy interpretation to propagate the fact that Taiwan’s economic fundamentals remain sound;
  - Encouraging investment trust companies to raise domestic stock funds for investment in the stock market, company directors to purchase their companies’ stocks, and well performing companies to buy back their stocks as treasury stocks;
  - Encouraging banks, securities firms, and insurance companies to make good use of their funds by investing in good quality stocks that have fallen excessively in price;
  - Revising the threshold at which financial holding companies may buy back their shares to hold as treasury stocks from a minimum capital adequacy ratio of 110% to 105%; and
  - Encouraging state-owned institutions to conduct their own evaluation and purchase of low-priced stocks of well performing companies, and urging the four government-managed funds to continuously exert the function of stabilizing the stock market, in order to reinforce investor confidence.
- Enforcing a blanket deposit guarantee measure until the end of 2009;
- Implementing various monetary easing measures to sufficiently inject liquidity to the market; and
- Providing funding support to commercial banks whose home-purchase lending is facing a shortage of funds or bordering on the upper limit prescribed by Article 72-2 of the Banking Act through simplifying the procedure for issuance of financial debentures, expediting the approval of applications for securitized housing loan products (mortgage bonds), and coordinating with Chunghwa Post Co. to provide postal savings deposits to supplement banks’ deposit base for the provision of home-purchase loans.

3.2 Enhancing financing to SMEs

- Implementing the Program for Strengthening Domestic Bank Financing of SMEs, and increasing the loan percentage and amount of the guarantees provided by the SMEG; and
- Carrying out the Micro-enterprise Startup Loan Program and the "Phoenix" Program of Small Business Startup Loans for Women, along with the provision of comprehensive business startup consultation and guidance, to help women and middle-aged and older people set up micro-businesses.

3.3 Expanding exports

- Executing continuously the plan for expanding overseas export markets, setting targets for growth of at least 10% in the second half of 2008 and 14% in 2008; and
- Diversifying export markets and especially pursuing expansion in emerging markets, and planning to accomplish the Global Market Expansion Plan.

3.4 Pursuing tax reform

- Implementing the income tax credit for middle- and low-income families, and raising the exemption of individual income tax and other deductions; and
- Lowering the estate tax and gift tax rate to 10% and the income tax for general profit-seeking enterprises.

5.3 Taiwan's amendment to fair value accounting standards based on recent international trends

Fair value accounting standards (Box 3) reflect current market conditions, enhance comparability of values of financial instruments purchased at anytime, and provide transparent and important information to financial statement users. However, recent market illiquidity due to the subprime mortgage crisis forced financial instruments to be measured by models instead of market prices, in turn increasing the uncertainty of fair value measurements. This not only raised concerns about vague classifications of the fair value hierarchy[58] of financial instruments stipulated by the US accounting standards, but also caused the stock prices of many corporations to slump when they disclosed large amounts of unexpected

[58] Refer to "The Definition of Fair Value" in Box 3.

losses according to fair value accounting standards. As a result, market fluctuations intensified and global investors started to panic. This is the reason that the reliability of fair value accounting and its impacts on financial statements were criticized. As required by the US$700 billion Bailout Act passed by the US Congress in October 2008, the Securities and Exchange Commission should submit study reports on fair value accounting standards[59] at the beginning of 2009, in line with the Emergency Economic Stabilization Act. The International Accounting Standard Board was also concerned with the drastic changes in the international financial conditions recently and amended International Accounting Standards No. 39 (IAS 39) and International Financial Report Standard No.7 (IFRS 7) on 13 October 2009, which relaxed fair value accounting reclassification limitations.[60]

Since Taiwan’s Statement of Financial Accounting Standards No. 34, Financial Instruments: Recognition and Measurement (Taiwan’s SFAS 34), was adopted with reference to IAS 39, and local corporations were damaged by the unfavorable international economic situation, the Accounting Research and Development Foundation in Taiwan, referring to the newest amendments to IAS 39 and IFRS 7, published the second amendment to Taiwan’s SFAS 34 in October 2008. The second amendment states that, in limited circumstances, trading purpose non-derivative financial assets may be reclassified into other categories, and available-for-sale financial assets may be reclassified into the loans and receivables category. It also allowed retrospective application of the amendment starting from 1 July 2008. Besides, the amendment required corporations to disclose the following information in the current and subsequent periods when reclassification was made: (1) the book values and fair values of all reclassified assets; (2) the changes in fair value recognized in profits or losses, or stockholders’ equity adjustments in each period if the financial asset was not reclassified; and (3) the incomes and expenses recognized as profits and losses after reclassifications.

[59] Key issues addressed by the report include: (1) the effects of fair value accounting standards on a financial institution’s balance sheet; (2) the impacts of such accounting practice on bank failures in 2008; (3) the impacts of such accounting standards on the quality of financial information available to investors; (4) the process of developing accounting standards used by the FASB; (5) the advisability and feasibility of modifications to fair value accounting standards; and (6) alternatives to those provided in SFAS 157.

