Explanatory notes:
Compilation of financial soundness indicators

I. General notes

To facilitate international comparison, most items listed in "Appendix: Financial Soundness Indicators" are compiled in accordance with the "Financial Soundness Indicators: Compilation Guide" issued by the IMF. However, a few indicators are not used for analysis in this report owing to insufficient time series data.

Unless otherwise stated, the data of all indicators are on a year-end (stock data) or year-to-date (flow data) basis.

Compilation of Domestic Banks' Indicators

1. The banks in this report as of the end of 2014 include Bank of Taiwan, Land Bank of Taiwan, Taiwan Cooperative Bank, First Commercial Bank, Hua Nan Commercial Bank, Chang Hwa Commercial Bank, The Shanghai Commercial & Savings Bank, Taipei Fubon Commercial Bank, Cathay United Bank, The Export-Import Bank of the Republic of China, Bank of Kaohsiung, Mega International Commercial Bank Co., Agricultural Bank of Taiwan, Citibank Taiwan, ANZ (Taiwan) Bank, China Development Industrial Bank, Industrial Bank of Taiwan, Taiwan Business Bank, Standard Chartered Bank (Taiwan), Taichung Commercial Bank, King's Town Bank, HSBC Bank (Taiwan), Bank of Taipei, Hwatai Bank, Shin Kong Commercial Bank, Sunny Bank, Bank of Panhsin, Cota Commercial Bank, Union Bank of Taiwan, Far Eastern International Bank, Yuanta Commercial Bank, Bank Sinopac, E. Sun Commercial Bank, KGI Bank, DBS Bank (Taiwan) Ltd., Taishin International Bank, Ta Chong Bank, Jih Sun International Bank, EnTie Commercial Bank, and CTBC Bank Co., Ltd., amounting to 40 banks.

2. The domestic banks' related indicators are calculated using unaudited data submitted regularly by domestic banks. The submitted data are different from the data posted on the banks' websites, which are audited and certified by certified public accountants or adjusted by the banks. The statistical basis for these two types of data is different.

3. Domestic banks' related indicators are calculated by aggregating the numerators and denominators of each ratio, and then dividing the total numerator by the total denominator to obtain the peer-group ratios. This methodology differs from the Winsorized mean in the quarterly "Condition and Performance of Domestic Banks" report compiled by the Department of Financial Inspection of the Central Bank of the Republic of China (Taiwan).

II. Explanatory notes on the indicators

1. Domestic banks' indicators

1.1 Earnings and profitability

1.1.1 Return on assets (ROA)

This indicator is used to analyze domestic banks' efficiency in using their assets.

- ROA = net income before income tax / average total assets
  - Net income: net income before income tax.
  - Average total assets: the average of total assets at the beginning and the end of the period before 2012, while the daily average of total assets since 2013.

1.1.2 Return on equity (ROE)

This indicator is used to analyze banks' efficiency in using their capital.

- ROE = net income before income tax / average equity
  - Net income: same as 1.1.1.
  - Average equity: the average of equity at the beginning and the end of the period before 2012, while the daily average of equity since 2013.

1.1.3 Net interest income to gross income

This indicator is a measure of the relative share of net interest earnings within gross income.

- Net interest income: interest income less interest expenses.
- Gross income: net interest income plus non-interest income.

1.1.4 Non-interest expenses to gross income

This indicator is a measure of the size of administrative expenses to gross income.

- Non-interest expenses include operating expenses other than interest expenses as follows:
  - Employee benefits expenses.
  - Other expenses related to operations.
  - Expenses for property and equipment, including: purchasing, ordinary and regular maintenance and repair, depreciation, and rental.
  - Other expenditure related to operations, including: purchases of goods and services (e.g. advertising costs, staff training service expenses, and royalties paid for the use of other produced or non-produced assets).
  - Taxes other than income taxes less any subsidies received from general government.
- Gross income: same as 1.1.3.

1.1.5 Gains and losses on financial instruments to gross income

This indicator is to analyze business revenues from financial market activities as a share of gross income.

