

Checklist for Market Risk Management

I. Development and Establishment of Market Risk Management System by Management

【 Checkpoints 】

- Market risk is the risk of loss resulting from changes in the value of assets and liabilities (including off-balance sheet assets and liabilities) due to fluctuations in risk factors such as interest rates, foreign exchange rates and stock prices and the risk of loss resulting from changes in earnings generated from assets and liabilities. There are three material market risks as follows:

- (1) Interest rate risk: The risk of loss resulting from changes in interest rates. As a result of a mismatch of interest rates on its assets and liabilities and/or timing differences in the maturity thereof, a financial institution may suffer a loss or a decline in profit due to changes in interest rates.
- (2) Foreign exchange risk: The risk of loss resulting from the difference between assumed and actual foreign exchange rates in the case where a financial institution has a long position or short position on a net basis with regard to its assets and liabilities denominated in foreign currencies.
- (3) Price Change Risk: The risk of loss resulting from a decline in the value of assets due to changes in the prices of securities, etc.

- The development and establishment of a system for market risk management is extremely important from the viewpoint of ensuring the soundness and appropriateness of a financial institution's business. Therefore, the institution's management is charged with and responsible for taking the initiative in developing and establishing such a system.

- It is important for the inspector to review whether the market risk management system developed is an appropriate one suited to the financial institution's strategic objectives, the scale and nature of its business and its risk profile.

It should be noted that the type and level of the market risk measurement and analysis methods to be used by a financial institution should be determined according to the institution's strategic objectives, the diversity of its business and the level of complexity of the risks faced by it and therefore a complex or sophisticated market risk measurement and analysis methods are not necessarily suited to all financial institutions.

- This checklist sets forth a broad range of check items, from which the inspector should select ones to be applied to a specific financial institution in light of the institution's asset management

strategy, investment style, volume of trading, risk profile, risk management method, measurement technique, and other factors. Check items accompanied by the phrase “for example,” are literally cited merely as examples, and the inspector should decide on a case-by-case basis whether to apply the items to a specific institution in light of the scale and nature of the institution’s business and its risk profile, etc. Check items accompanied by phrases like “in the case where the institution is using...” with regard to a certain management method or measurement technique should be applied to the case where the institution is actually using such a method or technique and where the inspector judges that the institution should use such a method or technique.

- The inspector should determine whether the market risk management system is functioning effectively and whether the roles and responsibilities of the institution’s management are being appropriately performed by way of reviewing, with the use of check items listed in Chapter I., whether the management is appropriately implementing (1) policy development, (2) development of internal rules and organizational frameworks and (3) development of a system for assessment and improvement activities.

- If any problem is recognized as a result of reviews conducted with the use of the check items listed in Chapter II. and later, it is necessary to exhaustively examine which of the elements listed in Chapter I. are absent or insufficient, thus causing the said problem, and review findings thereof through dialogue between the inspector and the financial institution.

- If the institution’s management fails to recognize weaknesses or problems recognized by the inspector, it is also necessary to explore in particular the possibility that the Internal Control System is not functioning effectively and review findings thereof through dialogue.

- The inspector should review the status of improvements with regard to the issues pointed out on the occasion of the last inspection that are not minor and determine whether or not effective improvement measures have been developed and implemented.

1. Policy Development

(1) Roles and Responsibilities of Directors

Do directors attach importance to market risk management, fully recognizing that the lack of such an approach could seriously hinder attainment of strategic objectives? In particular, does the director in charge of market risk management review the policy and specific measures for developing and establishing an adequate market risk management system with a full understanding

of the scope, types and nature of risks, and the techniques of identification, assessment, monitoring and control regarding market risk as well as the importance of market risk management, and with precise recognition of the current status of market risk management within the financial institution based on such an understanding? For example, does the director in charge understand the limitations and weaknesses of market risk measurement and analysis methods (techniques, assumptions, etc.) and consider countermeasures to supplement such shortcomings?

(2) Development and Dissemination of Office (Trading, Banking) Divisions' Strategic Objectives

Has the Board of Directors developed strategic objectives for the Office (Trading, Banking) Divisions that are consistent with the institution-wide strategic objectives and disseminated them throughout the institution? When developing the strategic objectives for the Office (Trading, Banking) Divisions, does the Board of Directors give due consideration to the asset and liability structure (including off-balance sheet items), marketability and liquidity and take into account the status of its capital? For example, does it pay attention to the following matters?

- Does it make clear whether to aim at minimizing the risk or to aim at making a profit by aggressively taking and managing a certain amount of risk in deciding the levels of risk-taking and profit objectives?
- Does it avoid setting institution-wide and division-specific strategic objectives that sacrifice risk management for profit? In particular, does it avoid setting objectives that pursue short-term profit by disregarding long-term risk or avoid setting a performance appraisal system that reflects such inappropriate objectives?

(3) Development and Dissemination of Market Risk Management Policy

Has the Board of Directors developed a policy regarding market risk management (hereinafter referred to as the "Market Risk Management Policy") and disseminated it throughout the institution? Is the appropriateness of the Market Risk Management Policy secured by, for example, including clear statements on the following matters?

- The roles and responsibilities of the director in charge and the Board of Directors or equivalent organization to the Board of Directors with regard to market risk management
- The policy on organizational framework, such as establishment of a division concerning market risk management (hereinafter referred to as the "Market Risk Management Division"), the Office (Trading, Banking) Division, and the division that conducts back-office business concerning market transactions (hereinafter referred to as the "Back-Office Division") and the authority assigned thereto
- The policy regarding the establishing of market risk limits

- The policy on identification, assessment, monitoring, control and mitigation of market risks

(4) Revision of Policy Development Process

Does the Board of Directors revise the policy development process in a timely manner by reviewing its effectiveness based on reports and findings on the status of market risk management in a regular and timely manner or on an as needed basis?

2. Development of Internal Rules and Organizational Frameworks

(1) Development and Dissemination of Internal Rules

Has the Board of Directors or equivalent organization to the Board of Directors had the Manager of the Market Risk Management Division (hereinafter simply referred to as the “Manager” in this checklist) develop internal rules that clearly specify the arrangements concerning market risk management (hereinafter referred to as the “Market Risk Management Rules”) and disseminate them throughout the institution in accordance with the Market Risk Management Policy? Has the Board of Directors or equivalent organization to the Board of Directors approved the Market Risk Management Rules after determining if they comply with the Market Risk Management Policy after legal checks, etc. ?

(2) Establishing of Appropriate Limits

Does the Board of Directors or equivalent organization to the Board of Directors in accordance with the Market Risk Management Policy and the Market Risk Management Rules, establish limits (risk limits, position limits, loss control limits, etc.) suited to each operation and each risk category by examining the details of operations of the various divisions and taking into consideration the position of each division in corporate management, the institution’s capital, earning power, risk management capability, human capacity, etc.?¹ Does the Board of Directors or equivalent organization to the Board of Directors review the details of each division’s operations and revise the method of establishing limits and the limits established in a regular and timely manner or on an as needed basis? Does the Board of Directors or equivalent organization to the Board of Directors compare the institution’s corporate strength and the quantity of market risk it faces and

¹ There are hard limits and soft limits. Hard limits trigger compulsory reduction of risks and positions when they are exceeded, while soft limits do not necessarily trigger such reduction but require that the Board of Directors or equivalent organization to the Board of Directors discuss and decide what measures to take. Usually, hard limits are established in the trading account and soft limits are established in the banking account. However, the inspector should review whether the two types of limits are established appropriately in a manner suited to the actual status of transactions.

make sure that the quantity of market risk is not excessive in relation to the corporate strength? Does the Board of Directors or equivalent organization to the Board of Directors pay attention to the following items, for example?

- In the case where the institution contains complex risks, does it conduct management of limits with due consideration for such risks?
- Does the institution give due consideration to market liquidity?

(3) Establishment of Market Risk Management Division

- (i) Does the Board of Directors or equivalent organization to the Board of Directors have the Market Risk Management Division established and have the division prepared to undertake appropriate roles in accordance with the Market Risk Management Policy and the Market Risk Management Rules?²
- (ii) Has the Board of Directors allocated to the Market Risk Management Division a Manager with the necessary knowledge and experience to supervise the division and enabled the Manager to implement management business by assigning him/her the necessary authority therefor?
- (iii) Has the Board of Directors or equivalent organization to the Board of Directors allocated to the Market Risk Management Division an adequate number of staff members with the necessary knowledge and experience to execute the relevant operations and assigned such staff the authority necessary for implementing the operations?³
- (iv) Does the Board of Directors or equivalent organization to the Board of Directors keep the Market Risk Management Division independent from the Office (Trading, Banking) Divisions and Marketing and Sales Divisions and secure a check-and-balance system of the Market Risk Management Division?

(4) Development of Market Risk Management Systems in The Office (Trading, Banking) Divisions, Marketing and Sales Divisions , etc.

- (i) Does the Board of Directors or equivalent organization to the Board of Directors provide a system to fully disseminate the relevant internal rules and operational procedures to the

² When the Market Risk Management Division is not established as an independent division (e.g., when the division is consolidated with another risk management division to form a single division or when a division in charge of other business also takes charge of market risk management or when a Manager or Managers take charge of market risk management instead of a division or a department), the inspector shall review whether or not such a system is sufficiently reasonable and provides the same functions as in the case of establishing an independent division commensurate with the scale and nature of the institution and its risk profile.

