AUDIT GUIDELINES

HEDGE FUNDS

June 2006

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 work steps 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 work steps 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 work steps accordingly. Internal auditors should always utilize professional judgment in determining appropriate work steps when executing an audit.

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I. INTRODUCTION TO HEDGE FUNDS

Scope of Internal Audit Guidelines

The Internal Audit Guidelines for Hedge Funds is a tool designed to facilitate the internal auditors' determination and assessment of the potential risks inherent in a hedge fund business and the related controls, which an organization may use to manage, monitor, and evaluate those risks. Included as well are possible worksteps that the Internal Auditor may perform to assess the effectiveness of controls and processes used in the monitoring of a firm's hedge fund activities**.** This guideline is designed to help evaluate the risks of a hedge fund business for U.S. broker dealers and their affiliate security dealers, as well as other financial services entities which operate hedge funds (e.g., investment managers and banks).

General Background

The term "hedge fund" is used to describe a wide range of investment vehicles, which can vary significantly in terms of size, strategy, organizational structure and business model. While there is no statutory or legal definition of a hedge fund, in general, it may be defined as:

> A privately offered, pooled investment vehicle that is not widely available to the public and the assets of which are managed by a professional investment management firm commonly referred to as a "Hedge Fund Manager."

While there are no definitive estimates of the size of the hedge fund industry, it is generally thought that the number of hedge funds approximates 10,000 with assets in the range of $1 trillion. Although hedge funds initially were designed to invest in the equities market and sought to take advantage of market inefficiencies, today hedge funds invest in a wide array of financial products, including derivatives, and employ a variety of trading strategies, which may or may not include hedging.

Typically, hedge funds within the U.S. are organized legally as partnerships or limited liability corporations with the investors as limited partners and the portfolio manager (i.e., hedge fund manager) as the general partner. Hedge funds located outside the U.S. are usually structured as limited liability corporations. Depending on its legal structure the hedge fund may be governed by a group or individual independent from the portfolio manager (e.g., board of directors, managing director, trustee) that oversees the activities of the fund.

In addition to the basic single fund, hedge funds may be structured in various ways. Three of the more common structures are known as fund of funds, master/feeder arrangements and side by side.

A fund of funds is basically a hedge fund whose holdings consist of shares of other funds. Some of these vehicles limit their holdings to specific managers or investment strategies, while others are diversified among various investment managers and strategies. The investor in a fund of funds hedge fund is generally seeking diversification as well as layered investment management oversight. The downside to this type of investment is that the investor incurs multiple

General Background (Cont'd)

management fees (for the fund of funds itself and for each of the funds that comprise the portfolio).

In a master/feeder structure, two or more feeder funds contribute their assets to a third fund (the 'master fund') that is used to conduct the trading activities for the feeder funds. This type of arrangement may be used when operating both an offshore and a domestic fund, each of which follows the same investment strategy. Master/feeder arrangements offer the advantage of creating critical investment mass while meeting the needs of both classes of investors (e.g., domestic and foreign) who may have differing tax considerations.

In a side by side structure, U.S. investors typically invest in a limited partnership organized in the U.S. and offshore investors invest in a offshore entity. Trade tickets are allocated between the domestic fund and the offshore fund. Whether a side by side structure or a master feeder arrangement is utilized will depend on the manager's strategy and goals.

Hedge Funds versus Mutual Funds

While both hedge funds and mutual funds represent pooled investment vehicles managed by a professional portfolio manager, there are a number of fundamental differences between them. Basic differences exist in the following areas: fees; leveraging practices; pricing and liquidity; regulatory oversight; and investor characteristics.

Management fees, sales charges and distribution fees charged by mutual funds are subjected to specific regulatory limits and must be disclosed in detail in the mutual fund prospectus. No such restrictions apply to hedge funds which typically charge an asset-based fee as well as a performance fee to its investors.

Mutual funds are severely limited by law in their ability to employ leveraging techniques in their investment strategy. SEC regulations over mutual funds utilizing options, futures, forward contracts and short selling require that the mutual fund must cover their positions. There are no comparable restrictions imposed on hedge funds which frequently utilize leveraging and other high risk strategies.

With respect to pricing and liquidity, mutual funds are required to value their portfolios and price their securities daily. In addition, mutual funds are required by law to allow shareholders to redeem their shares at any time. There are no specific rules governing hedge fund pricing and redemption and, as a result, hedge fund investors may not be able to determine the value of their investment at any particular point in time. As well, there are no standards for reporting after tax returns.

Hedge Funds versus Mutual Funds

U.S. mutual funds are among the most highly regulated financial products subject to, among other laws, the Investment Company Act of 1940 and the Investment Advisers Act (the "Act"). Hedge funds are considered private investment pools subject to far less regulatory oversight. However, in 2004 the SEC adopted new rules requiring that many hedge fund advisers register with the SEC in accordance with the Investment Advisers Act.

Generally, mutual funds are open to all investors with the only qualification being a minimum investment to open an account (typically about $1,000). The typical fund investor is a middle-income, middle-aged individual. Whereas the typical minimum investment in a hedge fund is $1 million or more, attracting institutional investors or high-net worth individuals. However, with the proliferation of hedge funds the competition for investors has intensified and, as a result, many hedge funds have begun to attract more traditional retail investors. The new rule adopted by the SEC to the Investment Advisors Act requires that, in order for the manager to receive performance-based fees, new investors in hedge funds must be "qualified clients," that is, have a minimum net income of $750,000 and minimum net worth of $1.5 million. The intent of these requirements is to limit participation in a hedge fund to so-called 'highly sophisticated' investors.

Domestic and Off-Shore Hedge Funds

Domestic hedge funds are hedge funds that are organized within the legal and tax structure of the United States and are therefore subject to U.S. laws. Off-shore funds are organized within non-U.S jurisdictions and therefore attract a wider range of investor base. Another advantage of off-shore funds is that, depending on the country, it may afford the investor a level of privacy and confidentiality than might otherwise be offered from a domestic fund.

Hedge Fund Activities

As a pooled investment vehicle the day–to-day activities of a hedge fund are very similar to those of a mutual fund. These activities may be broadly categorized as investing, operations and accounting.

Subscriptions and redemptions involve the acceptance of new investors and the redemption of existing investors. In accepting new investors a due diligence process should be followed to ensure that prospective investors meet the eligibility requirements for the fund. This process would usually include sending an offering memorandum, partnership agreement and subscription documents to the prospective investor who would return the completed subscription documents. Appropriate due diligence would be performed to ascertain that the investor meets eligibility requirements and is otherwise an acceptable investor. In the case of redemptions, notification must be received in a timely manner and then it must be verified that applicable holding periods have been met.

Hedge Fund Activities

Investing consists of those processes involved in employing an investment strategy, such as portfolio management (i.e., portfolio allocation, sector/security selection, trade decision making, portfolio analysis), order management and trade execution. Hedge fund managers attempt to produce targeted returns regardless of the underlying trends in the financial markets. In order to do this a wide array of strategies will be employed, that might involve short selling, arbitrage, hedging, and leverage, including the use of derivatives. Despite the strategy that may be employed, hedge funds are subject to the same market rules and regulations as any other trader.

Operations involve all post trade activities, such as clearance and settlement, corporate actions, cash management and reconciliation. Control of these activities is essential if the hedge fund is to avoid unexpected losses which might hinder its ability to achieve its targeted rate of return.

Accounting is very similar to accounting for business transactions in any other financial services organization. Activities include, among other things: profit and loss reporting; review of security pricing; booking journal entries, and; general ledger reconciliations.

Most hedge fund managers employ service providers for some investing activities and for most, if not all, operational and accounting activities. The service providers may be related or unrelated organizations, but in either case there should be a service level agreement in place with the provider.

Included in hedge fund service providers are banks and broker-dealers. Banks often provide letter of credit financing arrangements to enable hedge funds to meet short term cash needs. Broker-dealers provide hedge funds with execution, clearing and settlement of trades through executing and prime broker relationships. Acting as the prime broker, the broker-dealer provides clearance and settlement of trades as well as custody and asset servicing for the fund's portfolio. This audit guideline is intended as a guide for auditing hedge fund and hedge fund advisor activities and not for the activities of hedge fund service providers.

Regulatory

Hedge funds, as private partnerships, are offered as securities and thus governed by the Securities Act of 1933 and state blue sky laws unless they qualify for an exemption under Rules 505 and 506 of Regulation D. Under some of these exemptions a company may sell its securities to what are known as "accredited investors" as that term is defined in Regulation D. Whether or not exempt under the 1933 Act, hedge fund activities have historically been largely unregulated in the U.S.. While that remains relatively true today, in December of 2004 the SEC adopted a new rule and other rule amendments to the Investment Advisors Act of 1940 that would require, among other things, that advisers to "certain private investment pools" (i.e, hedge funds) must register with the SEC as investment advisers. Certain exemptions from the registration requirement are provided, the most significant of which are that the requirement does not apply to advisers who do not hold themselves out to the public as an investment adviser and who have had fewer than fifteen clients during the preceding twelve months.

Regulatory (Cont'd)

Some of the more significant provisions of the Investment Advisors Act which advisers will be subject to are its recordkeeping, compliance program and ethics requirements. The new rule and rule amendments are effective in stages between January, 2005 and February 2006. For further information reference is made to SEC Release IA-2333 dated December 2, 2004. Hedge funds themselves are required to register as an investment company under the Investment Company Act of 1940 if they have more than 100 investors, unless they qualify for exemption under either Sections 3(c)(1) or 3(c)(7). To avoid having to register, hedge funds generally try to take advantage of one of these exemptions.