- Gains and losses on financial instruments include the following items:
  - Realized and unrealized gains and losses in the statement of comprehensive income arising on all financial assets and liabilities which are held at fair value through profit

or loss, available for sale, and held to maturity.
- Gains and losses on financial assets or liabilities carried at cost.
- Gains and losses on debt instruments without active markets.
- Foreign exchange gains and losses.
- Gross income: same as 1.1.3.

1.1.6 Employee benefits expenses to non-interest expenses

This indicator is to analyze employee benefits expenses as a share of non-interest expenses.
- Employee benefits expenses, including: wages and salaries, profit sharing and bonuses, allowances, pensions, social insurance and medical insurance, etc.
- Non-interest expenses: same as 1.1.4.

1.1.7 Spread between lending and deposit rates

This indicator is to analyze the effect of the interest rate spread upon net interest revenues and profitability.
- Spread between lending and deposit rates: the weighted-average loan interest rate less the weighted-average deposit interest rate. The annual interest rate spread is the average of the last four quarters' spreads.

1.2 Asset quality

1.2.1 Non-performing loans to total loans

This indicator is to analyze asset quality in the loan portfolio.
- Non-performing loans:
  According to the *Regulations Governing the Procedures for Banking Institutions to Evaluate Assets and Deal with Non-performing / Non-accrual Loans*, non-performing loans include the following items:
  - Loans for which repayment of principal or interest has been overdue for three months or more.
  - Loans for which the bank has sought payment from primary/subordinate debtors or has disposed of collateral, although the repayment of principal or interest has not been overdue for more than three months.
- Total loans: Total loans include bills purchased, discounts, accrual and non-accrual loans, but excluding interbank loans.

1.2.2 Provision coverage ratio

This indicator is to analyze the provision policy for loan losses.
- Provision coverage ratio = loan loss provisions / non-performing loans

1.3 Capital adequacy

1.3.1 Regulatory capital to risk-weighted assets

This indicator is to analyze the capital adequacy of domestic banks. The minimum statutory ratio of regulatory capital to risk-weighted assets of a bank shall not be less than a certain ratio, based on the *Regulations Governing the Capital Adequacy Ratio and Capital Category of Banks*.
- Regulatory capital: the aggregate amount of net Tier 1 Capital and net Tier 2 Capital.

- Risk-weighted assets: the aggregate amount of the risk-weighted assets for credit risk together with the capital requirements for market risk and operational risk multiplied by 12.5.

1.3.2 Tier 1 capital to risk-weighted assets

This indicator is to analyze the capital adequacy of domestic banks based on the core capital concept.
- Tier 1 capital: the aggregate amount of net Common Equity Tier 1 and net additional Tier 1 Capital.
- Risk-weighted assets: same as 1.3.1.

1.3.3 Common equity Tier 1 capital to risk-weighted assets

This indicator is to analyze the capital adequacy of domestic banks based on the high quality capital concept.
- Common equity Tier 1 capital: includes common stock and additional paid-in capital in excess of par value of common stock, capital collected in advance, capital reserves, statutory surplus reserves, special reserves, accumulated profit or loss, non-controlling interests and other items of interest, less supervisory deductions.
- Risk-weighted assets: same as 1.3.1.

1.3.4 Capital to total assets

This indicator is to analyze the degree of financial leverage on assets funded by other than banks' own funds.
- Capital: equity interest of owners in a bank (i.e. the difference between total assets and liabilities).
- Total assets: the sum of financial and non-financial assets.

1.3.5 Non-performing loans net of provisions to capital

This indicator is to analyze the potential impact on capital of non-performing loans.
- Non-performing loans net of provisions to capital = (non-performing loans - specific loan provisions) / capital
  - Non-performing loans: same as 1.2.1.
  - Specific loan provisions: the minimum provision that a bank should allocate in accordance with Article 5 of *Regulations Governing the Procedures for Banking Institutions to Evaluate Assets and Deal with Non-performing / Non-accrual Loans*.
  - Capital: same as 1.3.4.