³ When a department or a post other than the Board of Directors or equivalent organization to the Board of Directors is empowered to allocate staff and assign them authority, the inspector shall review, in light of the nature of such a department or post, whether or not the structure of the Market Risk Management Division is reasonable in terms of a check-and-balance system and other aspects.

divisions involving market risks to be managed (e.g., the Office (Trading, Banking) Division, Marketing and Sales Divisions, etc.) and ensure that such divisions observe them? For example, does the Board of Directors or equivalent organization to the Board of Directors instruct the Manager to identify the internal rules and operational procedures that should be observed by the Office (Trading, Banking) Divisions, The Marketing and Sales Divisions, etc. and to carry out specific measures for ensuring observance such as providing effective training on a regular basis?

- (ii) Does the Board of Directors or equivalent organization to the Board of Directors provide a system to ensure the effectiveness of market risk management in the Office (Trading, Banking) Divisions, The Marketing and Sales Divisions, etc. through the Manager or the Market Risk Management Division?

(5) Arrangement for The System of Reporting to Board of Directors or equivalent organization to Board of Directors and Approval

Has the Board of Directors or equivalent organization to the Board of Directors appropriately specified matters that require reporting and those that require approval and does it have the Manager report the current status to the Board of Directors or equivalent organization to the Board of Directors in a regular and timely manner or on an as needed basis or have the Manager seek the approval of the Board of Directors or equivalent organization to the Board of Directors on the relevant matters? In particular, does it ensure that the Manager, without delay, reports to the Board of Directors or equivalent organization to the Board of Directors any matters that would seriously affect corporate management?

(6) System of Reporting to Corporate Auditor

In the case where the Board of Directors has specified matters to be directly reported to a corporate auditor, has it specified such matters appropriately and do they provide a system to have the Manager directly report such matters to the auditor?⁴

(7) Development of Internal Audit Guidelines and an Internal Audit Plan

Does the Board of Directors or equivalent organization to the Board of Directors have the Internal Audit Division appropriately identify the matters to be audited with regard to market risk management, develop guidelines that specify the matters subject to internal audit and the audit procedure (hereinafter referred to as “Internal Audit Guidelines”) and an internal audit plan, and

⁴ It should be noted that this shall not preclude a corporate auditor from voluntarily seeking a report and shall not restrict the authority and activities of the auditor in any way.

approve such guidelines and plan?⁵ For example, does it have the following matters clearly specified in the Internal Audit Guidelines or the internal audit plan and provide a system to have these matters appropriately audited?

- Status of development of the market risk management system
- Status of compliance with the Market Risk Management Policy, and Market Risk Management Rules, etc.
- Appropriateness of the market risk management computer systems⁶
- Appropriateness of the market risk management processes commensurate with the scale and nature of business and the risk profile
- Appropriateness of the use of market risk measurement and analysis methods (techniques, assumptions, etc.) taken into account the limits and the weaknesses thereof
- Validity of the market risk measurement and analysis methods (techniques, assumptions, etc.)
- Accuracy and completeness of the data used in market risk measurement and analysis
- Validity of scenarios, etc. used in stress tests
- Status of improvement of matters pointed out in an internal audit or on the occasion of the last inspection

(8) Revision of Development Process of Internal Rules and Organizational Frameworks

Does the Board of Directors or equivalent organization to the Board of Directors revise the development process of internal rules and organizational frameworks in a timely manner by reviewing their effectiveness based on reports and findings on the status of market risk management in a regular and timely manner or on an as needed basis?

3. Assessment and Improvement Activities

1) Analysis and Assessment

(1) Analysis and Assessment of Market Risk Management

Does the Board of Directors or equivalent organization to the Board of Directors appropriately determine whether there are any weaknesses or problems in the market risk management system and the particulars thereof, and appropriately examine their causes by precisely analyzing the status of market risk management and assessing the effectiveness of market

⁵ The Board of Directors or equivalent organization to the Board of Directors only needs to have approved the basic matters with regard to an internal audit plan.

⁶ It should be noted that the computer system may be a centralized dataprocessing environment system, distribution processing system, or EUC (end user computing) type. The same shall apply hereafter.

risk management, based on all the information available regarding the status of market risk management, such as the results of audits by corporate auditors, internal audits and external audits, findings of various investigations and reports from various divisions? In addition, if necessary, does it take all possible measures to find the causes by, for example, establishing fact findings committees, etc. consisting of non-interested persons?

(2) Revision of Analysis and Assessment Processes

Does the Board of Directors or equivalent organization to the Board of Directors revise the analysis and assessment processes in a timely manner by reviewing their effectiveness based on reports and findings of investigations on the status of market risk management in a regular and timely manner or on an as needed basis?

2) Improvement Activities

(1) Implementation of Improvements

Does the Board of Directors or equivalent organization to the Board of Directors provide a system to implement improvements in the areas of the problems and weaknesses in the market risk management system identified through the analysis, assessment and examination referred to in 3. 1) above in a timely and appropriate manner based on the results obtained by developing and implementing an improvement plan as required or by other appropriate methods?

(2) Progress Status of Improvement Activities

Does the Board of Directors or equivalent organization to the Board of Directors provide a system to follow up on the efforts for improvement in a timely and appropriate manner by reviewing the progress status in a regular and timely manner or on an as needed basis?

(3) Revision of Improvement Process

Does the Board of Directors or equivalent organization to the Board of Directors revise the improvement process in a timely manner by reviewing its effectiveness based on reports and findings of investigations on the status of market risk management in a regular and timely manner or on an as needed basis?

II. Development and Establishment of Market Risk Management System By Manager

【 Checkpoints 】

- This chapter lists the check items to be used when the inspector reviews the roles and responsibilities to be performed by the Manager and the Market Risk Management Division.
- If any problem is recognized as a result of reviews conducted with the use of the check items listed in Chapter II., it is necessary to exhaustively examine which of the elements listed in Chapter I. are absent or insufficient, thus causing the said problem, and review findings thereof through dialogue between the inspector and the financial institution.
- If the institution's management fails to recognize problems recognized by the inspector, it is also necessary to strictly explore in particular the possibility that the systems and processes listed in Chapter 1. are not functioning appropriately and review findings thereof through dialogue.
- The inspector should review the status of improvements with regard to the issues pointed out on the occasion of the last inspection that are not minor and determine whether or not effective improvement measures have been developed and implemented.

1. Roles and Responsibilities of Manager

(1) Development and Dissemination of Market Risk Management Rules

Has the Manager, in accordance with the Market Risk Management Policy, identified risks, decided the methods of assessment and monitoring thereof and developed the Market Risk Management Rules that clearly define the arrangements on risk control and mitigation, based on a full understanding of the scope, types and nature of risk and the relevant market risk management technique? Have the Market Risk Management Rules been disseminated throughout the institution upon approval by the Board of Directors or equivalent organization to the Board of Directors?

(2) Market Risk Management Rules

Do the Market Risk Management Rules exhaustively cover the arrangements necessary for market risk management and specify the arrangements appropriately in a manner befitting the scale and nature of the financial institution's business and its risk profile? Do the rules specify the following items, for example?

- Arrangements on the roles, responsibilities, and organizational framework of the Market

Risk Management Division, the Office (Trading, Banking) Division, and the Back-Office Division

- Arrangements on the identification of risks to be subjected to market risk management
- Arrangements on the market risk measurement and analysis methods (techniques, assumptions, etc.)
- Arrangements on the market risk monitoring method
- Arrangements on establishing market risk limits
- Arrangements on the periodic review of market risk measurement and analysis methods (techniques, assumptions, etc.)
- Arrangements on market value calculation;
- Arrangements on *TOKUTEI-TORIIHIKI* (hereinafter referred to as the “Segregated Trading Book”) (Trading Book)
- Arrangements the system of on reporting to the Board of Directors or equivalent organization to the Board of Directors

(3) Development of Organizational Frameworks by Manager

- (i) Does the Manager, in accordance with the Market Risk Management Policy and the Market Risk Management Rules, provide for measures to have the Market Risk Management Division exercise a check-and-balance system in order to conduct the system of market risk management appropriately?
- (ii) Does the Manager ensure that they report to the Comprehensive Risk Management Division without delay when detecting any weaknesses or problems of the market risk management system that may affect comprehensive risk management?
- (iii) With regard to New Products as specified by the Comprehensive Risk Management Policy, etc., does the Manager provide a system to identify their inherent risks in advance and report to the Comprehensive Risk Management Division when requested by the division to do so?⁷
- (iv) Does the Manager provide a system to promote the sophistication of the institution’s market risk management, including the expansion of coverage of market risk measurement and improvement in the precision thereof, in a manner befitting the scale and nature of the institution’s business and its risk profile, based on an understanding of the limitations and weaknesses of the market risk measurement and analysis methods (techniques, assumptions, etc.)?
- (v) Does the Manager provide a system to enable the Market Risk Management Division to obtain necessary internal data such as trading information and market data directly from the Office (Trading, Banking) Divisions in an appropriate manner? Does the Manager provide a system to

⁷ See “Checklist for Business Management (Governance) (for Basic Elements),” I. 3. (4).

enable the Market Risk Management Division to directly command and supervise middle offices, etc. at branches?

