The globalization of markets, increased transaction volume and volatility, and the introduction of complex products and trading strategies have led capital-markets and trading activities to take on an increasingly important role at financial institutions over the last decade. These activities include the use of a range of financial products and strategies, from the most liquid fixed-income securities to complex derivative instruments. The risk dimensions of these products and strategies should be fully understood, monitored, and controlled by bank management. Accordingly, adequate risk-management systems and controls at financial institutions are essential to prevent losses and protect capital. The role of regulators in supervising capital-markets and trading activities is to evaluate management's ability to identify, measure, monitor, and control the risks involved in these activities and to ensure that institutions have sufficient capital to support the risks they take. The level of risk an institution may reasonably assume through capital-markets and trading activities should be determined by the board of directors' stated tolerance for risk, the ability of senior management to effectively govern these operations, and the capital position of the institution.

OVERVIEW OF RISK

For capital-markets and trading activities, risk is generally defined as the potential for loss on an instrument, portfolio, or activity. Thus, the risks referred to in this manual will be discussed in terms of the impact of some event on value (value-at-risk) and income (earnings-at-risk) from the instrument, activity, or portfolio being addressed.

Risk management is the process by which managers identify, assess, monitor, and control all risks associated with a financial institution's activities. The increasing complexity of the financial industry and the range of financial instruments have made risk management more difficult to accomplish and to evaluate. In more sophisticated institutions, the role of risk management is to identify the risks associated with particular business activities and to aggregate summary data into generic components, ultimately allowing exposures to be evaluated on a common basis. This methodology enables institutions to manage risks by portfolio and to consider exposures in relationship to the institution's global strategy and risk tolerance.

A financial institution's risk-management process should not only be assessed by business line, but also in the context of the global, consolidated institution. A review of the global organization may reveal risk concentrations not readily identifiable from the limited view of a branch, agency, Edge Act institution, nonbank subsidiary, or head office on a stand-alone basis. The consolidation of risk information also allows the institution to identify, measure, and control its risks, while giving the necessary consideration to the breakdown of exposure by legal entity. Sometimes, if applicable rules and laws allow, identified risks at a branch or subsidiary may be compensated for by offsetting exposures at another related institution. However, this management of risks across separate entities must be done in a way that is consistent with the authorities granted to each entity. Some financial institutions and their subsidiaries may not be permitted to hold, trade, deal, or underwrite certain types of financial instruments, including some of those instruments discussed in the 4000 sections of this manual, unless they have specifically received regulatory approval. Furthermore, conditions and commitments may be attached to regulatory approvals to engage in certain capital-markets activities. Examiners should ensure that financial institutions have the proper regulatory authority for the activities they engage in and that activities are conducted consistent with their specific regulatory approvals.

Ideally, an institution should be able to identify the relevant generic risks and should have measurement systems in place to conceptualize, quantify, and control these risks on an institutional level using a common measurement framework. However, it is recognized that not all institutions have an integrated risk-management system that aggregates all business activities. In addition, risk-management methodologies in the marketplace and an institution's scope of business are continually evolving, making risk management a dynamic process. Nonetheless, an institution's risk-management system should always be able to identify, aggregate, and control all risks posed by capital-markets and trading activities that could have a significant impact on capital or equity.

Examiners need to determine the ability of the institution's risk-management system to measure and control risks. The assessment of risk-management systems and controls should be performed by type of instrument and type of risk. Some of the risks inherent in the trading process are described below:

- *Market (price) risk* is the risk that the value of a financial instrument or a portfolio of financial instruments will change as a result of a change in market conditions (for example, interest-rate movement).
- *Funding-liquidity risk* refers to the ability to meet investment and funding requirements arising from cash-flow mismatches.
- *Market-liquidity risk* refers to the risk of being unable to close out open positions quickly enough and in sufficient quantities at a reasonable price to avoid adverse financial impacts.
- *Counterparty credit risk* is the risk that a counterparty to a transaction will fail to perform according to the terms and conditions of the contract, thus causing the holder of the claim to suffer a loss in cash flow or market value.
- *Clearing/settlement credit risk* is (1) the risk that a counterparty who has received a payment or delivery of assets defaults before delivery of the asset or payment or (2) the risk that technical difficulties interrupt delivery or settlement despite the counterparty's ability or willingness to perform.
- *Operations and systems risk* is the risk of human error or fraud or the risk that systems will fail to adequately record, monitor, and account for transactions or positions.
- *Legal risk* is the risk that a transaction cannot be consummated because of some legal barrier, such as inadequate documentation, a regulatory prohibition on a specific counterparty, and nonenforceability of bilateral and multilateral close-out netting and collateral arrangements in bankruptcy.
- *Reputational risk* is the risk arising from negative public opinion regarding an institution's products or activities.

