

credit functions. Banks should establish processes (checklists, tickler files, etc.) to ensure that derivative transactions, like all other risk-taking transactions, are properly documented. These processes should monitor and control receipt of documents. Banks should establish thresholds limiting future business with counterparties failing to provide required documentation. Proper control over derivative documentation requires a process that quickly identifies and resolves documentation exceptions. The role of legal counsel in the documentation process is discussed in the “Compliance Risk” section.

Revaluation Approaches and Reserves

Both the risk control and audit functions should ensure that position valuations are generated from independent sources. Accurate values are key to the generation of reliable reports on risk levels, profitability, and trends. Ideally, much of the valuation process employs valuation model algorithms or electronic data feeds from wire services, with little manual intervention. When reliable revaluation models or data feeds are not available, as is the case with some illiquid or highly customized products, operations personnel or other independent personnel should obtain values from other dealers or use approved mathematical techniques to derive values.

The process through which positions are marked-to-market should be specified in policies and procedures. Controls should be implemented that ensure proper segregation of duties between risk-takers and control personnel, including the independent input and verification of market rates. In addition, controls should provide for consistent use of pricing methods and assumptions about pricing factors (e.g., volatility) to ensure accurate financial reporting and consistent evaluations of price risk.

The approach banks use to value their derivative portfolios will depend on a variety of factors including the liquidity and complexity of the contracts and the sophistication of their valuation and accounting systems. The most conservative approach is using the bid for long positions and the offer for short positions. Some dealers will take a conservative approach with illiquid or highly structured derivative portfolios by valuing them at the lower of cost or market (LOCOM).

Dealers and more sophisticated end-users typically value transactions at mid-market less adjustments (usually through the use of reserves) for future costs. The most common types of adjustments

are those made to reflect credit risk and future administrative costs. Other types of adjustments may be made to reflect close-out costs, investing and funding costs, and costs associated with valuation model errors. At a minimum, banks using mid-market valuations should make adjustments for credit risk and administrative costs. If a bank elects not to use adjustments for close-out costs, investment and funding costs, and model errors, its rationale should be documented.

Regardless of the valuation method used, management should ensure that policies and procedures are established that support their valuation. If mid-market less adjustments is used, policies and procedures should specify required valuation adjustments, documentation of valuation rationale, periodic review of assumptions, and appropriate accounting treatment.

Dealers should mark positions to market at least daily (intraday marks may be necessary in some market environments) and on an official, independent basis, no less frequently than once a month. For risk management purposes, active position-takers should independently revalue derivative positions at least once a month and should possess the ability to obtain reliable market values daily if warranted by market conditions. Limited end-users should establish a time frame for revaluations that is consistent with other risk measurements. At a minimum, revaluations should be conducted by end-users at least quarterly.

Although independent revaluation of exchange-traded instruments is readily accomplished through published contract prices, the valuation of less actively transacted instruments, particularly the less liquid and more exotic OTC derivatives, is more difficult. Certain volatility rates and other parameters can be difficult to generate without input from the risk-taker. However, if a bank wishes to deal in or use these products, it must have a mechanism to independently and consistently derive needed market rates from similar markets or other dealers.

In obtaining external valuations, the requirements of the valuation should be specified (for example: mid, bid, offer, indicative, firm). In addition, when external valuations are received they should be considered in light of the relationship with the party supplying them and, in particular, whether they include factors that may make them

inappropriate (for example, obtaining valuations from the originating dealer).

The revaluation process should include a review of trades executed at off-market rates. These trades may result from human error or undesirable trader or counterparty activity. A daily procedure should be followed that provides for an independent review, whether manual or automated, of trade prices relative to prevailing market rates. Any deals conducted at off-market rates should be reported to the senior operations and risk-taking management and risk control.

Procedures for documenting and resolving discrepancies between front office inputs and back office inputs should be firmly established. Documentation containing the reason for the discrepancy, the profit and loss impact, and the final resolution of the discrepancy should be maintained. Significant discrepancies should be reported to senior operations and risk-taking management. Independence in establishing revaluation information should not be compromised.

