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THE BANK OF THAILAND

27 September 2002

To Managers

All commercial banks

No. ThorPorTor. SorNorSor. (21) Wor. 2219/2545 Re: Submission of policy guideline regarding the liquidity management of financial institutions and relevant report forms

To enable commercial banks to have appropriate liquidity management and to have the capacity to receive the repayment of liabilities and obligations which are due and payable as well as to have the source of funds or liquid assets in an amount sufficient to handle the crisis scenario for a certain time.

The Bank of Thailand (the BOT) thus issues the policy guideline regarding the liquidity management of financial institutions and report forms on net liquidity position. Such issuance is for the purpose to inform the policy guideline and intention of the BOT to require the commercial banks to have an efficient liquidity risk management system and appropriate internal reporting system which shall start from 2003.

The commercial bank shall arrange for the reports on internal liquidity management in the forms specified by the BOT or such existing forms of the commercial bank which are materially in line with the forms of the BOT and make the same available to the inspector of the commercial bank for the sampling from the end of the first quarter of 2003 onward.

Please be informed and observed accordingly.

Regards,

(Mr. Thirachai Phuvanatnaranubala) Deputy Governor (Financial Institutions Stability) for Governor

Enclosures: 1. Policy guideline for the liquidity management of financial institutions;

BIBFs excluded

2. Report forms on net liquidity position.

Risk Supervision Policy and Analysis Department Tel. 102283-5843, 0-2356-7688

Note	[/]	The Bank of Thailand will arrange a meeting to clarify on 22 October 2002,
		2.00 p.m., at the conference room on the 7th floor, 3rd Building, the Bank of
		Thailand (for commercial banks, please inform the name list of the
		attendances numbering not over 2 persons within 18 October 2002 at Fax
		Number 0-2356-7504, Data Administration Center.

[] No meeting for clarification will be arranged.

Policy Guideline for the Liquidity Risk Management of Financial Institutions

Objectives:

- 1. To enable the financial institution to have the appropriate liquidity management system and to have the capacity to receive the repayment of liabilities and obligations which are due and payable as well as to have the source of funds or liquid assets in a sufficient amount to handle the crisis scenario for a certain time.
- 2. To help the financial institution to have the appropriate asset and liability management structure with the period of time and value of borrowings in accordance with the period of time and value of borrowings of the receipt of debt payment arising from credit extensions or investments.

Principles:

- 1. The board of directors of the financial institution shall approve the liquidity management policy and action plan as well as supervise and ensure the strict and continuous compliance with the liquidity management policy and action plan so as to be aware that the said policy and plan are still appropriate for the financial institution's business.
- 2. The financial institution shall arrange for the liquidity management policy and action plan which are in accordance with the policy guideline of the Bank of Thailand (the BOT) and have the said policy and plan reviewed from time to time or promptly upon a change in business strategy in order to adapt such policy and plan to correspond with the changed situation as well as have an internal monitoring system which can ascertain that the liquidity management follows the stipulated policy and plan.
- 3. The financial institution shall set the appropriate liquidity management system, both in foreign and Baht currencies under various circumstances as well as the effective and efficient reporting system which can sufficiently and timely provide necessary information to the executives of the financial institution, under supervision and with reports of data in various aspects in at least the areas required by the BOT.
- 4. The financial institution shall prepare the reports on internal liquidity management in the forms provided by the BOT or in such existing forms of the financial institution, which are materially in accordance with the forms of the BOT, and shall make the same available to the inspector of the commercial bank or competent official for sampling.

Requirements in practice

1. The board of directors of the financial institution shall approve the liquidity management policy and action plan as well as supervise and ensure the strict and continuous compliance with said liquidity management policy and action plan in order to be aware

that the said policy and action plan are still appropriate for the business of the financial institution.

- 2. The financial institution shall arrange for the liquidity management policy and action plan and ensure the strict implementation of such as well as promptly inform the BOT once a problem arises. It shall also have such policy and plan reviewed at least once a year or promptly upon material change in business strategy, in order to adapt such policy and plan to correspond with the changed situation.
- 3. The financial institution shall arrange for a supervising system which is in conformity with the liquidity management policy and plan and have a monitoring system conducted regularly to ensure that the liquidity management is as required.
- 4. The financial institution shall arrange for an appropriate liquidity management system both in foreign and Baht currencies under various circumstances based on the following factors:
 - 4.1 size and nature of business:
 - 4.2 distribution and fluctuation of source of funds;
 - 4.3 size and quality of assets;
 - 4.4 creditworthiness of existing standby facilities;
 - 4.5 size and complicatedness of transactions relevant to foreign currencies;
 - 4.6 risks in various areas which may have adverse effect on the financial institution's liquidity such as credit risk, market value risk, operational risk, legal risk, settlement risk and organization reputation risk;
 - 4.7 responsibility of the financial institution to enhance the liquidity of affiliated companies.
- 5. The liquidity management system referred in Clause 4 shall provide sufficient necessary information to the executives of the financial institution in an efficient and effective manner, by at least including the following in the report:
 - 5.1 net liquidity position of assets, liabilities and obligations of the financial institution both in normal and crisis scenarios, or such other system providing information in similar manner:
 - 5.2 market value of investments in securities, and market value of investments in securities after discount in case of forced sale in a crisis scenario, in which event the financial institution shall determine the discount rate applied in adjusting the market value which however shall not be less than the rate prescribed by the BOT in Attachment 1;
 - 5.3 creditworthiness and capability to perform under the contract of the standby facility source of the financial institution;
 - 5.4 concentration of sources of fund of the financial institution.
- 6. The financial institution shall prepare the report to be used for the internal liquidity management of the bank in the form specified by the BOT or in such existing form of the commercial bank which is materially in conformity with the form specified by the BOT.

- 7. The financial institution shall arrange for an appropriate internal monitoring system concerning liquidity management in accordance with the BOT's requirements to be subsequently mentioned in detail.
- 8. The financial institutions which shall be subject to the above-mentioned guidelines are as follows:
 - 8.1 commercial banks registered in the country (including overseas branches);
 - 8.2 financial companies with the capital fund of Baht 2,500 million or more;
 - 8.3 branches of foreign commercial banks.
- 9. All financial institutions shall comply with the rules on maintenance of liquidity assets that currently apply until a notification provides otherwise.

Liquidity management action plan

- 10. At least the following information shall be stated in the liquidity management action plan:
 - 10.1 Liquidity management strategy, by specifying the significant source of funds such as focusing on minor or major depositors or relying on funds from overseas parent companies and the significant source of funds used such as focusing on credit extensions in any industrial sector as well as specifying the policy which will enable the strategy to achieve its aim; the liquidity management strategy shall be demonstrated by both Baht and foreign currencies.
 - 10.2 Person responsible for liquidity management both in normal and crisis scenarios.
 - 10.3 Various limits which the financial institution applies to monitoring in relation to the level of reliance on funds from various sources, whether in terms of structure, nature or distribution on the depositor's side, financial tools, maturities and other ratios (examples as per Attachment 2) such as deposits per credits, mismatch limit in each period of time.
 - 10.4 Rules on the adjustment of work plan to reflect positive and negative cash flows incurred in each time period.
 - 10.5 Structure of source of funds and application of funds in accordance with the time period.
 - 10.6 Supervising system, frequency and scope of report and recipient of the report.
 - 10.7 Contingency plan in case of a specific bank's crisis and systemic crisis problems, including the minimum data system to be provided in the plan as follows:
 - steps and process of work, by specifying the responsible person and practice for each circumstance, steps of data reporting for decision making necessary for the responsible person of each level;
 - early warning system or trigger point (guideline as per Attachment 3) used for measuring the time at which the circumstance becomes a crisis situation and the contingency plan needs to be implemented.
 - Liquidity procurement plan, by specifying the source of funds such as non-liability assets which can be sold or committed credit lines extended by other banks which have not yet been withdrawn as well as assets to be used as collateral of the loan.
 - Ranking by importance and practice to each group of customers, both on the debtors' and creditors' side.

- Plan for communication and to deal with rumors as well as the image of the financial institution among customers, employees, creditors, the press and the public.