Section 3(c))(1) excludes from the definition of investment company any issuer whose outstanding securities are beneficially owned by not more than 100 investors and which is not making or does not propose to make a public offering of its securities. Section 3(c)(7) excludes from the definition of investment company any issuer whose outstanding securities are owned exclusively by persons who, at the time of acquisition of such securities, are "qualified purchasers," and which is not making and does not propose to make a public offering of its securities. In general, a qualified purchaser is a person who owns at least $5 million in investments.

However, if a fund has 500 or more investors it would be subject to the registration and reporting requirements of Section 12 of the Securities and Exchange Act of 1934.

Regardless of whether or not an investment adviser or hedge fund is required to register with the SEC they may have to make certain regulatory filings under U.S. law, depending on either their trading activity or their status as a regulatory entity. Exhibit A provides a description of a number of filings which might be required by a hedge fund depending on their status and investment activities. In addition, off-shore hedge fund managers may be subject to regulatory reporting and filing requirements in the foreign jurisdiction in which they conduct their business.

While there are no definitive disclosure requirements for hedge funds, the trend is toward more extensive disclosure in the primary disclosure document, the offering memorandum. Prospective and existing investors should be provided with information regarding the fund's investment objectives and strategies. Other disclosures might include some or all of the following:

- Investment and brokerage practices
- Fees and expenses
- Possible conflicts of interest
- Risk factors
- Performance and capital measures

Conflicts of Interest

Conflicts of interest within a hedge fund business can be a significant concern. The auditor should be aware of the circumstances that might create potential conflicts of interest and assure themselves that adequate procedures and controls exist to avoid such conflicts. Some areas or situations to be alert to red flags concerning potential conflicts of interest include:

- Hedge fund advisers may also be advising other funds, hedge funds and/or mutual funds. The other funds may be employing different investment strategies than the hedge fund which could present potential conflicts of interest. Full disclosure of these relationships should be made to the hedge fund investors.
- Security valuation – management fees are based upon portfolio performance which is directly impacted by the value of the securities within the portfolio. This becomes increasingly relevant to a hedge fund that contains illiquid positions where valuation of the positions inherently involves more subjective considerations. There should be adequate segregation of duties and management oversight with respect to security valuation to insure that valuations are reasonable.
- Order aggregation – trade orders made simultaneously for different funds creates the potential for one fund to receive advantageous prices relative to another fund. A system whereby orders are aggregated and an average price is derived can help to avoid unfair pricing practices.
- Misuse of non-public information – In an organization which also conducts an investment banking business, effective barriers must exist to prevent the inappropriate sharing of non-public information.
- Soft dollar arrangements – such arrangements could influence the portfolio manager to direct order flow in a way that disadvantages fund investors. Procedures should exist to monitor soft dollar activity to ensure that it is appropriate and within the safe harbor provisions of Section 28(e) of the Securities Exchange Act of 1934. An audit guideline on soft dollar activities is expected to be available in the near future.
- Tax conflict – in a master/feeder arrangement the investment manager is limited in their ability to achieve tax advantages for each investor type. For example, disposing of investments in a time frame that maximizes the tax treatment for one class of investor may not result in the same advantage for another class of investor. Side by side funds and investments made directly by feeder funds in a master/feeder structure provide flexibility to avoid these conflicts.
- Related broker-dealer – order flow directed through a related company may bring into question whether or not the hedge fund has obtained best execution for its securities transactions. Trade practices should be monitored closely to ensure that the fund manager is meeting their fiduciary responsibility for obtaining best execution.

Risks/Audit Objectives

There are a number of significant risks associated with the management of hedge funds. However, it is important to note that investment strategies, organizational structure, extent of assets managed and the objectives of the funds themselves vary greatly from hedge fund to hedge fund. These factors will impact the nature and extent of the risks associated with a particular organization and must be taken into consideration when assessing those risks and the control environment that has been established to manage them. For purposes of this Audit Guideline the risks have been categorized into several broad categories. Those risk categories and the related audit objectives are described below.

Portfolio Management risk concerns the possibility that the portfolio may not be adequately managed in accordance with the fund's strategy resulting in poor or improper investment management decisions.

> ***Audit objective:*** Ascertain that there is adequate oversight and supervision of the investment management decision making process.

Market risk relates to losses that could be incurred due to changes in market factors (e.g., prices, volatilities and correlations).

> ***Audit objective:*** Determine that effective procedures are in place to measure, communicate and respond to unfavorable changes in market factors.

Credit risk is the potential that losses may be incurred due to the decline in the creditworthiness of entities that the fund invests in or with which it deals as counterparty.

> ***Audit objective:*** Assess the effectiveness of the organization's risk management system to minimize unnecessary exposure to credit losses.

Funding Liquidity risk represents the potential that losses could be incurred when declines in a fund's capital because of redemptions, along with insufficient sources of liquidity, impair the fund's ability to continue its investment strategy.

> ***Audit objective:*** Ascertain that an effective process exists to measure funding liquidity requirements and respond adequately to projected funding needs, especially in times of stress.

Operational risk includes the potential exposure to the fund due to an inability to process transactions accurately and timely.

> ***Audit objective:*** Ensure that procedures and controls are sufficient to ensure the timely and accurate processing of transactions, including trade executions, corporate actions, position reconciliations, investment valuation, redemptions and other activity.

Risks/Audit Objectives

Regulatory risk is the potential that violations of securities regulations might occur and go undetected.

> ***Audit objective:*** Ascertain that effective procedures are in place to (1) prevent and detect potential violations of securities laws; (2) follow-up and resolve potential violations, and; (3) ensure that a strong and independent compliance program is in place to monitor regulatory compliance.

Accounting risk is present when the systems and procedures do not ensure the accurate and timely recording of transactions.

> ***Audit objective:*** Determine that adequate procedures exist to ensure that transactions are recorded accurately and timely.

Technology risk is present in any environment where substantial reliance is placed on systems for conducting business activities. Ensuring that only authorized individuals can affect transactions, that adequate segregation of duties exists to prevent one individual from having end-to-end control of the process and that system integrity and availability is ensured is critical.

> ***Audit objective:*** **D**etermine that systems are (1) properly safeguarded from unauthorized access, and; (2) protected from unintended disruption.

Audit Guidelines

The following guidelines do not represent an exhaustive set of procedures that the auditor needs to follow during all audits of hedge fund activities. To best evaluate hedge fund activities at a specific firm, judgment should be exercised when determining the procedures to be performed and the sequence of performing those procedures.

Securities Industry Association

II A. AUDIT GUIDELINES

This guideline is intended to provide members of the Securities Industry Association, Internal Auditors Division with information for the purpose of developing or improving internal audit programs. The information is designed to provide guidance to member firms in the preparation of procedures tailored to the specific needs of their individual environment. Internal auditors should always utilize professional judgment in determining appropriate worksteps to complete specific audit steps.

The footnote in the "Risks to be Managed" section of the following tables is a cross-reference to the "Hedge Fund Process Flowchart" included on page 37. This reference is included for informational purposes and can be used to determine the potential areas of the process that may be affected.

Portfolio Management

Risks to be Managed	***Types of Controls to Manage or Eliminate Risks***	***Potential Audit Workstep***
Portfolio management practices are inconsistent or erroneous resulting in poor or improper investment management decisions. • Portfolio management activities are not subject to adequate oversight and supervision. • Portfolio managers are unaware of positions and funds in managed accounts. • Research and analysis is not made available to portfolio managers on a timely basis. • Fund performance is not calculated accurately, timely or independently. (1,2,3,4)	1. Portfolio manager activities are supervised daily. 2. An investment committee periodically reviews investment activities/decisions. 3. Portfolio managers are provided with daily reports of trading activity, positions and funds in managed accounts and risk reports. 4. Research and analysis is: ♦ Automatically made available to all portfolio managers on a continuous basis. ♦ There is regular communication between research analysts and portfolio managers to discuss results of analysis.	1. Ascertain that portfolio managers are subject to daily supervision and that supervisors are provided with adequate reports detailing investment activities, performance and risk. 2. Verify the existence of an investment committee and determine that it: ♦ Meets on a regular basis and that it reviews investment activities/decisions. ♦ Is comprised of senior management personnel independent of portfolio management responsibilities. 3. Review daily reports received by portfolio managers (trading, positions, risk, etc.) and evaluate their completeness and accuracy. 4. Verify that research reports are made available to portfolio managers and that there is regular communication between research analysts and portfolio managers.