- (vi) Does the Manager have in place a market risk management computer system with the high reliability befitting the scale and nature of the financial institution's business and its risk profile, in order to identify all important market risks faced by the institution?
- (vii) Does the Manager ensure the system of training and education to enhance the ability of employees to conduct market risk management in an effective manner, thus developing human resources with relevant expertise?
- (viii) Does the Manager provide a system to ensure that matters specified by the Board of Directors or equivalent organization to the Board of Directors are reported in a regular and timely manner or on an as needed basis? In particular, does the Manager provide a system to ensure that matters that would seriously affect corporate management are reported to the Board of Directors or equivalent organization to the Board of Directors without delay?

(4) Revision of Market Risk Management Rules and Organizational Frameworks

Does the Manager conduct monitoring on an ongoing basis with regard to the status of the execution of business at the Market Risk Management Division? Does the Manager review the effectiveness of the market risk management system in a regular and timely manner or on an as needed basis, and, as necessary, revise the Market Risk Management Rules and the relevant organizational framework, or present the Board of Directors or equivalent organization to the Board of Directors with proposals for improvement?

2. Roles and Responsibilities of Market Risk Management Division

1) Identification and Assessment of Market Risks

(1) Identification of Market Risks

- (i) Does the Market Risk Management Division identify market risks faced by the institution and the risks subject to market risk management commensurate with the size and nature of the identified risks? When identifying market risks, does the Manager ensure that the process covers the full scope of business including the banking and trading books, overseas offices, consolidated subsidiaries, etc., in addition to exhaustively covering the risk categories such as interest rate risk, foreign exchange risk, and stock price risk (or risk factors) involved in its assets and liabilities (including off-balance sheet assets and liabilities)?
- (ii) Of the risks held, does the institution identify the following risks, for example, and consider whether or not to subject them to market risk management?
 - a. Interest rate risk:

The risk of the current value (or periodic profit) of assets and liabilities (including off-balance sheet assets and liabilities) being affected by changes in interest rates. Repricing risk, yield curve risk, basis risk, and optionality must be taken into consideration as possible sources of interest rate risk. The following are examples of items which contain interest rate risk.

- Deposits
- Loans
- Bonds
- Financial derivative products

b. Foreign exchange risk:

The risk of the current value (or periodic profit) of assets and liabilities (including off-balance sheet assets and liabilities) being affected by changes in foreign exchange rates. The following are examples of items that contain foreign exchange risk.

- Assets and liabilities denominated in foreign currencies
- Foreign exchange transactions
- Derivatives of foreign exchange transactions (forward contracts, futures, swaps, options, etc.)
- Assets and liabilities whose cash flow (redemption value, coupon rate, etc.) is determined in reference to foreign exchange rates

c. Stock risk:

The risk of the current value (or periodic profit) of assets and liabilities (including off-balance sheet assets and liabilities) being affected by changes in stock prices, stock index prices, etc. . The following are examples of items that contain stock risk.

- Stocks
- Corporate bonds with equity-purchase warrants
- Stock derivatives (forward contracts, futures, swaps, options, etc.)
- Assets and liabilities whose cash flow (redemption value, coupon rate, etc.) is determined in reference to stock prices, stock index prices, etc.

d. Commodity risk:

The risk of the current value (or periodic profit) of assets and liabilities (including off-balance sheet assets and liabilities) being affected by changes in commodity prices, commodity index prices, etc. The following are examples of items that contain commodity risk.

- Commodity derivatives (forward contracts, futures, swaps, options, etc.)
- Assets and liabilities whose cash flow (redemption value, coupon rate, etc.) is determined in reference to commodity prices, commodity index prices, etc.

e. Other market risks

Among risk factors that determine the current value other than the ones listed in a. to d. is, for example, the correlation between two or more indices in reference to which the cash flow of assets and liabilities (including off-balance sheet assets and liabilities) is determined.

(iii) With regard to corporate bonds, credit derivatives, etc., does the Market Risk Management Division identify, for example, the risk that changes in the credit spread will affect the current value (or periodic profit) and consider whether or not to subject the risk to market risk management?⁸

(iv) With regard to options transactions, does the Market Risk Management Division identify the following risks, for example, and consider whether or not to subject them to market risk management?

- The risk of the current value (or periodic profit) being affected by changes in volatility (vega risk)⁹
- The non-linear portion of the risk produced for the current value by a change in the price of the underlying asset (gamma risk).¹⁰

(v) In the case where there are risks not subject to market risk management, has the institution determined if their impact is negligible?

(iv) When the institution handles New Products, purchases new products or starts business at overseas offices or subsidiaries, does the Market Risk Management Division sort out the inherent market risks in advance the risks subject to market risk management?

(2) Measurement and Analysis of Market Risks

(i) Does the Market Risk Management Division measure and analyze all of the risks subject to market risk management? Does it conduct market risk measurement and analysis in each of the areas that are consistent with the institution's organizational framework and the roles and responsibilities allocated thereto?

(ii) Does the Market Risk Management Division measure the current value (market value) of the positions held by the institution with a frequency befitting the scale and nature of the institution's business and its risk profile?

(iii) Does the Market Risk Management Division measure and analyze market risks in the banking and trading books with appropriate market risk measurement and analysis methods (techniques, assumptions, etc.) befitting the scale and nature of the institution's business and its risk profile? Does the division conduct its risk measurement and analysis with due consideration for factors

⁸ In some cases, such risk is specified as credit risk, rather than market risk.

⁹ The vega risk is often specified as interest rate risk, foreign exchange risk, stock risk, commodity risk, etc. according to the type of the relevant underlying asset.

¹⁰ The gamma risk is often specified as interest rate risk, foreign exchange risk, stock risk, commodity risk, etc. according to the type of the relevant underlying asset.

that may affect the current value of assets and liabilities (including off-balance sheet assets and liabilities) and factors that may affect the periodic profit thereof?

Note: The following are examples of measurement and analysis techniques regarding market risk.

- Analysis of the balance of positions, unrealized profits/losses and realized profits/losses
- Gap analysis and static and dynamic simulation analysis based on the replacing-based ladder and maturity ladder
- Sensitivity analysis (duration, BPV (basis point value), GPS (grid point sensitivity), etc.)
- Scenario analysis using static and dynamic simulation
- VaR (value at risk)
- EaR (earnings at risk)

(iv) Does the Market Risk Management Division ensure validity of the pricing model, the risk measurement and analysis techniques (or measurement models), the assumptions, etc? Are the pricing model, concepts and risk measurement techniques used by the institution generally accepted in the financial industry?

(3) Risk Measurement with Uniform Yardstick

In the case where the quantity of market risks is measured with a uniform yardstick, does the Market Risk Management Division measure all of the risks identified as subject to market risk management with the use of a uniform yardstick? When there are risks that cannot be sufficiently grasped by a uniform yardstick or that have not been measured thereby, does the division take into consideration those risks identified as subject to market risk management by using supplementary information?

(4) Stress Test

Does the Market Risk Management Division measure the amount of changes in the current value of assets and liabilities (including off-balance sheet assets and liabilities) under stress conditions in a regular and timely manner or on an as needed basis? Does the division conduct stress tests based on stress scenarios that take into consideration major changes in the external environment (economy, market, etc.) that have occurred in the past as well as the current external environment and the scale and nature of the institution's business and its risk profile?

2) Monitoring

(1) Monitoring of Market Risks

Does the Market Risk Management Division, in accordance with the Market Risk Management Policy and the Market Risk Management Rules, conduct monitoring with regard to the status of market risks faced by the financial institution with an appropriate frequency in light of

the financial institution's internal environment (risk profile, the status of risk limits usage, etc.) and external environment (economy, markets, etc.)? For example, with regard to the trading books, does the Market Risk Management Division monitor the positions and loss of major products on an as-needed basis during the daytime? Does the division conduct monitoring with regard to the status of internal and external environments and the validity of the assumptions?

(2) Monitoring of Compliance with Risk Limits

Does the Market Risk Management Division appropriately monitor the status of compliance with the risk limits and the status of the use thereof?

(3) Reporting to Board of Directors or equivalent organization to Board of Directors

Does the Market Risk Management Division, in accordance with the Market Risk Management Policy and the Market Risk Management Rules, provide in a regular and timely manner or on an as needed basis information necessary for the Board of Directors or equivalent organization to the Board of Directors to make an appropriate assessment and judgment with regard to the status of the market risk management and the status of market risks? Does the division report the following items, for example?

- The market risk profile and the trend thereof
- The status of compliance with the risk limits and the status of the application thereof
- The nature (limitations and weaknesses) and validity of the market risk measurement and analysis methods (techniques, assumptions, etc.)

(4) Feedback to Office (Trading, Banking) Divisions, etc.

Does the Market Risk Management Division provide feedback for the results of its measurement, analysis and review with regard to the status of market risks to the Office (Trading, Banking) Division, etc?