Information Technology

Although systems and modeling technology supports a derivatives business, technology can also pose significant risks.

The degree of sophistication of systems technology should be commensurate with the character and complexity of the derivatives business. In assessing risk, management and the board should consider how well the management information system functions, rather than its technical specifications. The system should serve the needs of applicable users, including senior management, risk control units, front office, back office, financial reporting, and internal audit. For large systems, the bank should have flow charts or other documentation that show data flow from input through reporting.

An important aspect in the evaluation of information technology is how well different systems interface. (Interface is usually accomplished using emulators that communicate from one application to another.) Banks relying on a single database may have stronger controls on data integrity than those with multiple databases and operating systems. However, it is rare to find a single automated system that handles data entry and all processing and control functions relevant to OTC and exchange-traded instruments. The systems used may be a combination of systems purchased from vendors, applications developed in-house, and legacy systems.

Incompatible systems can result in logistical obstacles because deal capture, data entry, and report generation will require multiple keying of data. Accordingly, controls and reconciliations that minimize the potential for corrupting data should be used when consolidating data obtained from multiple sources. If independent databases are used to support subsidiary systems, reconciliation controls should be in place at each point that data files come together. Regardless of how a bank combines automated systems and manual processes, management should ensure that appropriate validation processes ensure data integrity.

Periodic planning. Operations and support systems should receive periodic reviews to ensure that capacity, staffing, and the internal control environment support current and planned derivative activity. These reviews can be performed as a part of the annual budgeting and planning process, but should also be conducted as activity and plans change throughout the year.

Contingency planning. Plans should be in place to provide contingency systems and operations support in case of a natural disaster or systems failure. Contingency back-up plans should be comprehensive and include all critical support functions. The objective of the plan should be to restore business continuity as quickly and seamlessly as possible. Plans should be tested periodically. The overall contingency planning process should be reviewed and updated for market, product, and systems changes at least once a year.

Compliance Risk

Compliance risk is the risk to earnings or capital arising from violations, or nonconformance with, laws, rules, regulations, prescribed practices, or ethical standards. The risk also arises when the laws or rules governing certain bank products or activities of the bank's clients may be ambiguous or untested. Compliance risk exposes the institution to fines, civil money penalties, payment of damages, and the voiding of contracts. Compliance risk can lead to a diminished reputation, reduced franchise value, limited business opportunities, lessened expansion potential, and an inability to enforce contracts.

The legal authority of national banks to enter into derivative transactions is well-established. The OCC has recognized that national banks may enter into derivative transactions as *principal* when the bank may lawfully purchase and sell the underlying instrument or product for its own account, as a dealer or market-maker; or when the bank uses the transaction to hedge the risks arising from legally permissible activities.

A national bank may also enter into derivative transactions as principal or agent when the bank is acting as a financial intermediary for its customers and whether or not the bank has the legal authority to purchase or sell the underlying instrument for its own account. Accordingly, a national bank may enter into derivative transactions based on commodities or equity securities, even though the bank may not purchase (or may be restricted in purchasing) the underlying commodity or equity security for its own account.

Counterparty Authority

The enforceability of many OTC derivative contracts (e.g., swaps and options) in the event of counterparty insolvency has not been tested in the courts in all jurisdictions. Therefore, competent legal counsel should review applicable documents before such transactions are executed. Counsel should be familiar with the economic substance of the transaction, the laws of the jurisdictions in which the parties reside, and laws governing the market in which the instrument was traded. Whenever standardized documents are not used, contracts should be reviewed by counsel. Standard industry or trade association contracts should be reviewed whenever changes are made.