Portfolio Management

Risks to be Managed	*Types of Controls to Manage or Eliminate Risks*	*Potential Audit Workstep*
	5. Fund performance is calculated by a group independent of portfolio management and provided to portfolio managers daily.	5. Verify that fund performance is: ♦ Calculated by a group independent from portfolio management ♦ Is calculated accurately and timely

Market Risk

Risks to be Managed	***Types of Controls to Manage or Eliminate Risks***	***Potential Audit Workstep***
• Changes in market conditions result in excessive assumption of risk within the portfolio. ♦ Market risk is not effectively measured, monitored or communicated. ♦ Risk models do not accurately measure the market risk. ♦ Risk models are not supplemented by other measurement techniques that measure market risk under extreme conditions. ♦ Market risk is measured and monitored by a group that is independent from investment decision making. (6,7)	1. Market risk is measured and daily through the use of a market risk model and other risk monitoring tools (e.g., portfolio valuations, concentration, unrealized P&L). The risk model employs Value at Risk ('VAR') as a consistent framework for measuring the risk of loss for a portfolio, incorporating various factors affecting the risk and return of the portfolio's assets. The factors include market rates and prices, credit spreads, volatilities and correlations. 2. Market risk models, and other risk reports, have been developed and are maintained independent from the portfolio management area. 3. The risk model and reports have been vetted and is tested periodically for accuracy.	1. Ascertain that a risk model and other risk reports are used to measure market risk and that a reasonable determination has been made of all the factors impacting the market risk of the portfolio ♦ Verify whether those factors have been incorporated into the risk model ♦ Assess the appropriateness and accuracy of other risk reports that are used 2. Ascertain that the risk model was developed and is maintained independent from portfolio management. 3. Verify that the risk model was initially and subsequently tested for accuracy.

Market Risk

Risks to be Managed	***Types of Controls to Manage or Eliminate Risks***	***Potential Audit Workstep***
	4. Risk models and other risk reports are subjected to periodic: ♦ Stress testing (magnifying the effects of the parameters used in the model) ♦ Back testing (comparing the actual changes in the value of the portfolio for a prior period to the changes reflected in the model). 5. Scenario analyses are periodically conducted to measure the portfolio risk against various scenarios of market behavior (e.g., situations where concerns about credit quality lead to dramatic declines in asset values combined with decreases in asset funding liquidity). 6. A risk management group, independent from portfolio management is responsible for measuring and monitoring market risk, including development, maintenance and testing of risk models. 7. Escalation procedures are in place to ensure that the hedge fund manager is informed promptly (either electronically or manually) when market risk exceeds established parameters.	4. Determine that the risk model is periodically subjected to stress testing and back testing. 5. Ascertain that scenario analyses are periodically performed to measure the impact of extreme market scenarios on the portfolio. ♦ Evaluate the results of the most recent stress testing, back testing and scenario analysis. 6. Determine that the risk management group is independent from portfolio management duties and is responsible for: ♦ Development, maintenance and testing of risk models. ♦ Measuring and monitoring market risk. 7. Review the procedures for informing the fund manager when market risk exceeds established parameters. ♦ Ensure that the fund manager is notified automatically. ♦ If the fund manager is not notified automatically, ascertain that an appropriate procedure is in place to provide the manager with timely notification.

Credit Risk

Risks to be Managed	*Types of Controls to Manage or Eliminate Risks*	*Potential Audit Workstep*
Credit polices and procedures are not adequate to manage the credit risk inherent from securities trading activities, exposing the firm to potential financial loss arising from counter party failure. (7,8,9)	1. A group independent from portfolio management and trading (e.g., Credit Risk Committee) is responsible for establishing credit policies with respect to counter-parties and investments and monitoring adherence to those policies. 2. Approval of counter parties is based on an analysis of creditworthiness using current financial and other qualitative information. The results of the analyses are adequately documented. 3. Appropriate credit limits are established for each approved counter-party. 4. Counter-parties are subjected to an initial credit review and to periodic reviews thereafter. A process exists to monitor, report, age and approve instances where reviews are not completed within prescribed timeframes. 5. Portfolio concentration limits (by country, industry, sector and issuer) are set to avoid excessive exposure to any single market component.	1. Determine that an independent authority is responsible for approving (e.g. Credit Committee) and monitoring (e.g. Credit Department) counter-party credit and concentration limits. ♦ Review Credit Committee minutes to verify that limits have been approved. 2. Ascertain that limits are established only after a review of the counter-party's financial condition has been completed. 3. Ascertain that guidelines used to establish and approve credit and concentration limits are adequate. 4. Select a sample of counter-parties. ♦ Review their respective credit files to determine that appropriate documents (e.g., financial statements, SEC filings, press releases) are included to support the credit limit. ♦ Verify that the credit reviews have been performed on a timely basis. 5. Verify that portfolio concentration limits used to manage issuer, credit and country exposure, have been established.

Credit Risk

Risks to be Managed	*Types of Controls to Manage or Eliminate Risks*	*Potential Audit Workstep*
	6. Exceptions to credit and concentration limits are reported to and reviewed by someone independent of portfolio management and trading. 7. For further information on credit risks and controls refer to the IAD Audit Guideline on Credit Risk.	6. Review procedures for monitoring adherence with approved credit and concentration limits. Verify that someone independent of portfolio management and trading reviews limit exceptions. ♦ Obtain credit and concentration limit exception reports and investigate any significant exceptions. ♦ Review exception reports over a selected period of time and investigate any identified exception trends (e.g. same counter-party, same security, same trader, exceptions consistently just below the reporting threshold). 7. For further information on audit steps concerning credit risks and controls refer to the IAD Audit Guideline on Credit Risk.

Funding Liquidity Risk

Risks to be Managed	*Types of Controls to Manage or Eliminate Risks*	*Potential Audit Workstep*
Funding liquidity is not measured or monitored, impairing the fund's ability to continue its investment strategy and increasing the risk of liquidating investments into a rapidly declining market. (10,11)	1. The amount of available cash (uninvested funds) is calculated at the end of the day. ♦ A specific area (e.g., repo desk) is responsible for investing the excess cash. ♦ An approved list of investments and counter-parties is used for making investment decisions. ♦ The cash position is reviewed by the portfolio manager each day to determine that available funds were invested. 2. Available liquidity (cash plus borrowing capacity) is measured and monitored on a regular basis. Borrowing capacity consists of lines of credit and potential margin borrowing. ♦ A group, independent from fund management, is responsible for measuring and monitoring available liquidity. ♦ A standard format and formula is utilized to perform the calculation. ♦ The calculation is reviewed by fund and senior management.	1. Review the cash management process and evaluate the effectiveness of established policies for investing excess cash. ♦ Select a sample of days and verify that excess cash has been invested in accordance with established policies. ♦ Determine that excess cash is invested in authorized investment vehicles and with approved counter-parties. ♦ Verify that the cash position is reviewed each day by fund management. 2. Verify that available liquidity (cash + borrowing capacity) is being measured and monitored on a regular basis. ♦ Determine that the method for measuring available liquidity incorporates all available sources of funding. ♦ Test the accuracy of the calculations.

Funding Liquidity Risk

Risks to be Managed	*Types of Controls to Manage or Eliminate Risks*	*Potential Audit Workstep*
	3. Potential need for liquidity is also measured and monitored on a regular basis. Measures used for the potential need for liquidity include such things as: ♦ Equity or NAV ♦ Worst historical drawdown ♦ Ratio of available liquidity to VAR 4. A formal contingency plan exists to provide alternative funding sources during stress conditions.	3. Verify that the potential need for liquidity is measured and monitored on a regular basis. ♦ Ascertain that the formula used for measuring potential need for liquidity is appropriate considering the size and asset make-up of the portfolio. 4. Determine that the measurement for potential need for liquidity is related to the measurement of available liquidity and that parameters exist for defining when a potential liquidity shortfall might occur. ♦ Ascertain that a contingency plan exists that will provide additional funding during a liquidity crunch. ♦ For a period of time review the monitoring of available liquidity relative to liquidity needs and, for any time that liquidity shortfall parameters are exceeded, verify that appropriate steps were taken in accordance with the contingency plan.

Funding Liquidity Risk

Risks to be Managed	***Types of Controls to Manage or Eliminate Risks***	***Potential Audit Workstep***
Redemption risk (i.e., the risk that a large percentage of investors will redeem their investments at the same time) is not adequately minimized through effective diversification of the investor base. (12,13)	5. Parameters have been established for targeted diversification of the investor base. ♦ The investor base is monitored regularly to ensure that it meets the diversification targets. ♦ Periodic reports of the investor base as related to diversification targets are distributed to fund and senior management. 6. A redemption schedule is prepared periodically and distributed to fund management to inform them of expected withdrawls.	5. Evaluate the diversification parameters that have been established. ♦ Ascertain that investor diversification is within the targeted parameters. ♦ Determine that the investor base is monitored on a regular basis. ♦ Verify the accuracy of investor diversification reports. 6. Review the redemption schedule for a selected period: ♦ Determine that the schedule is distributed to fund management ♦ Determine the accuracy of the schedule by comparison to actual draw-downs during the period

Operational Risk

Risks to be Managed	*Types of Controls to Manage or Eliminate Risks*	*Potential Audit Workstep*
Insufficient operational procedures and controls may result in financial loss, damage to the organization's reputation or possible regulatory sanctions. The following specific operational activities should be considered: • Trade breaks and fails are not resolved accurately or timely. • Corporate actions are not recorded timely or accurately. • Portfolio positions and balances are not reconciled to custodian records. • Proxies are not acted upon by portfolio management. • Outsourcing arrangements are not monitored to ensure that services are provided in accordance with contractual agreements. • Trades are not reconciled to the books and records.	<u>Trade Breaks/Fails</u> 1. Reports of failed trades and trade breaks are received throughout the day and problem trades are monitored and resolved. ♦ Unresolved breaks and fails are aged and reported each day. ♦ Breaks are resolved by personnel independent of portfolio management. ♦ Break resolutions and the related documentation are reviewed and approved by a supervisor. ♦ Breaks that exceed pre-defined dollar levels are escalated to senior management. <u>Corporate Actions</u> 2. Utilizing external data feeds: ♦ The system automatically calculates and records dividends and interest on portfolio positions independent of the fund/account custodian. ♦ Voluntary reorganization actions are automatically identified, logged and forwarded to portfolio management for action. ♦ Actions taken by portfolio management are entered in the log.	<u>Trade Breaks/Fails</u> 1. Review and test procedures over failed trades and trade breaks: ♦ Determine that breaks are resolved by personnel independent from portfolio management. ♦ Select a sample of failed trade and trade break reports and verify that all items were resolved timely. ♦ Determine that break resolutions have been approved by supervisory personnel. ♦ Ascertain that breaks exceeding pre-defined dollar levels are escalated to senior management. ♦ Verify that portfolio management reviews unresolved break reports. <u>Corporate Actions</u> 2. Review the process for calculating and recording corporate actions on portfolio positions. Select a sample of announcements and: ♦ Verify that distribution was calculated and recorded correctly. ♦ Ascertain that the distribution was reflected on the custodian's records. ♦ For a sample of reorg actions verify that the system properly identified them and that appropriate action was taken.

