AUDIT GUIDELINES
FIXED INCOME REPURCHASE AGREEMENTS

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I. INTRODUCTION TO FIXED INCOME REPURCHASE AGREEMENTS

Scope of Internal Audit Guidelines

The Internal Audit Guidelines for Fixed Income Repurchase Financing is a tool designed to facilitate the internal auditors' determination and assessment of the potential risks and the potential controls which an organization may use to monitor and evaluate fundamental risks inherent in the firm's business. Also included are possible worksteps that the Internal Auditor may perform to test and assess the effectiveness of controls and processes used in the monitoring of a firm's Fixed Income Repurchase/Financing function. Although the guidelines were designed to evaluate the risks of a US broker dealer and its affiliate security dealers, many of the principles underlying the guidelines are also applicable other financial services entities.

A repurchase agreement or *repo* is the sale of a security at a negotiated price with a commitment by the seller to buy the security back from the purchaser at a specified price at some designated future date. The difference between the two prices is the interest paid on the repo. At initiation of the transaction, the buyer pays the principal amount to the seller, and the security is transferred to the possession of the buyer. At expiration of the repo, the principal amount is returned to the initial buyer (or lender) and possession of the security reverts to the initial seller (or borrower). The security serves as collateral against the obligation of the borrower.

In a repurchase agreement, an institution borrows funds when it "sells" the security and commits to "repurchase" it in the future. In a reverse repurchase agreement or *reverse repo*, the institution lends funds when it "buys" the security and commits to "resell" it in the future. A reverse repo is sometimes termed a resale agreement or a security purchased under agreement to resell. The terms "repo" and "reverse repo" thus describe the same transaction, but from the perspective of each counterparty.

Most repos are transacted using U.S. Treasury or agency securities as collateral. Repos of mortgage pass-through securities and collateralized mortgage obligations (CMOs) issued or guaranteed by U.S. government agencies are less common. Repos of other securities or loans are not common, in part because the Federal Reserve System generally considers repos with other assets to be deposits of the selling institution and subject to Regulation D reserve requirements.

Repos can be conducted on an overnight basis, for a longer fixed term, or an open account basis. Overnight repos, or one-day transactions, represent approximately 80 percent of all repo transactions. Term repos generally have maturities that do not extend beyond 30 days, although transactions with terms greater may be executed for an entity specialized needs. Repo agreements "to maturity" are those that mature on the same day as the underlying securities. "Open" repo agreements have no specific maturity, so either party has the right to close the transaction at any time.

Overnight repos with U.S. government collateral, generally take place at rates slightly below the fed funds rates. The value of collateral is set to slightly exceed the contract amount resulting in a "cushion" (or margin) so that the lender of funds is partially protected from collateral market value declines. Interest may be paid explicitly so that the "sale" price and "repurchase" price of the security are the same (open account repo), or it may be embedded in a difference between the sale price and the repurchase price (overnight and term repo). Interest is calculated on an actual/360-day add-on basis. The seller of a security under a repo agreement continues to receive all interest and principal payments on the security while the purchaser receives a fixed rate of interest on a short-term investment. The seller normally needs to "claim" the interest received by the buyer. When executed under a continuing contract (demand or open-basis overnight repo), repo contracts usually contain a clause to adjust the interest rate on a day-to-day basis.

Institutions often finance their proprietary position through vehicles like repos and reverse repos. In such cases an institution is subject to interest rate risk if the average maturity (duration) of the proprietary positions is materially different from the average maturity (duration) of the corresponding repo/ reverse repo (i.e. risk of non-parallel shifts in the yield curve). Repos and reverse repos, if used to fund longer or more sensitive positions, expose the institution to fluctuation in interest rates as the reinvestment interest rates for the repo/ reverse repo and the underlying collateral diverge. Since repo rates move closely with those of other short-term instruments (i.e. money market, treasury bills, COD's, etc.), these instruments may offer an attractive hedge for positions in repos. Institutions may also attempt to earn positive carry by employing a "matched book", financing repos with reverse repos. If the portfolio of repos is not maintained as a matched book by the institution, the dealer or institution could be subject to a level of residual market risk.

Despite the fact that there may be high quality collateral underlying a repo transaction, both parties to the transaction are exposed to credit risk. The buyer is exposed to the risk that the seller will default on his or her obligation to repurchase the security when agreed. The buyer has access to the security as collateral and in the event of default; the security could be sold to satisfy the debt. The seller is exposed to the risk that the buyer will not return the collateral if the market value of the security rises to a level higher than the original loan. Over collateralization and margin arrangements are generally used to reduce credit risk.