Liquidity management system

- 11. The financial institution shall arrange a reporting system on net liquidity position of assets, liabilities and obligations of which shall include the following important information:
 - 11.1 net liquidity position indicating positive cash flow in comparison with negative cash flow for the following 7-day and 1-month periods;
 - 11.2 liquidity position for the 7-day period in case of crisis scenario by conducting a scenario analysis; the details of each type of crisis are as shown in Attachment 4.
- 12. The financial institution having a great number of foreign currency transactions (higher than the rate fixed in the report form explanation) shall additionally report on the net liquidity position of assets, liabilities and obligations in aggregate form for all foreign currencies.
- 13. In grouping assets, liabilities and obligations for each period of time, the following practices shall be applied:
 - 13.1 considering assets, liabilities and obligations in accordance with the remaining period before maturity under the contract;
 - 13.2 subsequently making improvement by considering the actual past behavioral maturity since certain assets may not generate funds under the agreement or the deposit entitling the depositor to immediately withdraw has not yet been withdrawn in full or there is a rollover even upon maturity or in case where the financial institution extends a draw down under loan commitment but the customer does not draw, for example.
- 14. Such behavioral adjustment shall take into consideration, both normal and crisis scenarios and shall obtain the approval of the risk management committee or asset and liability committee (the ALCO). In this regard, the financial institution shall provide the document indicating the calculation methods, assumptions and supporting information for inspection by the BOT and have all the assumptions applied in the behavior adjustment process reviewed every year or immediately upon material change. The examples for the method of behavior adjustment are provided in Attachment 5.
- 15. The financial institution shall prepare a report showing the actual information in the previous installment, including the highest amount withdrawn per day in each month as well as compare such with the figure of behavioral adjustment estimated in the previous installment.

Internal supervising system concerning liquidity management

16. The financial institution shall set up a risk management committee or ALCO whose duties are as follows:

- 16.1 to prepare in writing, the policy and action plan for liquidity management and have the said policy and plan reviewed regularly (at least once a year) or promptly upon any material change in order to correspond with the changed circumstances and be capable of supporting existing risks and being disclosed to all concerned parties;
- 16.2 to clearly determine the duties, responsibilities and rank of reports of the parties related to liquidity management in writing and disclose such to and for the observance by all concerned parties in which there shall also be a review conducted and an appropriate balance of power administered;
- 16.3 to control the liquidity management to be in accordance with the prescribed policy and action plan and to report the same to the financial institution's board of directors.
- 17. In the case where a problem in liquidity arises, the responsible person shall report such problem to the executives of an appropriate level as soon as the problem is discovered. The risk management committee or ALCO shall promptly report all significant problems and possible remedy to the board of directors of the financial institution. The financial institution should clearly set forth the provisions on the levels of problems and responsible persons.
- 18. The financial institution shall regularly arrange for the examination of correctness, reconciliation, review and safe keeping of information for the data information and reporting systems.
- 19. The financial institution shall assess the efficiency and effectiveness of the liquidity management system conducted by an independent unit in the financial institution at least once a year and report such directly to the board of directors of the financial institution via the risk management committee or ACLO. Such assessment shall take the following factors into consideration:
 - 19.1 the stipulation of policies, terms and practices in managing liquidity shall be clear, in writing in accordance with the business strategy of the financial institution and regularly reviewed;
 - 19.2 the financial institution has complied with the internal policies, terms and practices and the rules of the BOT:
 - 19.3 the data information and reporting systems are efficient and effective and have the correctness been proved and the reconciliation been reviewed;
 - 19.4 the consideration has been taken against such risk likely to affect the liquidity management in every aspect;
 - 19.5 the analysis on the problems that have arisen and the remedy thereof has been determined.

Discount rate used in adjusting the value from the market price

In assessing the value of investments in securities, the risk management committee of the financial institution or the ACLO shall determine the discount rate used in adjusting the value from the market value which is not lower than the rate specified by the Bank to Thailand, as follows:

Tier 1 Instruments means the instruments which have no obligations and are negotiable without limitation in liquidity and credit risks at a low level (with credit risk equivalent to that of the Thai government). These instruments can be traded in the bond repurchase market of the Bank of Thailand and/ or of private sector e.g. securities issued by the Thai government, securities guaranteed by the Ministry of Finance and securities issued by the Bank of Thailand. It is required in this regard, reference to the discount rate subject to the residual maturity of the instruments under the rules of the BOT regarding the trading of bonds under the resale and repurchase agreement B.E. 2545 (2002), issued by the Finance Market Operations Group, the Bank of Thailand (please follow the notification regarding such matter from time to time).

Tier 2 Instruments means the instruments which have no obligations and are negotiable without limitation in liquidity and credit risks higher than the Tier 1 Instruments. In a normal scenario, these instruments would be considered as having high liquidity and being at the same time capable of ready conversion into cash at the high rate, and in crisis scenario as lacking liquidity and capable of ready conversion into cash at the low rate e.g. (1) ordinary or preferential shares which can be traded in the Securities Exchange of Thailand, especially those classified in SET 50, (2) debt instruments other than Tier 1 Instruments, and (3) debt instruments issued by the central government of the countries in the OECD group. The discount rate shall be applied in accordance with the types of instruments, as follows:

- Equity instruments (ordinary and preferential shares)

Types of Equity Instruments	Discount Rate
1. Shares in the SET 50 Group	20%

Source: Securities and Exchange Commission

- Debt instruments: The discount rate of the instrument shall be calculated by adding the specific risk (Table 1), which is based on the type of instrument, to the general market risk, which is based on the remaining contractual maturity, then by applying the sum thereof as the discount rate to be used for such instrument. Such sum however, shall not exceed 100%.

Table 1 Specific Risk Rates

Types of Equity Instruments	Risk Rates
1. Credit Rating AAA/A-1 or equivalent	2%
2. Credit Rating AA A BBB/A-2 A-3 or equivalent	5%
3. Credit Rating BBB B (long-term)/B (short-term) or equivalent	8%
4. Issuer in SET 50	10%
5. Issuer as a state organization or state enterprise or financial	10%
institution established under specific law, not categorized as a type	
above	
6. Other debt instruments not falling under the types above	100%

Source: Securities and Exchange Commission

<u>Note</u>: The rating of debt instruments as mentioned above shall be conducted by such rating institute as approved by the Securities and Exchange Commission.

(Please follow subsequent notifications regarding such matter from time to time)

General Market Risk Rates

The financial institution shall consider using the discount rate for the general market risk not lower than the discount rate notified by the Financial Markets Operation Group, the Bank of Thailand.

Other Instruments including such instruments other than the Tier 1 and 2 Instruments, shall be subject to the discount rate of 100%.

Examples of ratios and factors of liquidity risk levels

The financial institution should select any of the following items that is appropriate for its business:

- (1) withdrawals per day;
- (2) loans per deposits ratio;
- (3) borrowed funds per total assets ratio;
- (4) commitments to lend per total assets ratio;
- (5) liquid per illiquid ratio;
- (6) borrowed funds per deposits or liabilities ratio;
- (7) determining the highest level of the short-term mismatch size and the accumulated amount in the next period;
- (8) determining maximum short term loans per total liabilities (both in forms of direct loans and issuance of instruments) in order to deal with mismatch sizes in various periods;
- (9) determining minimum liquidity assets per short term loans;
- (10) determining loans per capital;
- (11) limiting the liquidity gap in various periods and the level of liquidity gap per liquid assets or per short term loans in short periods;
- (12) determining the ratio of high risk liabilities of some certain types to total liabilities;
- (13) determining the level of reliance on source of funds, both from major customers and target groups;
- (14) determining the maturity pattern of assets, liabilities and obligations of each item;
- (15) determining the short term liquidity level to support daily transactions.

Guidelines for the designing of early warning system

The financial institution shall create an instrument to help indicate the start of an unusual or crisis scenario. The significant factors of the early warning system shall be as follows:

(1) Definitions and indicators of abnormality at various levels (Indicative Signals)

There should be statements provided to describe the situations (Qualitative Approaches) and/ or usage of the various ratios mentioned in Attachment 2 as indicative signals (Quantitative Approach) such as the report on the declining economic growth rate, the financial crisis of other countries or rate of withdrawals per day, by stipulating both the level requiring preparation (Alert) and the level requiring commencement of plan implementation (Trigger Point).

(2) Monitoring and maintaining the system to be up-to-date (System Monitoring and Maintenance)

The indicative signals should always be monitored and reviewed and the duties and responsible persons should be clearly determined in respect of all important issues such as the monitoring and reporting of changes of indicative signals, coordination among all work divisions and more.