Operational Risk

Risks to be Managed	*Types of Controls to Manage or Eliminate Risks*	*Potential Audit Workstep*
• Portfolio positions are not priced accurately. • Trade errors or operational losses resulting in customer losses are not reimbursed to the client. (14,15,16,17,18,20,21)	Position Reconciliation 3. Portfolio positions and balances are reconciled to custodian records daily. ♦ Exceptions are investigated and resolved timely (e.g., by end of day). ♦ Reconciliations are reviewed and approved on a timely basis. ♦ Write-offs and adjustments over a pre-determined amount must be approved. ♦ Unresolved differences are aged and reported to portfolio management daily. Proxy Processing 4. Proxies are logged and passed to portfolio management. ♦ Action taken is recorded in the log. ♦ A corporate governance service is utilized to assist in proxy decisions.	Position Reconciliation 3. Review the procedures for reconciling positions and balances to custodian records and verify that: ♦ Reconciliations are performed daily and are reviewed and approved. ♦ Reconciliations are accurate. ♦ Exceptions are resolved timely and accurately. ♦ Write-offs and adjustments are approved. ♦ Unresolved differences are aged and reported to portfolio management on a timely basis. Proxy Processing 4. Review procedures for processing proxies: ♦ Determine that proxies to be processed internally are logged and passed to portfolio management for action. ♦ Ascertain that action taken is consistent with portfolio guidelines. ♦ Compare actions taken to corporate governance service reports and investigate actions taken that were not in line with recommended actions.

Operational Risk

Risks to be Managed	***Types of Controls to Manage or Eliminate Risks***	***Potential Audit Workstep***
	<u>Service Providers</u> 5. Formal contracts exist for all third party services ♦ Initial and ongoing due diligence is performed on external service providers. ♦ The services provided are monitored on a regular basis to ensure compliance with the contractual agreement. <u>Trade Activity</u> 6. Trade confirmations are reconciled to trade blotters daily. <u>Security Pricing</u> 7. Security prices are downloaded daily from multiple pricing vendors and used to automatically value the portfolio. ♦ The Board or the valuation committee has approved pricing sources.	<u>Service Providers</u> 5. Identify all third party service providers, both internal and external. ♦ Verify that contracts exist for external providers and that service level agreements exist for internal service providers. ♦ Determine that initial and ongoing due diligence is performed over external service providers to ensure that they are a financially viable entity. ♦ Ascertain that there is regular monitoring of the services provided to ensure compliance with the service agreement and that the rates being charged are reasonable. 6. Review reconciliations of trade confirmations to trade blotters. ♦ Ascertain that any exceptions are resolved timely <u>Security Pricing</u> 7. Review process used for obtaining prices from independent sources and verify: ♦ That multiple pricing sources are used when feasible. ♦ That vendors used are established industry pricing sources. ♦ That the Board or valuation committee has approved pricing sources.

Operational Risk

Risks to be Managed	*Types of Controls to Manage or Eliminate Risks*	*Potential Audit Workstep*
	8. A report is produced of price variances between vendors. ♦ Items on the report are researched and a determination is made as to which price is correct. ♦ The price used is independently approved. 9. An exception report is generated showing any position for which a price has not been received. ♦ Following established guidelines each position is researched and a price obtained. ♦ Someone independent from the person obtaining the price reviews and approves the price that is used. 10. An exception report is produced showing variances in pricing from the previous day that exceeds pre-determined parameters and prices that have not changed (possible stale prices). ♦ The prices are reviewed to determine their accuracy. ♦ Someone independent from the person verifying the prices reviews and approves the determination of the accurate price.	8. Review reports of price variances reported by different pricing vendors and: ♦ Verify that a proper determination is made as to the correct price. ♦ Ascertain that the price used has been independently approved. 9. Review the procedures for following up on pricing exception reports. ♦ Ascertain that a report is generated showing positions for which a price has not been obtained. ♦ Select a sample of securities not priced by pricing services and verify that they are priced reasonably and that the prices used have been independently approved. 10. Ascertain that a report is generated showing large price changes from the previous day (and prices that have not changed). ♦ Select a sample of security price variances and verify that the price used is reasonable and has been independently approved. ♦ For the sample of security prices reviewed, compare prices used to the last or subsequent reported sales price (where available) and investigate any large variances between prices.

Operational Risk

Risks to be Managed	*Types of Controls to Manage or Eliminate Risks*	*Potential Audit Workstep*
	11. When no published price is available (except positions valued through the use of a model): ♦ A valuation committee has established a policy and procedure for valuation. ♦ Someone independent of portfolio management and trading performs the valuation. ♦ Significant price variances arising from the valuation procedure are researched and resolved. 12. For securities valued through the use of a model: ♦ The valuation committee approves all models. ♦ Access to the model is restricted to authorized personnel only, not including trading and portfolio management personnel. ♦ Models are reviewed periodically to ensure that they remain accurate. <u>Error Reimbursement</u> 13. An error policy is in place whereby trade errors and operational losses resulting in customer losses are reimbursed to the client.	11. Ensure that there are documented procedures regarding the manual pricing and/or verification of pricing and that the procedures: ♦ Are performed independently of portfolio management and trading. ♦ Have been approved by the valuation committee. 12. Obtain a list of all securities valued through the use of a model and: ♦ Review a sample of models and ensure that they contain all relevant components and appear to be reasonable in light of the type of security. ♦ Verify that the valuation committee has approved the models being used. ♦ Ascertain that access to the models are appropriately restricted to authorized personnel, to specifically exclude portfolio management and trading employees. ♦ Determine that the models have been thoroughly tested, including assumptions, mathematical accuracy, assessment of vulnerabilities and stress testing. <u>Error Reimbursement</u> 13. Assess the impact of various operational/trade errors to the underlying client and ensure the client is made whole.

Operational Risk

Risks to be Managed	*Types of Controls to Manage or Eliminate Risks*	*Potential Audit Workstep*
Risk of financial loss may exist if class action suits involving fund investments are not monitored and the necessary steps taken to receive pro rata share of judgments.	Class Action Lawsuits 14. A process exists to identify and monitor on-going class action suits involving fund investments. ♦ A periodic status report of pending class action suits is produced. ♦ When a judgment is declared the appropriate steps are taken to receive the pro rata share.	Class Action Lawsuits 14. Review the process followed to monitor class action lawsuits. ♦ Ascertain that the status of pending class action suits is reported to fund management. ♦ Verify that the necessary action is taken to receive the pro rata share.
Inadequate controls over security lending practices (if the fund engages in security lending) may result in financial losses. • Securities are loaned to or through an unauthorized agent bank or broker/dealer. Collateral received is lower than the value of securities loaned. (19)	Securities Lending 15. Securities can be loaned only through or to agent banks or broker/dealers authorized for such activity. 16. Collateral received in return for securities loaned is monitored to ensure that it exceeds the value of loaned securities. 17. For more detailed information refer to the Audit Guidelines for Security Lending issued August 2002.	Securities Lending 15. Verify that securities have been loaned only through or to approved counterparties. 16. Review and test procedures for monitoring collateral value. 17. Reference is made to the Audit Guidelines for Security Lending issued August 2002 for additional guidance.

Operational Risk

Risks to be Managed	*Types of Controls to Manage or Eliminate Risks*	*Potential Audit Workstep*
Controls over subscriptions and redemptions are not sufficient to prevent: • Acceptance of unqualified investors. • Acceptance of ERISA accounts in excess of regulated limits (25% of aggregate equity). • Inappropriate redemptions: ♦ Do not meet notification requirements ♦ During lock out period ♦ Exceeds the percentage limit for a single redemption (22,23,24,25,26)	Subscriptions/redemptions 18. Potential investors are provided with the offering memorandum and must submit a completed application form. 19. Potential investors are subjected to the following checks: ♦ Income and net worth verification ♦ Credit and background checks ♦ Screening against OFAC and other government lists ♦ Assessment of investor's sophistication and other suitability criteria 20. A checklist is completed to ensure that the appropriate steps were taken. 21. Once the checklist is completed the application is submitted for approval. ♦ Senior management approves all new investors. 22. The new accounts system prevents investment by ERISA accounts that will result in the fund exceeding permissible levels.	Subscriptions/redemptions 18. Select a sample of new investors and: ♦ Verify that they were provided with the offering memorandum ♦ Review their application and determine that it was completed properly 19. Ascertain that income, credit and background checks were completed, and ♦ Determine that the investor was screened against OFAC and other government lists ♦ Verify that the investor was evaluated for suitability versus established criteria 20. Verify that all steps on the checklist were completed 21. Determine that the account application was properly approved 22. Review the new accounts system and ascertain that it prevents new ERISA accounts that will result in the fund exceeding permissible levels. ♦ In the absence of system controls determine that a process exists to monitor the level of ERISA accounts and prevent acceptance of accounts that will exceed permissible levels.