Under accounting principles generally accepted in the United States, financing transactions are generally recorded on the company's balance sheet as financing transactions. However, if the delivery of securities represents a surrender of control of the collateral sale treatment may be warranted and the delivered securities would effectively be removed from the balance sheet. The "control framework model" is generally utilized to determine if financing or sale treatment is warranted.

There are similarities that exist between the Fixed Income Repurchase Financing function and Securities Borrowed/ Loaned function, as both are predication ability to monetize proprietary collateral. The primary differences between the two functions are the nature of the underlying legal agreements and regulatory environment surrounding each business. For example, Regulation T substantially governs the Securities Borrowed/ Loaned function. Additionally, with regard to collateralization provisions, in repurchase transactions the counterparty receiving securities collateral is generally over-collateralized relative to the cash surrendered while in a securities lending transaction the counterparty receiving the cash collateral is over-collateralized. Separate Internal Audit Guidelines exist for Securities Borrowed/Loan function.

Regulation

If the buyer is to rely on its ability to sell a security in the open market upon a seller's default, it must exercise effective control over the securities collateralizing the transactions. The Government Securities Act was passed in 1986 to address abuses that had resulted in counterparty losses when the seller held the security (i.e. premise repo or hold in custody repo). Its requirements include that written repurchase agreements must be in place, the risks of transactions must be disclosed to both counterparties, specific repurchase securities must be allocated to and segregated for the counterparty, and confirmations must be made and provided to the counterparty by the end of the day on which a transaction is initiated and on any day which a substitution of securities occurs. Furthermore, participants in repo transactions now will often require securities to be delivered or held by a third party custodian (i.e. tri-party repo).

SEC Rule 15c3-1 governs the net capital requirements for broker or dealers and specifically contemplates adjustments to net worth related to repurchase and reverse repurchase agreement deficits. Furthermore, SEC Rule 17a-3 directs all brokers and dealers to preserve books and records relating to repurchase and reverse repurchase agreements.

Guidelines

The Guidelines are organized to allow the internal auditor to focus on specific risks and controls within the Fixed Income Repurchase Financing function:

General and Organization- The Internal Auditor considers the Fixed Income/Repurchase Financing function within an organization. The worksteps in this section facilitate the auditor's ability to evaluate the overall competence and ability of the Fixed Income/Repurchase Financing function to perform in accordance with the policies and risk parameters described in the firm's polices. Additionally, the auditor should also conclude on the function's overall status and viability within the organization to achieve its mission of obtaining a low cost source of financing and appropriately recognizing revenue and expense.

Presentation- The Internal Auditor evaluates the quality of a reporting structure and the accuracy of the reports used to track activity and related exposures. Additionally, the Auditor evaluates the quality of the information contained in management reports.

Data Quality- The Internal Auditor evaluates the quality of data used by Fixed Income/Repurchase Financing function. This section enables the auditor to better determine the validity of reported transactions and allows the auditor to assess the quality of controls used to record and evaluate such transactions (reconciliation's are performed and management review process).

Rights and Obligations- The Internal Auditor evaluates that agreements and contracts are maintained in an appropriate fashion and are reviewed by parties suited to evaluate the legal enforceability of the arrangement with the counterparty.

Completeness- The Internal Auditor evaluates that management reports adequately address all risks and exposures to the firm.

Valuation- The Internal Auditor evaluates the quality of the firm's ability to value collateral on a timely basis and recognize the financing's contract value. This section considers the firm's valuation methodologies and models used to determine values of open exposures and posted collateral.

Technology- The Internal Auditor evaluates the quality of the controls inherent within the technology environment to determine that an effective architecture exists to support the Fixed Income Repurchase/Financing function. Considerations that the internal auditor should assess include security over data, access controls, system administration, data integrity, capacity (stress testing) and disaster recovery.

The Audit Guidelines (the "guidelines") are intended to provide members of the Securities Industry Association ("SIA"), Internal Auditors Division with information for the purpose of developing or improving their approach towards auditing certain functions or products typically conducted by a registered broker-dealer. These guidelines do not represent a comprehensive list of all worksteps or procedures that can be followed during the course of an audit and do not purport to be the official position or approach of any one group or organization, including SIA or any of its divisions or affiliates. Neither SIA, nor any of its divisions or affiliates, assumes any liability for errors or omissions resulting from the execution of any worksteps within these guidelines or any other procedures derived from the reader's interpretation of such guidelines. In using these guidelines, member firms should consider the nature and context of their business and related risks to their organization and tailor the worksteps accordingly. Internal auditors should always utilize professional judgment in determining appropriate work steps when executing an audit.