Adjustment of information to be in conformity with behaviors

Normal Business Operations

To adjust behaviors in a normal scenario, the financial institution should **rely on the past information in the actual normal scenario, excluding the crisis scenario**, and foresee trends under possible assumptions in normal scenarios. The important issues causing the actual cash flows received to be different from those arising from the agreement may be as follows:

- Behavior of significant on-balance-sheet items such as partial deposits, even being of short term. However, there may be renewal in a normal scenario thereby causing the true average maturity to be longer than the maturity under the contract
- Behavior of significant off-balance-sheet items such as exchange rate contracts or interest rate contracts
- Seasonal fluctuation such as during the Chinese New Year celebrations, during which a great amount of money may be withdrawn or after the harvest season where a great amount of money may be deposited
- Impact from the financial institution's own policy on the asset and liability management

Bank's Specific Crisis

Such crisis is a result of the financial institution's own erroneous administration which severely affects its position and may cause depositors and creditors to lose confidence as well as cause other financial institutions to possibly lose credibility in the financial institution. Important issues which should be considered in adjusting behavior in this case are as follows:

- Past information collected **only during the actual occurrence of such crisis**, from (1) the financial institution's own experience, (2) information from other financial institutions in the country with a similar size and business nature (3) information from an overseas financial institution, or (4) estimation under various assumptions in case no information can be found and the arrangement is required for significant on-balance-sheet and off-balance-sheet items.
- Efficient contingency plan and early warning system.

Contagion Effect

Impacts from the crisis arising from other financial institutions may differ. For example, a crisis situation in a small financial institution may result in the withdrawal of money from other financial institutions that are small in size and have a similar business nature for the purpose of transferring deposits to a large financial institution with high stability. The analysis in dealing with the problems will thus be different. Large financial

institutions may have to prepare a procedure to deal with excess liquidity while other small financial institutions may have to prepare such plan which can promptly support the lack of liquidity.

The adjustment of information behavior in this case thus depends on past information which indicates any possible directions, assumptions which each financial institution uses to support the preparation of information and on which the financial institution should consider with careful attention. The most important issues to be considered in adjusting behavior may be applied from those issues in case of the bank's specific crisis but with the severity at a lower level.

Systemic Crisis Problems

This case requires analysis in a holistic manner to see how the crisis would affect the financial institution. For example, the crisis in the macro economy both in and outside the country which will affect the country broadly and almost in all areas at the same time, may first affect the financial institution system then spread out; or the crisis which may arise from other macro factors in other areas such as in the exchange rate system or impacts from a crisis abroad, and then further cause the contagion effect to the financial institution.

The analysis or estimation of damages incurred in this case is relatively difficult to conduct. It depends on the size and the severity of the problem. Therefore, in order to be prepared to handle this situation, the financial institution must apply the liquidity risk management system which has been continually improved and there shall be experienced and skilled officers for the analysis and devising a plan.

Therefore, the information behavior adjustment in this case is based on past information indicating the extent of damage which may arise as well as past lessons which ought to be applied in the preparation. In this regard, the assumptions which each financial institution applies for supporting the arrangement of information shall be considered with the utmost care. The important issues which should be taken into consideration in adjusting behavior in this case may be applied from those issues in case of the bank's specific crisis.

Examples of methods for adjusting information to be in conformity with behaviors

The methods to adjust behaviors of items may be different depending on the nature of items. The methods to be applied with the same item in each case (scenario analysis) may be different depending on the discretion of each financial institution. The following are examples of statistic methods which may be applied and are therefore raised herein:

(1) Application of outstanding balance in estimating positive-negative cash flow (Stock Basis)

For this method, the calculation shall be made on previous average outstanding balances for any required period such as daily, weekly or monthly. This amount will be treated as a core part to be deducted from the due amount in the future in accordance with various periods of time. The result therefrom is the positive-negative cash flow likely to be incurred. If the period of time taken into consideration has seasonal fluctuation, the average core part value will then be subject to such data arising from the past period covering the same season.

Advantages:

- 1. easy for arrangement;
- 2. able to reflect feasibility to a certain extent.

Disadvantages:

- 1. if the data is too minimal, the average value calculated may not reflect actual scenario, if the data is too little;
- 2. may not reflect well the seasonal fluctuation;
- 3. other factors may affect the average value such as the deposit base or size of credit which may increase or decrease;
- 4. unable to determine the change of variations in the future.

(2) Calculation of positive-negative cash flow from the change of outstanding amount (Flow Basis)

Advantages:

- 1. easy for arrangement;
- 2. able to reflect feasibility to a certain extent;
- 3. able to solve problems regarding the change of size of assets or liabilities to a certain extent.

Disadvantages:

- 1. if the data is too minimal, the average value calculated may not reflect the actual scenario;
- 2. may not reflect well the seasonal fluctuation;
- 3. other factors may affect the average value, such as interest rate fluctuation and competition situation;
- 4. unable to determine the change of variables in the future.

(3) Calculation of the ratio of the amount with true receipt-payment to the amount falling due under the agreement from the maturity ladder

This method will be derived from the data from the preparation of the report in net liquidity position under the agreement following the maturity ladder, by comparing the estimation for the previous period with the actual data, then further applying this ratio for future estimation.

Advantages:

- 1. easy for arrangement;
- 2. able to reflect feasibility to a certain extent.

Disadvantages:

- 1. requires continuous data collection;
- 2. if the data is too minimal, the average value calculated may not the reflect actual scenario;
- 3. since such ratio is the composite amount of various factors, the outcome of each factor thus cannot be distinguished;
- 4. unable to determine the change of variables in the future.

(4) Calculation of the ratio of actual withdrawals to contractual amounts

This method is suitable for off-balance-sheet items upon which the past statistics of actual withdrawals per contractual amounts shall be collected for future estimation. The average value may be calculated first, by considering seasonal fluctuation factors.

Advantages:

- 1. easy for arrangement;
- 2. able to reflect feasibility to a certain extent.

Disadvantages:

- 1. requires continuous data collection;
- 2. if the data is too minimal, the average value calculated may not reflect the actual scenario;
- 3. since such ratio is the composite amount of various factors, the outcome of each factor thus cannot be distinguished;
- 4. unable to determine the change of variables in the future.

(5) Application of economic dimension method or the regression equation (Regression Analysis)

For this method, the data and statistical relations as well as variables are used to create an equation which can simultaneously compute the effect from various factors such as seasonal fluctuation, impact from change of interest rate and others.

Advantages:

- 1. able to reflect well the outcomes of various factors;
- 2. able to distinguish the outcomes of each factor;

- 3. able to estimate outcomes arising from the change of factors in the future;
- 4. also able to be used to conduct the what-if-analysis.

Disadvantages:

- 1. preparation may be complicated;
- 2. requires a great amount of data and continuous monitoring;
- 3. in case of too minimal data, it may not reflect the actual scenario;
- 4. due to high uncertainty of the making of assumptions in the future, the preparation and estimation may require experts or adequately experienced persons in order to achieve such result with minimal errors.

(6) Application of future scenario model (Simulation Model)

For this method, it is required to apply the structure and past behavior to create a simulation model for the future. This method will well reflect the future behavior resulting from the past in short periods, it is thus suitable for past data in a small amounts and past behavior with low fluctuation. Furthermore, it can as well reflect seasonal fluctuation to a certain extent. For example, the estimation of withdrawal of three-month fixed deposit can be conducted as follows:

Required data:

- net withdrawal rate in the past as per various periods of time (daily, monthly, quarterly) (rollover rate), which can be computed based on the actual past data of the aggregate amount falling due and the amount actually paid;
- past pattern of distribution such as most deposits will be renewed for another 3 months, such data which can be obtained via (1) the actual renewal of data in the past, or (2) the computation of proxy, which, in case of monthly data, may offset the monthly data on the amount falling due in the future of any consecutive two months to see how the amount falling due in the month prior to the renewal and distribution causes increment to subsequent months;
- the amount falling due in the future as per various periods of time, which can be derived from the actual contractual data.

Summary of creating a simulation model

- insert the amounts falling due under various maturities in the table according to the periods of time;
- apply the net withdrawal rate from the first period in the past to the calculation of the net outflow to be incurred in the first period, of which the remaining part is the amount under the renewal of the first period;
- distribute the amount under the renewal of the first period in the future in accordance with the pattern of distribution in the past, then add to the existing amount falling due in that period of time in order to obtain the amounts falling due in subsequent periods;
- apply the net withdrawal rate from the second period in the past to the calculation of the net outflow to be incurred in the second period based on the new amount falling due which is the sum of the previous amount and the amount under such renewal from the first period, of which the remaining part is the amount under the renewal of the second period;
- distribute the amount under the renewal of the second period in the future, then calculate the net withdrawal as in the first period and continually do so;

- then finally sum up the net withdrawal of each period to correspond with the required period of time.

Observations

- The net withdrawal rate and pattern of distribution to be applied in the future estimation may vary from the data in the past. It is, however, based on the consideration in accordance with the assumptions or other indicating factors which are better such as seasonal fluctuation.

Advantages:

- 1. able to reflect well the outcomes of various factors in a certain number;
- 2. does not require a great amount of retrospective data;
- 3. able to distinguish the outcomes of each factor to a certain extent;
- 3. able to estimate the outcomes arising from the change of factors in the future:
- 4. able to as well used to conduct the what-if-analysis.