Operational Risk

Risks to be Managed	*Types of Controls to Manage or Eliminate Risks*	*Potential Audit Workstep*
	23. Redemptions must be submitted on a standard redemption form. ♦ Date redemption form is received is entered into the redemption system. 24. Redemption system prevents redemptions when: ♦ Notification has not been received in a timely fashion (e.g., 30 days) ♦ Redemption request occurs during the lock out period ♦ Redemption amount exceeds the percentage limit on one time redemptions 25. In the absence of system based redemption controls, the following manual procedures may be utilized: ♦ A checklist is used to ensure that redemption requests properly reviewed ♦ The checklist requires that redemptions be reviewed for timely notification, lock out period and one time limitations ♦ The completed checklist and redemption request form is submitted for senior manager approval	23. Select a sample of redemptions and: ♦ Examine redemption the forms for completeness ♦ Verify that the date received was entered into the redemption system and that it complies with the notification period ♦ Determine that the redemption request did not occur during the lockout period ♦ Verify that the amount does not exceed limits on one time redemptions ♦ Ascertain that the redemptions have been properly approved 24. Review the redemption system and ascertain that it prevents redemptions when timely notification has not been received, during the lock out period and when they exceed one time limitations. 25. In the absence of system controls verify that a process exists to prevent inappropriate redemptions either through the use of a checklist or by other means.

Regulatory

Risks to be Managed	Types of Controls to Manage or Eliminate Risks	Potential Audit Workstep
For applicable hedge funds, non-compliance with the requirements of the Investment Advisers Act of 1940, as revised and amended on December 2, 2004 (see SEC Release No. IA-2333) may expose the organization to regulatory sanctions, legal action and reputation damage. For specific risks, controls and audit steps, refer to the IAD Audit Guideline concerning Investment Management, Compliance and Administration, dated August 2005.	1. For specific risks, controls and audit steps refer to the IAD Audit Guideline concerning Investment Management, Compliance and Administration, dated August 2005.	1. For specific risks, controls and audit steps refer to the IAD Audit Guideline concerning Investment Management, Compliance and Administration, dated August 2005.
Inaccurate regulatory filings or other required reports might result in regulatory exposure. See Exhibit A for a list of potential regulatory reports that may need to be filed. (27,28)	2. A calendar of regulatory filings is maintained by the group responsible for preparation and filing of required reports. 3. Reports are prepared and distributed for internal review prior to filing. 4. Portfolio management, senior management, compliance and legal review the reports.	2. Review the calendar of regulatory filings and confirm that it is complete and accurate. 3. Verify the accuracy of a sample of reports. 4. Ascertain that the reports are reviewed and approved on a timely basis by, among others: ♦ Portfolio management ♦ Compliance ♦ Legal

Regulatory

Risks to be Managed	*Types of Controls to Manage or Eliminate Risks*	*Potential Audit Workstep*
A code of ethics has not been established covering such things as employee trading. (29,30)	5. A code of ethics has been adopted and: ♦ Covers all required elements under the rules (e.g., personal trading by "Access Persons"). ♦ Has been approved by the Board of Directors or senior management. ♦ Is enforced by the Chief Compliance Officer (COO). ♦ Has been issued to all relevant employees who have been required to sign an acknowledgement of receipt. 6. Exceptions to the code of ethics are reported to the COO and are researched and appropriate action taken. 7. Holding reports and transaction reports are received from employees within required timeframes.	5. Review the code of ethics and verify that it: ♦ Contains all required elements. ♦ Has been approved by the Board of Directors or senior management. ♦ Is enforced by the COO. ♦ Has been issued to all relevant employees who have acknowledged receipt. 6. Review the process for reporting code exceptions to the COO: ♦ Ascertain that exceptions are researched and appropriate action taken. ♦ Verify that appropriate reporting is made to the Board of Directors or senior management. ♦ Assess whether there is an inordinate number of exceptions and the reasons why. **7.** For a sample of employees verify that holding and transaction reports have been received on a timely basis.

Regulatory

Risks to be Managed	*Types of Controls to Manage or Eliminate Risks*	*Potential Audit Workstep*
The absence of an effective compliance program to prevent and detect potential violations of legal and regulatory requirements, increasing the risk that a violation will go undetected. (31,32,33,34)	8. Written policies and procedures designed to prevent and detect violations of Federal Securities laws have been implemented. ♦ Such policies and procedures are reviewed and approved annually by the Board of Directors or senior management. ♦ An individual has been designated as Chief Compliance Officer. 9. The Compliance Department receives periodic exception reports designed to detect potential violations of regulations. Exception items are investigated in order to determine whether a violation has occurred.	8. Review the written compliance procedures for completeness and appropriateness. ♦ Determine whether the procedures have been reviewed and approved by the Board of Directors or senior management. ♦ Note whether an individual has been designated as the Chief Compliance Officer and whether such individual has sufficient access to the Board or senior management. 9. Review the monitoring procedures followed by Compliance for detecting possible regulatory violations. Examine exception reports utilized in the Compliance program and: ♦ Verify the completeness and accuracy of the reports. ♦ Ascertain that the reports are reviewed on a daily basis. ♦ Ensure that exceptions are appropriately followed up and resolved. ♦ Determine that there is adequate supervisory review of the work performed.
An effective Anti-Money Laundering Program does not exist.	10. Refer to the IAD Audit Guideline on Anti-Money Laundering, dated April 2002 for specific information on risks, controls and audit steps.	10. Refer to the IAD Audit Guideline on Anti-Money Laundering, dated April 2002 for specific information on risks, controls and audit steps.

Regulatory

Risks to be Managed	*Types of Controls to Manage or Eliminate Risks*	*Potential Audit Workstep*
Regulatory sanctions may be imposed for failure to comply with the soft dollar safe harbor provisions (Section 28e) of the Securities Exchange Act of 1934. • Soft dollar arrangements are not approved or monitored for compliance with the safe harbor provisions of the Act. • Disclosure of soft dollar arrangements is inadequate. (36,37,38,39)	11. Written agreements are obtained in advance for all soft dollar arrangements. They: ♦ Must be approved by portfolio management, legal and an independent soft dollar committee. ♦ May only be used for bona fide research, execution services and market information services. 12. Documentation is obtained supporting the services provided under soft dollar arrangements. 13. A group independent of portfolio management and trading (e.g., accounting) periodically performs an analysis of the services provided under soft dollar arrangements in relation to the commissions paid. 14. Disclosure of the use of soft dollars is approved by the legal and compliance departments.	11. Obtain a list of all soft dollar arrangements and, for a sample: ♦ Verify that a written agreement exists. ♦ Determine that the arrangement has been approved by portfolio management, legal and an independent soft dollar committee. 12. Review documentation obtained and ascertain that the arrangement is for acceptable services under the safe harbor provisions. 13. Review the independent analysis performed to ensure that the services provided are commensurate with the commissions paid. 14. Review the disclosure of soft dollar arrangements and: ♦ Ensure that it was approved by legal and compliance. ♦ Assess whether or not it is reasonable.
Non-conformity with disclosures made in the offering memorandum might result in investor legal actions.	15. Compliance with offering memorandum disclosures is periodically performed by a group independent from fund management.	15. Review the process for monitoring compliance with offering memorandum disclosures: ♦ Ensure that the monitoring is performed by an independent group. ♦ Determine that appropriate action is taken when exceptions are found. ♦ Ascertain that the results are reported to the board or to senior management.

Accounting Risk

Risks to be Managed	*Types of Controls to Manage or Eliminate Risks*	*Potential Audit Workstep*
Inadequate accounting procedures and controls may result in financial risk, regulatory violations and reputation damage. • Management fees are incorrectly calculated or not collected timely. • Portfolio expenses may not be appropriate or recorded timely and accurately. • Net Asset Value (NAV) is not calculated correctly or reported timely. • Portfolio management is not provided accurate and timely information. (40,41,42,43)	Management Fees/Expenses 1. Management fees are automatically calculated and recorded in accordance with the fund prospectus and reviewed by the accounting group for reasonableness. 2. Expenses for fund services (e.g., accounting, facilities, custodian services) are automatically accrued based on service level agreements. ♦ The accounting area reviews expense accruals for reasonableness. ♦ Changes in accrual rates are made only on the basis of authorized documentation and must be approved by portfolio management. 3. Other fund expenses are recorded based upon approved invoices. **4.** Variations in fund expenses are periodically analyzed and significant variances are investigated.	Management Fees/Expenses 1. Select a sample of daily management fee accruals and: ♦ Verify that they were calculated in accordance with the prospectus. ♦ Ascertain that the fees are reviewed for reasonableness. ♦ Confirm that fees are automatically charged. ♦ Determine that any changes to the methodology for calculating management fees can only be made by someone independent from the accounting area and that the changes must be properly approved. 2. Select a sample of service expense accruals and: ♦ Verify that they were calculated in accordance with service level agreements. ♦ Ascertain that the accruals are reviewed for reasonableness. ♦ Determine that changes in accrual rates are properly documented and have been approved by portfolio management. 3. Select a sample of other fund expenses and verify that they were made based upon properly approved invoices. 4. Ascertain that variations in fund expenses are periodically analyzed.