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II A. AUDIT GUIDELINES

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GENERAL AND ORGANIZATION

Risks to be Managed	*Types of Controls to Manage or Eliminate Risks*	*Potential Audit Workstep*
Policies and procedures are not adequate for the fixed income repurchase agreement operations and thus the financing business' associated operations are not commiserate with management's expectations and objectives.	• Consistent, current and complete policies and procedures. • Timely review of policies and procedures by senior management.	• Obtain and review financing operation policies and procedures. • Make sure policies are in written form, current and are easily understandable. • Perform walk through of financing transaction(s) to determine compliance with policies and procedures. • Determine if policies and procedures are clear in the role which the Company is authorized to act (i.e. as principal or agent). • Ensure that policies are reviewed in a timely manner by management. • Obtain the minutes (or similar documentation) of the appropriate overseeing committee to determine that policies and procedures have been updated to reflect current market conditions (i.e. new regulations) and company risk profile.

Risks to be Managed	*Types of Controls to Manage or Eliminate Risks*	*Potential Audit Workstep*
Contracts are entered into with a counter-party that is not in good financial standing, leading to added credit risk and potential losses in the event of counterparty default.	• Credit Department's updated credit limits and margin guidelines (haircut) are provided to fixed income repurchase agreement personnel in a timely manner. • Periodic reviews of counterparties are prepared and updated on a timely basis.	• Obtain list of counterparties and relevant limits for which credit area has approved for financing transactions. • Determine that fixed income repurchase agreement personnel are aware of counterparties' applicable limits and margin guidelines (haircut) which transactions can be entered.
Policies and procedures do not provide for adequate segregation of duties leading to undetected losses and/or misstatement of books and records arising from employee fraud.	• Detailed organizational chart and hierarchy detailing department's independence and authority. • Structured financing department with specific roles. • Approved mission statement and/ or committee charter.	• Obtain the organizational chart. • Determine if the organizational structure provides for adequate segregation of duties between financing functions. • Complete segregation of duties checklist and make informed judgment about potential conflicts.
Personnel enter into financing transactions without proper supervision leading to unauthorized transactions which are not consistent with mandate of trading desk.	• Review and sign off by appropriate supervisor for all contracts. • Exposure Reports report limit violations. • Policies articulate the trading desks' authorization/ management structure. • Program controls to prevent non authorized users. • Position limits are set for each trader.	• Review financing department policies and procedures to determine that sign offs are required for transactions. • Interview staff of financing department to determine if procedures are followed. • Ensure that there is adequate supervision of staff entering into financing transactions. • Select sample of trading tickets or daily transaction reports to ensure that proper sign offs have been obtained. • Determine that program

Risks to be Managed	*Types of Controls to Manage or Eliminate Risks*	*Potential Audit Workstep*
		controls prevent non-authorized users from accessing system.
Transactions are entered into by personnel who lack proper education and training which creates an environment where management's objectives and strategies are not understood or achieved.	• Formalized human resources hiring process (i.e. review of applicable license requirements) and standards for each job function. • Annual employee review process. • Existing continuing education process. • Formalized organization structure within the financing department: individuals are assigned roles which commiserate with subject matter expertise and experience.	• Interview staff of financing department, and preliminarily assess if they have a reasonable understanding of their role. • Determine that there are an adequate number of staff members to complete objectives; consider both front and back office employees. • Ensure that there is adequate supervision of staff - understand the review and approval process within the financing department. • Review continuing education classes are available to staff and records of staff attendance. • Determine that proper licenses, when necessary, are obtained and updated for applicable personnel. • Determine if mechanism exists enabling staff to maintain up to date knowledge of current securities and trends within financing transactions and are in content of policy documents.
Company utilizes a tri party custodian (or any other financial institution which holds collateral), whose impaired financial standing or operational	• SAS 70 reports are obtained. • Formal process of approval by Credit Department • Limits are set for each custodian/ counterparty	• Obtain list of custodians for which credit area has approved for financing transactions. • Determine that financing personnel are aware of the custodians which

Risks to be Managed	*Types of Controls to Manage or Eliminate Risks*	*Potential Audit Workstep*
deficiency impairs the ability to secure collateral and thus increases the risk of market loss.	by Credit Department. • Executed custodial agreement is maintained and reviewed by legal or other appropriate personnel.	transactions can be utilized. • Obtain SAS 70 reports for tri party custodians and determine that proper controls exist. • Obtain custodial agreements to determine that such agreement is appropriately maintained/ stored and that the language supports management and the front office's perception of the relationships with the custodian.