Disadvantages:

- 1. preparation may be complicated;
- 2. may not be used in estimating long-term future data since it depends on short-term past data;
- 3. the correctness will depend on the assumptions and correctness of variables:
- 4. the making of assumptions, especially such factors which will be applied for future calculations, may be highly uncertain. Thus the preparation and estimation may require experts or adequately experienced persons so as to achieve such result with acceptable errors.

Explanation of the report form on net liquidity position (for commercial banks)

General provisions

- 1. The arrangement of the report on net liquidity position in accordance with future maturities is a method to measure important liquidity risk. The significant principle of preparing this report is to adjust data in significant items to correspond with the behavior expected to truly occur under various circumstances, based on past data and expectation of possible trends in the future under assumptions as an important factor. This method, apart from using to measure risk, can also help liquidity management of the commercial bank.
- 2. The arrangement of this report covers only such material items being significant and having high ratios, as follows:
- 2.1 material on-balance-sheet items on the asset side of which the aggregate amount exceeds 90% of the on-balance-sheet total assets in accordance with the consolidated ThorPor. 3 of all offices;
- 2.2 material on-balance-sheet items on the liability side of which the aggregate amount exceeds 90% of the on-balance-sheet total liabilities in accordance with the consolidated ThorPor. 3 of all office:
- 2.3 material off-balance-sheet obligation items on the liability side of which the aggregate amount exceeds 90% of the off-balance-sheet total obligations in accordance with ThorPor. 10.3 in case of domestic commercial banks, and ThorPor. 11.2 for overseas commercial banks.
- 3. The commercial bank having the ratio of its assets in foreign currencies to its total assets or the ratio of its liabilities in foreign currencies to its total liabilities higher than 10%, shall prepare the report on net liquidity position for all foreign currencies converted into USD (Part 2) based on the reference exchange rate in accordance with the Notification of Bank of Thailand as at the reporting date. If any commercial bank has to arrange for Part 2 of the mentioned report, it shall regularly prepare such report although the ratio is less than 10% in some installments. Unless otherwise agreed by the Bank of Thailand, the commercial bank required to arrange for the report as per Part 2 shall always do so even having such ratio lower than 10%.

4. The arrangement of report

- 4.1 The commercial bank shall arrange for the report on net liquidity position in normal scenario (Part 1) on a quarterly basis and such report is based on the data as at the end of reporting quarter. For the report form under Part 2, only the commercial bank specified in Clause 3 shall arrange for it.
- 4.2 The commercial bank shall prepare the report on net liquidity position in the most serious crisis scenario (Part 3) at least once a year as at the end of the month in which the commercial bank annually improves its asset and liability management plan, or as at the end of year if no certain period of time is specified.

Part 1: Report on net liquidity position in normal scenario

Covering transactions in all currencies converted into Baht (unit: million Baht)

(by using the reference exchange rate in accordance with the Notification of the Bank of Thailand as at the reporting date)

Explanation of the Report Form 1/1

Report on net liquidity position in normal scenario (remaining contractual maturity)
Covering transactions in all currencies converted into Baht (unit: million Baht)

- 1. Assets (positive cash flow) is the total amount of all on-balance-sheet and off-balance-sheet items on the asset side (1.7+1.8).
- 1.1 **Cash** means the cash and cash under collection as defined in Clause 1 of ThorPor. 3.

Method of completing the table: Record the book value of the whole amount in the box "promptly- 7 days"

1.2 **Interbank and money market items** means the interbank and money market transactions as defined in Clause 2 of ThorPor. 3.

Method of completing the table: Record the book value of such transaction in accordance with the remaining period before contractual maturity date. Record in the box "promptly– 7 days" if it is the case of such agreement under which money is payable upon demand (at call).

1.3 **Securities purchased under resale agreement** means the securities purchased under a resale agreement as defined in Clause 3 of ThorPor. 3.

Method of completing the table: Record the book value of this item in accordance with the remaining period before the contractual maturity date.

1.4 **Investment in securities** means the investment in securities as defined in Clause 4 of ThorPor. 3. In this regard, the allowance for adjustment of securities value and allowance for devalue of securities shall be deducted from such investment before recording the net amount in the table.

Method of completing the table: Record the net amount after deduction of allowance for adjustment of securities value and allowance for devalue of securities in the table, as follows:

- (1) Non-obligation instruments shall be recorded in the table in accordance with the remaining contractual maturity. For securities with uncertain maturity, record in the box "over 1 year".
 - (2) Obligation instruments shall be recorded in the box "over 1 year".

The instruments issued by the debtor who has any of its loan account classified as substandard, doubtful, doubtful of loss and loss shall be recorded in the box "over 1 year".

1.5 **Net credits**

- 1.5.1 **Credits** means the credits as defined in Clause 5 of ThorPor. 3 and shall be separately presented by sub-categories of the ThorPor., such as
 - 1.5.1.1 **Overdrafts**:
 - 1.5.1.2 Loans (excluding credit card debtors);
 - 1.5.1.3 Credit card loans;
 - 1.5.1.4 **Bills**;
 - 1.5.1.5 **Others**.

Method of completing the table: record by the method in accordance with the classification of credits, as follows:

- Credit classified as current loan and special mentioned loan: Record the book value of such credit in accordance with the remaining period before maturity date. If being unaware of the specific period of time, the item shall be recorded in the box "over 1 year". The overdue credit under the contract shall be recorded in accordance with the value in the period of time during which the repayment is expected to be received in the amount as close to the truth as possible.
- Credit classified as substandard, doubtful, doubtful of loss and loss: Record in accordance with the book value of credit of the whole amount in the box "over 1 year".
- 1.5.2 **Accrued interest receivables** means the accrued interest receivables as defined in Clause 6 of ThorPor. 3.

Method of completing the table: Record the whole amount of this item in the box "over 1 year". If the accrued interest receivables of credits account classified as current and special mentioned loan can be separated, the accrued interest receivables of the credits of the said two classes shall then be recorded in accordance with the period of time during which the repayment is expected to be received in the amount as close to the truth as possible.

1.5.3 **Allowance for doubtful debts** means the amount set aside for credits and accrued interest receivables of the part expected to be uncollectable as defined in Clause 7 of ThorPor. 3.

Method of completing the table: Record the whole amount of this item as the amount deducted from the amount of credit and accrued interest receivable items in the box "over 1 year".

1.6 **Other items on the asset side** The types of assets recorded shall be specified in accordance with those specified in the Report Form ThorPor. 3 for the purpose of making such to be more than 90% of the on-balance-sheet total assets when including with other items in Clauses 1.1-1.5.

Method of completing the table: Record the book value of this item in accordance with the remaining period before contractual maturity date. If being unaware of the specific period of time, the item shall be recorded in the box "over 1 year".

- 1.7 **Total items on the asset side** is an aggregate amount of the amount in Clauses 1.1, 1.2, 1.3, 1.4, 1.5, 1.6 in each period of time.
- 1.8 **Off-balance-sheet obligation items on the asset side** is an aggregate amount of the amount in Clauses 1.8.1-1.8.3 in each period of time.
 - 1.8.1 **Exchange rate contracts** means the following contracts:
 - Cross currency interest rate swaps;
 - Forward foreign exchange contracts;
 - Currency future;
 - Currency option,

and other contracts of similar characteristics, only where the commercial bank is the recipient of money.

Method of completing the table: Record the amount of money to be received by the commercial bank from the party in accordance with the remaining period before the contractual maturity date based on the exchange rate in the contract. For the contract of which the party being a debtor who has any of its loan account classified as substandard, doubtful, doubtful of loss and loss, the item shall be recorded in the box "over 1 year".

- 1.8.2 **Interest rate contracts** means the following contracts:
 - Single currency interest rate swaps;
 - Basis swaps;
 - Forward rate agreements;
 - Interest rate future;
 - Interest rate option,

and other contracts of similar characteristics, only where the commercial bank is the recipient of money.

Method of completing the table: Record the amount of money to be received by the commercial bank from the party in accordance with the period of time agreed in the contract. For the contract of which the party being a debtor who has any of its loan account classified as substandard, doubtful, doubtful of loss and loss, the item shall be recorded in the box "over 1 year".

1.8.3 Others (please specify) is other existing off-balance-sheet items on the asset side

Method of completing the table: Record the amount of money to be received by the commercial bank from the party in accordance with the remaining period before the contractual maturity date. For the contract of which the party being a debtor who has any of its loan account classified as substandard, doubtful, doubtful of loss and loss, the item shall be recorded in the box "over 1 year".