Accounting Risk

Risks to be Managed	Types of Controls to Manage or Eliminate Risks	Potential Audit Workstep
	NAV Calculations 5. NAV is automatically calculated each day in accordance with the fund prospectus. 6. NAV variances from the prior day that exceed pre-determined parameters are investigated to ensure accuracy. 7. Someone independent of the preparer reviews and approves the NAV calculation and variance analysis.	NAV Calculations 5. Review the procedures for calculating and reporting the NAV. Select a sample of NAV calculations and: ♦ Verify that the NAV was calculated in accordance with the fund prospectus. ♦ Determine the source of the components that comprise the NAV calculation (e.g., settled portfolio value, unsettled trades, cash balances, income and expense accruals and shares outstanding). ♦ For the components determined above, verify the accuracy of the figures used in the NAV calculation. ♦ Determine that the calculation was completed timely. 6. Ensure that a reasonableness check of the daily NAV is performed by comparison to the prior day's NAV. 7. Verify that someone independent of the preparer reviews and approves the NAV calculation and variance analysis.

Technology

Risks to be Managed	Types of Controls to Manage or Eliminate Risks	Potential Audit Workstep
Technology risk can lead to unauthorized system access and inappropriate authority levels as well as to loss of system availability: • System access is not appropriately restricted to authorized personnel. • Authorized users have the authority to perform functions that are not in line with their duties and responsibilities. • System program changes are not sufficiently controlled. • Disaster recovery is not adequate to ensure continued system availability and capability. (44,45,46,47,48,49,50, 51,52)	1. A responsible individual (e.g., system administrator) with no portfolio management responsibility controls all system access. ♦ Access forms are utilized to add, delete or change an individual's access. ♦ Forms must be approved by business managers. 2. Authority levels for users are established by the system administrator commensurate with their duties and responsibilities (i.e., no incompatible duties). 3. System access and authority level reports are periodically produced and reviewed by appropriate business managers to ensure access remains appropriate. 4. Individual user ID's and passwords are required and must be changed frequently. 5. Daily reports of all unsuccessful log-on attempts are produced and reviewed by the system administrator. 6. Programmed controls automatically log system changes. ♦ System changes are only made through an established change control process.	1. Determine that the system administrator has no other portfolio management responsibilities. ♦ For a sample of system users verify that approved access forms are on file. 2. Obtain system reports of user access and authority and: ♦ Determine that only appropriate personnel have system access. ♦ Ensure that user authority levels are commensurate with their roles and responsibilities. ♦ Reconcile access reports to payroll records. 3. Verify that system access reports are periodically produced and reviewed by appropriate business managers. ♦ Select a sample of former employees who had system access and ascertain that their access was removed on a timely basis. 4. Ensure that user ID's and passwords are required and must be changed frequently. 5. Verify that the system limits log-on and input attempts. ♦ Verify that system exception reports of failed log on's are reviewed daily. 6. Review logs of system changes and verify that changes are made through an established change control process.

Technology

Risks to be Managed	Types of Controls to Manage or Eliminate Risks	Potential Audit Workstep
	7. Business continuity/disaster recovery plans have been approved and tested.	7. Verify the existence and regular testing of a Business Contingency Plan. ♦ Evaluate the adequacy of the back up plan in case of system unavailability.

Securities Industry Association

II B. SEGREGATION OF DUTIES CHECKLIST

Introduction

Adequate segregation of duties reduces the likelihood that errors (intentional or unintentional) will not be prevented and 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 as well as other oversight functions (Controllers, Compliance, Legal, Credit) 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 or functional job titles, 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. 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. The segregation of duties checklist is located on the following page.

SEGREGATION OF DUTIES CHECKLIST

Portfolio Risk Management

Who makes investment decisions? ____________
Who reviews investment decisions? ____________
Who authorizes trades? ____________
Who executes trades? ____________
Who approves trades? ____________
Who develops risk models? ____________
Who measures and monitors market risk? ____________

Credit Risk Management

Who performs due diligence over counter-parties? ____________
Who establishes activity and position limits? ____________
Who approves activity and position limits? ____________
Who monitors activity and position limits? ____________
Who establishes issuer limits? ____________
Who approves issuer limits? ____________
Who monitors for exceptions to issuer limits? ____________

Operations

Who reconciles trading records to portfolio records? ____________
Who resolves trade errors? ____________
Who calculates and records corporate actions? ____________
Who balances portfolio records to custodian records? ____________
Who reviews reconciliations of portfolio records to custodian records? ____________
Who makes write-offs and adjustments? ____________
Who resolves differences between portfolio records and custodian records? ____________
Who approves pricing sources? ____________
Who resolves security price discrepancies? ____________
Who approves resolution of price discrepancies? ____________
Who develops security pricing models? ____________
Who reviews/approves security pricing models? ____________
Who establishes service level agreements? ____________
Who approves service level agreements? ____________
Who monitors adherence with service level agreements? ____________

Regulatory

Who establishes the code of ethics? ____________
Who approves the code of ethics? ____________
Who is responsible for compliance with the code of ethics? ____________
Who approves employee trades? ____________
Who reviews employee trades and positions? ____________

SEGREGATION OF DUTIES CHECKLIST

Accounting

Who records fees and expenses? ____________

Who reviews/approves fees and expenses? ____________

Who calculates NAV? ____________

Who reviews/approves NAV calculations? ____________

System Access and Authority

Who is responsible for granting system access? ____________

Who establishes user authority levels? ____________

Who approves system access and authority levels? ____________

Who reviews system access reports? ____________

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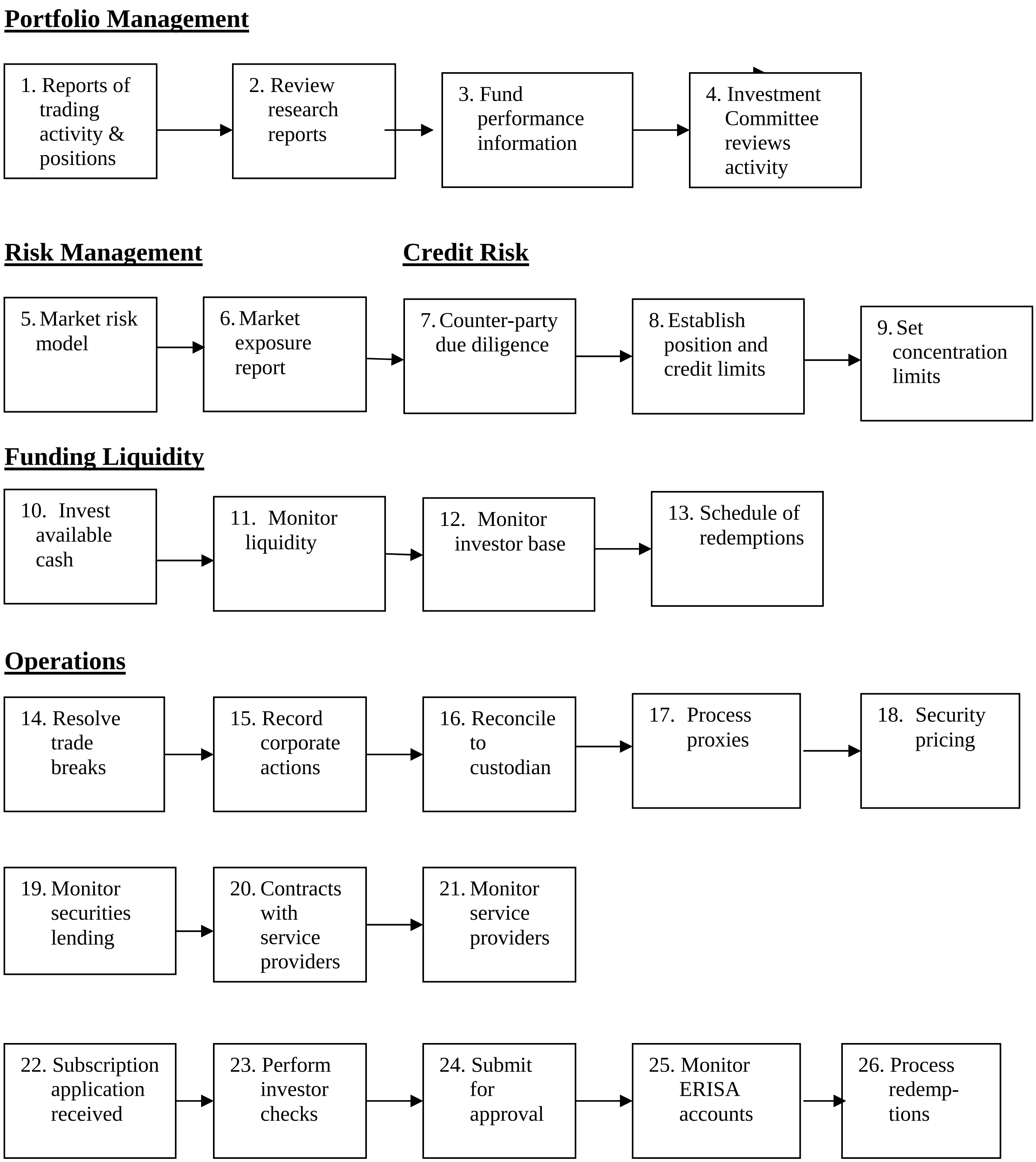
III. FLOWCHART