REPORTING

Risks to be Managed	*Types of Controls to Manage or Eliminate Risks*	*Potential Audit Workstep*
Transaction has been entered into which exceed limits (i.e. credit, transaction volume, collateral concentration), leading to potential excess exposure exceeding the Company's risk profile.	• Exception reports are generated and provided to appropriate personnel. • Trade approval processes are in place. • Intra day reports are provided with updated outstanding financing positions to senior management. • Credit limits are available to personnel entering into finance transactions. • Management reviews and authorizes excess limits.	• Obtain credit limits established by credit department. • Determine that credit exposure limits and current exposures are available to financing department personnel. • Determine that transactions are monitored by management on a daily basis for limit violations or other violations of policy. • Determine that personnel entering into financing transactions review credit limits to ensure compliance. • Obtain the financing position report and select a sample of counterparties to ensure that the report appropriately monitors current exposures and trading position through confirmation and/or reconciliation to back office reports. • Review the exception report for instances where limits have been exceeded. Investigate reasons for exception. • Ensure that when limits have been exceeded proper management authorization and approval is documented. • Ensure that management reviews aged and outstanding margin calls.

Risks to be Managed	*Types of Controls to Manage or Eliminate Risks*	*Potential Audit Workstep*
Reports generated do not provide management (or other internal users) with appropriate information (e.g. maturities, collateral quality, interest rates, repo rate aging) regarding financing transactions causing management to have inaccurate information for decisions.	• Daily management reporting and review process. • Automated reconciliation process.	• Obtain all management information used to monitor the financing function. • Select sample of daily/monthly management reports generated and review and access the quality and completeness of critical MIS and related reconciliations to trading and back office systems. • Access the nature and cause of manual entries and processes relating to MIS and management reporting. • Determine that reports are provided to the appropriate levels of management. • Determine if reports are adequate for management to understand the risk and regulatory requirements. • Determine if reports provided to complementary functions (credit, regulatory, finance/accounting, etc.) provide appropriate and useful data that meets their applicable needs. • Determine the appropriateness of frequency and timing of report distribution to management.
Financing transactions are not in accordance with regulatory/legal standards specific for regulated entities or external reporting leading to regulatory citation.	• Corporate Reporting reviews the reports filed either to internal or external users. • Personnel training classes are provided for personnel to remain up to date on regulatory/legal requirements.	• Determine that proper systems are in place in order to capture correct data for external reporting. • Determine that financing personnel are aware of external reporting requirements (e.g. FAS 140, regulatory reporting).

Risks to be Managed	*Types of Controls to Manage or Eliminate Risks*	*Potential Audit Workstep*
Inappropriate movement of collateral and funds leading to "under collateralized" transactions and an inappropriate understanding of the company risk profile.	• Utilization of custodian/ tri party custodian to hold securities. • System generated daily reconciliations. • Policy in place regarding write offs and investigation of reconciling items.	• Obtain sample of all reconciliations used to monitor financing transactions. • Determine that reconciliations are performed and reviewed in a timely manner. • Determine the source of data (system generated or manually created). • If manually created, assess the process to determine if susceptible to errors. (Determine that adequate amount of management review is provided). • Ensure that all exceptions are investigated. • Determine that reconciliations include the complete listing of financing transactions.

DATA QUALITY AND OPERATIONS

Risks to be Managed	*Types of Controls to Manage or Eliminate Risks*	*Potential Audit Workstep*
Reported collateral for outstanding financing contract is not available, the use of the same collateral within multiple transactions or is encumbered leading to additional credit risk from the resultant unsecured financing.	• Company takes physical possession of securities. • Utilization of custodian/ tri party custodian to hold securities. • Regular security count or confirmation process. • Reconciliation between stock record and outstanding finance report. • Reconciliation between stock record and custodian.	• Obtain and review reconciliation between custodian and Company's stock record. • Select sample of trade tickets and trace the securities to custodian statement and company's stock record. • Obtain confirmations received for latest Quarterly Verification process. • Determine that confirmations received reconcile to the outstanding repurchase agreements and securities loaned transactions as of the date of confirmations. • Determine the appropriateness of the physical location of collateral (custodian, tri party custodian, held in custody).
Lack of segregation of duties between front office and back office functions increasing potential for fraudulent or unrecorded financing transactions.	• Structured financing department with specific roles. • Cashier desk independent of financing department. • Custodial process independent of financing department. • Confirmation process of transactions. • Mission statements are in place for each department.	• Perform walkthrough of financing transaction to determine that proper segregation of duties exists. • Determine that personnel entering into transactions are not handling the confirmation and settlement processes.