The examiner must be prepared to identify and evaluate exposures that arise out of any part of a capital-markets operation. To that end, the examiner must become familiar with the institution's overall reporting structure and segregation of duties, range of business activities, global risk-management framework, risk-measurement models, and system of internal controls. Furthermore, the examiner must assess the qualitative and quantitative assumptions implicit in the overall risk-management system and the effectiveness of the institution's approach to controlling risks. In addition, the examiner must determine that the management information system and other forms of communication are adequate for the institution's level of business activity.

Banking supervision is a dynamic process and this is especially evident in the oversight of capital-markets and trading activities. As capital markets, financial instruments, and secondary-market activities continue to expand and develop, they have an increasingly significant impact on the safety and soundness of financial institutions. Consequently, it has become equally necessary for bank supervisors to focus their attention on the capital-markets and trading activities arena. Policies and practices for evaluating the exposures, management tools, and controls employed by banking institutions have had to be constructed and adapted to keep pace with changes in the industry. In this context, the manual encourages the examiner to ask the following basic questions:

- Are the tools employed by management to measure and monitor risk exposure adequate?
- Is the level of risk exposure appropriate given the financial institution's size, sophistication, and financial condition?
- Are the risks in the institution's portfolio of products and activities recognized, understood, measured, and managed?
- Are the activities conducted consistent with the goals and risk tolerance of senior management and the board of directors?

To prepare for the on-site portion of the examination of any capital-markets or trading activity, a preliminary overview of the range of products and activities of the institution should be developed. This overview will help examiners formulate a scope and objective for the upcoming exam that is consistent with the types and levels of risk exposure assumed by the institution.

PREEXAMINATION REVIEW

The review of trading activities is generally conducted on the basis of a financial institution's organizational structure. These structures may vary widely depending on the size and sophistication of the institution, the markets and geographies in which it competes, and the objectives and strategies of its management and board of directors.

Many banks and bank holding companies have several subsidiaries that conduct business independent of affiliated entities, and some branches and agencies may operate autonomously. The overlap of business lines, sharing of information and personnel, and transaction netting agreements that exist among affiliated legal entities force examiners to go beyond the basic business-unit review and focus on functional exposures within the global institution. It is also important for an examiner to ensure that an institution respects divisions between legal entities, such as firewall and bank/nonbank separations. For example, while a bank holding company must be aware of the level of its consolidated risk, it cannot ignore legal boundaries completely in the management of that risk. Exposure in the bank is not automatically hedged by offsetting positions in the bank holding company and vice versa. In some cases, transactions may be offset by a transaction between these affiliates which may, however, be subject to other regulatory requirements. Bank holding companies should manage and control risk exposures on a consolidated basis, while recognizing legal distinctions among subsidiaries. Examiners should always maintain a view of the "big picture" impact of capital-markets and trading activities on consolidated risk exposure.

The examiner team should meet before the examination begins to summarize the institution's status and assign responsibilities for completing preparatory work. Generally, examination assignments may be segregated based on products, activities, or functions. For example, for trading operations, examiners may be given administrative responsibility for the following areas of review:

- interest-rate products including fixed-income securities, swaps, futures, forward-rate agreements (FRAs), options, caps, and floors
- currency-related activities including customer-driven and discretionary foreign-exchange (FX) trading, cross-currency transactions, and currency derivatives (for example, currency options, forwards, futures, and swaps)
- equity-based products and activities including equity options, warrants, and swaps
- commodity-based products and activities including commodity futures, options, and forwards

Other capital-markets activities, such as asset securitization or secondary-market credit activities may be assessed by specific activity, function, or product.

To prepare examiners for their assignments, the following initial procedures should be followed to achieve the required scope and coverage of the institution's activities.

- Determine the extent of work performed during the past year by auditors and regulatory agencies (these would include, but not be limited to, the institution's internal auditors, the various exchanges, the Securities and Exchange Commission, the Commodity Futures Trading Commission, the National Association of Securities Dealers, the National Futures Association, and the Internal Revenue Service).
- Review deficiencies identified by audit reports and reports of examination.
- Obtain a listing of the names, qualifications, functions, and positions of key trading and front- and back-office personnel, and a current organizational chart. This material should be available in prior examination and inspection reports.
- Evaluate the volume of transactions and the dollar value of positions held in each trading product and activity. These data may be found in various regulatory reports.
- Using the audit findings on the effectiveness of controls over capital-markets and trading activities, evaluate the examination scope to assess organizational and reporting changes, identify perceived weaknesses, and highlight patterns of error.