Limited End-Users

A requirement that bank counsel review all derivative contracts could entail significant legal expense and make derivative use uneconomical. An end-user (as well as dealers) can avoid much of this expense by using only standard industry contracts and addendums (e.g., the International Swaps and Derivatives Association, Inc., (ISDA) master agreement) and dealing only with counterparties domiciled in countries where there is high certainty of enforceability. Nonstandard clauses that are introduced in standardized contracts and addendums should be reviewed by legal counsel. With regard to counterparty authority and the legality and enforceability of the agreement, it may suffice for a limited end-user to obtain a legal opinion from its counterparty stating that the

provisions of the agreement are enforceable and that it has the authority to enter into the transaction. If a limited end-user enters into a particularly novel transaction or does business with a high-risk counterparty (e.g., where legal uncertainty exists), then a more comprehensive legal review may be necessary.

Dealers and Active Position-Takers

National banks should make every effort to ensure that counterparties have the power and authority to enter into derivative transactions. The authority of a counterparty to engage in derivatives can be evidenced by corporate resolutions and certificates of incumbency. Additionally, banks should ensure that transactions are adequately documented. If adequate documentation of transactions is not obtained, enforcement of the transactions may be precluded under the relevant state law statute of frauds, which may require the existence of a written agreement for enforcement of a contract.

There are various methods by which a bank may reasonably satisfy itself that a counterparty has the legal capacity to engage in derivatives. For example, for governmental entities or for certain clients in regulated industries, a national bank should review relevant statutes or regulations delineating the powers of the entity. In other situations, a bank may need to examine the constitutive documents and other relevant materials of the counterparty; for example, for mutual fund clients, a bank should at least examine a fund's prospectus. In some cases, a bank may be able to achieve a level of reasonable satisfaction only upon the receipt and analysis of a well-reasoned opinion from competent counsel specifically addressing the issues of power and authority of the counterparty and the capacity of the individuals who will sign legal documents on behalf of the counterparty.

Some types of transactions may be more problematic than others. For example, a counterparty that has the power and authority to enter into interest rate swaps may not have the power or authority to engage in commodity derivative transactions. Also, the authority of certain fiduciaries to enter into derivative transactions may be limited by the governing instrument or by the Employee Retirement Income Security Act (ERISA). A national bank should ensure that all obligations arising from contemplated transactions with its

counterparty are valid and enforceable. See also the discussion on transactions with undisclosed counterparties in the “Credit Risk” section.

Credit Enhancements

A bank should ensure that its rights with respect to any cash, securities, or other property pledged to the bank by a counterparty to margin, collateralize (secure), or guarantee a derivative contract are enforceable and exercisable and can be used upon the default of the counterparty to offset losses. To be reasonably sure that the pledged rights will be available if needed, the bank must have both access to, and the legal right to use the assets. For example, to establish reasonable access the counterparty should deliver pledged assets directly to the bank or to an independent escrow agent. Furthermore, bank counsel should give an opinion on whether the contract that governs the pledged assets is legally enforceable. See the “Credit Risk” and “Liquidity Risk” sections for more information on credit enhancements.

Bilateral Netting

As discussed above, a national bank must reasonably satisfy itself that the terms of any contract governing its derivative activities with a counterparty are legally sound. This is particularly important with respect to contract provisions that provide for the net settlement of balances between the bank and its counterparties.

Master settlement and close-out netting arrangements, to the extent *legally enforceable* (during the course of periodic payments and in the event of the insolvency of the counterparty), constitute a favorable means of reducing exposure to counterparty credit risk.

Settlement or payment netting involves netting payments between two counterparties, for the same date, the same currency, and under the same transaction or group of transactions, to a single payment.

Close-out (or default) netting arrangements involve netting the positive and negative current replacement values (mark-to-market) with respect to the non-defaulting party for each transaction under the agreement to a single sum, either positive or negative. If the sum of the netting is positive, then the defaulting counterparty owes that sum to the nondefaulting counterparty. If that amount is

negative, the nondefaulting counterparty would pay that amount to the other party, provided no walkaway provisions exist.