RIGHTS AND OBLIGATIONS

Risks to be Managed	*Types of Controls to Manage or Eliminate Risks*	*Potential Audit Workstep*
Transactions are entered into without legally enforceable agreements leading to additional risk and losses in the event of default.	• Legal department review of agreements. • Use of master repurchase agreements. • Letters of understanding or other documents demonstrating counterparty authority to enter into transaction.	• Select a sample of transactions and determine that master repurchase agreements are used and contain appropriate signature before transactions have been entered. • If arrangements other than principal to principal (e.g. agent) are allowed, legal department reviews documentation to determine if Company is exposed. • Determine that legal department reviews unique attributes (e.g. principal and agent responsibilities, collateral substitution) of deviations from standard master repurchase agreement
Counterparty fails to return collateral securities or to provide additional collateral due to the revaluation of collateral causing additional market risk exposure.	• Legal department review of agreements.	• Determine appropriateness of reports generated for monitoring the outstanding financing positions. • Determine that a process exists to collect collateral to satisfy defaults. • Determine appropriateness of steps taken for buy in policies. • If collateral substitution occurs, evaluate the terms and conditions where substitution is legally permitted and test a sample of enacted substitutions for legal permissiveness and maintenance of appropriate counterparty collateral provisions.

Risks to be Managed	*Types of Controls to Manage or Eliminate Risks*	*Potential Audit Workstep*
Repo rates utilized to calculate interest income/ expense are not appropriate for applicable financing transaction leading to less optimal use of securities or excessive expense.	• Repo desk supervisor/ risk management/ product controller review of repo rates on a daily basis. • Formalized approval process for contracts and transactions. • Confirmation process for transactions. • System generated reports for changes in repo rates for open repurchase transactions.	• Understand the process that the fixed income repurchase agreements department utilizes for unusual repo rate rates (i.e. securities traded on special). • Determine appropriateness, through sampling of transactions, for repo rates through current market data (current repo rate, Fed funds rate). • Assess how management and an independent group (e.g. risk management) away from the front office perform timely reviews of the adequacy of negotiated repo rates. • Review confirmations sent to counterparties and determine that all transactions are confirmed in a timely manner. • Select sample of repo reset rates to determine that the changes in rates are in accordance with the Company's policies and market conditions.
Interest for open repurchase transactions is not properly recorded/ collected leading to incorrect books and records and financial loss.	• Regular reports are generated and reviewed for projected accruals vs. actual receipt/ disbursements. • Accruals to cash receipt/ disbursement reconciliations. • Analytical review of interest revenue and expenses.	• Based on a sample of transactions, determine the appropriateness of interest accrual as compared to open repurchase transactions. • Review interest accrual reports for accuracy. • Assess the quality of analytics used by the controllers or other back office personnel to assess the accuracy of P&L calculations.

Risks to be Managed	*Types of Controls to Manage or Eliminate Risks*	*Potential Audit Workstep*
		• Determine that interest accrual reports utilize correct information (including all open positions, repo rates, date of contract). • Review reconciliation of actual vs. projected interest for open transactions.
Claiming and paying of interest underlying securities for repo and reverse repo transactions are not properly managed leading to incorrect books and records and financial loss.	• Use and reconciliation of accrual suspense accounts to accumulate interest amounts on underlying securities. • Daily reconciliation of stock record and interest accrual reports.	• Determine appropriateness for interest accrual on repo transactions through calculation and walkthrough of the accrual recordation process. • Determine the nature and quality of procedures are in place to allocate and receive interest while custodian or other third party holds repo collateral. • Review interest suspense accounts for reasonableness.

COMPLETENESS

Risks to be Managed	*Types of Controls to Manage or Eliminate Risks*	*Potential Audit Workstep*
Transactions are not captured in financing ledger/ management reports leading to financial loss and misstatement of books and records.	• Regular cash/ security reconciliation between front office and back office books and records. • Sequential trade tickets are utilized and reviewed for sequence breaks. • System reconciliations performed on the data utilized for front and back office. • Confirmation process.	• Determine if system generated reports require manual adjustments. • If manual adjustments are required, determine the appropriateness and whether it is of a recurring nature. • Recurring and/or routine adjustments: review process to determine if applied appropriately and consistently. • Select sample of non-routine journal entries and investigate scope of adjustments and determine if adjustments are appropriate. • Ensure a process is in place to validate the integrity of data on a daily basis (reconciliation between front and back office systems).
Inventory listings of collateral are incomplete or not available to personnel responsible for review of deficits leading to potential unidentified or overstated deficit balances.	• Regular security count. • Confirmation process with counterparty. • Confirmation process with custodian of securities. • Reconciliation between stock record and outstanding finance report. • Utilization of custodian/ tri party custodian to hold securities.	• Obtain and review reconciliation between custodian and Company's stock record. • Obtain confirmations and other support for most recent quarterly verification process. • Determine that confirmations received reconcile to the outstanding repurchase transactions as of the date of confirmations.