- **2. Liabilities (negative cash flow)** is the total amount of on-balance-sheet and off-balance-sheet items on the liability side (2.6+2.7).
- 2.1 **Deposits** means the item which is as defined in Clause 12 of ThorPor. 3 and shall be separately presented by types of deposits, as follows:
- 2.1.1 **Payable upon demand** means the deposit of which the repayment shall be made upon the demand of the depositor.

Method of completing the table: Record the whole amount of the deposit payable on demand in the box "promptly-7 days".

2.1.2 **Savings** means the deposit of which the repayment shall be made upon demand and which requires a pass book in making deposit or withdrawal but no cheque used in making withdrawal.

Method of completing the table: Record all savings in the box "promptly-7 days".

2.1.3 **Payable upon maturity** means the deposit which have a due date for repayment although using a deposit slip and pass book in making deposit and withdrawal.

Method of completing the table: Record the book value of this item in accordance with the remaining period before the contractual maturity date of the deposit.

2.2 **Interbank and money market items** means the interbank and money market items as defined in Clause 13 of ThorPor. 3.

Method of completing the table: Record the book value of this item in accordance with the remaining period before the contractual maturity date. In case of the contract under which the money is payable upon demand (at call), the item shall be recorded in the box "promptly-7 days".

2.3 **Securities sold under the repurchase agreement** means the securities sold under the repurchase agreement as defined in Clause 15 of ThorPor. 3.

Method of completing the table: Record the book value of the said securities in accordance with the remaining period before the contractual maturity date.

2.4 **Loans** means the loans as defined in Clause 16 of ThorPor. 3.

Method of completing the table: Record the book value of loans in accordance with the remaining period before the contractual maturity date.

2.5 **Other items on liability side** The types of such liabilities recorded shall be specified so as to have the same being in excess of 90% of the on-balance-sheet total liabilities when aggregating with other items in Clauses 2.1 –2.1 in accordance with the ThorPor 3 report form.

- 2.6 **Total items on liability side** is an aggregate amount of the amount in Clauses 2.1, 2.2, 2.3, 2.4 and 2.5 in each period of time.
- 2.7 **Off-balance-sheet obligation items on liability side** is an aggregate amount of the amount in Clauses 2.7.1 2.7.5 in each period of time
- 2.7.1 **Exchange rate contract** has the same meaning as defined in Clause 1.8.1, only where the commercial bank is the payer.

Method of completing the table: Record the amount of money the commercial bank will have to pay to the party in accordance with the remaining period before the contractual maturity date based on exchange rate specified in the contract.

2.7.2 **Interest rate contract** is as defined in Clause 1.8.2, only the case where the commercial bank is the payer.

Method of completing the table: Record the amount of money the commercial bank will have to pay to the party in accordance with the period of time agreed under the contract.

2.7.3 Guarantees (please specify)

Method of completing the table: Record the remaining liabilities to be paid by the commercial bank to the party in the earliest period of time during which the contract is enforced.

2.7.4 **Unused loans** means the overdraft or term loan amount which has not yet been drawn down by the customer, unused letter of credit amount as well as amounts of other types having been unused by the customer.

Method of completing the table: Record the remaining amount not yet been drawn down in the earliest period that the customer is entitled to make the drawing.

2.7.5 **Others (please specify)** is off-balance-sheet items on the liability side which when aggregating with other items in Clauses 2.7.1 - 2.7.4 will exceed 90% of the off-balance-sheet total obligations in accordance with ThorPor. 10.3.

Method for completing the table: Record the amount of money the commercial bank will pay to the party in accordance with the remaining period before the contractual maturity date.

- 3. Net liquidity position (as per the contract) is the total assets and liabilities (Clause 1) deducted by total liabilities and obligations (Clause 2) in each period of time. (Percentage of accumulated positions to total deposits) is the accumulated total amount of Item 3 in each period of time comparing with the total deposits in Clause 2.1.
- **4. Examination items on data of all currencies** Record this item in accordance with the actual situation only for examining purposes.

Explanation of the Report Form 1/2

Report on the net liquidity position in a normal scenario (remaining behavioral maturity)

Covering transactions in all currencies converted into Baht (unit: million Baht)

- 1. For the meanings, definitions and structures of all off-balance-sheet items on the asset, liability and obligation sides appearing in this report, please refer to the explanation of the Report Form 1/1 report form. The difference from the Report Form 1/1 report form is that this report requires the item recording to be in accordance with the remaining period as per circumstances upon which some certain significant items shall be adjusted for the compliance with circumstances expected to possibly occur.
- 2. Item requiring circumstance adjustment is the item with an asterix (*) For other items, the commercial is hereby requested to take into consideration whether or not they should be adjusted. In case of no further adjustment, please record the items as same as that presented in the Report Form 1/1 (remaining contractual maturity). In this regard, the item requiring no circumstance adjustment is the item which positive/negative cash flow will normally be in conformity with the contractual maturity.
- 3. **For the guideline on behavior adjustment**, please refer to Attachments 4 and 5 of the Policy guideline regarding the liquidity management of financial institutions.

Explanation of the Report Form 1/3

Explanation for the circumstance adjustment of items in a normal scenario Covering transactions in all currencies converted into Baht

For this report, the commercial bank shall explain the method of its circumstance adjustment for the item requiring circumstance adjustment (the item with an asterix (*)) and any other items which the commercial bank deems appropriate to adjust, by specifying assumptions, methods and other important details for the purpose of using it as references for improving the future behavioral adjustment to be more accurate and efficient.

Explanation of the Report Form 1/4

Report on the data truly occurred, only the item having behavioral adjustment Covering transactions in all currencies converted into Baht

For this report, the commercial bank is required to weekly collect the data of positive and negative cash flows truly incurred in all items having circumstance adjustment. This is for the purpose of using such as the data to improve and develop the behavioral adjustment method to be more accurate and efficient.

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Part 2: Report form on the net liquidity position in a normal scenario

Covering transactions in all currencies converted into USD (unit: million USD)

(The commercial bank having the ratios of transactions in foreign currencies on the asset side to total assets or of liabilities in foreign currencies to total liabilities in excess of 10% shall prepare a report on net liquidity position for all foreign currencies converted into USD, by using the reference exchange rate as set forth in the Notification of the Bank of Thailand as at the reporting date)

Explanation of Report Form 2/1

Report on the net liquidity position in a normal scenario (remaining contractual maturity)

- 1. For the meanings, definitions and structures of on-balance-sheet and off-balance-sheet items on both the asset and liability sides appearing in this report, please refer to the explanation of Report Form 1/1. The difference from Report Form 1/1 is that this report is the recording of data of transactions in all foreign currencies converted into USD (unit: million USD).
- 2. For the method for arranging and recording data, please apply such method as explained in Report Form 1/2.

Explanation of Report Form 2/2

Report on new liquidity position in ordinary scenario (remaining behavioral maturity)

- 1. For the meanings, definitions and structures of on-balance-sheet and off-balance-sheet items on both the asset and liability sides appearing in this report form, please refer to the explanation of Report Form 1/2. The difference from Report Form 1/1 is that this report is the recording of data of transactions in all foreign currencies converted into USD (unit: million USD).
- 2. For the method for arranging and recording data, please apply from such method as explained in Report Form 1/2.

Explanation of Report Form 2/3

Explanation of circumstance adjustment of items in ordinary scenario

- 1. For the meanings, definitions and structures of on-balance-sheet and off-balance-sheet items on both the asset and liability sides appearing in this report form, please refer to the explanation of Report Form 1/3. The difference from Report Form 1/1 is this report is the method of circumstance adjustment of transactions in all foreign currencies converted into USD (unit: million USD).
- 2. For the method for arranging and recording data, please apply from such method as explained in Report Form 1/3.

Explanation of Report Form 2/4

Report on the data truly occurred, only the items having behavioral adjustment Covering the transactions in all foreign currencies converted into USD.

For this report, the commercial banks are required to weekly collect the data truly occurred in all the items having circumstance adjustment. This is for the purpose of using such as the data to improve and develop the behavioral adjustment method to be more accurate and efficient.