Over the last few years, changes in the law have brought near certainty about the enforceability of bilateral close-out netting arrangements involving various derivative instruments during the insolvency proceedings of U.S. counterparties. The provisions of the Financial Institutions Reform, Recovery, and Enforcement Act of 1989 (FIRREA) provide that, in some instances, counterparties may net under master netting agreements consisting of swap agreements that are qualified financial contracts (as these terms are broadly defined) entered into with insured depository institutions placed in receivership or conservatorship. Subsequently, the 1990 amendments to the U.S. Bankruptcy Code extended to swap agreements (also broadly defined) immunity from (1) cherry-picking by a trustee in bankruptcy and (2) the automatic stay upon the filing of a petition in bankruptcy. Sections 401-407 of the Federal Deposit Insurance Corporation Improvement Act of 1991, the Payment Systems Risk Reduction Act (PSRRA), validated the netting of bilateral and multilateral payment obligations as contained in netting contracts entered into by financial institutions (as those terms are defined in the PSRRA).

The same degree of certainty does not apply to contracts with counterparties outside the United States. For national banks with significant exposures abroad, competent legal counsel should be consulted to more precisely quantify legal risk. ***Where the legal enforceability of netting arrangements has not been established, national banks should not evaluate the risks of derivative transactions on a net basis.*** In such instances, the benefits normally gained from such contracts will not be available. Thus, credit exposure may be grossly understated, and, therefore, improperly monitored. Only when the enforceability of close-out netting arrangements with foreign counterparties has a high degree of certainty, should national banks monitor their credit and liquidity risks for derivative transactions with such counterparties, on a net basis.

Multiproduct master agreements include all derivative transactions with a counterparty, regardless of the type of contract, in a single netting arrangement. National banks should recognize the potential legal risk in concentrating all derivative transactions with a counterparty under a multiproduct master agreement when

applicable law does not clearly support the enforceability of the obligations arising out of such an agreement in the event of the default and insolvency of the bank's counterparty. In such cases, the close-out netting provisions may be unenforceable and the bank's exposure to counterparties may actually be the aggregate gross exposure on each outstanding derivative transaction.

When the enforceability of a multiproduct master agreement is uncertain but the enforceability of a single-product master is established, national banks should consider entering into single-product master netting agreements for different types of derivative transactions (e.g., currency options, commodity derivatives, and equity derivatives). In such cases, concentration risk is reduced and the bank will likely be able to rely on its net credit and liquidity exposure calculations under each agreement as an accurate assessment of its risk.

If a bank desires to avoid concentration risk and yet realize the potential benefits available from placing all derivative transactions with a counterparty under a single master agreement, it can enter into a master-master (or umbrella master) agreement, which will aggregate the net gains and losses across the individual single-product master netting agreements. If this agreement is deemed to be enforceable against a counterparty, then the bank will have realized the benefits of including all derivative transactions under a single-product master netting agreement. If it is not, the bank will have preserved the benefits that arise from entering into single-product master netting agreements.

The risk-based capital standards have recently been amended to recognize that bilateral netting agreements reduce credit risk. The 1994 amendment to 12 CFR 3 allows banks to bilaterally net contracts for risk-based capital purposes provided the bilateral netting agreement: 1) is in writing; 2) is not subject to a walkaway clause; and 3) creates a single legal obligation. Furthermore, the bank should: 1) obtain a written and reasoned legal opinion(s) stating with certainty that, in the event of a legal challenge, the court and the administrative authorities would find the bank's exposure to be the net amount; 2) establish and maintain procedures to monitor possible changes in the law and to ensure that bilateral netting contract continues to satisfy Part 3 requirements; and 3) maintain documentation in its files adequate to support netting under the contract. See the "Credit Risk" section for more information on bilateral netting.

should be approved by the bank's board and the supervisory staff of the OCC before the bank engages in such activities.

Upon OCC approval, a national bank may engage in the activities only under the conditions specified above, and any other conditions that may be imposed on the bank by the OCC's supervisory staff. All activities must be conducted in accordance with safe and sound banking principles.