[60] Originally, according to IAS 39, reclassifications of financial assets or liabilities classified as the fair value through profit or loss category upon initial recognition were not permitted in subsequent periods. The International Accounting Standard Board approved amendments to the standards of reclassifications on 15 October 2008. The changes included: (1) financial derivatives can not be reclassified into other categories; (2) if upon initial recognition, financial instruments have been designated as the fair value through profit or loss category, they can not be reclassified into other categories; (3) if a financial asset, which is not within the previously mentioned scope, is no longer held for the purpose of selling in the near term, and is subject to meeting specified criteria, it is permitted to be reclassified into other categories.

Box 3
Introduction to fair value accounting standards

1. The definition of fair value

According to International Accounting Standards No. 32 (IAS 32) and Taiwan's Statement of Financial Accounting Standards No. 36（Taiwan's SFAS 36）, "Financial Instruments: Disclosure and Presentation," fair value represents the amount for which an asset could be exchanged and a liability could be settled in an arm's-length, orderly transaction between knowledgeable and willing parties. IAS 39 and Taiwan's SFAS 34 "Financial Instruments: Recognition and Measurement" have further mandated that quoted market prices in an active market are strong evidence of fair values. If the markets for financial instruments are not active, however, valuation methodologies may be employed. The acceptable methodologies include the prices generated by recent market transactions (or referring to the current fair value of another instrument that is substantially the same), discounted cash flow analysis, and option pricing models.

Moreover, in order to improve the consistency and comparability of fair value measurements and disclosures, the US released SFAS 157 in 2006, which clearly specified that fair value is, at measurement date, the price to be received or paid in an orderly transaction between market participants when selling the asset or transferring the liability. Based on the prioritization of inputs used to measure fair value, the statement established a hierarchy of fair value methodologies, which comprised three levels:

- Level 1: financial instruments with observable, quoted prices in active markets should be measured at the quoted prices. This level carries the best quality of fair value information.
- Level 2: those financial instruments with observable inputs for identical or similar assets or liabilities in markets (e.g. infrequently traded corporate bonds or government bonds that have no quoted prices or trade infrequently, but can be referred to market values of similar securities) should measure their fair values by introducing the observable inputs into the models.
- Level 3: for financial instruments with unobservable inputs for the assets or liabilities (e.g. asset-backed securities), fair values can be measured based on the assumptions, made by the reporting entity, with the best information available (which may include the reporting entity's own data) and are estimated by mathematical valuation models.

2. Pros and cons of fair value accounting

pros	***cons***
Fair value is more predictable A fair value of financial instruments represents market expectations and assessments as to the amount, time, and uncertainties of such instruments' future cash flows. It takes elements that affect market values, such as interest rates, exchange rates, credit, and demand and supply into consideration. Hence it is more predictable. ***Increasing comparability among financial instruments with similar economic characteristics*** Fair value information normally reflects judgments on the current value of expected future cash flows for related financial instruments in the financial market, which allows comparability among financial instruments with similar economic characteristics. ***Consistency with approaches of financial risk management and beneficial to performance evaluations*** Fair values reflect the latest values of financial instruments. This accounting	***Reliability of fair value measurements is relatively low*** Financial instruments without market prices, due to an inactive market or exhausted liquidity, should be valued by models. However, the high uncertainty on the parameters, hypothesis and estimation deviations introduced by valuation models, and the lack of definite measurement indicators for evaluation calibrations have raised concerns about the reliability of fair value measurements. ***Lack of comparability of financial statements among peers*** The classifications of financial instruments in fair value accounting standards are based on corporate intentions and capabilities. As a result, various corporations who hold similar financial instruments will have inconsistent bases for subsequent measurements owing to the classification differences. This could undermine the comparability of financial statements among peers.

approach helps to set and control stop-loss limits for financial risk managements, and evaluate the corporate internal performance. It is also beneficial for external financial statement users to objectively evaluate the performance of corporations.

Financial reports are presented more fairly

Financial derivatives are generally off balance sheet transactions. As fair value accounting standards require corporations to recognize effects of changes in fair value in order to reflect off balance sheet risks on time, the financial reports can be presented more fairly.

Increasing the volatility in the financial statements and enhancing effects of procyclicality

The volatility in the financial statements with fair value measurements will be increased when unrealized profits or losses are instantly recognized on income statements or balance sheets. Also, if corporations distribute surplus to shareholders based on the unrealized gains from assets revaluations or from liability reductions, their financial structures will be impaired. Moreover, fair value accounting is mainly applicable to the measurement of financial assets, while most financial liabilities are recognized at amortized costs. The inconsistent accounting approaches between financial assets and liabilities will lead to a procyclical effect. For example, during economic recessions, fair value measurements will enable a drastic reduction of corporate values and even trigger the contagion effect.

Measurements of fair value can be manipulated easily

As market values of financial instruments are easily manipulated, fair value may fail to reflect the real values. This could erode the quality of financial statement information.