BACKGROUND REVIEW

Specific items which should be reviewed during the preexamination process for capital-markets and trading activities include the following:

- *Regulatory reports.* During the planning stages of an examination, the examiners may estimate activity volumes and diversity of instru-

ments and activities from periodical regulatory reports. This information will help in the development of an examination scope and objective, as well as in the determination of staffing and resource requirements.
- *Prior report of examination.* The findings and conclusions of the prior examination are invaluable to the preparation of the scope and objectives of the current examination. Examination reports provide insight into bank management's policies and practices in measuring and managing risk, the extent of risk exposure in a given product and/or activity, and the overall adequacy of the trading-activity control environment.
- *Audit reports.* Internal and external audits are often focused on the activities of individual business units and may not encompass aggregate exposures and controls. Nevertheless, they are useful in identifying exceptions to internal policies and specific violations such as limit exceptions. Management's responses to audit findings are also useful in identifying corrective actions and the direction of the unit.
- *Correspondence since the last examination.* An additional resource that should be reviewed before an examination is the correspondence file. This will contain important information such as management's response to the prior examination findings, any applications submitted to the Federal Reserve (for additional powers, mergers, and acquisitions), and any supervisory action or agreement that may exist.
- *Outstanding applications.* The examiner-in-charge should inquire about the status of any outstanding applications before the Federal Reserve Board that may suggest expansion in the capital-markets and trading activities of the banking institution.

FIRST-DAY LETTER

In preparation for an on-site examination, examiners will often need to customize the first-day-letter questionnaire to reflect the specific focus of the capital-markets review. The focus will reflect the range of products and activities of the institution as well as management's approach to risk control. The following is a brief list of core requests to be made in the first-day letter:

- a copy of the organization charts (including name and title of managers) for the capital-markets or global-trading operations to be assessed, including functional and legal-entity organization
- a copy of the institution's written risk-management policies and procedures that outline the instruments traded, their associated risks, and the monitoring of the risks
- a copy of established limits for each principal type of risk as well as documentation indicating periodic approval by the board of directors
- general-ledger and subsidiary-ledger accounts identifying the range and level of activity as of the examination date
- management information reports used in the global, functional, or legal-entity oversight of market- and credit-risk management
- detailed information on transactions that are unique or uncommon
- copies of management reports issued in connection with the bank's new financial products that were put in place since the last examination indicating the office at which such activity is conducted, the lines and limits established for each activity, and the perceived risks associated with each activity
- a description of the scope and frequency of internal and external audits of the institution's capital-markets and trading activities and copies of audits, including working papers, conducted of capital-markets operations since the last examination

The first-day letter to an institution that engages in capital-markets or trading activities and the use of derivatives usually will be much more precise and comprehensive than this list, depending on the institution's range of products and activities. Significantly more detail should be requested relative to the objectives of the trading operations, the activities in which the institution engages, the products it uses, and the risk-management methods and reports it relies on. The first-day letter should also include requests for detailed information related to the areas highlighted in the market, credit, liquidity, and operational risk sections of this manual.

Obtaining an overview of the organization, management structure, product universe, and control environment of a financial institution's capital-markets and trading activities is a critical initial step in the examination process. This overview can be developed by applying the examination procedures listed in this manual, which enable the examination team to understand the institution's legal-entity and managerial structures and the scope and location of its activities, and to evaluate policies, procedures, and actual practices. An overview also helps the examiner to identify broad internal control processes and gain insight into how effectively they cover trading activities. Finally, the overview helps identify significant changes in operations and the rationale for those changes.

Evaluating the capital-markets, trading, and marketing activities conducted by the financial institution can be a complicated task that may be compounded by the lack of a clear distinction between bank and nonbank powers granted to an institution. A number of institutions will shift positions among legal entities to facilitate risk management along product or geographic-market lines. Therefore, the overview or organizational structure is central in evaluating whether the financial institution has separated activities as required by law and regulation.

The examiner-in-charge is responsible for evaluating the organizational structure, activities, overall risk-management system, and controls of the global-trading and capital-markets operations at the highest organizational level. In a U.S. financial institution, this would generally be the bank holding company level. Examiners should be aware that organization and structure can differ significantly among financial institutions.