Financial derivative transactions with respect to bank-eligible precious metals (gold, silver, platinum, palladium, and copper) are not subject to this guideline.

Equity Derivatives

The OCC has permitted a national bank to make interest payments on customer deposit accounts based on the percentage increase, if any, in the S&P Index from the date the account is opened until maturity, and to hedge its interest obligations to the holders of deposit accounts with futures contracts in the S&P Index. In finding these transactions permissible for national banks, the OCC concluded that offering the account is within the expressly authorized power of national banks to receive deposits. The OCC further concluded that a national bank's purchase and sale of S&P Index futures to hedge its interest obligations on the deposit was incidental to the bank's expressly authorized deposit-taking authority. In reaching these conclusions, the OCC recognized that because the futures would be cash settled, the bank would not acquire any ownership interest in the securities comprising the S&P Index.¹

National banks may enter into matched and unmatched equity and equity index swaps (equity derivative swaps) as agent or principal. A national bank may hedge risks arising from any unmatched equity derivative swaps by purchasing and selling exchange-traded futures and options, government securities, or forward contracts. Moreover, banks warehousing equity derivative swaps may use futures contracts, options, and similar over-the-counter instruments that are settled in cash to hedge the aggregate unmatched positions in the portfolio. In finding equity derivative swap activities permissible for national banks, the OCC recognized that a bank engaging in matched and unmatched equity derivative swaps acts as a financial intermediary, just as it does in its deposit and lending

¹Sentence revised October 2001.

Risk Management of Financial Derivatives

Tier I and Tier II Dealers Request Letter

Below is a comprehensive list of suggested request items for Tier I and Tier II dealers. Because the activities of bank derivative dealers vary widely, examiners should tailor the request letter to the specific activities and risks faced by the bank and the specific area targeted for examination.

Before requesting information from the bank, examiners should discuss their examination scope with examiners working in other areas of the bank who may have requested similar information. This will help avoid duplicative requests for information and reduce the burden on the bank of compiling the material.

Senior Management and Board Oversight

- ___ 1. Board minutes and relevant committee minutes (e.g., asset liability management committee (ALCO), audit, new products), including handouts and presentation materials, since the last examination.
- ___ 2. Written policies and procedures, including limits, for relevant areas such as treasury, trading, new products, risk control, audit, credit, funding, operations, accounting, code of ethics, legal and compliance.
- ___ 3. Organizational charts for key functional areas (e.g., treasury, trading, risk control, credit, funding, operations, audit and compliance).
- ___ 4. Brief biographies or resumes of managers of units responsible for derivative activities.
- ___ 5. Job descriptions for key positions responsible for derivative activities, including officer responsibilities and authority levels.
- ___ 6. Compensation plan for key line managers, traders, and salespeople.
- ___ 7. Internal and external audit, risk control, and compliance

- and consultant reports (including management responses) since the last examination.
- ___ 8. Business and strategic plans for relevant areas.
- ___ 9. Monthly budget variance reports for the year-to-date on a consolidated basis and for all relevant profit centers.
- ___ 10. Revenue and earnings reports for the prior year and year-to-date by month on a consolidated basis and for all relevant profit centers.
- ___ 11. Consolidated risk management reports for targeted activities .
- ___ 12. Summary of monthly derivatives volume (by notional and transactional amounts) for the prior year and year-to-date.
- ___ 13. Summary of the customer base (e.g., retail in proportion to institutional).
- ___ 14. Samples of derivatives marketing presentations, advertisements, and other sales documents.

Price Risk

- ___ 15. Price risk monitoring reports used by senior management and line managers (including limit monitoring).
- ___ 16. Access to price risk limit exception reports for the desired sample period, including subsequent approvals.
- ___ 17. Access to derivatives portfolio position reports for the desired sample period.
- ___ 18. Description of the method used to measure price risk including source, key assumptions such as historical observation periods, confidence levels, correlations, database parameters, and updates.
- ___ 19. Results of portfolio stress testing.