VALUATION

Risks to be Managed	*Types of Controls to Manage or Eliminate Risks*	*Potential Audit Workstep*
Collateral values used in financing transactions are not calculated or reflected correctly resulting in unidentified deficit positions or inadequate collateral value to loan ratio.	• Collateral is marked to market on a daily basis by a group (e.g. risk management) independent of front office. • Collateral collection process in place. • Reconciliation process is in place from custody statement to books and records.	• Obtain reconciliation report between outstanding contracts and collateral held. • Ensure that collateral requirements are applied consistently across all counterparties. • Reconcile custodian statement for collateral to accounting books and records. Investigate differences. • Compare value of collateral to third party pricing. • Determine adequateness of third party pricing reports. • Perform price testing on a selection of collateral positions.
Contract value versus market collateral value deficits are not reduced in a timely and appropriate fashion causing additional market risk.	• Outstanding financing vs. collateral reports generated on a timely basis. • Policy and procedures address collateral requirements and levels to maintain. • Procedures in place to collect additional collateral for deficit positions and to effect buy-ins (sell-outs) when necessary. • Use of “watch lists” or other management tools to identify and monitor financially suspect counterparties.	• Obtain financing vs. collateral reports. • Review aging reports for margin calls to determine that deficit positions are handled in a timely manner. • Determine that the Company collects additional collateral for deficit positions or takes appropriate market action. • Ensure that additional collateral requested from counterparties is received in a timely manner. • Determine that the financing department is aware of the nature of the securities received as collateral and the inherent risks involved with these securities.

Risks to be Managed	*Types of Controls to Manage or Eliminate Risks*	*Potential Audit Workstep*
		• Assess that sampled collateral received is in accordance with types and levels allowed in the Company's policies. • Review and assess "watch list" utilized by management.
Interest income/ expense) and other commissions and fees are incorrectly stated resulting in financial loss and misstated books and records.	• Comparison of interest income/expense calculated by third party vendor (i.e. custody statement). • Analytical analysis is performed. • Management reviews P& L analysis.	• Obtain schedule of accrued income/expense for all financing transactions. • Select sample and test accrued interest calculations. • Determine that the accrued income/ expense report is reviewed on a timely basis and updated to reflect correct contract information. • Determine that commissions or fees are correctly recorded for transactions entered into as agent or principal.

TECHNOLOGY

Risks to be Managed	*Types of Controls to Manage or Eliminate Risks*	*Potential Audit Workstep*
Inappropriate users are able to view and manipulate data housed within the financing system allowing unauthorized trading.	• Programmed controls over access (e.g. database of users, passwords, etc.). • Periodic review of all users and the access level of each user.	• Determine and test that systems have adequate access security controls such as passwords and controls surrounding change management; test the effectiveness and accuracy of the access assigned to system users. • Determine that there is a periodic review of users for appropriateness of access.
Financing application programs can be modified by users resulting in improper activity and causing transactions and related reporting to be incorrect.	• Programmed controls which automatically log system changes. • Enacted process and approval hierarchy developed for system changes including clear policies surrounding sign-offs.	• Verify that program changes are made through a program change process to ensure that changes in financing programs are properly authorized and approved. • Understand if the Financing programs allow for "manual overrides" of system generated or inputted data and assess the potential impact upon data quality.
Data contained in financing systems is inaccurately provided from interfaces such as automated feeds or user defined sources causing inaccurate reporting and impairment of the company's ability to manage its risk properly.	• Programmed controls over data security and integrity. • System reconciliations of data housed in front end or back office systems.	• Ensure that financing systems contain edit checks and data validation controls to prevent and/or detect data errors. • Review system processing to ensure that all applicable financing trade information is fed into the system from the front end trading systems on a timely basis. • Ensure that transactions are assigned systematic, sequential reference identification numbers,

Risks to be Managed	*Types of Controls to Manage or Eliminate Risks*	*Potential Audit Workstep*
		understand the prevent/ detect controls for out of balance or out of sequence conditions.
A disaster occurs which disrupts the management or operations function and therefore cause the company to be unable to conduct its routine level of functionality.	• Current and documented Business Continuity and Disaster Recovery Plan. • Data backup and restoration process is defined.	• Ensure the existence of a Business Continuity Plan (BCP) and determine how the plan has been tested and validated for effectiveness. • Ensure that critical processes have been defined and appropriately considered in a BCP. • Ensure that critical systems can be restored in the event of a disaster. • Determine that tolerable outage periods have been determined and that a BCP contemplates such requirements. • Understand the mechanism for testing and updating the BCP. • Ensure that sufficient data backup and restoration procedures are in place. • Assess whether the needs for the physical location in the event of displacement of key personnel have been addressed.

