INTERNAL AUDITORS DIVISION
An Affiliate of SIFMA

Arbitrage Trading

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I. Background

Arbitrage trading is most commonly characterized as one of the following four types of trading techniques:

1. Merger and acquisition arbitrage - The simultaneous purchase of stock in a company being acquired and the sale (or short sale) of stock in the acquiring company.

2. Liquidation arbitrage - The exploitation of a difference between a company's current value and its estimated liquidation value.

3. Pairs trading - The exploitation of a difference between two very similar companies in the same industry that have historically been highly correlated. When the two company's values diverge to a historically high level you can take an offsetting position in each (e.g. go long in one and short the other) because, as history has shown, they will inevitable come to be similarly valued.

4. Price anomalies – the exploitation of anomalies in different markets for the same instrument (e.g., taking advantage of differentials in pricing for the same security trading on two different exchanges). Many firms execute this strategy using sophisticated technology supporting complex technical trading methodologies. In theory, this type of arbitrage is risk-less, however, very few of these opportunities are observed in the market.

II. Risks

The key risks associated with arbitrage trading are similar to other kinds of proprietary trading:

1. Inappropriate use of the firm's capital by not adequately setting and monitoring limits on positions that the firm is able to hold.
2. Processing errors resulting in positions being incorrectly recorded and/or reported.
3. Incorrect valuation of inventory.
4. Improper use of inside information or violations of the firm's Information Walls.

If not properly controlled, these risks can result in losses to the firm, adverse publicity and/or regulatory sanctions.

III. Control Points

1. A "hands on" trading management, risk management or other senior management group or groups to establish, review, approve and monitor:
   - trading limits by category, trader and department,
   - the concentration of positions in particular securities or industries,
   - new types of trading vehicles and strategies,
   - appropriate hedging (e.g., the use of foreign currency forwards options),
   - adherence to the firm's cash and regulatory capital limits on arbitrage trading, and,
   - coordination and communication within the firm.
2. An accounting function properly segregated from the trading function to verify and ensure the integrity of internal and external financial and regulatory reporting.
3. Management review of all activity in the personal accounts of traders.
4. Timely periodic preparation and management (trading and accounting) review of various reports detailing:
   - the firm's current and potential exposure,
   - daily profit and loss (realized and unrealized) and daily trading activity by type of trading strategy,
   - aged fails,
   - daily trade history (including trade cancellations and corrections),
   - aged and concentrated positions,
   - daily error and suspense account activity,
   - net financial results of the arbitrage trading area after taking into consideration all income sources and all direct and indirect expenses (e.g., financing charges on fails and stock borrowing costs), and
   - use of the firm's cash and capital.
5. Preparation and periodic update of an arbitrage trading manual. This manual should not only address operating procedures, but also the concepts associated with the risk arbitrage decision making process. Procedures should also be in place to regularly communicate to traders their compliance and day-to-day responsibilities.
6. An independent stock record control group to compare, analyze and adjust differences between the stock record and the traders' records.
7. A review of the mark-to-market prices for major positions performed by a group independent from the traders.
8. Management monitoring and review of compliance with regulations concerning "inside information", "Information Walls", Grey & Restricted listing process, short sales, short tendering, options trading, etc.
9. Procedures to manage conflicts between the arbitrage activity and other business relations and commitments in the firm.

IV. Audit Objectives

An audit of arbitrage trading should ascertain that:

1. Procedures are adequate to evaluate and monitor any potential risk coincident with arbitrage transactions.
   - Prior to any proprietary trading in new products, management should evaluate potential risks and develop criteria for approval to commence trading.
   - Management should establish individual transaction limits and overall position limits.
   - Management should receive periodic reporting of position levels. .
2. Arbitrage transactions are properly recorded and cleared in accordance with their terms.
   - Tickets are properly prepared for each trade, containing time stamps and all other relevant information, and are maintained in an orderly manner in accordance with record retention regulations.
3. The firm's financial statements and regulatory reports properly reflect the results of arbitrage trading activity in accordance with generally accepted accounting principles.
   - Inventory positions are accurately priced at the proper mark-to-market.
   - Realized and unrealized profits and losses are accurately reflected.
   - The firm's regulatory filings, including the calculation of net capital and haircuts, accurately reflect the results of arbitrage trading activity.
4. Procedures are adequate to monitor the personal accounts of arbitrage employees for improper transactions.
5. The arbitrage desk/department is in compliance with regulatory rules and regulations as promulgated by the SEC, exchanges, other self regulatory organizations, and the firm's code of ethics.