1.4 Liquidity

1.4.1 Customer deposits to total loans

This indicator is a measure of liquidity to indicate the degree of dependence on more stable sources of funds (customer deposits) to illiquid assets (loans).
- Customer deposits: including check deposits, demand deposits, time deposits, saving deposits, and money remittances.
- Total loans: same as 1.2.1.

1.4.2 Liquid assets to total assets

This indicator is to analyze the liquidity available to meet expected and unexpected demands for cash.

- Liquid assets: the core liquid assets comprising cash, checks for clearing, amounts due from the Central Bank, amounts due from banks, and assets with remaining maturity of no more than three months, can be converted into cash quickly and with minimal impact to the price received.
- Total assets: same as 1.3.4.

1.4.3 Liquid assets to short-term liabilities

This indicator is to analyze the liquidity mismatch of assets and liabilities, and provide an indication of the extent to which banks could meet the short-term withdrawal of funds without facing liquidity problems.

- Liquid assets: same as 1.4.2.
- Short-term liabilities: liabilities with remaining maturity of no more than one year, including deposits, borrowings, debt securities issued, and the net market value of financial derivatives positions (liabilities less assets).

1.5 Credit risk concentration

1.5.1 Household loans to total loans

This indicator is to analyze the concentration of loans to the household sector by domestic banking units (DBUs) of domestic banks.

- Household loans: loans from DBUs of domestic banks to the household sector.
- Total loans: total loans (excluding export bills purchased and non-accrual loans) of DBUs of domestic banks.

1.5.2 Corporate loans to total loans

This indicator is to analyze the concentration of loans to local public and private corporate borrowers by DBUs of domestic banks.

- Corporate loans: loans from DBUs of domestic banks to public and private non-financial corporate borrowers.
- Total loans: same as 1.5.1.

1.5.3 Large exposures to capital

This indicator is to analyze vulnerabilities at domestic banks arising from the concentration of credit risk on single individuals or corporate borrowers.

- Large exposures: refer to the total amount of credit to the first 20 private enterprises at domestic banks after integration.
- Capital: same as 1.3.4.

1.5.4 Gross asset positions in financial derivatives to capital

This indicator is to analyze the effect of price changes on gross asset positions in financial derivatives relative to capital.

- Gross asset positions in financial derivatives: total amounts of positive fair value in

hedged and non-hedged financial derivatives such as swap, forward, and option contracts, excluding embedded derivatives inseparable from the underlying instruments.
- Capital: same as 1.3.4.

1.5.5 Gross liability positions in financial derivatives to capital

This indicator is to analyze the effect of price changes on gross liability positions in financial derivatives relative to capital.
- Gross liability positions in financial derivatives: total amounts of negative fair value in hedged and non-hedged financial derivatives such as swap, forward, and option contracts, excluding embedded derivatives inseparable from the underlying instruments.
- Capital: same as 1.3.4.

1.6 Sensitivity to market risk

1.6.1 Net open position in foreign exchange to capital

This indicator measures the mismatch of foreign currency asset and liability positions at domestic banks to assess the potential vulnerability of capital to exchange rate movements.
- Net open position in foreign exchange: the open foreign currency positions in balance sheet and financial derivatives, which are converted into NT dollars using the exchange rates as of the reporting date.
- Capital: same as 1.3.4.

1.6.2 Foreign-currency-denominated loans to total loans

This indicator is to analyze the share of foreign currency loans within gross loans.
- Foreign-currency-denominated loans: the loans to other financial institutions, corporate entities, and individuals that are payable in foreign currency, or in domestic currency but with the amount to be paid linked to a foreign currency.
- Total loans: including loans to customers and other financial institutions.

1.6.3 Net open position in equities to capital

This indicator is to analyze the effect of the fluctuation of banks' net positions in equities compared with own equity.
- Net open position in equities: the sum of on-balance-sheet holdings of equities and notional positions in equity derivatives.
- Capital: same as 1.3.4.