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II B. SEGREGATION OF DUTIES CHECKLIST

Adequate segregation of duties reduces the likelihood that errors (intentional or unintentional) will remain undetected. The basic idea underlying segregation of duties is that no one employee or group of employees should be in a position both to perpetrate and to conceal errors or irregularities in the normal course of their duties. Additionally, errors may occur due to inadequate supervision of employee activity. In general, the principal incompatible duties to be segregated are: authorization, custody of assets, and recording or reporting of transactions. In addition, the risk management function should be separated from the functions that are originating risk itself and the processing of a transaction.

A practical method for using this checklist is to list the names of individuals responsible for particular functions. Review the checklist for individuals whose names are listed more than once and then make a determination whether that represents a potential lack of segregation of duties. Also consider whether individuals are performing incompatible duties. Once an individual is identified as performing incompatible duties, all duties performed by that individual should be challenged as to whether the effectiveness of those duties is reduced or eliminated by the lack of segregation of duties identified. Larger organizations may find it sufficient to list only the department performing each of these duties, rather than the names of individuals. Those companies could then evaluate whether any departments were performing incompatible duties.

Keep in mind that not all instances where an individual performs more than one function represent a lack of segregation of duties. When an individual does appear more than once the auditor may consider the existence of compensating controls that would mitigate the potential of a segregation of duties conflict when assessing the quality of the control environment. In addition, it is important to remember that there is a possibility of a lack of segregation of duties within the same category. Consequently, completion of this checklist is intended to highlight potentially conflicting duties, not to be the only method of identifying all such conflicting duties.

SEGREGATION OF DUTIES CHECKLIST

Application and Approval

Who approves counterparties? ________________

Who approves new transactions? ________________

Who reviews repo rates/ reset rates? ________________

Who determines credit limits? ________________

Who approves credit limits? ________________

Who approves overall capital allocation to the trading desk? ________________

Who monitors counterparties? ________________

Who investigates counterparties? ________________

Who has access to financing data files and programs? ________________

Who determines financing policies and procedures? ________________

Who reviews outstanding margin/collateral calls? ________________

Booking and accounting/ clearance of transactions

Who executes financing transactions? ________________

Who controls the movement of cash (e.g. wire transfer)? ________________

Who handles the receipt and disbursement of securities? ________________

Who maintains books and records concerning financing transactions? ________________

Who reconciles front office records to accounting office records? ________________

Who receives incoming margin/collateral calls? ________________

Valuation

Who values collateral? ________________

Who assesses collateral values for propriety? ________________

Who reviews and approves the financing position valuation reconciliation? ________________

Legal and Regulatory

Who monitors legal issues? ________________

Who monitors compliance with regulatory requirements? ________________

Who obtains and maintains the necessary Master Repurchase Agreement and collateral documents? ________________

Monitoring

Who is responsible for monitoring collateral and reconciling with custodian statement? ________________

Who monitors trading positions against limits and who performs a check of new transactions for compliance against authorized limits? ________________

Who reviews and approves instances where limits have been exceeded? ________________

Confirmation of trades

Who is responsible for sending periodic statements detailing transactions/collateral? __________________