OPERATIONAL AND LEGAL STRUCTURE OF THE FIRM AND ITS CAPITAL-MARKETS ACTIVITIES

The ownership structure includes the geographic locations and legal-entity divisions of an institution's relevant banking and nonbanking operations, including holding companies, significant affiliated entities, and separately capitalized units such as section 20 or limited purpose ‘‘venture’’ entities. Other organizational structures include branches, agencies, subsidiaries, joint ventures, or portfolio investment partnerships. Some of these entities may be registered with regulatory agencies such as the Securities and Exchange Commission (SEC), National Association of Securities Dealers (NASD), and Commodity Futures Trading Commission (CFTC) and may have affiliations with, or membership in, stock and commodities exchanges worldwide. These organizations may impose constraints on the activities of an institution, and the examination team should be aware of the scope, conclusions, and timing of any examinations, inspections, and reviews conducted by other regulatory bodies.

Depending on the powers granted to it by the country having jurisdiction, a diversified multinational banking organization may use a variety of functional management structures which cross legal-entity boundaries to invest, trade, underwrite, or deal in trading products. Functional management lines may be introduced to facilitate decision making. An institution may clear its own trading products, provide clearing services for customers, or maintain clearing and settlement relationships with correspondent financial institutions. The examiner should review these operations as well as the reasons and results of significant reorganizations, particularly if the entities have exceptional earnings profiles.

To manage and control activities on a global basis, a financial institution should have programs established to identify where it conducts activities both by business entity and by legal entity. These programs should document how activities are monitored on an ongoing basis and reported to senior management. The examiner should review the adequacy of the management information system from a reporting and automation perspective. The most recent internal and external audit reports covering the banking institution's capital-markets and trading activities should be evaluated to identify any deficiencies related to organizational structure and separation of duties. For additional guidance, examiners should refer to the *Bank Holding Company Examination Manual*, specifically section 2185.0 on nonbank section 20 subsidiaries engaged in dealing and underwriting and the 3000 sections on nonbank activities, including securities brokerage, foreign-exchange advisory, futures commission merchant, primary dealer, and a wide range of other underwriting and dealing activities.

Risk-Management Organization

Risk management is the process of monitoring, controlling, and communicating to senior management and the board of directors the nature and extent of risk from capital-markets and trading activities. The board of directors has a regulatory mandate to set and periodically approve an institution's limit levels, given its tolerance for risk. Senior management should regularly evaluate the risk-management procedures in place to ensure they are appropriate and sound. Senior management should also foster and participate in active discussions with the board of directors, staff of risk-management functions, and traders regarding procedures for measuring and managing risk. Management must also ensure that capital-markets and trading activities are allocated sufficient resources to manage and control risks.

Personnel responsible for the risk-management function should be separate from trading-floor personnel. In contrast to the measurement and assessment of risk exposures, the day-to-day management of exposures by trading staff may follow a decentralized, product- or portfolio-specific approach. Therefore, an independent system for reporting exposures to both senior-level management and the board of directors is an important element in the overall risk-management process.

A review of the structure of managerial reporting lines is helpful in determining the financial institution's capacity to identify and manage risk. The reporting lines may be structured by legal entity, by functional lines of responsibility, or along business or profit-center lines. The examiner should request the organization chart to identify overlaps in the legal and operational structures and should cite possible violations of section 20 firewall provisions or other regulations which require strict separation of activities. Examiners should be aware of special conditions appearing in authorizations for the board of directors. Potential conflicts of interest of board members should also be evaluated.

Risk management can be performed globally, concentrating on the institution's generic categories of risk, locations, and activities, or by functional department, specific product, or portfolio. Global risk-management reports should clearly describe the elements of risk; provide a quantifiable description of the amount of capital allocated to capital-markets and trading activities; and identify limits on market, credit, and operational risks. *Examiners should be aware that a global approach to risk analysis can fail to identity specific risk levels in specific products, functions, or activities. Conversely, functional decentralized approaches can miss consolidated risks. Risk-analysis methods which incorporate aspects of both approaches are more effective.*

Financial institutions should have highly qualified personnel throughout their capital-markets and trading teams, including those in functions responsible for risk management and internal control. The personnel of independent risk-management functions should have a complete understanding of the risk associated with all on- and off-balance-sheet instruments that are transacted. Accordingly, compensation policies for these individuals should be adequate to attract and retain qualified personnel. As a matter of general policy, compensation policies, especially in the risk-management, control, and senior-management functions, should be structured to avoid potential incentives for excessive risk taking that can occur if, for example, salaries are tied too closely to the profitability of capital-markets and trading activities.