- ___ 20. Price risk model validation reports and management's responses, if applicable.
- ___ 21. If available, breakdown of sources of trading/positioning profits for relevant profit centers (e.g., customer trading income, dealer spread, positioning income, proprietary trading income, net interest income).

Liquidity Risk

- ___ 22. Access to derivatives portfolio cash flow reports for the desired sample period.
- ___ 23. Liquidity risk monitoring reports used by senior management and line management.
- ___ 24. Contingency funding plan.

Foreign Exchange Risk

- ___ 25. Description of the methods used to identify, measure, monitor, and control capital exposure from foreign currency translation.
- ___ 26. Management reports detailing all exposures from foreign currency translation.
- ___ 27. Reports detailing hedge efficiency and performance related to capital exposure from foreign currency translation.

Credit Risk

- ___ 28. Access to a list of transactions with collateral enhancements, margining agreements, third-party guarantees, or early termination clauses (both one-way and two-way).
- ___ 29. Description of the method used to measure presettlement and settlement credit risk exposure including source, key assumptions such as historical observation periods, confidence levels, correlations, database parameters and updates.

- ___ 30. Credit risk model validation reports and management's responses, if applicable.
- ___ 31. Credit risk monitoring reports used by senior and line management (including limit monitoring).
- ___ 32. Access to a list of counterparty credit lines and credit line availability. If available, reports broken out by dealer and end-user/customer and internal risk rating.
- ___ 33. Counterparty credit risk rating report that aggregates bank-wide credit exposure by counterparty, including that originating from commercial lending relationships.
- ___ 34. Counterparty credit concentration reports sorted by external factors (e.g., countries, regions, industries), internal factors (e.g., exposure, tenors, risk ratings), and type of counterparty (e.g., interbank, corporate), if possible.
- ___ 35. Large deal reports for the desired sample period.
- ___ 36. Credit policy and limit exception reports (e.g., counterparty credit limit exceptions, past due counterparty reviews, and documentation exceptions) including subsequent approvals.
- ___ 37. Past-due, nonperforming, or deteriorating trend counterparty credit line reports.
- ___ 38. List of customer transactions terminated or amended during the prior 12 months (or shorter period if deemed appropriate) with reason for action.

Transaction Risk

- ___ 39. Flow charts of processing and reporting flows.
- ___ 40. Information used to evaluate back office operational efficiency (e.g., average hours, overtime, number of transactions processed per employee, volume/ratio of disputed, unconfirmed, or failed trades) and incurred

penalties.

- ___ 41. Description of front and back office systems configuration (hardware and software), including spreadsheet systems.
- ___ 42. Operational exceptions reports (aging, failed trades, off-market trades, outstanding items, suspense items, miscellaneous losses, etc.).
- ___ 43. Summary of most recent account reconcilements between front and back office and general ledger and subsidiary ledgers or a description of the process.
- ___ 44. Brokerage commission and fee reports.
- ___ 45. Description of derivatives valuation process (who, how, frequency, etc.).
- ___ 46. Details of valuation reserve accounts including current balance, reserve methodology, and accounting treatment.
- ___ 47. Systems disaster recovery plan.

Compliance Risk

- ___ 48. Pending litigation or customer complaints lodged against the bank relating to derivative activities.
- ___ 49. Legal documentation exception reports.
- ___ 50. Access to compliance program procedures and supporting workpapers for recent reports.

Risk Management of Financial Derivatives Active Position-Takers/Limited End-Users Request Letter

Below is a comprehensive list of suggested request items for active position-takers and limited end-users. Because the activities of active position-takers and limited end-users vary widely, examiners should tailor the request letter to the specific activities of the bank and the specific area targeted for examination.

Before requesting information from the bank, examiners should discuss their examination scope with examiners working in other areas of the bank who may have requested similar information. This will help avoid duplicative requests for information and reduce the burden on the bank of compiling the material.