3) Control and Mitigation

(1) Countermeasures to Case Where Unmanageable Market Risks Exist

In the case where risks not covered by market risk management have non-negligible effects or where risks to be controlled through market risk management cannot be managed appropriately, does the Market Risk Management Division provide information necessary for the Board of Directors or equivalent organization to the Board of Directors to make decisions as to whether the financial institution should withdraw from or downsize the business affected by those risks?

(2) Countermeasures to Case Where Risk Limits are Exceeded

In the case where the financial institution has exceeded the risk limits, does the Market Risk Management Division provide information necessary for the Board of Directors or equivalent organization to the Board of Directors without delay to make decisions as to whether to take steps to mitigate positions and risks, etc?

4) Review and Revision

(1) Sophistication of Market Risk Management¹¹

Does the Market Risk Management Division conduct a review to grasp the limitations and weaknesses of market risk measurement and analysis methods (techniques, assumptions, etc.) and devise countermeasures to complement the said methods? Does it conduct investigations, analysis and feasibility studies in light of those limitations and weaknesses with a view to making risk management more sophisticated to suit the risk profile?

(2) Revision of Market Risk Identification

Does the Market Risk Management Division check in a regular and timely manner or on an as needed basis whether or not the impact of risks not subject to market risk management has increased due to changes in the scale and nature of the institution's business and its risk profile or changes in the external environment (economy, market, etc.)? In the case where the impact is determined as significant, does the division take appropriate countermeasures?

(3) Revision of Market Risk Assessment Method

(i) Does the Market Risk Management Division review in a regular and timely manner or on an as needed basis whether the coverage, frequency, technique of market measurement and analysis, etc. are suited to the institution's strategic objectives, the scale and nature of its business and its risk profile? When a revision is necessary, does the division make the revision based on the internal rules after following appropriate procedures?

(ii) Does the Market Risk Management Division conduct theoretical and empirical review of the pricing model, the market measurement and analysis techniques and the assumptions, etc. and make the revision thereof in a regular and timely manner or on an as needed basis? Does the division review and revise the market risk measurement method by comparing the measurement results with the actual trend of profits/losses?

¹¹ It should be noted that sophistication of risk management includes not only expansion of scope of risk measurement and improvement in precision and other aspects of risk management but also enhancement of measures to complement the limits and weaknesses of the management and the technique of utilizing measurement results.

(4) Revision of Method of Establishing Limits and Limits Established

Does the Market Risk Management Division review in a regular and timely manner or on an as needed basis whether the method of establishing limits and the limits established are suited to the financial institution's strategic objectives, the scale and nature of its business and its risk profile? In the case where a revision is deemed necessary, does the division provide information necessary for the Board of Directors or equivalent organization to the Board of Directors without delay to make appropriate assessments and decisions?

(5) Revision of Strategic Objectives, etc.

Does the Market Risk Management Division review the reasonableness of the risk-return strategy by comparing the results of market risk measurement and the trend of actual profits/losses? Does it provide information necessary for the Board of Directors or equivalent organization to the Board of Directors to revise the strategic objectives, etc.?

III. Specific Issues

【 Checkpoints 】

- This chapter lists the check items to be used when the inspector reviews specific issues particular to the actual status of market risk management.

- If any problem is recognized as a result of reviews conducted with the use of the check items listed in Chapter III., it is necessary to exhaustively examine which of the elements listed in Chapters I. and II. are absent or insufficient, thus causing the said problem, with the use of the checklists in those chapters, and review findings thereof through dialogue between the inspector and the financial institution.

- If the institution's management fails to recognize problems recognized by the inspector, it is also necessary to strictly explore in particular the possibility that the systems and processes listed in Chapter 1. are not functioning appropriately and review findings thereof through dialogue.

- The inspector should review the status of improvements with regard to the issues pointed out on the occasion of the last inspection that are not minor and determine whether or not effective improvement measures have been developed and implemented.

1. Conduct of Market Activities

(1) Appropriate Conduct of Market Activities

Do the Office (Trading, Banking) Divisions conduct market activities appropriately in accordance with the strategic objectives, the Market Risk Management Policy, the Market Risk Management Rules, etc.? Does the Market Risk Management Division conduct monitoring for whether the Office (Trading, Banking) Divisions are conducting risk control and other activities appropriately and report the status of activities to the Board of Directors or equivalent organization to the Board of Directors in a regular and timely manner or on an as needed basis? If it finds that market activities are not conducted in accordance with the strategic objectives, the Market Risk Management Policy, the Market Risk Management Rules, etc., does the Market Risk Management Division promptly take improvement measures?

(2) Transactions Based on Fair Prices

Do the Office (Trading, Banking) Divisions conduct transactions at fair prices? Does the

Market Risk Management Division check whether the Office (Trading, Banking) Divisions are conducting transactions at fair prices by using deviations from market rate as a basis for its judgment?

(3) Management of Limits

- (i) Do the internal rules, etc. specify the arrangements and procedures for prompt reporting to the Manager the delegation and the countermeasures to be taken when the risk limits, position limits and loss limits are exceeded or likely to be exceeded? Do the internal rules, etc. stipulate that once the limits (in case of hard-limit) are exceeded, the positions must not be maintained?
- (ii) Does the institution delegate the authority concerning positions, profit objectives, loss control limits, etc. in writing to the director in charge, the Manager and dealers and make clear to dealers the focus of responsibility, for example by obtaining signed confirmation from dealers each time the limits are changed? Does the institution regularly (at least once every half year) revise the limits established for each division?
- (iii) Are the internal rules etc. concerning the limits applied rigorously? In the case where any problem is detected in the internal rules or the enforcement thereof, are appropriate improvement measures taken?

(4) Analysis of Profit/Loss Status, etc. and Checks on Inappropriate Handling

Is there not any inappropriate practice using derivatives and other transactions for the purpose of manipulating the account settlement? In the case where the Office (Trading, Banking) Divisions, etc. generate excessive profits, does the Market Risk Management Division analyze the cause thereof and check whether or not the excessive profits result from inappropriate practices such as those deviating from the internal rules? Does the Market Risk Management Division inspect profits/losses to examine them in relation to the contract value, the notional amount and the trading volume, etc.?

(5) Reporting to Market Risk Management Division

Do the Office (Trading, Banking) Divisions provide all information concerning market risks without delay and accurately to the Market Risk Management Division? In the case where a problem related to market risk management occurs, is it ensured that the person in charge of the relevant activities and the relevant Office (Trading, Banking) Division report it to the Market Risk Management Division without delay and accurately, rather than try to resolve the problem on his or her own and within the division itself?

(6) Development of Mutual Check-and-Balance System

(i) In the case where computer systems of the Office (Trading, Banking) Divisions, the Market Risk Management Division and the Back-Office Division are not integrated, does the Market Risk Management Division obtain position information, etc. from both the Office (Trading, Banking) Divisions and the Back-Office Division and determine if there is no discrepancy between the two sets of information?

(ii) Does the Market Risk Management Division have a sufficient number of staff members to monitor transactions?

(iii) Does the Market Risk Management Division regularly examine and analyze profits/losses (including unrealized evaluation profits/losses) in the relevant business term to verify whether there is any irregularity. In such examination and analysis, does the division compare the losses/profits with the risk quantity, for example?

(iv) Is consideration given to the following matters in order to exercise a mutual check and balance system?

- Is familiarity between the chief dealer and the Back-Office Division Manager not creating a situation in which dealers are allowed to directly engage in system operation and issue instructions with regard to accounting?

- Are there any experienced dealers so trusted by others that their conduct of transactions is regarded as unquestionable? Is the institution aware that human risk increases when it depends too much on specific individuals and does it conduct management in a way so as to avoid such risk?

- Is the market-related organization not run in a way to hamper the function of a check-and-balance system, for example, with a confirmation section established under the Office (Trading, Banking) Division Manager or the same person serving as the Manager of both Market and Back-Office Divisions?

- Is dealer trading voice-recorded 24 hours a day and are the trades on the voice recording checked against trading records with sampling and other methods?

Are recorded tapes stored for a prescribed period of time? Are the tapes stored under the control of an organization segregated from the Market and Back-Office Divisions (e.g. the Market Risk Management Division, etc.) or a section of the Back-Office Division segregated from the responsibilities? It is desirable that telephone conversations involving the Back-Office Division be recorded, too, for follow-up checks. It should be noted that when comparing the trades on the voice recording with dealing tickets (trading records), it is necessary to check whether the all trades on the voice recordings are covered by dealing tickets, rather than checking the dealing tickets against the recordings.

- Is at-home dealing allowed only under restricted conditions for purposes such as avoiding risks related to off-hours trading? Does the institution specify the maximum trading

volume and the types of transactions allowed for at-home trading and the dealers allowed to engage in such trading (Do the internal rules specify these items)? Are answering machines and other similar devices used to voice-record at-home dealing?

- Are all dealers fully aware that dealing recordings are regularly checked against dealing tickets?

2. Assets and Liabilities Management

1) Policy Development and Organizational Frameworks

(1) Development of Strategic Objectives, etc.

(i) Is an ALM Committee, etc.¹², as an entity that comprehensively manages assets and liabilities and participates in the development and implementation of the ALM strategies and the like, involved in the development of strategic objectives, etc. for the Office (Trading, Banking) Divisions?

(ii) Does the ALM Committee, etc., in accordance with the strategic objectives, the Market Risk Management Policy and the Market Risk Management Rules, discuss the management of assets and liabilities, including long-term investments for business relationships and off-balance sheet assets and liabilities, and conduct risk control in relation to the institution's capital and other elements of institution's soundness? For example, does the ALM Committee, etc. control the level of interest rate risk in the banking book in relation to the capital?

(iii) Does the ALM Committee, etc. make effective use of the results analyzed by divisions involved in interest and foreign exchange rate forecasts, risk measurement, and hedging transactions in their analysis and examination? With regard to interest rate risk in particular, are the results of assessments based on multifaceted and appropriate risk analysis and measurement reported accurately to the ALM Committee, etc., and are sufficient discussions conducted on the management of assets and liabilities? Does the ALM Committee, etc. also examine the possible impact of offsetting effects of assets in various risk categories?

(2) Framework of ALM Committee, etc.

(i) Is there an arrangement to ensure that important information related to the Office (Trading, Banking) Divisions is provided to the ALM Committee, etc. in a timely and appropriate manner? Is the definition of the important information that must be provided to the ALM Committee, etc. specified by the internal rules?

(ii) Do the directors and Managers in charge of the relevant divisions attend all meetings of the

¹² In the case where an ALM Committee, etc. is not in place, the inspector should review whether an alternative risk management process is performing necessary functions.

ALM Committee, etc. and involve themselves in deliberations? When an incident that may seriously affect corporate management, such as a major change in the market environment, occurs, is a meeting of the ALM Committee, etc. held in a timely and appropriate manner with the participation of the representative directors?

2) Appropriate Assets and Liabilities Management

(1) Management of Limits

In comprehensive management of assets and liabilities, is management of limits conducted from the perspective of market risk management in accordance with the Market Risk Management Policy and the Market Risk Management Rules? Are limits established with due consideration for the capital and net profits from core businesses and are the limits established not excessive compared with the institution's corporate tolerance? Are long-term investments for business relationships and off-balance sheet assets and liabilities also taken into consideration in the setting of limits? Are alarm points set as necessary to issue warnings before the limits are reached? Are procedures in place for reporting and other measures to be taken when the alarm is triggered? Are the limits and alarm points revised in a regular and timely manner or on an as needed basis?

(2) Risk Control

Are market risk elements such as changes in interest rates, foreign exchange rates and prices controlled in accordance with the strategic objectives, etc., the Market Risk Management Policy and the Market Risk Management Rules? Is the level of interest rate risk in the banking book controlled, for example?

(3) Utilization of Examination by ALM Committee, etc. for Corporate Strategies

- (i) Are the results of analysis by the ALM Committee, etc. taken into consideration when the Board of Directors develops strategic objectives and the Market Risk Management Policy?
- (ii) Does the Market Risk Management Division review whether the market risk control is conducted in accordance with the strategic objectives, etc., the Market Risk Management Policy and the Market Risk Management Rules and the like and report its findings to the Board of Directors or equivalent organization to the Board of Directors? In the case where it finds otherwise, does the division take improvement measures without delay?

3. Funds

1) Management of Screening

(1) Decision-Making Process

When the institution purchases a fund, does it go through a decision-making process based on the internal rules, etc., with due recognition and understanding of the nature of the fund and the risks involved therein? For example, does the institution appropriately check the structure of the fund, the fund Manager risk and liquidity risk involved and the limitations of the institution's approach to management?

(2) Screening at the Time of Purchase

When purchasing a fund, does the institution appropriately check the following items, for example, based on its selection criteria?

- Investment strategy
- Risk management policy, risk management method
- Volatility
- Profit stability
- Nature of leverage and leverage policy

(3) Acquisition of Information

Does the contract provide for disclosure of information at appropriate intervals? Are details of the information disclosed sufficient in terms of risk management?

2) Continuous Risk Management

(1) Conduct of Appropriate Risk Management

Does the institution conduct risk management concerning the fund purchased based on sufficient understanding of the details of the fund, such as the presence or absence of an audit and the length of the cancellation period?

(2) Grasp of Investment Status

Does the institution review, with the use of asset management reports and the like, whether the fund is managed in accordance with the investment strategies, investment guidelines, etc. explained in advance? Does the institution appropriately check any change in the investment style of the fund?

(3) Acquisition of Information

Is the contract maintained in a way to ensure sufficient disclosure at appropriate intervals in terms of risk management, and are its terms observed?

3) Others

(1) Market-Value Evaluation

Does the institution review and check the validity of the various elements for determining the market value of the fund purchased, such as the assessment method of the fund's investment assets and other basic matters?

(2) Risk Quantity Measurement, etc.

Does the institution measure the risk quantity appropriately in a manner befitting the nature of the fund? Is the risk quantity measured within the appropriate investment limitations established with due consideration for the institution's capital, profit-earning power, etc.?

4. Market Risk Measurement Technique¹³

(1) Establishment of Market Risk Measurement System

- (i) Is the market risk measurement system conceptually sound and implemented with integrity?
- (ii) Is the role of the market risk measurement technique clearly positioned under the Market Risk Management Policy and implemented based on an understanding of the items listed below, for example? Does it determine if it is implemented with integrity to consolidated subsidiaries as well?
 - (a) The financial institution's strategic objectives, the scale and nature of its business and its risk profile
 - (b) The basic design concept of the market risk measurement technique based on (a)
 - (c) Identification and measurement of market risk based on (b) (coverage, technique, assumptions, etc.)
 - (d) The nature (limitations and weaknesses) of the market risk measurement techniques that derive from (c) and the validity of the technique
 - (e) Details of backtesting to study (d) (in the case where a statistical technique is employed to measure the risk quantity)
 - (f) Details of stress tests to supplement (d) (in the case where a statistical technique is used to measure the risk quantity)
- (iii) In the case where capital allocation management¹⁴ is employed has the capital allocation management policy been developed based on the outcomes obtained through the calculation of the market risk measurement technique? When there are risks which are not measured with this technique, are there any reasonable grounds for excluding them from the measurement? Is the risk capital allocated with due consideration for the risks excluded from the measurement?

¹³ Risk measurement techniques include not only statistical techniques but also BPV (basis point value), GPS (grid point sensitivity), etc.

¹⁴ See Checklist for Capital Management

2) Appropriate Involvement of Directors, Corporate Auditors and Board of Directors or equivalent organization to Board of Directors

(1) Understanding of Market Risk Measurement Technique

- (i) Do directors understand that decisions concerning the market risk measurement technique as well as the risk limits and the risk capital limits (in the case where capital allocation management is employed) have serious implications for the financial institution's corporate management and financial conditions?
- (ii) Does the director in charge of market risk management understand the market risk measurement technique required for the business of the financial institution and comprehend the nature (limitations and weaknesses) thereof?
- (iii) Do directors and corporate auditors seek to enhance their understanding of the market risk measurement technique by receiving training or through other means?

(2) Approach to Market Risk Management

- (i) Do directors involve themselves actively in market risk management that uses the market risk measurement technique?
- (ii) Does the Board of Directors clearly define the basic concept of the market risk measurement technique deemed as necessary for the business of the financial institution?
- (iii) Does the Board of Directors or equivalent organization to the Board of Directors take into consideration the results of stress tests when developing the Market Risk Management Policy and the Market Risk Management Rules?

3) Establishment of Independent Market Risk Management Division

(1) Securing of Independence of Market Risk Management Division

Does the institution have the Market Risk Management Division in charge of designing and operating the market risk management system established independently from the Office (Trading, Banking) Divisions? In the case where the institution is subject to market risk capital requirement, is the same director not in charge of the Office (Trading, Banking) Divisions and the Market Risk Management Division?

(2) Clarification of Roles and Responsibilities of Market Risk Management Division

Are the Market Risk Management Rules clearly defined the roles and responsibilities of the Market Risk Management Division?

(3) Roles and Responsibilities of Market Risk Management Division

- (i) Does the Market Risk Management Division report the outcomes obtained through the use of the

market risk measurement technique directly to the director in charge and the Board of Directors or equivalent organization to the Board of Directors?

- (ii) Has the Market Risk Management Division fully disseminated the internal rules and detailed operational procedures, etc. that must be observed to all of the relevant divisions?
- (iii) Does the Market Risk Management Division appropriately analyze and assess the outcomes obtained through the use of the market risk management technique?

4) Deployment of Staff for Market Risk Management

- (i) Are staff members with expertise in using the market risk measurement technique and the pricing model secured according to the needs of the operations of the relevant divisions (the Office (Trading, Banking) Divisions, the Market Risk Management Division, the Back-Office Division, the Internal Audit Division, etc.)?
- (ii) Does the Manager have sufficient knowledge and experience with regard to the market risk measurement technique and the pricing model?

5) Framework for Research on Market Risk Measurement Technique

Is a framework in place for conducting research on the market risk measurement technique?
Is research conducted on the following items, for example?

- Countermeasures of the limitations and weaknesses of the market risk measurement technique
- Preventing the market risk measurement technique from technology obsolescence
- Response to changes in the composition of market risks in the portfolio
- Elaboration and sophistication of the market risk measurement technique

6) Development of Internal Rules, etc. Concerning Market Risk Measurement Technique

(1) Development of Internal Rules

Has the institution developed the internal rules and detailed operational procedures that specify the policy concerning the use of the market risk measurement technique and the management and procedures thereof, and does it regularly revise the rules and detailed operational procedures? Is consistency secured between other internal rules and operational procedures concerning the market risk management system?

(2) Compliance with Internal Rules

Does the institution provide a system to ensure compliance with the internal rules and detailed operational procedures, etc.?

7) Incorporation of Market Risk Measurement Technique into Regular Market Risk Management

(1) Compilation and Communication of Reports on Market Risk Measurement Results

- (i) Are the results of market risk measurement promptly reflected in risk reports and communicated to the Manager?
- (ii) Are appropriate measures taken when the results of the calculation of the market risk measurement technique show a breach of the limits established by the institution?
- (iii) Is a report that includes comments for consideration by the Manager and sums up the status of major market risks compiled regularly and communicated to the Manager?

(2) Analysis and Utilization of Market Risk Measurement Results

- (i) Are the outcomes obtained through the use of the market risk measurement technique appropriately analyzed and utilized for market risk management?
- (ii) Do the relevant divisions utilize risk reports for their daily risk management business?
- (iii) Are the results of market risk measurement fully utilized for the development of strategic objectives, the Market Risk Management Policy and the Market Risk Management Rules as well as for monitoring? Are the results also taken into account in the development of the investment policy and the establishment of limits?
- (iv) Is analysis conducted on the relation among the market risk quantity calculated with the use of the market risk measurement technique, the limits and profit objectives established by the institution?
- (v) Are the outcomes obtained through the use of the market risk measurement technique (e.g. VaR (value at risk)) utilized for performance evaluation? Is performance evaluation conducted for each of the business units divided along the line of internal control for earning management, based on the risk-return analysis using the outcomes obtained through the use of the market risk measurement technique employed?

(3) Appropriate Use of Market Risk Measurement Technique

- (i) When the institution modifies the market risk measurement technique, does it follow appropriate procedures?
- (ii) When the institution modifies the market risk measurement technique, does it disseminate the modification to the relevant divisions and consolidated subsidiaries after determining the modified technique's consistency with the Market Risk Management Policy?
- (iii) It is desirable for the Office (Trading, Banking) Divisions and the Market Risk Management Division to conduct market risk management by using the outcomes obtained through the use of the same market risk measurement technique. When the techniques used by them are not the

same, are the differences comprehended?

8) Market Risk Measurement

(1) Securing of Appropriateness of Market Risk Measurement Technique

- (i) Does the institution use a market risk measurement technique that covers all of the important market risks it takes? In the case where there are risks excluded from measurement, has the institution reviewed the judgment that those risks are not important?
- (ii) When employing market risk measurement technique, does the institution make the selection after weighing its calculation results against the outcomes obtained through the use of other techniques by using test data?

(2) Reflection of Market Risk Measurement Technique in Computer System

- (i) Are changes in the risk measurement technique (measurement technique, assumptions, etc.) accurately reflected in computer systems?
- (ii) Is consistency secured between the systems used by the Office (Trading, Banking) Divisions, the Market Risk Management Division and the Back-Office Division? It is desirable that the Office (Trading, Banking) Divisions and the Market Risk Management Division use the same models (market risk measurement model, pricing model, risk factor calculation method, etc.). If this is not the case, does the institution comprehend the differences between the models used by the Office (Trading, Banking) Divisions and the Market Risk Management Division?

(3) Data Input into Computer System

- (i) Does the institution obtain data at an appropriate time? Has it established detailed guidelines for detecting and handling extraordinary data and is it operating based on these guidelines?
- (ii) Does the institution check data for errors?
- (iii) Do external data used by the institution come from appropriate sources? In the case where data from multiple sources are used, is there a rational reason for this and is consistency among those data secured? Is there not any problem with consistency, timing, reliability, and independence of the data source?
- (iv) Are the accuracy and completeness of position data secured? For example, is the input process of transaction data conducted through a direct link? When the input process is manual, is a review conducted to verify the data accuracy?

(4) Handling of New Products

Before introducing New Products, does the institution firmly comprehend the nature of the market risks involved and build the risks into the market risk measurement technique? In the case

where the institution decides not to apply the market risk measurement technique to the risks involved in New Products, are the grounds not to apply it reasonable?

9) Measurement of General Market Risk (in the case where the quantity of general market risk is measured)

(1) Market Risk Measurement

Does the institution use a measurement technique that covers all of the important risks it takes and conduct risk measurement appropriately? In the case where there are products and risk factors to which the market risk measurement technique is not applied in the calculation of the risk quantity, does the institution take steps to comprehend the quantity of the risks involved therein with the use of an alternative technique?

- Does the institution capture linear and non-linear risks when measuring its market risks?
- In the case where the institution takes optionality, does it capture the gamma and vega risks involved in options?
- In the case where the institution owns path-dependent products, does it capture the risks inherent in such products?
- In the case where the institution uses proxy variables in its risk measurement, does it capture residual risk?

(2) Frequency of Risk Measurement

In the case where the institution uses the internal model approach under market risk capital requirements, does it conduct daily measurement of VaR in the trading book?

(3) Confidence Level

In the case where the institution uses the internal model approach under market risk capital requirement, does it apply a one-tail confidence level of 99%? Does the accuracy of the outcome obtained through the use of the market risk measurement technique suit the confidence level applied? With regard to the outcome for use in internal control, in addition to verifying the accuracy of the results, are the grounds for the adoption of the confidence level applied clear?

- In the case where a parametric technique (variance-covariance method, etc.) is employed, is the assumption of distribution appropriate?
- In the case where a simulation method (historical simulation method, etc.) is employed, is the estimation of the distribution tail appropriate?
- In the case where the Monte Carlo simulation method is employed, are the precision of random numbers and simulation times consistent with the confidence level applied?

(4) Holding Period

In the case where the institution uses the internal model approach under market risk capital requirement, is the holding period set at 10 trading days or longer? Is the institution's data sampling method appropriate for the holding period? With regard to the data sampling method for internal control, is the holding period adopted consistent with the position's liquidation horizon and the characteristics of positions, in addition to reviewing the data sampling method?

(5) Historical Data Observation Period, Update Frequency and Handling of Deficient Data

- (i) Is the historical observation period one year or longer? Is the historical data observation period adopted valid?
- (ii) Are historical data updated at least once every three months? When a problem that may undermine the validity of the update frequency, such as large fluctuations in market prices, occurs, does the institution take appropriate countermeasures based on recognition of the need to update historical data?
- (iii) Is the method of supplementing deficient data appropriate?

(6) Consideration of Correlation

- (i) In the case where the institution takes into consideration the correlation between risks within each broad risk category (interest rate risk, foreign exchange risk, stock risk and commodity risk. Option volatility is included in a relevant risk category), does it determine the validity of the correlation with the use of historical data?
- (ii) In the case where the institution takes into consideration the correlation among broad risk categories, does it determine the reasonableness of the correlation and compile and store documents that explain this reasonableness?

(7) Establishing Market Risk Factors

- (i) Are market risk factors established in a way to enable the institution to sufficiently capture the market risk inherent in the institution's portfolio?
 - Does the institution establish market risk factors with regard to the broad risk categories of interest rate, foreign exchange, stock and commodity risks?
 - Does the institution revise the market risk factors set in a manner befitting the change in its business, the market environment, etc.?
 - In the case where proxy variables are used, are they valid and conservative?
- (ii) Are interest rate risk factors established in a way to enable the institution to sufficiently capture the interest rate risk inherent in the institution's portfolio?
 - Has the institution developed internal rules and detailed operational procedures

- concerning the yield curve formulation method?
- Is there not any problem with the consistency of the establishing yield curve-related risk factors (currency, type, period) and the modeling approach with the nature of the institution's portfolio?
 - Does the institution capture spread risk?
- (iii) Are foreign exchange risk factors established in a way to enable the institution to sufficiently capture the foreign exchange risk inherent in the institution's portfolio?
- Is the institution's treatment of a currency which lacks market liquidity in its market risk measurement consistent with its treatment of such a currency in the business policy?
- (iv) Are stock risk factors established in a way to enable the institution to sufficiently capture the stock risk inherent in the institution's portfolio?
- Are the stock risk factors established in a manner consistent with the nature of market and investment (unlisted shares, funds, the level of diversification and concentration of issues, etc)?
- (v) Are commodity risk factors established in a way to enable the institution to sufficiently capture the commodity risk inherent in the institution's portfolio?
- (vi) Are risk factors that enable the institution to sufficiently capture the optionality risk inherent in the institution's portfolio established within each risk category?
- Has the institution developed internal rules and detailed operational procedures concerning the method of the volatility curve formulation?
 - Is there not any problem with the consistency of the establishing volatility risk factors (currency, type and term) and the modeling approach with the nature of the institution's portfolio?
- (vii) In the case where the institution's portfolio contains risks other than the ones mentioned in (ii) to (vi), are risk factors established in a way to enable the institution to sufficiently capture such risks?

(8) Position Data

Does the institution establish relations between position data and risk factors in an accurate and appropriate manner? In mapping of assets related to two or more risk factors, does the institution match the assets with the corresponding risk factors?

10) Measurement of Specific Risks (in the case of financial institutions subject to market risk capital requirement, or that measure the risk quantity with regard to specific risks)

- (i) Does the institution measure all specific risks?
- (ii) In the case where the institution measures specific risks with the use of the internal model

approach, does it meet the following criteria?

- Can the institution explain the past price changes concerning its portfolio?
- Does the institution capture the impact of changes in its portfolio (including the level of risk concentration) on market risks as a whole?
- Does the institution comprehend the impact on the market risk in its entirety caused by the changes in market environment?
- Does the institution comprehend the difference between the risks involved in positions similar to each other but not identical given the difference in their maturities, levels of subordination and credit incidents involved, etc.?
- Does the institution accurately capture event risk and default risk?
- Can the institution show based on the results of backtesting that it accurately captures specific risks?
- Does the institution, under realistic market scenarios, conservatively assess risks arising from less liquid positions or positions with limited price transparency?

(iii) With regard to the event risk not captured by the market risk management technique because it is beyond the 10-day holding period and 99 percent confidence interval, does the institution capture the impact of such events through appropriate techniques such as stress testing?

(iv) In the case where the institution does not measure specific risks with the use of the internal model approach, does it use The Standardized Approach ?

11) Backtesting (in the case where a statistical technique is used to measure the risk quantity)

(1) Implementation of Backtesting

(i) Does the institution document the purpose, implementation method and frequency of backtesting as well as the analysis and reporting procedures thereof?

(ii) Does the institution regularly conduct backtesting with the use of actual profits/losses or hypothetical profits/losses for no portfolio changes?

In order to review the appropriateness of the market risk measurement technique, does the institution use profits/losses befitting a statistical verification?

(iii) In the case where the institution takes into consideration the correlation measured based on historical data within each broad risk category (interest rate risk, foreign exchange risk, stock risk and commodity risk; however, option volatility is included in a relevant risk category), does it conduct backtesting on a category-by -category basis in a manner befitting the nature of the business?

(2) Analysis of Backtesting Results

(i) When the actual profits/losses exceeds the outcome obtained through the use of the market risk

measurement technique, does the institution analyze and study the cause thereof and revise the measurement model accordingly?

- (ii) Does the institution take appropriate responses according to the number of exceptions that actual profits/losses exceeded the outcomes obtained through the use of the market risk measurement technique?
- (iii) Does the institution comprehend, based on the results of backtesting, the nature of the market risk measurement technique (limitations and weaknesses) and risks not covered by the technique and ensure the reliability and appropriateness of the market risk measurement technique by taking necessary countermeasures?
- (iv) Are the results of backtesting and the results of the analysis and study thereof reported to the director in charge and the Board of Directors or equivalent organization to the Board of Directors? Does the institution provide a system to ensure that when any problem with regard to the appropriateness of the market risk measurement technique is detected based on the results of backtesting and the analysis thereof, the problem is reported to the Board of Directors or equivalent organization to the Board of Directors without delay and countermeasures are formulated?

12) Calculation of Market Risk Equivalent Amount under Market Risk Capital Requirement (in the case of financial institutions subject to market risk capital requirement)

(1) Calculation of Market Risk Equivalent Amount

Is the market equivalent amount adopted by the institution the larger of the VaR (value at risk) on the calculation base date and a figure obtained by multiplying the average VaR (value at risk) over the last 60 trading days including the calculation base date by the prescribed multiplier?

(2) Appropriate Response to Exceptions in Backtesting

Whenever a daily actual loss amount exceeds the relevant daily VaR (value at risk) five times or more during the most recent 250 trading days including the calculation base date, does the institution establish the system to analyze the cause and explain it clearly?

13) Stress Tests (in the case where a statistical technique is used to measure the risk quantity)

(1) Implementation of Stress Tests

- (i) Does the institution document the purpose, implementation method and frequency of stress tests as well as the analysis and reporting procedures thereof?
- (ii) Does the institution conduct stress tests in an appropriate manner in a regular and timely manner or on an as needed basis? If the institution is subject to market risk capital requirement, it should regularly conduct stress tests.

(iii) Do the risk factors subject to stress tests cover material transactions? Does the institution revise risk factors not subject to stress tests as necessary?

(2) Developing of Stress Scenario

Does the institution develop scenarios that take into consideration incidents that may seriously affect the financial institution and supplement the limitations and weaknesses of the market risk measurement technique?

- Does the institution develop stress scenarios, which apply market turmoil, where big price fluctuations and a rapid decline of liquidity occurred simultaneously in the past crises, to the current portfolio?
- Does the institution develop a worst-case scenario for its portfolio?
- Do the stress scenarios set by the institution reflect its risk nature? Do the scenarios take into consideration the nature of options and products similar in nature to options, for example?
- Does the institution set stress scenarios in case the assumptions of the market risk measurement technique, etc. are failing ?

(3) Utilization of Stress Test Results

Are the results of stress tests and the results of analysis and study thereof reported to the director in charge and the Board of Directors or equivalent organization to the Board of Directors? Does the institution provide a system to ensure that when a large amount of loss is expected as a result of a stress test, the case is reported to the Board of Directors or equivalent organization to the Board of Directors without delay and corrective measures are formulated? Does it utilize the test results in a way to reflect them in the investment policy, the establishing limits and the internal capital adequacy assessment?

14) Review of Accuracy and Appropriateness of Market Risk Measurement Technique (in the case where a statistical technique is used to measure the risk quantity)

- (i) Are the accuracy and appropriateness of the market risk measurement technique assessed and challenged in the development stage and regularly thereafter by a person or persons with no involvement in the development of the market risk measurement technique and with sufficient capabilities? Is such a review also made in the case where a material modification of the market risk measurement technique, a structural change of the market or a change in the portfolio may undermine the accuracy and appropriateness of the technique?
- (ii) Does the institution not underestimate risks in using the market risk measurement technique because of inappropriate assumptions, etc.?

- (iii) Does the institution conduct backtesting in order to assess the accuracy and appropriateness of the market risk measurement technique? Does it seek to enhance the review by conducting medium- and long-term analysis, for example, in addition to backtesting required by regulation?
- (iv) Does the institution obtain reasonable assessment results by reviewing the measurement model in an appropriate manner in light of the institution's portfolio and the structure of the market risk measurement technique?
- (v) Does a review using a hypothetical portfolio show that the market risk measurement technique appropriately captures the impact that may arise from the structural nature of the portfolio?

15) Document of Records on Market Risk Management Technique (in the case where a statistical technique is used to measure the risk quantity)

Does the institution develop the system to keep meticulous records, for future reference, on the deliberation process with regard to the selection of the market risk measurement technique and the assumptions thereof and the grounds for the selection, in order to enable a follow-up review and utilize the records to make the measurement more sophisticated and elaborated? Does the institution keep records with regard to the following items, for example?

- The basic design concept
- Documents that explain the key points and details of the market risk measurement technique (measurement technique, assumptions, etc.)
- Results of deliberation with regard to the selection of the market risk measurement technique and the grounds for the selection
- Details of the implementation of assessment of the accuracy and appropriateness of the market risk measurement technique, results of assessment thereof and the grounds for the judgment
- Details of the implementation of backtesting and stress tests, results of assessment thereof and the grounds for the judgment
- The pricing model of each product

16) Audits (in the case where a statistical technique is used to measure the risk quantity)

(1) Development of Audit Program

Has the institution developed an audit program that exhaustively covers audits of the market risk measurement technique?

- Does a person in charge of internal audits have expertise in the market risk measurement technique?
- Is an internal audit conducted at least once a year?

(2) Scope of Internal Audits

Is auditing conducted to check the following items?

- Consistency of the market risk measurement technique with the strategic objectives, the scale and nature of the business and the risk profile
- Appropriateness of employing the market risk measurement technique in light of the nature (limitations and weaknesses) thereof
- Appropriate documentation of records on the market risk measurement technique and timely updating thereof
- Appropriateness of the deployment of staff members with expertise in the use of the market risk measurement technique and pricing models
- Integration of the results obtained through the use of the market risk measurement technique into daily management of market risks
- Appropriateness of the approval process of a new model that includes pricing models and a market risk measurement technique
- Appropriate reflection of any modification of the process of market risk management in the measurement technique
- Validity of the scope of measurement conducted with the market risk measurement technique
- Absence of any deficiency in the information system for the management
- Reasonableness of the logic of pricing models
- Validity of the market risk measurement technique and the assumptions, etc.
- Accuracy and completeness of data used in market risk measurement
- Consistency, timeliness, reliability and independence of data source used when the market risk measurement technique is applied
- Adequacy of the process and results of backtesting
- Adequacy of the process and results of stress tests
- Appropriateness of the regular review of the market risk measurement technique

(3) Utilization of the Results of Internal Audits

Does the Market Risk Management Division appropriately revise the market risk measurement technique based on the results of internal audits?

(4) Utilization of the Results of External Audits

Are external audits conducted in an appropriate manner (in terms of coverage, frequency and depth) with due consideration for the nature of the institution's business and the status of implementation of internal audits? Does the Market Risk Management Division appropriately

revise the market risk measurement technique based on the results of external audits?

5. Market Risk Measurement Model Developed by Outside Vendor¹⁵

(1) Appropriateness of Market Risk Measurement System

- (i) Does the person in charge of market risk measurement at the financial institution have sufficient knowledge with regard to the measurement technique and understand the modeling process of market risk measurement?
- (ii) Do the institution's Market Risk Management Division and the Internal Audit Division conduct a theoretical and empirical verification of the validity of the measurement technique?

(2) Appropriateness of Market Risk Measurement Model

- (i) Is there not any "black box" with regard to the measurement model? If there is one, has the validity of the measurement model been verified ?
- (ii) Are the consistency and the accuracy of data used in measurement secured?
- (iii) Is the measurement model selected suited to the scale and nature of the financial institution's business, and its risk profile?

(3) Management of Developer of Market Risk Measurement Model

- (i) Is the developer consigned with the development of the market risk measurement model capable of ensuring continuous management of the model and promoting sophistication and elaboration of the model? Does the institution regularly evaluate the developer?
- (ii) Does the developer provide sufficient user support (training, consulting and maintenance) with regard to market risk measurement?
- (iii) Is it ensured that the developer reports to the institution on the status of its verification of the validity of the measurement model in a regular and timely manner or on an as needed basis?

6. Installation of Computer System

(1) Dealing Support System

Does the institution have a dealing support system that enables mark-to-market evaluation of dealer-by-dealer (or unit-by unit) positions and office-by-office positions with regard to all major products it handles? Does it have a system that enables management of profits on a dealer-by-dealer or a position-by-position basis?

(2) Installation of ALM System

¹⁵ In the case where the market risk measurement is outsourced, the review should be conducted by using the check items listed in this paragraph.

Does the institution have a system in place for assets and liabilities management? For example, does it have a system that uses a multifaceted risk-return analysis technique that covers the institution's market risks including interest rate risk such as repricing risk, yield curve risk and basis risk as well as foreign exchange risk and price change risk and that is befitting the scale and nature of the institution's business, and its risk profile?

(3) Computer System for Back-Office Processing

Does the institution have accounting and information support systems that can fully perform basic back-office processing, settlement and management concerning all transactions in which the institution is involved?

7. Calculation of Market Prices

(1) Development of Internal Rules

In order to exclude arbitrariness from accounting processes and ensure transparency, it is necessary for the Board of Directors or equivalent organization to the Board of Directors to establish internal rules and enforce them on a continuous basis. Does the institution specify the following items at a minimum? Does the institution attach due importance to the internal rules and, when revising the rules, does it follow procedures same as those followed when they are established?

- a. Power and responsibilities of the Manager in charge of the division that calculates market values.
- b. Obligation to comply with internal rules and procedures for revising the rules
- c. The basic concept concerning the calculation of market values
 - Calculation of market values by a division independent from organizations that conduct *TOKUTEI-TORIHAKI* (hereinafter referred to as the "Segregated Trading") and non-segregated trading transactions
 - The method of market value calculation. (In the case where the method of calculating market values is specified by other documents, the internal rules should make reference thereto.)
 - The method of involvement of an organization performing front-office functions in the calculation of market values in the case where such involvement is necessary

(2) Independence of Market Value Calculation Division

Are divisions in charge of market trading and the calculation of market values separately established in order to secure fairness in market value calculation? Aren't the Office (Trading, Banking) Divisions intervening in the Market Value Calculation Division in a way to undermine the objectivity of the calculation.

(3) Securing of Objectivity of Market Value Calculation

- (i) Has the institution established a market value calculation manual in accordance with the internal rules and does it follow the manual on a continuous basis? When it becomes necessary to modify the calculation method because of an accounting system reform and the development of a new technique or for other reasons, does the institution promptly make modification in accordance with the internal rules? Does it make clear the status of such modification?
- (ii) Has the manual for market value calculation been approved in an appropriate manner by the person with the approval authority after being checked by a division (such as the Risk Management Division and the Internal Audit Division) independent from the Office (Trading, Banking) Divisions (divisions performing so-called front-office functions) and a division responsible for the development of financial products, in order to secure fairness and validity of the manual? Is the status of use of the manual regularly checked by a division independent from the Office (Trading, Banking) Divisions, a division in charge of the development of financial products and a division in charge of market value calculation?
- (iii) Does the institution calculate market values appropriately based on “Accounting Standards concerning Financial Products” (Accounting Standards Board of Japan), etc.? Does it conduct market value calculation on its own? In the case where the institution obtains market value information from third parties, does it obtain such information regularly and review the validity of the market values for itself?
- (iv) Does the institution include the status of securing of objectivity of market value calculation among its important internal audit items?

8. Issues Related to Segregated Trading (in the case of institutions which have segregated trading books)

(1) Development of Internal Rules

In order to exclude arbitrariness and ensure transparency in segregated accounting, it is necessary for the Board of Directors or equivalent organization to the Board of Directors to establish clear internal rules and enforce them on a continuous basis. Does the institution specify the following items at a minimum in addition to the items listed in Chapter III. 7. (1) above? Does the institution attach due importance to the internal rules, and, when revising the rules, does it follow procedures same as those followed when they are established?

- a. Clear operational procedures concerning segregated accounting based on the legal definition of “segregated trading purposes”
 - Definition of segregated trading purposes
 - Clear organizational divisions (divisions of personnel into units) and independent decision-making power
 - Restrictions on concurrent service of dealers in organizations involved in segregated

- trading and other organizations
- Ban on transfers between accounts (excluding the case where such transfers are conducted within the limitations allowed according to an application filed with the authority in accordance with laws)
 - Limiting of counterparties for segregated trading securities to market and recognition of the hedging purpose
- b. Power and responsibilities of the Manager in charge of a division that conducts segregated trading
- c. Responsibilities to comply with internal rules and procedures for revising internal rules
- d. Methods concerning internal trading and management thereof
- Definition of internal trading and coverage thereof
 - The basic policy on internal trading
 - Approval of internal trading by an organization independent from a front-office organization
 - Approval procedures of internal trading and documents to be stored
- e. Rules concerning commissioned trading

(2) Separation of Organizations and Personnel

It is desirable that an organization engaged in transactions related to the segregated trading book (an organization performing so-called front-office functions at a minimum) be a unit (e.g. section, group, department) or larger in size and be separate in terms of organizational structure and personnel from an organization that is engaged in similar transactions but also conducts transactions related to the non-segregated trading book, which has a different purpose.

It should be noted that such an organizational division is not necessarily required in the case where segregated trading and assets involved in such transactions are clearly segregated from other types of transactions and assets involved therein from an objective viewpoint and it is thus deemed that there is no concern that accounting manipulation would be conducted (e.g. in the case where the segregated trading division is concurrently engaged in transactions other than those listed as segregated transactions).

(3) Book-Keeping

With respect to the books for the segregated trading book, are segregated transactions and assets involved in them clearly distinct from other transactions and assets involved therein?

(4) Ban on Transactions Related to Non-Segregated Trading Book by Segregated Trading Division

Is an organization engaged in transactions related to the segregated trading book not involved in transactions related to the non-segregated trading book (and vice versa). (This shall not apply to the case where segregated transactions and assets involved in such transactions are clearly distinguished from other types of transactions and assets involved from an objective viewpoint and it is thus deemed that there is no concern that accounting manipulation would be conducted.)

(5) Ban on Arbitrary Account Choice

Does the institution not decide in an arbitrary manner whether to enter a transaction in the segregated or non-segregated trading book, for example deciding to process a transaction that should be handled in the non-segregated trading book as a segregated transaction in dealing with a market risk-related problem?

(6) Adequateness of Internal Trading

With regard to internal trading within a financial institution, there is concern that the institution may take advantage of the differences between accounting systems in posting profits/losses. In order to exclude arbitrary trading, does the institution conduct internal trading appropriately in accordance with the “Documents Noting Matters Related to the Handling of Internal Trades” (or internal rules concerning the segregated trading book)?

(7) Securing of Objectivity of Market Value Calculation

Does the institution include the following items in particular among the check items concerning internal control in order to secure objectivity of market value calculation in the segregated trading book ?

- a. Is there no deviation from the scope of transactions specified in the ordinance? (Inter-account transactions are not allowed for exchange transactions, securities-related transactions and acquisitions and transfers of monetary receivables)
- b. Is an internal check and balance system functioning effectively to ensure that internal trading is conducted in accordance with the internal rules? For example, is internal trading conducted at market price?
- c. Are internal transactions indicated as such on trading tickets and the records thereof stored separately?
- d. Is there not any intentional profit/loss adjustment?

(8) Disclosure

Does the institution disclose the following items with regard to appropriate segregated accounting and obtaining and management of objective market prices?

- a. Framework of segregated trading book (definition of “trading for the segregated trading purpose,” specific products eligible for segregated trading, organizational divisions, etc.)
- b. Measures to secure objectivity of market prices
- c. Financial information concerning the segregated trading book