Part 3: Report on net liquidity position in the most serious crisis scenario

Covering transactions in all currencies converted into Baht

(by using the reference exchange rate in accordance with the Notification of the Bank of Thailand as at the reporting date)

Explanation of Report Form 3/1

Report on net liquidity position in crisis scenario

Covering the transactions in all currencies converted into Baht (unit: million Baht)

- 1. For the meanings, definitions and structures of off-balance-sheet items on both the asset, liability and obligation sides appearing in this report, please refer to the explanation of Report Form 1/1 (remaining contractual maturity) and the explanation of Report Form 1/2 (remaining behavioral maturity). The difference from Report Form 1/2 is that this report is the data recording in accordance with circumstances obtained from the analysis of crisis scenarios in various cases by applying Scenario Analysis. Only shall the crisis scenario expected to have the most adverse effect be recorded (the commercial bank should however undertake the analysis in all cases to prepare for the liquidity management under crisis scenarios at any levels).
- 2. For the investment in securities item, if there is the circumstance adjustment, it is required to use the value after deduction at the discount rate set forth in Clause 7 in the Explanation of the Report Form 3/3.
- 3. For the examples of crisis scenarios to which the commercial bank should analyze by applying Scenario Analysis, please refer to Attachment 4 of the Policy guideline regarding the liquidity management of financial institutions.
- 4. Please specify the crisis event analyzed by applying the Scenario Analysis, which is expected to have the most adverse effect, at the bottom part of the report form.
- 5. For the method of behavioral adjustment and recording data, please apply from such method as explained in Report Form 1/2.

Explanation of the Report Form 3/2

Report on net liquidity position in crisis scenario

Covering transactions in all currencies converted into Baht (unit: million Baht)

- 1. For this report, the commercial bank shall explain the method of circumstance adjustment for the items requiring circumstance adjustment (the item with the asterix (*) mark at the end) and the item which the commercial bank deems appropriate to adjust, by specifying assumptions, methods and other important details for the purpose of using such as the data to improve and develop the circumstance adjustment method in crisis scenario to be more accurate and efficient.
- 2. Please specify the crisis event from the scenario analysis which is foreseen to have the most severe effect, at the bottom part of the report form.

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Explanation of Report Form 3/3

Report on non-obligation liquid asset position and emergency credit line Covering transactions in all currencies converted into Baht

- 1. This is a report on outstanding balances of liquid asset such as cash, Tier 1 Instruments, Tier 2 Instruments and irrevocable credit line. For this purpose, both book value and value after discounting shall be recorded.
- 2. The levels of investments in securities reported in this part of the Report Form are the Tier 1 Instruments, Tier 2 Instruments and other instruments, as follows:

Tier 1 Instruments means the instruments which have liquidity risk and credit risk at the low level (with credit risk equivalent to that of the country). These instruments shall however be the instruments which have no obligation, be negotiable without limitation and can be traded in the bond repurchase market of the Bank of Thailand and/ or of private sector. The instruments of this type are deemed as having high liquidity and being capable of converting into cash at a high rate even in a crisis scenario e.g. securities issued by the Thai government, securities guaranteed by the Ministry of Finance and securities issued by the Bank of Thailand.

Tier 2 Instruments means the instruments which have liquidity risk and credit risk higher than those of the Tier 1 Instruments. These instruments shall have no obligation and be negotiable without limitation. These instruments would be considered in a normal scenario as having high liquidity and being at the same time capable of converting into cash at the high rate. However, if there is crisis, these instruments may considered being lack of liquidity and capable of converting into cash at the low rate e.g. (1) ordinary or preferential shares which can be traded in the Securities Exchange of Thailand, only which is classified to be in SET 50, (2) other debt instruments than Tier 1 Instruments, and (3) debt instruments issued by the central government of the countries in the OECD group.

Other instruments are instruments other than the Tier 1 and Tier 2 Instruments.

- 3. **Attachment 1** is the specification of significant details of the Tier 1 Instruments in each item such as the name-type, issuer, maturity, book value, guarantee, yield and other significant data.
- 4. **Attachment 2** is the specification of significant details of the Tier 2 Instruments in each item such as the name-type, issuer, maturity, book value, guarantee, yield and other significant data.
- 5. **Attachment 3** is the specification of significant details of other instruments in each item such as the name-type, issuer, maturity, book value, guarantee, yield and other significant data.
- 6. **Attachment 4** is the specification of details of irrevocable credit line in each item such as amount, loan provider, interest rate, credit rating of the loan provider, cost of loan maintenance and other significant data.

7. For the adjustment of discoun 1 of the Policy guideline regarding	at of instruments of each level, please refer to Attachmen the liquidity management of financial institutions.	t

Report Form 1/1 (for commercial banks)
Report on net liquidity position in ordinary scenario (remaining contractual maturity)
Transactions in all currencies converted into Baht (unit: million Baht)
As at _____

			Remainin	g Contracti	ıal Maturity	у	Auditi	ng of Bala	ances
Relevant items	Relevant tables	Promptly 8 day-1 >1-3 >3-6 >6 months				Total of Over Total			
		-7 days	month	months	months	1 year	1 year	1 year	balance
1. Assets (positive cash flow)	=(1.7)+(1.8)								
1.1 Cash	Clause 1/ ThorPor. 3								
1.2 Interbank and money market items	Clause 2/ ThorPor. 3								
1.3 Securities purchased under resale	Clause 3/ ThorPor. 3								
agreement									
1.4 Investment in securities	Clause 4/ ThorPor. 3								
1.5 Net credits	Sum of Clauses 1.5.1								
1.5.1 N	to 1.5.3								
1.5.1 Net credits such as: 1.5.1.1 overdrafts	Clause 5/ ThorPor. 3								
1.5.1.1 overdrans 1.5.1.2 loans (excluding credit cards)									
1.5.1.2 loans (excluding credit cards) 1.5.1.3 credit card loans									
1.5.1.4 bills									
1.5.1.5 others									
1.5.1.5 others 1.5.2 Accrued interest receivables	Clause 6/ ThorPor. 3								
1.5.3 Allowance for doubtful debts	Clause 7/ ThorPor. 3								
1.6	Clause // Inori or. 5								
1.7 Total items on the asset side	Sum of Clauses 1.1								
	to 1.6								
1.8 Off-balance-sheet obligation items	Sum of Clause 1.8.1								
on the asset side	to 1.8.3								
1.8.1 Exchange rate contracts	Clause 5/ ThorPor. 10.3								
1.8.2 Interest rate contracts	Clause 6/ ThorPor. 10.3								
1.8.3 Others (please specify)									
2. Liabilities (negative cash flow)	=(2.6)+(2.7)								
2.1 Deposits	Clause 12/ ThorPor. 3								
2.1.1 Payable upon demand									
2.1.2 Savings									
2.1.3 Payable upon maturity such as:									
 3-month fixed deposit 6-month fixed deposit									
- 12-month fixed deposit									
- others (please specify)									
2.2 Interbank and money market items	Clause 13/ ThorPor. 3								
2.3 Securities sold under repurchase	Clause 15/ ThorPor. 3								
agreement									
2.4 Loans	Clause 16/ ThorPor. 3								
2.5									
2.6 Total items on the liability side	Sum of Clauses 2.1								
	to 2.5								
2.7 Off-balance-sheet obligation items on	Sum of Clause 2.7.1								
the liability side	to 2.7.5								
2.7.1 Exchange rate contracts	Clause 5/ ThorPor. 10.3								
2.7.2 Interest rate contracts	Clause 6/ ThorPor. 10.3								
2.7.3 Guarantees (please specify)									
2.7.4 Unused loans	Clause 4.2/ ThorPor.								
2.7.4 Ollused Iodils	10.3								
2.7.5 Others (please specify)									
3. Net liquidity position (in accordance	= (1)-(2)								
with contract)									
(Percentage of accumulated positions	= Accumulated amount	t of (3)/							
per total deposits)	(2.1 Total amount)								

Examination items on data of all currencies		Amounts
4.1 On-balance-sheet total assets (million Baht) 4.2 On-balance-sheet total liabilities (million Baht) 4.3 Off-balance-sheet total obligations (million Baht) 4.4 Percentage of (1.7) per (4.1) 4.5 Percentage of (2.6) per (4.2) 4 6 Percentage of (2.7) per (4.3)	in accordance with ThorPor. 3 in accordance with ThorPor. 3 in accordance with ThorPor. 10.3	

Examination items on data of foreign	Amounts
currencies	
5.1 Asset side	
5.1.1 Total assets in foreign currencies	
5.1.2 Total assets in all currencies	
5.1.3 Percentage of (5.1.1) per (5.1.2)	
5.2 Liability side	
5.2.1 Total liabilities in foreign currencies	
5.2.2 Total liabilities in all currencies	
5.2.3 Percentage of (5.2.1) per (5.2.2)	

Report Form 1/2 (for commercial banks)

Report on net liquidity position in ordinary scenario (remaining behavioral maturity)

Transactions in all currencies converted into Baht (unit: million Baht)

As at		
AS at		

			Remainin	ng Contract	ual Maturity	V	Auditi	ng of Bala	ances
Relevant items	Relevant tables	Promptly	8 day-1	>1-3	>3-6	>6 months	Total of	Over	Total
		-7 days	month	months	months	1 year	1 year	1 year	balance
1. Assets (positive cash flow)	=(1.7)+(1.8)								
1.1 Cash	Clause 1/ ThorPor. 3								
1.2 Interbank and money market items	Clause 2/ ThorPor. 3								
1.3 Securities purchased under resale	Clause 3/ ThorPor. 3								
agreement 1.4 Investment in securities	Clause 4/ ThorPor. 3								
1.5 Net credits	Sum of Clauses 1.5.1								
1.5 Tet creats	to 1.5.3								
1.5.1 Net credits* such as:	Clause 5/ ThorPor. 3								
1.5.1.1 overdrafts									
1.5.1.2 loans (excluding credit cards)									
1.5.1.3 credit card loans									
1.5.1.4 bills									
1.5.1.5 others									
1.5.2 Accrued interest receivables	Clause 6/ ThorPor. 3								
1.5.3 Allowance for doubtful debts	Clause 7/ ThorPor. 3								
1.6	Sum of Clauses 1 1								
1.7 Total items on the asset side	Sum of Clauses 1.1 to 1.6								
1.8 Off-balance-sheet obligation items	Sum of Clause 1.8.1								
on the asset side	to 1.8.3								
1.8.1 Exchange rate contracts	Clause 5/ ThorPor. 10.3								
1.8.2 Interest rate contracts	Clause 6/ ThorPor. 10.3								
1.8.3 Others (please specify)									
	(2.5) (2.5)								
2. Liabilities (negative cash flow)	=(2.6)+(2.7)								
2.1 Deposits*	Clause 12/ ThorPor. 3								
2.1.1 Payable upon demand* 2.1.2 Savings*									
2.1.2 Savings 2.1.3 Payable upon maturity* such as:									
- 3-month fixed deposit									
- 6-month fixed deposit									
- 12-month fixed deposit									
- others (please specify)									
2.2 Interbank and money market items	Clause 13/ ThorPor. 3								
2.3 Securities sold under repurchase	Clause 15/ ThorPor. 3								
agreement	CI ACCESS D. O.								
2.4 Loans	Clause 16/ ThorPor. 3								
2.5	Sum of Clauses 2.1								
2.0 Four terms on the natinty side	to 2.5								
2.7 Off-balance-sheet obligation items on	Sum of Clause 2.7.1								
the liability side	to 2.7.5								
2.7.1 Exchange rate contracts	Clause 5/ ThorPor. 10.3								
2.7.2 Interest rate contracts	Clause 6/ ThorPor. 10.3								
2.7.3 Guarantees (please specify)									
 2.7.4 Unused loans*	Clause 4.2/ ThorPor.								
2.7.1 Chuscu louis	10.3								
2.7.5 Others (please specify)									
(France of France)									
3. Net liquidity position (in accordance	= (1)-(2)								
with contract)		6(2)							
(Percentage of accumulated positions	= Accumulated amount	of (3)/							
per total deposits)	(2.1 Total amount)								

st Items requiring behavior adjustment

Enclosure of Report Form 1/3 (for commercial banks) Explanations for method of behavior adjustment of items in ordinary scenario Transactions in all currencies converted into Baht (unit: million Baht) As at ______

Items having behavior adjustment	Assumptions to be used	Methods to be used	Other significant details	Remarks
Assets (positive cash flow) Net credits* such as 1.5.1 overdrafts 1.5.1 loans (excluding credit cards) 1.5.1 credit card loans 1.5.1 bills 1.5.1 others				
2 Liabilities (negative cash flow) 2.1 Deposits* 2.1.1 Payable upon demand* 2.1.2 Savings* 2.1.3 Payable upon maturity* such as - 3-month fixed deposit - 6-month fixed deposit - 12-month fixed deposit - others (please specify) 2.7.4 Unused loans*				

Enclosure of Report Form 1/4 (for commercial banks) Report on the data actually occurred, only the items having behavior adjustment Transactions in all currencies converted into Baht (unit: million Baht) Data during the period from January 2003 – March 2003

2003	January				Fe	ebruary		March				
Items having behavior adjustment	1st - 7th	8th – 15th	16th – 23rd	24th - end	1st - 7th	8th – 15th	16th – 23rd	24th - end	1st - 7th	8th – 15th	16th – 23rd	24th - end
1. Assets (positive cash flow) 1.5 Net credits such as 1.5.1 overdrafts 1.5.2 loans (excluding credit												
cards) 1.5.3 credit card loans 1.5.4 bills 1.5.5 others												
2. Liabilities (negative cash flow) 2.1 Deposits* 2.1.1 Payable upon demand* 2.1.2 Savings* 2.1.3 Payable upon maturity* such as - 3-month fixed deposit - 6-month fixed deposit - 12-month fixed deposit - others (please specify) 2.7.4 Unused loans *												

*** This pattern shall be applied to subsequent months as well.

3. Highest amount withdrawn per day in each month	Amounts
- January 2003	
- February 2003	
- March 2003	

Report Form 2/1 (for commercial banks) Report on net liquidity position in ordinary scenario (remaining contractual maturity) Transactions in all currencies converted into USD (unit: million USD)

As at _____

				Remaining	g Contractual	Maturity		Audit	ing of Bala	nces
	Relevant items	Relevant tables	Promptly -7 days	8 days-1 month	>1 - 3 months	>3 - 6 months	>6 months -1 year	Total of 1 year	Over 1 year	Total balance
1.	Assets (positive cash flow)	=(1.7)+(1.8)								
1.1	Cash	Clause 1/ ThorPor. 3								
1.2	Interbank and money market items	Clause 2/ ThorPor. 3								
1.3	Securities purchased under resale	Clause 3/ ThorPor. 3								
	agreement									
1.4	Investment in securities	Clause 4/ ThorPor. 3								
1.5	Net credits	Sum of Clauses 1.5.1								
		to 1.5.3								
1.5.1	Net credits such as	Clause 5/ ThorPor. 3								
	1.5.1.1 overdrafts									
	1.5.1.2 loans (excluding credit									
	cards) 1.5.1.3 credit card loans									
	1.5.1.4 bills									
	1.5.1.5 others									
1.5.2	Accrued interest receivables	Clause 6/ ThorPor. 3								
	Allowance for doubtful debts	Clause 7/ ThorPor. 3								
1.6										
1.7	Total items on the asset side	Sum of Clauses 1.1]	
		to 1.6]	
1.8	Off-balance-sheet obligation items	Sum of Clause 1.8.1]	
10:	on the asset side	to 1.8.3								
	Exchange rate contracts	Clause 5/ ThorPor.								
	Interest rate contracts	10.3								
1.8.3	Others (please specify)	Clause 6/ ThorPor. 10.3								
		10.5								
2.	Liabilities (negative cash flow)	=(2.6)+(2.7)								
2.1	Deposits	Clause 12/ ThorPor.								
2.1.1	Payable upon demand	3								
	Savings									
2.1.3	Payable upon maturity such as									
	- 3-month fixed deposit									
	- 6-month fixed deposit									
	- 12-month fixed deposit									
2.2	- others (please specify) Interbank and money market items									
2.3	Securities sold under repurchase	Clause 13/ ThorPor.								
2.3	agreement	3								
2.4	Loans	Clause 15/ ThorPor.								
2.5		3								
2.6	Total items on the liability side]	
		Clause 16/ ThorPor.]	
2.7	Off-balance-sheet obligation items	3]	
271	on the liability side	Sum of Clause - 2.1]	
	Exchange rate contracts Interest rate contracts	Sum of Clauses 2.1 to 2.5								
	Guarantees (please specify)	Sum of Clause 2.7.1]	
2.7.3		to 2.7.5								
2.7.4	Unused loans	Clause 5/ ThorPor.								
	-	10.3								
2.7.5	Others (please specify)	Clause 6/ ThorPor.]	
		10.3								
		Clause 4.2/ThanDan								
		Clause 4.2/ ThorPor. 10.3								
3.	Net liquidity position (in	= (1) - (2)								
	accordance with contract)	. / . /]	
i	(Percentage of accumulated	= Accumulated amou	int of (3)/]	
	positions per total deposits)	(Total amount 2.1)								

Report Form 2/2 (for commercial banks) Report on net liquidity position in ordinary scenario (remaining behavioural maturity) Transactions in all currencies converted into USD (unit: million USD)