BUSINESS LINES AND SERVICES

Financial institutions identify primary business lines in a variety of ways. In trading operations, the transaction activity of different instruments may be subdivided into financial engineering, sales and distribution, underwriting, market making, proprietary trading and advisory services, and others. The grouping of activities may provide insight into the market strategy or competitive advantage of an institution, its capital and risk-limit allocation, and its concentration of risk. Transaction-activity groupings may help to identify the managerial and operational synergy between business and product lines and between affiliated entities.

Institutions may specialize in trading specific types of instruments and offer services tailored to their customers. The degree of diversity in the range of business lines and services is a measure of the banking organization's capacity to establish a presence in those markets. Diversity of business lines can be an early indicator of potential imbalances in an institution's resource allocation, such as too broad a range of unsupervised activities or dependence on too narrow a range of activities.

Products and services that an institution has begun offering or discontinued since the previous examination should be identified. Business strategies which discuss any planned or recent changes to the business should be reviewed. A restructuring in business lines and services might be used to camouflage problems such as recognizing illegal profits or incurring large losses or breaches of internal limits, controls, regulations, or banking and securities laws. The examiner should refer all exceptional or unusual findings to the examiner-in-charge. Initiation of new products or new business initiatives should be formally approved by the board of directors after thorough research into all relevant aspects of the product.

Banking regulations provide for limitations and restrictions on permissible activities for banking organizations and their nonbank subsidiaries. A review of specific products and services is an additional check for identifying the banking organization's adherence to applicable legal or regulatory requirements. To ensure the adequacy of internal accounting, clearing, and settlement of transactions, banking institutions should document the methods used to collect and monitor information on all traded instruments.

MANAGEMENT AND COMPENSATION STRUCTURE

Capital-markets and trading management structures may be organized by legal entity, business line, profit center, or a combination thereof. Regulatory conditions as well as safe-and-sound banking practices often require the separation of managerial duties. Overlaps should be reviewed for compliance with regulations, ethical standards, and safety-and-soundness concerns.

Background reviews include the evaluation of management expertise and character. Resumes should be reviewed to determine whether key managers in trading, sales, operations, and compliance have been or are currently registered with any nonbank securities regulators (for example, provisions such as NASD Series 7 or CFTC commodity or exchange requirements such as "registered principal"). The reviews should indicate whether management or trading and sales personnel have been cited for violations of securities laws, mentioned in criminal referrals to state or federal officials and are currently or have been under statutory supervision or periods of disqualification under NASD, New York Stock Exchange (NYSE), or other self-regulatory organization (SRO) rules.

The review should indicate whether management or trading and sales personnel are allowed to trade for their own accounts. Policies directed at the personal-investment activities of staff, as well as the areas responsible for monitoring and controlling them, should be identified. The compensation structure of key principals, including current and deferred salary, bonus, commission, equity participation, or other remuneration, should be described. Loans between the institution and key management should also be identified. Compensation practices should be reviewed to determine that the independence of those involved in risk-management oversight is not compromised by direct benefit from the profits of the risk-taking function. Finally, the profiles section should comment on the reasons for resignations or reassignments of key managers, traders, and salespeople.

The growing level of sophistication of capital markets requires experienced management with appropriate credentials to understand complex trading instruments and their associated risk-management techniques. The level of experience required to understand quantitative analysis and advanced risk-based sensitivity analysis should be commensurate with the sophistication of the firm's activities.

Any deficiencies in management's capacity to understand and control the instruments or the types of risk associated with them are cause for regulatory concern. However, the determination of deficiencies must be based on a fair and impartial assessment of the products traded and the institution's future business plans.

GENERAL POLICIES AND PROCEDURES

The adequacy of policies and procedures for capital-markets and trading activities should be evaluated against the complexity and volume of financial transactions. Policies and procedures should be written and include, at a minimum, a mission statement, limits approved by the board of directors, procedures for reviewing limits, a list of traders and their assignments, the organization's structure and responsibilities, permissible activities, an approved list of brokers, counterparties, dealing guidelines, and an explicit dispute-resolution methodology. Furthermore, the institution should have a code of ethics for employees, a policy for personal trading, investment guidelines, a detailed description of transaction processing, and reconciliations and accounting procedures including a chart of accounts.

Policies and procedures should require that capital-markets and trading activities are under senior management review and subject to periodic audit. An internal audit department should be organizationally and functionally separate from trading-management oversight and should report to the board of directors of the institution. In institutions that are more active in trading, other organizational units should provide an independent assessment of the profitability and risk inherent in these activities.