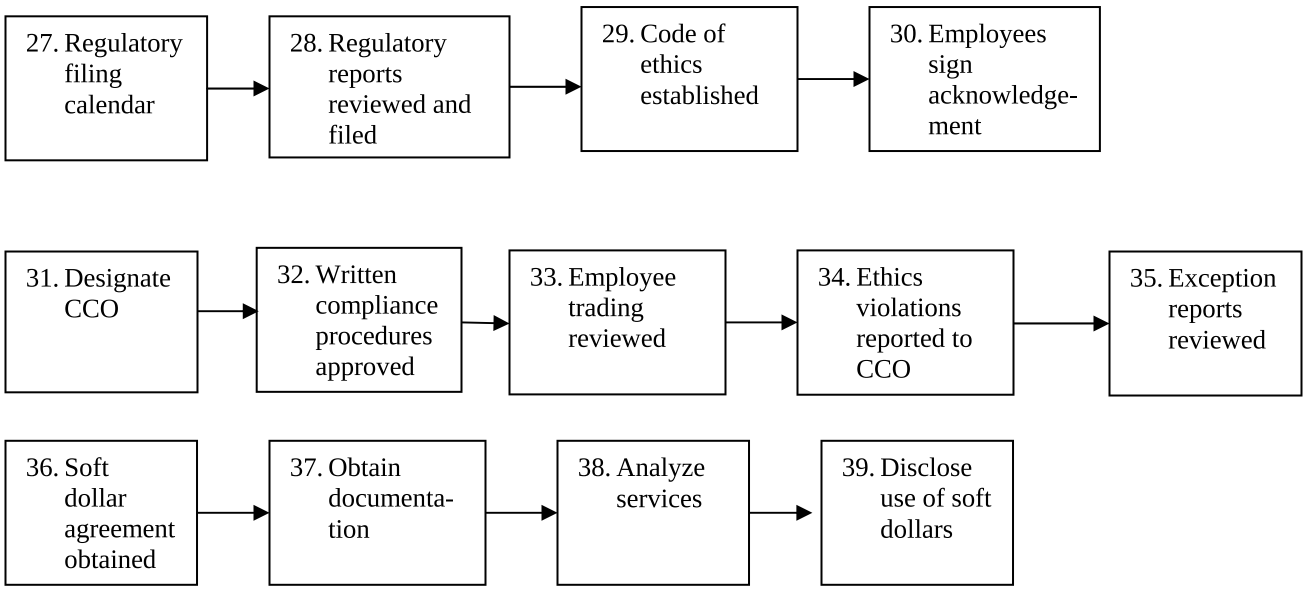
The following flowchart illustrates the typical hedge fund transaction cycle. Definitions for the individual process steps are included below. Such definitions are numbered in order to cross-reference with the appropriate process steps.

Hedge Fund Process Flowchart

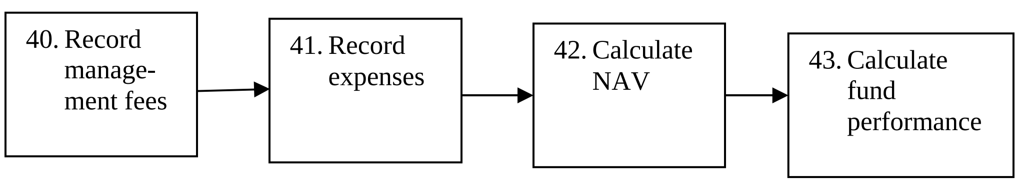


Hedge Fund Process Flowchart

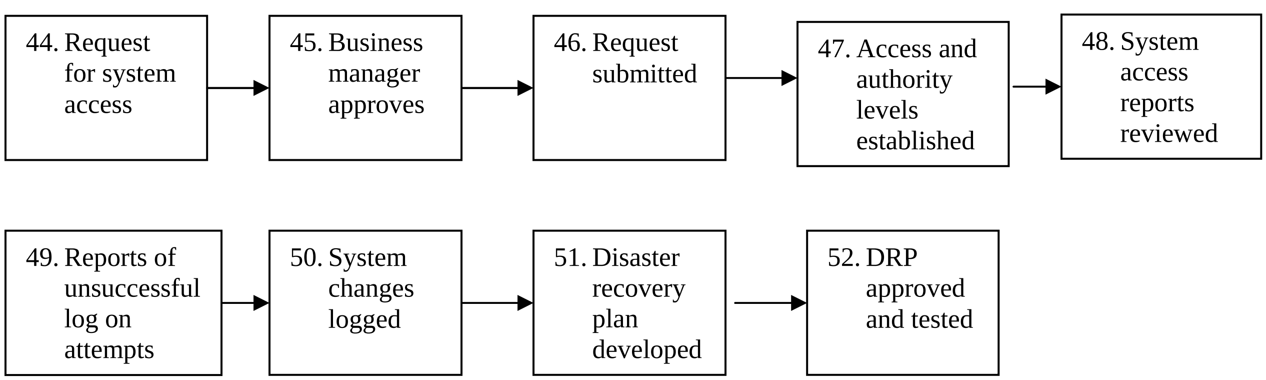
Regulatory



Accounting



System Access



Definition of Process Steps

1. Among other reports, portfolio managers are provided with daily reports of trading activity and positions.
2. Portfolio managers review research reports and communicate with research analysts.
3. Fund performance information is provided daily.
4. Portfolio manager activity is supervised daily and the Investment Committee periodically reviews investment activities/decisions.
5. Market risk model is developed and used to monitor market exposure.
6. Daily reports are generated from the market risk model and provided to the hedge fund managers.
7. All counter-parties are subjected to appropriate due diligence to ensure their financial stability.
8. Position and activity limits are established for all counter-parties. These limits are monitored and remedial action is taken when the limits are exceeded.
9. Concentration limits are established and monitored in order to avoid excessive exposure to a single issuer.
10. Available cash is determined at end of day and invested overnight.
11. Available liquidity is measured and monitored regularly and compared to the potential need for liquidity to identify possible liquidity shortfalls.
12. The investor base is monitored on a regular basis to ensure that it meets targeted diversification.
13. A schedule of expected fund redemptions is prepared and distributed to fund management.
14. During the day trade breaks are resolved.
15. Corporate actions are identified through the use of corporate announcement services. Actions are recorded automatically to the portfolio.
16. Portfolio records are reconciled to custodian records and differences are researched and resolved. Preferably the reconciliation is performed daily.
17. Proxies are received and distributed to portfolio management.
18. Utilizing external pricing vendors, the securities are priced daily. Pricing discrepancies are researched and resolved.
19. Securities lending collateral is monitored daily to ensure that it exceeds the value of the securities loaned.
20. Contracts are signed with service providers. Legal must approve all contracts.
21. The service provider sends periodic reports (e.g., daily, weekly, monthly). Reports are reviewed in order to monitor compliance with the service level agreement.
22. Subscription application forms are received. An offering memorandum is sent to prospective investors.
23. Credit and background checks are performed. Income and net worth information is verified.
24. Once checks are completed, management approves all new investors.
25. The value of ERISA accounts is monitored to ensure that they do not exceed 25% of aggregate equity.
26. Redemptions are received on standard redemption forms. Requests for redemptions are checked to make sure that they are not during the lock out period or exceed allowable percentages.
27. A calendar of due dates for regulatory filings is maintained by the area responsible for making the filings.
28. Reports are prepared and reviewed prior to filing.
29. An approved code of ethics is established and distributed to all employees.
30. Employees must sign an acknowledgement that they have received, understand and agree to comply with the code of ethics.
31. A Chief Compliance Officer is designated.
32. Written compliance procedures designed to prevent and detect potential violations of legal and regulatory requirements are developed. Compliance procedures are reviewed and approved by senior management or the Board of Directors.

33. Employee holdings and transaction reports are reviewed for potential violations of the code of ethics.
34. Ethics violations are reported to the Chief Compliance Officer.
35. Daily exception reports of questionable activity are reviewed by compliance. Exception items are investigated.
36. Soft dollar agreements are obtained prior to entering into a soft dollar arrangement.
37. Documentation is obtained and reviewed supporting soft dollar services.
38. Soft dollar services received (e.g., research) is analyzed to ensure that they are commensurate with the value of the commissions paid.
39. Soft dollar arrangement disclosure is reviewed and approved by the legal department.
40. The accounting group records management fees. In most cases fees are recorded automatically.
41. Fund expenses (e.g., brokerage fees, custodian fees) are also recorded, preferably through an automated process. Other non-recurring type expenses are recorded and paid based on approved invoices.
42. The NAV is calculated as required, reviewed, approved and then released to interested parties.
43. Fund performance is calculated and distributed to portfolio management and other interested parties.
44. Request for system access form is prepared for individuals requiring access.
45. Appropriate business manager approves access request form.
46. Access request form is submitted to the system administrator.
47. System access and authority level is established after determining that authority level is consistent with the individual's responsibilities.
48. Periodically reports detailing who has system access and the level of their access are sent to business managers for verification.
49. System generated reports showing who successfully accessed system and who unsuccessfully attempted to access the system are reviewed by the system administrator.
50. System changes are automatically logged via programmed controls.
51. Business continuity and disaster recovery plans have been established.
52. Business continuity and disaster recovery plans have been approved and tested.