As at _____

				Remaining	Contractual	Maturity		Aud	iting of Bala	nces
	Relevant items	Relevant tables	Promptly - 7 days	8 days-1 month	>1-3 months	>3-6 months	>6 months - 1 year	Total of 1 year	Over 1 year	Total balance
1.	Assets (positive cash flow)	=(1.7)+(1.8)					,			
1.1	Cash	Clause 1/ ThorPor. 3								
1.2	Interbank and money market items	Clause 2/ ThorPor. 3								
1.3	Securities purchased under resale agreement	Clause 3/ ThorPor. 3								
1.4	Investment in securities	Clause 4/ ThorPor. 3								
1.5	Net credits	Sum of Clauses 1.5.1 to 1.5.3								
1.5.1	Net credits such as	Clause 5/ ThorPor. 3								
	1.5.1.1 overdrafts 1.5.1.2 loans (excluding credit									
	cards) 1.5.1.3 credit card loans 1.5.1.4 bills									
	1.5.1.4 bills 1.5.1.5 others									
152	Accrued interest receivables	Clause 6/ ThorPor. 3								
	Allowance for doubtful debts	Clause 7/ ThorPor. 3								
1.7	Total items on the asset side	Sum of Clauses 1.1 to 1.6								
1.8	Off-balance-sheet obligation items on the asset side	Sum of Clause 1.8.1 to 1.8.3								
1.8.1	Exchange rate contracts	Clause 5/ ThorPor.	1							
	Interest rate contracts	10.3								
1.8.3	Others (please specify)	Clause 6/ ThorPor.								
		10.3								
2. 2.1	Liabilities (negative cash flow) Deposits*	=(2.6)+(2.7) Clause 12/ ThorPor.								
	Payable upon demand*	3								
	Savings*	3								
	Payable upon maturity* such as									
	- 3-month fixed deposit									
	- 6-month fixed deposit									
	- 12-month fixed deposit									
	- others (please specify)									
2.2	Interbank and money market items									
2.3	Securities sold under repurchase	Clause 13/ ThorPor.								
2.4	agreement	3 Classes 15 / The arDen	1							
2.4	Loans	Clause 15/ ThorPor.	1							
2.5	Total items on the liability side	3	1							
2.0	Total items on the natinty side	Clause 16/ ThorPor.	1							
2.7	Off-balance-sheet obligation items	3								
271	on the liability side Exchange rate contracts	Sum of Clauses 2.1	1							
	Interest rate contracts	to 2.5	1							
	Guarantees (please specify)	Sum of Clause 2.7.1	1							
2.1.5		to 2.7.5	1							
2.7.4	Unused loans*	Clause 5/ ThorPor.								
2.7.5	Others (please specify)	Clause 6/ ThorPor.	1							
		10.3								
		Clause 4.2/ThP-								
		Clause 4.2/ ThorPor. 10.3								
3.	Net liquidity position (in	= (1) - (2)								
	accordance with behavior)	A 1 1	 4							
	(Percentage of accumulated positions per total deposits)	= Accumulated amo Total amount 2.1)	unt of (3)/							

^{*} items requiring behavior adjustment

Enclosure of Report Form 2/3 (for commercial banks) Explanations for method of behavior adjustment of items in ordinary scenario Transactions in all currencies converted into USD (unit: million USD)

As	at			

Items ha	aving behavior adjustment	Assumptions to be used	Methods to be used	Other significant details	Remarks
1.5 Cred 1.5.1 1.5.2 1.5.2	ets (positive cash flow) lits such as 1 overdrafts 2 loans (excluding credit cards) 3 credit card loans 4 bills 5 others				
2.1 Dep 2.1. 2.1. 2.1.	bilities (negative cash flow) osits* 1 Payable upon demand* 2 Savings* 3 Payable upon maturity* such as - 3-month fixed deposit - 6-month fixed deposit - 12-month fixed deposit - others (please specify) 4 Unused loans*				

Enclosure of Report Form 2/4 (for commercial banks) Report on the data actually occurred, only the items having behavior adjustment Transactions in all currencies converted into USD (unit: million USD) Data during the period from January 2003 – March 2003

	2003		Ja	ınuary			Fel	bruary			M	arch	
Ite	ems having behavior adjustment	1st - 7th	8th – 15th	16th – 23rd	24th - end	1st - 7th	8th - 15th	16th – 23rd	24th - end	1st - 7th	8th – 15th	16th – 23rd	24th - end
1. 1.5	Assets (positive cash flow) Net credits such as 1.5.1 overdrafts 1.5.2 loans (excluding credit cards) 1.5.3 credit card loans 1.5.4 bills 1.5.5 others												
2. 2.1	Liabilities (negative cash flow) Deposits* 2.1.1 Payable upon demand* 2.1.2 Savings* 2.1.3 Payable upon maturity* such as												

^{***} This pattern shall be applied to subsequent months as well.

3.	Highest amount withdrawn per day in each month	Amounts
	- January 2003	
	- February 2003	
	- March 2003	

Report Form 3/1 (for commercial banks) Report on net liquidity position in crisis scenario 1/ Transactions in all currencies converted into Baht (unit: million Baht)

As at ______

			Remaining Contrac	tual Maturity	Auditing of Balances		
	Relevant Items	Relevant Tables	Promptly – 7 days	8 days – 1 month	Promptly – 7 days	8 days – 1 month	
1. 1.1 1.2	Assets (positive cash flow) Cash Interbank and money market items	=(1.7)+(1.8) Clause 1/ ThorPor. 3 Clause 2/ ThorPor. 3					
1.3	Securities purchased under resale agreement	Clause 3/ ThorPor. 3					
1.4 1.5 1.6	Investment in securities Net credits	Clause 4/ ThorPor. 3 Clause 5/ ThorPor. 3					
1.7	Total items on the asset side	Sum of Clauses 1.1 to 1.6					
1.8	Off-balance-sheet obligation items on the asset side 1.8.1 Exchange rate	Sum of Clause 1.8.1 to 1.8.3 Clause 5/ ThorPor. 10.3					
	contracts 1.8.2 Interest rate contracts 1.8.3 Others (please specify)	Clause 6/ ThorPor. 10.3					
	T 1.1 11/2 ((2.6) (2.7)					
2.	Liabilities (negative cash flow)	=(2.6)+(2.7)					
2.1	Deposits	Clause 12/ ThorPor. 3					
2.2	Interbank and money market items	Clause 13/ ThorPor. 3					
2.3	Securities sold under repurchase agreement	Clause 15/ ThorPor. 3					
2.4 2.5 2.6	Loans Total on-balance-sheet items	Clause 16/ ThorPor. 3					
2.7	in (2.1) to (2.5) Off-balance-sheet obligation items on the liability side 2.7.1 Exchange rate	Sum of Clause 2.7.1 to 2.7.5 Clause 5/ ThorPor. 10.3					
	contracts 2.7.2 Interest rate contracts 2.7.3 Guarantees (please specify)	Clause 6/ ThorPor. 10.3					
	2.7.4 Unused loans 2.7.5 Others (please specify)	Clause 4.2/ ThorPor. 10.3					
3.	Net liquidity position (in accordance with behavior)	= (1) - (2)					
	(Percentage of accumulated positions per total deposits)	= Accumulated amount of (3) (Total amount 2.1)	I)/				

^{*} Items requiring behavior adjustment

1/ Based on the analysis via Scenario Analysis and expected to have the most severe effect (please specify)

Enclosure of Report Form 3/2 (for commercial banks) Explanations for method of behavior adjustment of items in crisis scenario $^{1/}\,$ Transactions in all currencies converted into Baht (unit: million Baht)

As at		
ASAL		

Ite	ms having behavior adjustment	Assumptions to be used	Methods to be used	Other significant details	Remarks	
1.	Assets (positive cash flow) 1.2 Interbank and money market items* 1.4 Investment in securities * 1.5 Credits*					
2. 2.1 2.2 2.7.4	Liabilities (negative cash flow) Deposits* Interbank and money market items* Unused loans*					

	1.5 Credits*	<u>'</u>		
2.	Liabilities (negative cash flow)	1		
2.1	Deposits*	<u>'</u>		
2.2	Interbank and money market	ļ		
	items*	ļ		
2.7.4	Unused loans*	ļ		

L/	Based on the analysis	via Scenario Analy	sis and e	expected to nave	tne most severe effect	(piease specity)

Report Form 3/3 (for commercial banks)

Report on non-obligation liquid assets and emergency credit lines Transactions in all currencies converted into Baht (unit: million Baht)

at	
	at

Relevant ite	ems	Supporting	Book values	Values after discount
		documents		
1. Cash				
2. Tier 1 Instruments		1		
2. Tier 2 Instruments		2		
3. Other instruments		3		
4. Irrevocable credit lin	ne of each item	4		
Total				

Supporting documents (please see the Explanation of the Report Form 3/3)

- 1. Specify details of Tier 1 Instruments of each item and net amount after discount
- 2. Specify details of Tier 2 Instruments of each item and net amount after discount
- 3. Specify details of other instruments of each item and net amount after discount
- 4. Specify details of irrevocable credit line of each item.

1/ please see Clause 7 of the Explanation of Report Form 3/3