Who receives inward and outward confirmations? __________________

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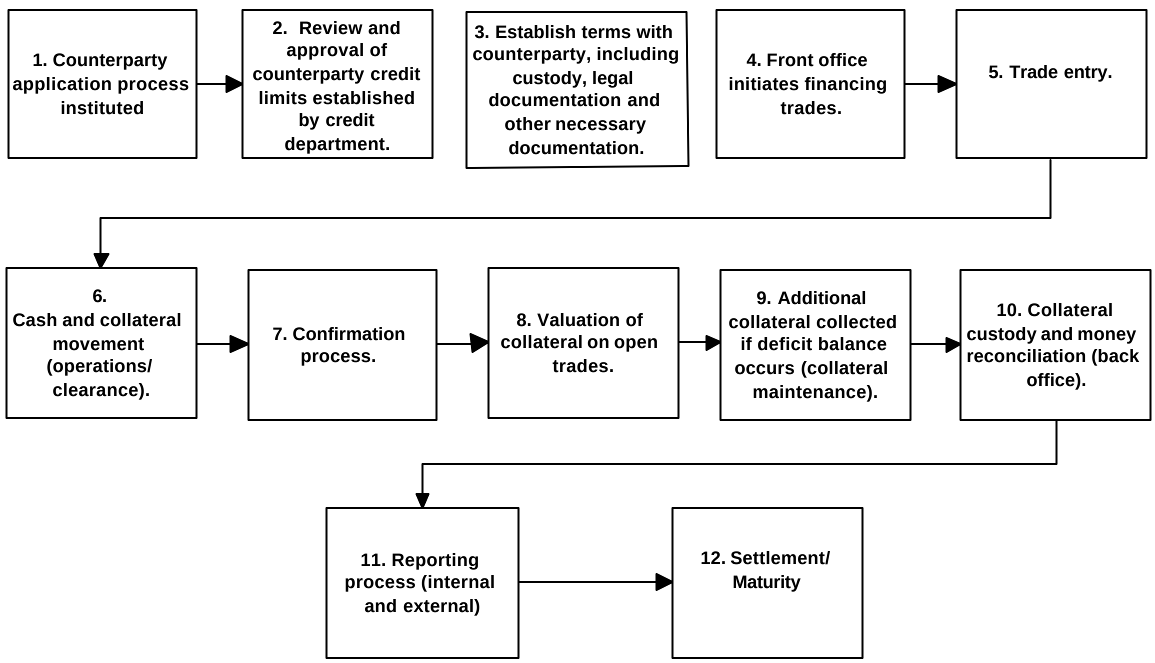
III. FIXED INCOME REPURCHASE AGREEMENT FLOWCHART

The following flowchart illustrates the typical fixed income/ repurchase agreement cycle. Definitions for the individual process steps are included below. Such definitions are numbered in order to cross-reference with the appropriate process step.

Fixed Income Repurchase Agreements Diagram Flowchart



Definitions of Process Steps

Counterparty application process initiated- In most organizations, the account opening or new accounts process is clearly delineated in the organization's policies. The Credit Process begins when the front office applies for a counterparty credit line for financing together with required counterpart documentation.

Review counterparty credit limits established by credit department- The credit department compiles relevant factors to facilitate the determination of a credit line specific to the counterparty. This process would include the gathering of quantitative and qualitative financial data relevant to the counterparty and the compilation of such data in a format prescribed as relevant to the determination of Credit Department objectives. The financing front office should review and affirm the receipt of the established limits established by the Credit Department.

Establish terms with counterparty, including custody, legal documentation and other necessary documentation- Terms of the relationship and related legal documentation are established with the counterparty including custody arrangements and permissive collateral. Legal documentation (e.g. master repurchase agreements) need to be received before the trade has been instituted to ensure proper rights over pledged collateral.

Front office initiates financing trades- Terms of a specific financing transaction are established and approved.

Trade entry- Entry is booked to company's system of books of records. For many companies the books and records system has a direct link with the front office system. Once the trade is booked the financing area will have access to in order to determine real time information on the financing needs and securities that are available for repurchase transactions.

Cash and collateral movement (Operations/ Clearance)- Based on the terms established with the counterparty the cash and securities (collateral) change hands via appropriate custodians.

Confirmation process- Personnel outside the front office confirm all trades with the counterparty.

Valuation of collateral on open trades- Posted collateral should be regularly reviewed as well for its propriety of calculation. Despite the fact that collateral is oftentimes not recorded on the institution's balance sheet, its regular valuation is a key component of the counterparty exposure calculation.

Additional collateral requested if deficit balance occurs (collateral management)- Upon completion of the valuation of collateral, deficit balances need to be satisfied based on established policy thresholds. The deficit balance is calculated based on the collateral valuation related to contract amounts.

Collateral custody and money reconciliations (back office)- Reconciliation of collateral with custodial documentation performed, including arrangements like tri-party and hold-in-custody. Reconciliation at front office and back office trading systems for contract and collateral accuracy. Reconciliation of cash movement between the trading system and bank reconciliation or money transfer functions.

Reporting Process- The reporting process surrounding fixed income repurchase agreements should be clearly defined by the institution. Internal and external reporting are each important and assist in an appropriate entity wide risk management framework, P&L reporting, regulatory reporting and any other disclosures when provided, required or requested disclosure to counterparties, investors and other external parties.

Settlement/Maturity- The fixed income/repurchase agreement process of a specific transaction concludes upon maturity of such contract. At such time the contract expires and the actual cash settlement and return of securities (collateral) occurs. Oftentimes contracts are re-established or “rolled over”, particularly open of overnight repos. Transactions that are not settled at the scheduled maturity via payment should be monitored for credit impairment or operational issues.