Exhibit A

POTENTIAL HEDGE FUND FILINGS

Listed below are regulatory filings (excluding tax-related, broker-dealer and state "blue sky" filings) that hedge fund managers may be required to file in the United States. The list is organized by regulatory agency and type of filing. The filings made to particular regulators by individual hedge fund managers will vary depending on the type and volume of trading in which they engage, their business model and the jurisdictions in which they operate. Hedge fund managers may also be subject to regulatory reporting and filing requirements in the foreign jurisdictions in which they conduct their business; however, those requirements are not included in this Exhibit. Finally, this exhibit does not purport to cover all potential filing requirements that a hedge fund may be subject to.

Federal Reserve

Large Position Reporting

Report of positions in specific Treasury security issues that exceed the large position threshold specified by the U.S. Treasury Department (minimum $2 billion).

Reports are filed in response to notices issued by the U.S. Department of the Treasury if such threshold is met.

Forms FC-1, FC-2 and FC-3

Reports of weekly, monthly and quarterly consolidated data on the foreign exchange contracts and positions of major market participants.

Reports to be filed throughout the calendar year by each foreign exchange market participant that had more than $50 billion equivalent in foreign exchange contracts on the last business day of any calendar quarter during the previous year.

Treasury Auction

Treasury security reports filed as necessary. Confirmations must be filed by any customer who is awarded a par amount of $500 million or more in U.S. government securities in a Treasury auction. The confirmation must include its reportable net long position, if any.

Forms CQ-1 and CQ-2

Forms filed by U.S. persons who have claims on, or financial liabilities to, foreigners, have balances on deposit with foreign banks (in the U.S. or abroad) or otherwise engage in transactions in securities or other financial assets with foreigners.

Form S

Form filed by any U.S. person who purchases or sells $2 million or more of long-term marketable domestic and foreign securities in a month in direct transactions with foreign persons.

Securities and Exchange Commission ("SEC")

Form D

Notice of sale filed after securities, such as interests in a private hedge fund, are sold in reliance on a Regulation D private placement exemption or a Section 4(6) exemption from the registration provisions of the 1933 Act.

Form 144

Form filed as notice of the proposed sale of restricted securities or securities held by an affiliate of the issuer in reliance on Rule 144 when the amount to be sold during any three month period exceeds 500 shares or units or has an aggregate sales price in excess of $10,000.

Schedule 13D

Disclosure report for any investor, including a hedge fund and its fund manager, who is considered beneficially to own more than 5% of a class of equity securities publicly traded in the U.S.

Schedule 13G

Short-form disclosure report for any passive investor, including a hedge fund and its fund manager, who would otherwise have to file a Schedule 13D but who owns less than 20% of the subject securities (or is in certain U.S. regulated investment businesses) and has not been purchased for the purpose of influencing control.

This reporting requirement is triggered by direct or indirect acquisition of beneficial ownership of more than 5% of a class of equity securities publicly traded in the U.S.

Forms 3, 4 and 5

Every director, officer or owner of more than 10% of a class of equity securities of a domestic public company must file a statement of ownership. The initial filing is on Form 3 and changes are reported on Form 4. The Annual Statement of beneficial ownership of securities is on Form 5. The statements contain information on the reporting person's relationship to the company and on purchases and sales of the equity securities.

Form 13F

Quarterly position report for registered and unregistered institutional investment managers (i.e., any person, other than a natural person, investing in or buying and selling securities for its own account, and any person exercising investment discretion with respect to the account of any other person) with investment discretion over $100 million or more in equity securities publicly traded in the U.S. Reports contain position information about the equity securities under the discretion of the fund manager, and the type of voting authority exercised by the fund manager.

Form 17-H

Material Associated Persons (MAP) reports, filed by registered broker-dealers. Some hedge fund managers are affiliated with registered broker-dealers. MAPs generally include material affiliates and parents and may therefore include an affiliated hedge fund manager or the related hedge fund.

Form ADV

Hedge fund managers that have at least 15 "clients," as defined under Investment Advisers Act Rule 203(b)(3)-2, must file a Form ADV. This Form is divided into two parts. The information submitted in Part I is filed electronically with the National Association of Securities Dealers Investment Adviser Registration Depository ("IARD") and includes information about the investment adviser's education, business, the persons who own the adviser and whether they have been sanctioned for violating securities or other laws. The information in Part II is geared primarily toward the adviser's clients and contains information relating to the business practices, fees, investment strategies and conflicts of interest the investment adviser may have with its clients. Part II is not submitted to the SEC but is deemed to be filed so long as a copy is maintained in the adviser's files and is subject to review by the SEC.

Commodity Futures Trading Commission ("CFTC") and National Futures Association ("NFA")

Commodity Pool Operator (CPO) and Commodity Trading Advisor (CTA) Registration

An individual or entity that operates or solicits funds for a commodity pool, which would include a hedge fund manager for a hedge fund that trades futures or options on futures, may be required to register as a Commodity Pool Operator, unless it qualifies for an exemption from registration. An exemption from registration is available if the pool is (i) sold only to accredited investors, "knowledgeable employees" or certain qualified eligible persons and (ii) engaged in limited trading of commodity interests (as measured by certain portfolio tests) . There is also an exemption from registration for operators of pools that admit only highly sophisticated participants which include (i) natural persons who are qualified purchasers, knowledgeable employees or non-U.S. persons and (ii) entities that are qualified eligible persons or accredited investors.

An individual or entity that, for compensation or profit, advises others (directly or indirectly) as to the value of or advisability of buying or selling futures contracts or options on futures generally must register as a Commodity Trading Advisor unless it qualifies for the statutory exemption in Section 4m(1) of the Commodity Exchange Act or the exemption provided in Rule 4.14(a)(8). Providing advice indirectly includes having the authority to allocate the assets of a fund or account to another CTA to trade.

The documents required for registration as a Commodity Pool Operator or Commodity Trading Advisor are: a completed Form 7R (which provides CPO or CTA information), a completed Form 8R (which provides biographical data) and fingerprint card, for each principal (defined to include executive officers, directors and 10% owners), branch office manager and associated person (defined to include persons soliciting fund interests or accounts or supervising persons so engaged), and proof of passage of the "Series 3" exam for each associated person and proof of passage of the "Series 3" and futures branch office manager exams for each branch office manager.

Form 3-R

Form used to report any changes to information contained in the basic registration Form 7-R.

Form 8-T Associated Person Termination

Form that must be filed within 20 days of the termination of an Associated Person, principal or branch manager.

Annual Report

Annual report of a pool must be filed pursuant to Reg. § 4.22(c) by that fund's CPO (unless the fund is exempt under § 4.7).The Annual Report must contain certain information, such as actual performance information and fees, and must be distributed to each participant in the fund.

The annual report must be filed within 90 days of the fund's fiscal year-end.

CPO / CTA Questionnaire

Annual compliance questionnaire concerning its business activities for registered CPOs or CTAs.

NFA Self-Audits

In order to satisfy their continuing supervisory responsibilities, NFA members must review their operations on an annual basis using a self-examination checklist. The checklist focuses on a member's regulatory responsibilities and solicits information on whether the member's internal procedures are adequate for meeting those responsibilities.

Registered CPOs and CTAs as members of NFA are required to conduct such self-audit annually. A written attestation affirming completion of the self-audit must be signed and dated by supervisory personnel. The attestation must be retained by the member for five years and provided to NFA upon request.

Year-End Financial Reports for § 4.7 Funds

Annual reports for § 4.7 funds (i.e., funds that are limited to qualified eligible persons and are exempt from the normal disclosure requirements applicable to commodity pools) must contain a Statement of Financial Condition, a Statement of Income (Loss), appropriate footnote disclosure and other material information, as well as a legend as to any claim made for exemption. The Annual Report must be presented and computed in accordance with GAAP consistently applied and, if it is certified by an independent public accountant, it must be certified in accordance with Rule 1.16.

Form 40

“Statement of Reporting Trader” for persons who own or control reportable positions in futures. A hedge fund and/or hedge fund manager will be required to file a Form 40 upon special call by the CFTC or its designee if the fund or manager holds positions equal to or in excess of specified levels. The form generally must be filed within ten business days after the CFTC makes the call. Such specified levels are set separately for each type of contract. The Form 40 requires the disclosure of information about ownership and control of futures and option positions held by the reporting trader as well as the trader’s use of the markets for hedging. Hedging exemptions from speculative position limits must be reported.

Form 102

Form filed by clearing members, futures commission merchants ("FCMs"), and foreign brokers, which identifies persons, including hedge funds, having financial interest in, or trading control of, special accounts in futures and options. The CFTC is advised of the type of account that is being reported and gives preliminary information regarding whether positions and transactions are commercial or noncommercial in nature. The form must be filed when the account first becomes “reportable” (i.e., when it first contains futures or options positions equal to or in excess of specified levels), and updated when information concerning financial interest in, or control of, the special account changes. In addition, the form is used by exchanges to identify accounts reported through their large trader reporting systems for both futures and options.

Federal Trade Commission (“FTC”) and Department of Justice

Hart-Scott-Rodino Notice

Notification filed prior to the consummation of certain mergers, acquisitions and joint ventures. After notification is filed there is a waiting period while the FTC and Department of Justice review the competitive effects of the transaction. The notification includes information about the transaction and the participants in the transaction.