1.6.4 Foreign-currency-denominated liabilities to total liabilities

This indicator is to analyze the relative importance of foreign currency funding within total liabilities.
- Foreign-currency-denominated liabilities: the liabilities that are payable in foreign currency, or in domestic currency but with the amounts to be paid linked to a foreign currency.
- Total liabilities: the total amounts of current, non-contingent liabilities, and the liabilities positions in financial derivatives.

2. Non-financial corporate sector indicators

2.1 Total liabilities to equity

This indicator is a leverage ratio which is used to analyze the extent of activities that are financed through liabilities other than own funds.

- Total liabilities: including short-term and long-term liabilities.
- Equity: including funds contributed by owners, capital surpluses, retained earnings, and other items related to owners' equity.

2.2 Return on equity

This indicator is to analyze profitability of non-financial corporations in using their capital.

- Return on equity = net income before interest and tax / average equity (the "net income before interest and tax" is adopted according to the FSIs of the IMF)
  - Net income before interest and tax: net income before tax plus interest expenses from continuing operation units.
  - Average equity: the mean of the equity at the beginning and the end of the current year.

2.3 Net income before interest and tax / interest expenses

This indicator is to analyze how well non-financial corporate income covers interest expenses.

- Net income before interest and tax: same as 2.2.
- Interest expenses: the interest expense payments on debt within the specified time period of the statement.

3. Household sector indicators

3.1 Household borrowing to GDP

This indicator is to analyze the level of household borrowing to gross domestic product (GDP).

- Household borrowing: household outstanding loans and credit card revolving balances from financial institutions. Financial institutions include depository institutions and other financial institutions (trust and investment companies, life insurance companies, securities finance companies, and securities firms).

3.2 Borrowing service and principal payments to gross disposable income

This indicator is to analyze the capacity of households to cover their debt payments.

- Borrowing service and principal payments: interest and principal payments made on outstanding loans and credit card revolving balances within the specified time period of the statement.
- Gross disposable income: the aggregate of the wages and salaries from employment, property and corporate income, and current transfers receipts less current taxes on income and wealth and other current transfers expenditures (net disposable income) plus expenses of interest and rent.

4. Real estate market indicators

4.1 Land price index

This indicator is to analyze the price movements of urban land prices in the Taiwan area.
- Land price index: the general index of urban land prices released by the Ministry of Interior each half year, and the reference dates are the end of March and September, respectively.

4.2 Residential real estate loans to total loans

This indicator analyzes the concentration of domestic banks' loans in residential real estate.
- Residential real estate loans: individual loans that are collateralized by residential real estate. Residential real estate includes houses, apartments, and associated land (including owner use and rental use).
- Total loans: same as 1.2.1.

4.3 Commercial real estate loans to total loans

This indicator analyzes the concentration of domestic banks' loans in commercial real estate.
- Commercial real estate loans including: loans to corporate entities and individuals that are collateralized by commercial real estate, loans to construction companies, and loans to companies involved in the development of real estate. Commercial real estate includes buildings and associated land used by enterprises for retail, wholesale, manufacturing, or other purposes.
- Total loans: same as 1.2.1.

5. Market liquidity

5.1 The turnover ratio of trading value in stock market

This indicator is to analyze the average turnover frequency in the stock market (i.e. stock market liquidity).
- The turnover ratio of accumulated trading value: the accumulated value of the monthly turnover ratio in terms of trading value within the current year of the statement.
- The monthly turnover ratio in terms of trading value in stock market = total trading value / market value
- Total trading value: total trading value of stock transactions in the month.
- Market value: total market value of listed stocks as of the end of the month.

5.2 The monthly average turnover ratio in bond market

This indicator is to analyze the average turnover frequency in the bond market (i.e. bond market liquidity).
- Monthly average turnover ratio in bond market = total amount of monthly turnover ratio in terms of trading value in bond market / 12
  - Monthly turnover ratio in terms of trading value: trading value in the month / average bonds issued outstanding.
  - Trading value in the month: total bond trading value (excluding repo transactions).
  - Bonds issued outstanding: bonds that have been issued and are in the hands of the public.
  - Average bonds issued outstanding = (bonds issued outstanding at the month-end plus bonds issued outstanding at previous month-end) / 2