V. Audit Procedures

These procedures are intended to provide guidance for the preparation of audit programs tailored to the specific needs of individual firms and are not all-inclusive.

1. Review compliance with trading and concentration limits.
   - Ascertain that appropriate limits have been established by a group independent of the trading area for both long and short positions and for concentration by security and/or industry.
   - Evaluate the adequacy of procedures for the monitoring of adherence to established limits and for the reporting and resolution of anticipated and unanticipated violations.
   - Review a representative sample of daily positions to determine the degree of compliance with established position limits.
2. Review adequacy of trading strategies and new trading vehicle approvals.
   - Review trading and hedging strategies.
     - Ascertain and test that compliance with strategies is being monitored continuously.
     - Review approvals of trading and hedging strategies and verify that such strategies are being adequately communicated to traders and complied with.
   - Ascertain if any new products have begun trading since the last audit.
     - Evaluate the adequacy of procedures to review and approve new trading vehicles.
     - Verify that trading in the new products had not commenced before approval was obtained.
3. Review a sample of exposure reports and determine the adequacy and accuracy of the exposure calculations. Determine if concentrations of securities and aged items are handled properly in the calculations.
   - Verify that reports are prepared or reviewed by a group independent of the trading area.
4. Ascertain who has the authority to process adjusting journal entries to profit and loss of firm trading accounts.
   - Review a sample of journal entries and verify that they are properly authorized.
5. Select a sample of trade tickets.
   - Verify that the tickets are properly prepared and maintained in an orderly manner.
   - Match the trade tickets to the firm's trading records.
6. Select a period and test profit and loss calculations and reconcile them to the firm's general ledger. Determine that profit and loss calculations are prepared in a consistent manner.
7. Test the accuracy of reports which detail the net financial results of the arbitrage trading area, taking into consideration all income sources and expenses.
8. Test the accuracy of reports which detail the arbitrage trading area's use of the firm's cash and capital. For example, test the correctness of cost of carry charges on proprietary positions, as well as financing charges on fails and stock borrowing costs.

9. Examine aged fail reports for accuracy and determine if aged fails result from inadequate procedures or controls.
10. Reconcile arbitrage trading inventory to management reports indicating aged and concentrated positions. Determine the propriety of such positions.
11. Ascertain the adequacy of management's daily reviews of trading activity, including trade corrections and cancellations, and review of error and suspense account transactions. Select a representative sample of trade adjustments and error and suspense transactions and determine the propriety of the entries and their proper posting to the accounts.
    - Determine the propriety of any trades being executed away from the market.
    - Determine the propriety of trades in/out with the same party in the same security over a short period of time.
12. Review the adequacy of any trading manual detailing the trading area's procedures or any other procedures in place used to communicate to traders their responsibilities.
13. Review the reconciliations of traders' records with the stock record.
    - Review and conclude on the propriety of the reconciliation between the trade date records maintained by the traders and the firm's settlement date records.
    - Trace a representative sample of trade tickets to the executed trade reports. Reconcile any differences and conclude on the adequacy of trade processing.
14. Review the procedures followed to mark-to-market security inventory. Test the marks by tracing the prices to valid external sources (i.e., published stock market quotations, pink sheets, etc.).
    - Verify that all inventory is properly aged and that the carrying value properly reflects any marketability issues.
15. Review the firm's regulatory filings, including the calculation of net capital and haircuts, to ensure they accurately reflect arbitrage trading activities. Test to ensure proprietary positions are included in the haircut calculation and capital charges are taken in compliance with net capital rules and regulations.
16. Using appropriate testing techniques, ascertain the adequacy of management's monitoring and supervision of the following:
    - Trading activity in securities that are subject to some form of restriction (i.e., due to information barrier or "Chinese wall" policies and procedures)
    - Procedures to identify and resolve potential conflicts of interest between the firm's risk arbitrage department and investment banking or other similar relationships.
    - Restrictions on purchases during a public offering, exchange offering or an acquisition involving the distribution of securities.
    - SEC beneficial ownership filing requirements.
    - Employee security transactions.
    - Short sales.