Senior Management and Board Oversight

- ___ 1. Board minutes and relevant committee minutes (e.g., ALCO, audit, new products) including handouts and presentation materials since the last examination.
- ___ 2. Written policies and procedures, including limits, for relevant areas such as treasury, new products, credit, liquidity, operations, accounting, risk control, audit, code of ethics, legal and compliance.
- ___ 3. Organizational charts for key functional areas (e.g., treasury, credit, liquidity, operations, risk control, audit, legal and compliance).
- ___ 4. Internal and external audit, risk control, and compliance and consultant reports and management responses since the last examination.
- ___ 5. Business and strategic plans.
- ___ 6. Budget and variance reports year-to-date.
- ___ 7. Revenue and earnings reports for the prior year and year-to-date.

- ___ 8. Consolidated risk management reports (interest rate, credit, and liquidity risks).
- ___ 9. Summary of derivative transactions for the desired sample period (by notional and transactional amounts).
- ___ 10. Risk management or hedging reports showing effectiveness of strategies.

Interest Rate Risk

- ___ 11. Interest rate risk management reports used by senior management and line managers (including limit monitoring).
- ___ 12. Access to a description of the method used to measure interest rate risk and access to supporting documents describing key parameters and assumptions such as interest rate scenarios, prepayments, maturity and repricing characteristics of indeterminate maturity accounts, and new business.
- ___ 13. Results of interest rate stress test reports.
- ___ 14. Results of back-testing of interest rate risk methodology (for accrual earnings-at-risk).
- ___ 15. Interest rate risk model validation reports and management responses (as applicable).

Liquidity Risk

- ___ 16. Liquidity risk monitoring reports used by senior management and line management.
- ___ 17. Contingency funding plan.

Credit Risk

- ___ 18. Access to a list of transactions with collateral enhancements, margining agreements, third-party guarantees, or early termination clauses (both one-way and two-way).
- ___ 19. Description of the method used to measure credit risk.
- ___ 20. Credit risk model validation reports and management's responses, if applicable.

- ___ 21. Credit risk reports used by senior management and line management (including limit monitoring).
- ___ 22. Credit policy and limit exception reports.

Transaction Risk

- ___ 23. Flow charts of processing and reporting flows.
- ___ 24. Information used to evaluate back office operational efficiency (e.g., average hours, overtime, number of transactions processed per employee, volume/ratio of disputed, unconfirmed, or failed trades) and any incurred penalties.
- ___ 25. Description of front and back office systems configuration (hardware and software), including spreadsheet systems.

- ___ 26. Summary of most recent account reconciliations between front and back office and general ledger and subsidiary ledgers or process description.
- ___ 27. Operational exceptions reports (e.g., aging, failed trades, outstanding items, suspense items, miscellaneous losses).
- ___ 28. Description of derivative valuation process (who, how, frequency, etc.).

Compliance Risk

- ___ 29. Pending litigation related to derivative activities.
- ___ 30. Legal documentation exception reports.
- ___ 31. Access to compliance program procedures and supporting workpapers for recent reports.

Risk Management of Financial Derivatives

Examination Procedures

General Procedures

The following procedures should be used when examining the derivatives activities of national banks and nationally chartered federal agencies and branches. The procedures in the first section will help the examiner determine the nature of the bank's use of derivatives. After that determination has been made, the examiner should proceed to the appropriate section (i.e., Tier I and Tier II dealers or active position-takers and limited end-users). When examining limited end-users whose only derivatives exposure is in the form of structured notes, follow the specific procedures for structured notes in that section.

Objective: To evaluate the bank's participation in derivatives markets and set the examination scope.

1. Review OCC documents to identify any previous issues with derivatives that require follow-up.
 - Prior examination reports.
 - Overall summary comments.
 - Work papers from prior examinations.
 - OCC approvals, if applicable.
2. Prepare and submit a request letter to management.
3. Review request information for significant changes in derivatives activities since the prior examination. Consider the following:

