CAMBRIDGE ASSOCIATES LLC

AN OVERVIEW OF HEDGE FUND STRATEGIES AND OPERATIONS

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An Overview of Hedge Fund Strategies and Operations

This paper provides an introduction to hedge fund strategies and operations. Topics covered include common investment strategies, capacity, investor base, legal and fee structures, liquidity provisions, staffing, external service providers, and fund documents. Although the focus is on U.S.-based hedge funds, particularly in the sections discussing the legal elements of investing in hedge funds, much of the information provided is applicable to hedge funds globally. Important vocabulary is bolded throughout. Included in this report are the names of select service providers. These providers are examples only and should not necessarily be interpreted as the primary, best, or only providers, or in any way endorsed by Cambridge Associates. In many cases, there are multiple other equally qualified organizations.

Hedge Fund Definition

Broadly defined, hedge funds are private, actively managed investment vehicles that employ creative or "alternative" strategies, primarily involving marketable securities. In addition to stocks and bonds, financial instruments traded by these funds may include derivatives contracts (e.g., futures, forwards, swaps, and options related to stocks, bonds, commodities, interest rates, or currencies), or less liquid assets such as private placements, structured products, bank loans, real estate, insurance risk, special-purpose vehicles, royalties rights, and receivables. The diversity of hedge fund strategies is discussed in more detail below, but common characteristics include the use of leverage and short selling (defined below). The appeal of such strategies is that they are generally designed to achieve positive absolute returns with less correlation to broad market trends, while employing risk management techniques intended to reduce downside potential. Some hedge funds may offer share classes intended to generate positive returns relative to a benchmark such as a market index, a foreign currency, or the price of gold, although this is not common.

The hedge fund industry has grown significantly in recent decades, even taking into account the significant shakeout that took place during 2008 and early 2009. According to an HFR Global Hedge Fund Industry report, approximately 6,700 funds managed an estimated total of $1.4 trillion in assets as of second quarter 2009—an amount approaching $1.65 trillion today. In comparison, an estimated 530 funds managed an approximate total of $38.9 billion in assets in 1990.

Common Investment Strategies

There are a number of common hedge fund investment strategies. These include long/short equity, event-driven, credit-focused, and global macro. Some managers may take a multistrategy approach, allocating capital across different strategies as opportunities emerge.

Long/Short Equity

One of the most common hedge fund strategies is **long/short equity**. The term long/short refers to the fact that the fund manager both purchases equity shares that he expects to appreciate in value (i.e., is **long** those shares), and **sells short** (bets against) equity shares that he believes will decline in value. In order to short shares of a company, the manager must first borrow them from an owner. Such transactions are typically facilitated by the fund's prime broker and are therefore dependent on the prime broker's ability to find the required stock to borrow (often

referred to simply as **stock borrow**). To **cover** (close out) such trades, the manager then buys back the stock—ideally at a lower price—and the prime broker returns the stock to the lender (which is often the prime broker itself). For a long investment, the manager attempts to buy low and sell high. For a short investment, the manager attempts to sell high and then buy back low. A short sale is therefore profitable if the stock shorted declines in value. A portion of cash proceeds from short sales are held as collateral by the prime broker and invested in safer, short-term instruments such as Treasury bills that can generate interest for the short seller, known as a **short rebate**. The broker also charges interest for lending the security, which may or may not exceed the short rebate. The short seller must pay cash dividends on borrowed stock to the broker.

One implicit benefit of the long/short strategy is that the manager's short positions may act, at least in part, as a **hedge**—a form of protection against losses—with respect to a broad market downturn in equity values. During such a period, the fund would likely gain on its short book, possibly enough to mitigate or even supersede losses likely in the long book. Managers that invest globally may also engage in **currency hedging** in an attempt to lessen the impact of foreign currency movements on the portfolio. Those that invest in certain commercial and industrial sectors may engage in **commodity hedging**, using futures to reduce commodity cost risks inherent in certain positions (e.g., airline companies sensitive to the price of oil). Equity options may also be used as insurance to minimize downside risk, or strategically to make specific directional bets.

The value of a fund's long investments as a percentage of its total assets under management is referred to as its **long exposure**. The value of its investments sold short as a percentage of assets under management represents its **short exposure**. The fund's long exposure minus its short exposure equals its **net exposure**. This figure helps to give a rough sense of how hedged the portfolio is against market movements; however, managers often also consider net exposures on a **beta-adjusted** basis, in order to account for differences in market sensitivity associated with different positions, or on a **delta-adjusted** basis, as a way of accounting for leveraged exposure from derivatives (see below). A fund that regularly maintains a high positive net exposure is considered **long biased** and typically performs better in bull markets. A fund that regularly maintains negative net exposure (i.e., more short than long exposure, as adjusted) is considered **short biased** and typically performs better in bear markets. Funds that maintain net exposure that is close to zero are called **low net**, or **market neutral** if the manager is particularly focused on removing all market exposure while seeking only **alpha**—positive performance associated with specific investment decisions, not broad market moves.

A fund's long and short exposures added together represent its total **gross exposure**, which is one measure of leverage. **Leverage** refers to a variety of methods for enhancing investment returns. A hedge fund manager might create leverage by buying securities on **margin** (i.e., borrowing money from the fund's prime broker); using cash proceeds from short sales to purchase long investments; or buying or selling short inherently levered instruments such as options, futures, forwards, and certain swaps and structured products. Unadjusted gross exposure shows the extent of the fund's use of balance sheet and margin leverage, but does not include off–balance sheet leverage from derivatives. It is common for hedge fund managers to say that their funds have no leverage if their gross long exposure is less than 100%—regardless of whether they hold levered derivatives positions—because the fund's

long positions have not been financed with borrowed money.

All else being equal, a proportional increase in the gross exposure of all positions across a portfolio translates to an increase in volatility and upside/downside potential for that portfolio as a whole. A fund's gross exposure level therefore serves as a helpful input for monitoring portfolio risk. Appropriate gross exposure levels for funds vary depending on the strategy and whether the manager takes a more conservative or aggressive approach to investing. To give a sense of the range of potential exposures, consider that a typical long/short fund might have an average gross exposure level of 150% with a high degree of flexibility. In the lower-volatility markets from 2003 to early 2007, some long/short managers boosted their funds' gross exposure to 300% or more, while during the credit crisis of 2008 and early 2009, some managers held the majority of their funds' assets in cash instruments to lower volatility and protect the portfolio against losses.

Long/short equity funds come in many varieties. A fund's focus may be regional or global; sector specific or pan sector; market capitalization oriented or market capitalization agnostic. Its portfolio may be concentrated or contain numerous small investments; the strategy may be highly trading oriented or hold investments for years. As noted, a fund may be long or short biased, or market neutral; a manager may express a growth or value bias, seek out growth at a reasonable price, or prefer a blended portfolio. The manager's decisions may be based on financial analysis and fundamental research, or only on computerized, quantitative trading models such as those employed by quant funds.

While most long/short equity fund managers generally invest in companies without seeking to influence them, this is not always the case. **Activist** managers attempt to prompt corporate actions likely to increase the value of the manager's investment—such as operational improvements, structural changes, growth initiatives, mergers, spin-offs, division sales, or dividends—either by persuading company management to take such actions or by replacing members of the board of directors with the manager's own representatives to effect similar changes. Many activist funds have highly concentrated portfolios and take large stakes in a company's outstanding shares. Funds that do not engage exclusively in activist investing may nevertheless engage in activist tactics from time to time.

Long/short equity managers generally seek to profit on both their long and short positions. They may or may not use broad market hedges such as exchange-traded index funds or market futures to balance out long and short exposure or profit from market moves. Some engage in **pairs trading**, which involves buying long one company and selling short another company in the same industry, with the intent of profiting primarily from the difference in their relative value. In this case, the manager is less concerned with making a profit on both the long and short positions than with achieving a net gain on the overall trade. Regardless of whether both stocks' prices go up or down, the trade as a whole will be profitable if the long investment increases in value relative to the short. This strategy, applicable to other financial instruments as well, is sometimes referred to as **relative-value arbitrage**.

Event-Driven Strategies

Arbitrage refers to any strategy that is designed to capture valuation spreads between two or more financial instruments. **Merger arbitrage**, sometimes referred to as **risk arbitrage**, is an attempt to capture equity price spreads in companies that are expected to be bought out by other companies in announced stock-for-stock, stock-for-cash, or stock-for-stock-and-cash deals. For example, if Company A offers to buy Company B in a one-

for-one stock deal, the share prices of the two companies should converge, as the shares of B will convert to shares of A, assuming the merger closes. If, after the announcement, shares of A trade for $50 and shares of B trade for $49, there exists an arbitrage spread of $1 that can be captured by selling short shares of A and buying shares of B, and then waiting for the share prices to converge as B shares convert to A shares in the merger. In practice, the trade is often unwound prior to the merger's close because the spread has tightened enough for sufficient profit. In the case of a cash-for-stock deal, the arbitrageur might simply buy the target company's shares if they are trading at a discount to the offering price.

The attraction of merger arbitrage is that, assuming the merger closes according to the agreement, the fund earns a profit regardless of interim volatility and market movements, so long as the fund can maintain its arbitrage position—the catalyst for realizing the profit is straightforward and clear. Some merger arbitrageurs may hold concentrated positions in deals at times or use leverage to attain higher profits, increasing risk and/or borrowing costs. Merger arbitrageurs must carefully assess the probability of the merger closing in light of a range of regulatory, financing, shareholder, and corporate considerations, because if the proposed merger collapses, the potential downside for the strategy may prove far more significant than the upside. It is also possible for arbitrageurs to bet on the breakup of a merger, selling short the target company's shares and going long the acquirer's, with the expectation that the spread will widen—rather than close—when it becomes clear the merger will not take place.

While some managers specialize only in merger arbitrage, others may use it as a substrategy within their portfolio. For example, **event-driven** managers have a broad mandate to seek profits from all types of corporate events, including mergers, reorganizations, spin-offs, recapitalizations, litigations, and potential bankruptcies. Rather than invest only in announced deals, event-driven managers may also speculate about possible catalytic events before they take place (e.g., buying shares of a company they think would make an attractive acquisition target). Event-driven managers may also engage in **capital structure arbitrage**, which involves investing in one part of a company's capital structure while short selling another part (e.g., buying bonds and shorting equity) if they believe an imminent corporate event will benefit holders of one instrument over another. For example, a major secondary equity offering might dilute the economic interests of equity holders while improving a company's ability to make debt payments; a bankruptcy could wipe out equity holders and make bondholders the new owners of a company. Event-driven managers may also get involved in **special situations** investing, such as providing short-term, high-yield interim financing to companies in the midst of reorganization.

Credit-Focused Strategies

In the credit-focused space, **credit opportunities** managers buy bonds or **structured credit products** (prepackaged baskets of bonds or credit-related instruments) they expect to appreciate in value and bet against those they expect to decline in value, either by shorting them or by entering into credit default swap agreements. **Credit default swaps** are derivatives that pay holders in the event of a credit default and that tend to increase in value as the reference bond decreases in value. **Distressed-debt** managers focus on bonds and bank loans trading at a significant discount to par value as a result of the debtor company's troubled financial condition. These managers may become actively involved in company reorganization and bankruptcy committees while providing interim debtor-in-possession financing; they may also buy a bond with the expectation that it will be converted

to equity of greater value as a result of a reorganization.

Credit managers may also engage in **fixed income arbitrage**, a strategy designed to draw profit from pricing anomalies between credit securities, while maintaining low exposure to broad changes in interest rates—generally by capturing spreads between similar instruments with price differentials that do not properly reflect variance in risk factors such as maturity dates, option features, and collateralization. Bond-related capital structure arbitrage is one example of fixed income arbitrage; another is capturing irrational price spreads between off- and on-the-run U.S. Treasury bonds (similar "risk-free" securities that nevertheless may trade at an inappropriate valuation spread for a period simply because one is more frequently traded than the other). By buying the cheaper bond and shorting the more expensive bond, the manager hopes to make a profit as the bonds move back toward more rational fundamental values relative to each other; at the same time, any interim broad change in interest rates across the markets should affect both bonds fairly similarly and therefore should not have a strong impact on the overall trade. Fixed income arbitrageurs may also seek to capitalize on pricing inefficiencies in the credit derivatives markets in order to capture value spreads or effectively create cheap options on volatility with attractive risk/reward potential.

Convertible arbitrage managers seek to profit from perceived opportunities in the market's valuation of convertible bonds relative to the underlying equities into which such bonds are convertible. This usually takes the form of purchasing a company's convertible bond and shorting its equity in accordance with the manager's valuation models; the manager thus hopes to gain from some combination of interest on the bond, interest on the proceeds of the equity short sale, and appreciation in the bond's price relative to the price of the underlying equity.

The amount of leverage credit funds use depends on the strategy, but may be significantly greater than is typical for an equity fund. This is particularly the case with credit arbitrage strategies.

Global Macro

Global macro funds come in many varieties. While the strategy's name implies a tendency to invest directionally in macroeconomic themes, some are more trading oriented, some are more arbitrage oriented, and some are more quant driven. What the funds have in common is the tendency to invest in large, liquid assets such as currencies, commodities, sovereign debt, and market indices—typically through derivatives, although they may also invest in company-specific securities. Macro managers may also make bets related to changes in interest rates or volatility in various areas. Their funds may employ significant leverage, in part because instruments such as currency forwards and commodity futures have low margin requirements that add considerably to the fund's off–balance sheet leverage.

Discretionary macro funds use human judgment extensively as a part of their strategy, investing based on their management team's analysis of market fundamentals, security mispricings, and trends. Such funds may be managed solely by an individual portfolio manager or by groups of traders managing defined portions of the fund's capital (often referred to as **carve-outs** or **sleeves**), and are overseen by an overall risk manager or a principle capital allocator, who may also manage a carve-out for the fund as well.

Systematic macro funds are those that take a quantitative or rule-based approach to investing based on factors such as supply and demand data, trend following, and pattern recognition. Human input for these strategies is generally limited to

the development and refinement of algorithms. Systematic macro funds often use automated, high-frequency trading programs that require powerful electronic computing infrastructures.

Multistrategy and Open Mandate

Multistrategy managers have broad mandates to allocate capital across multiple strategies at once. In addition to the strategies referenced above, they may also engage in other areas, such as private placements, insurance, real estate, and art. The term **open mandate** is sometimes used synonymously with multistrategy, although multistrategy funds tend to allocate capital more regularly across their core strategies, while open mandate funds tend to be more opportunistic in shifting the fund's capital from one strategy or asset class to another.

Managers with a particular core strategy may sometimes commit a minor portion of assets opportunistically to areas outside of their primary focus. For example, a long/short equity manager may invest a portion of fund capital in bonds or private placements, run a small volatility-related substrategy, or engage in some directional commodity trading.

Risk Management

In order to protect against downside risk, hedge funds typically employ a number of risk management measures. Risk management techniques include monitoring cross-sectional exposure data with respect to geography, industry, asset class, strategy, market capitalization, and other financial metrics to raise awareness of thematic biases in the portfolio. Such exposures may also be examined on a beta- or volatility-adjusted basis. Managers may have strict exposure and position-size limits, as well as automatic **red-flag** warnings or **stop-loss** triggers that force a reduction of exposure when certain risk or loss thresholds are breached. Managers may also look at quantitative **value-at-risk** reports based on the historical or implied volatility of portfolio positions, or conduct statistical portfolio **stress tests** to gain an additional sense of loss potential under different market scenarios.

Capacity

Many hedge fund managers seek to limit their funds' assets under management at or below an estimated **investment capacity**, a self-determined size for assets under management beyond which a fund may become less efficient in maximizing returns. In fact, hedge funds often close to new capital for extended periods, if not indefinitely—typically in order to manage asset growth and capital flows. They may even force a return of some portion of capital to investors after a period of capital appreciation, due to anticipated capacity constraints. In addition, some funds may remain closed for noneconomic reasons (e.g., the manager may wish to manage assets only for select charities or friends and family).

A fund's investment capacity is generally determined by the manager's perceived **opportunity set**—the size and range of attractive investments available to the strategy. Capacity will also vary in accordance with the scalability of the strategy with respect to factors such as portfolio **liquidity**—the manager's ability to enter and exit positions quickly and with economic efficiency. For example, equity managers may find it difficult to create meaningful exposure levels in specific small-cap stocks without taking large, illiquid stakes or triggering securities filings with regulatory authorities, thereby potentially adding further liquidity constraints and/or unwanted media attention to investments. Therefore, equity managers that seek to make significant investments in small-cap stocks will likely have a smaller fund

capacity than those that trade exclusively in large-cap stocks. Similar issues may affect a fund's opportunity set for short selling. For example, in addition to facing liquidity concerns, short sellers also rely on the availability of stock borrow. Managers holding more concentrated portfolios or focusing on smaller market areas may also wish to limit capacity.

Investor Base

In order to remain exempt from certain U.S. regulations that would otherwise constrain alternative investment strategies, hedge funds must abide by certain limitations with respect to marketing and the composition of their investor base—in contrast, for example, to mutual funds, which are marketed through public media, have tighter regulatory constraints on their investment mandates, and are broadly available to U.S. retail investors. Hedge fund offerings are thus limited to U.S. investors that meet certain criteria with respect to wealth and investment knowledge, and to certain foreign investors (see below for restrictions).

Hedge fund managers may turn away legally eligible investors even while open to new capital inflows for reasons such as self-created minimum investment requirements or a desire for the fund's investor base to be more concentrated among certain types of clients—for example, those seen as more stable business partners; those considered more ethics oriented, such as endowments and foundations; or those that may be helpful to the firm in other ways, such as former business executives who may be able to provide the firm's research team with insights into particular industries.

Senior staff at the firm also typically invest in the fund, either directly or through deferred compensation, further aligning their interests with those of investors. Typical hedge fund investors also include high-net-worth individuals and family offices, pension plans, sovereign wealth funds, and funds-of-funds. Eligibility requirements for hedge fund investors and their effect on a fund's legal structure are discussed in more detail below.

Legal Structures

It is common for hedge funds to have both onshore (U.S.-based) and offshore investment vehicles. Onshore funds are typically structured as limited partnerships, with U.S. taxable investors the limited partners and an entity related to the investment manager (typically a limited liability company) the general partner. Offshore funds are typically domiciled in lands with favorable tax policies (e.g., Bermuda, the British Virgin Islands, or the Cayman Islands) for the benefit of non-U.S. and U.S. tax-exempt investors. Onshore and offshore funds that make the same investments are generally structured either as **parallel funds** investing *pari passu*, or as **feeder funds** that aggregate their capital in a **master fund**, which then makes portfolio investments on behalf of all investors; the latter arrangement is commonly referred to as a **master/feeder** structure. Variants of these structures may also be used for different reasons. Some managers may agree to manage certain clients' assets through separate **managed accounts** in the relevant investor's name, according to the terms of a private management agreement. Such accounts may be managed *pari passu* with one of the manager's funds, or according to a specialized mandate. Many managers, however, do not allow this option because in practice, managing such accounts can be operationally burdensome.

A number of U.S. regulatory frameworks intersect to create rules under which hedge funds and their managers operate. It is common practice for hedge funds to abide by rules that exempt the funds and

their share offerings from registration with the U.S. Securities and Exchange Commission (SEC) under the Investment Company Act of 1940 and the Securities Act of 1933, respectively.

A hedge fund may be referred to as a **3(c)(1) fund** or a **3(c)(7) fund**, depending on which exemption it operates under in accordance with the Investment Company Act. In order to qualify for exemption under Section 3(c)(1), securities of the fund must not be owned by more than 100 beneficial owners and must not be made "a public offering." In order to be a considered a "private" offering, the fund's securities must be owned only by **accredited investors**. Regulation D of the Securities Act of 1933 defines accredited investors as the following:

- Individuals with assets (or joint assets with a spouse) of more than $1 million, or with either individual income of more than $200,000 per year for two years or joint income with a spouse of more than $300,000 per year for two years—with an expectation, in both cases, of reaching the same income in the current year;
- Entities and trusts, not formed for the purpose of investing in the fund, with total assets of more than $5 million; and
- Any entity in which all equity owners are accredited investors.

To qualify for exemption under Section 3(c)(7), the fund must have only **qualified purchasers** as investors. Qualified purchasers are defined under Section 2(a)(51) of the Investment Company Act as the following:

- Individuals who own (including jointly with a spouse) not less than $5 million in investments;
- Entities with $5 million or more in investments, owned directly or indirectly by two or more natural persons who are related, or by such persons' estates, foundations, charitable organizations, or trusts ("family entities");
- Those individuals who are authorized to make decisions for, and those who contribute assets to, trusts that are not "family entities" and were not formed for the purpose of investing in the fund;
- Persons acting on behalf of their own account or the accounts of other qualified purchasers, who in the aggregate have, and invest on a discretionary basis, at least $25 million in investments; and
- Entities in which all investors are qualified purchasers.

While the Investment Company Act does not limit the number of investors in a 3(c)(7) fund, such funds are functionally limited to 499 investors (or 299 U.S. investors in a non-U.S. fund), due to Section 12(g) of the U.S. Securities Exchange Act of 1934, which holds that more than that number would render the shares a public offering. Both 3(c)(1) and 3(c)(7) funds, therefore, are subject to functional limitations on their numbers of investors, which may give rise to "slotting issues" (i.e., the inability to take in new investors, since no open slots remain).

It is worth noting that at the time of writing, rules regarding hedge fund registration are under active review by the U.S. Congress and thus may be subject to change. Although not currently required to do so, many hedge fund managers have registered with the SEC as investment advisors under the Investment Advisers Act of 1940, which is distinct from registering the fund or its shares.

Fee Structures

Investments in hedge funds are typically subject to three types of expenses: **management fees**, **incentive fees**, and **operational expenses** borne by the fund. Both management fees and fund expenses are generally charged regardless of how the fund has performed, while incentive fees—also called **performance fees**—are only charged on gains. Management fees are typically paid by the fund to the manager on a monthly or quarterly basis—primarily to compensate the manager for time and expenses—and are based on a fixed percentage of assets under management; common annualized rates range from 1% to 2%. Incentive fees are typically charged (or, in the case of a limited partnership, "allocated" to the fund's general partner) at the fund's fiscal year-end as a percentage of each investor's gains above the investment's prior annual **high-water mark** (established at fiscal year-end) or above a pre-selected benchmark referred to as a **hurdle rate**.

The idea behind a high-water-mark provision, sometimes referred to as a **loss-carryforward provision**, is that managers should only be rewarded for cumulative gains, rather than gains achieved in any one year—if the fund has a performance drawdown, investors that suffer that loss should not pay incentive fees until the loss is recouped. One problem with this standard high-water-mark provision is that managers of funds that incur a significant drawdown may have difficulty retaining valuable staff that rely on annual incentive fees for sizable year-end bonuses; if management and staff do not have conviction that losses can be regained, they may also choose to unwind the product. Some managers attempt to mitigate this issue by limiting the loss carry-forward to one year, after which the high-water mark resets. While this arrangement does provide a more stable fee structure for the manager, some argue that it still misaligns management and investor interests over time since, in theory, a manager could earn large incentive fees based solely on portfolio volatility, regardless of whether clients reap cumulative gains or losses or break even. In recognition of this concern, some funds use a **modified high-water mark**, which maintains a reduced incentive fee after a draw-down until the client's investment exceeds a hurdle that is usually well above its high-water mark. For example, a fund with a 20% incentive fee may have a modified high-water-mark provision that states that the manager will receive a 10% incentive fee until 250% of the drawdown amount is earned. Under this arrangement, management receives some short-term financial reward for positive performance after a down year—which helps with firm stability—while, at the same time, its long-term structural incentives are still progressively oriented toward cumulative gains for investors.

Holdback/clawback provisions allow investors to hold back a portion of incentive fees for a period of time and possibly retain them (i.e., claw the fees back) if the fund experiences an extended drawdown. Such provisions are extremely rare in the hedge fund industry and are much more commonly found in terms for private equity and venture capital funds.

Side letters (legal documents that amend a standard contract) are sometimes written between managers and select investors granting preferential fees or redemption rights (see below), special representations or reporting requirements, and **most-favored-nation clauses**, which state that the investor's terms must be at least as favorable as those of any other investor. Many managers refuse to grant side letters with preferential terms, taking the view that all of their investors should have the same terms.

Additional expenses charged to the fund typically include administration fees; accounting, tax, audit, and research costs; directors' fees (if applicable);

brokerage expenses; custody fees; interest and other borrowing charges; legal expenses; taxes; insurance premiums; and regulatory expenses. In some cases, the fund will also bear travel-related costs associated with investment research. Aggregate fund expenses are generally not fixed, and so it is important that managers be thoughtful about minimizing these costs to investors. Clients, or their advisors, should also monitor these fees to make sure they are reasonable, although there is no universal expense level that may be considered reasonable for all funds, as some strategies may be more cost intensive than others.

The management company will typically bear costs related to employee compensation and benefits; office space and utilities; and telephone, computer, and other information technology (IT)–related equipment. Rather than having fixed management and incentive fee arrangements, some funds will charge compensation costs to the fund as a part of overall fund expenses; such arrangements should be monitored closely, as they may effectively result in floating-rate fees determined each year at the manager's discretion. In general, investors should review fund documents diligently in order to understand which expenses the management company is assuming and which expenses the hedge fund is assuming.

Redemption Rights

Terms specifying investors' ability to redeem shares in hedge funds can vary significantly. Most funds offer the right to redeem shares only on select dates that are spaced out regularly over time—e.g., monthly, quarterly, semiannually, or annually, and typically as of month-end. Many funds require that a redemption notification be sent a specified number of days in advance of the desired redemption date (otherwise known as a **notice period**).

Although it may seem that greater liquidity rights are more favorable to investors, they can be somewhat of a double-edged sword. On the one hand, they provide investors with more ready access to their capital. On the other hand, they can destabilize a fund's asset base and force managers to spend more time adjusting the portfolio in order to meet redemption requests than managing the fund's investments—particularly during periods of stress in the market. Funds that allocate significant assets to illiquid investments cannot offer investors a high degree of liquidity without creating an asset-liability mismatch such that the manager may not be able to liquidate investments at fair value in time to meet the total cash demands of withdrawing investors. A reasonable balance must be struck between investors' desire for liquidity and the manager's need for assets under management.

One way managers have addressed this issue is to offer an initial **lock-up period**, after which investors are given greater liquidity. For example, a fund may offer an investor quarterly liquidity after a two-year **hard lock-up** period, during which the investor may not withdraw capital. This arrangement affords the manager asset stability during this period. Alternatively, a **soft lock-up** arrangement grants the investor liquidity during the lock-up period, provided that the investor is willing to pay an **early exit fee** to the fund—typically a fixed percentage of the investor's withdrawal amount. Essentially, the investor maintains access to its capital, but has a disincentive to withdraw during the lock-up period, thereby increasing the stability of the fund's assets under management. Early exit fees help offset liquidation costs associated with withdrawals.

In order to meet varying client preferences, some funds offer multiple share classes with different redemption rights. Shares with longer lock-ups may assess lower performance fees as an incentive for investors to make a longer-duration invest-

ment. To moderate asset outflows, some share classes may allow investors to withdraw only a certain portion of invested capital on each redemption date.

Managers often attempt to space redemption outflows over time in order to prevent a large percentage of assets under management from being withdrawn all at once. As a further protection against such an event, some fund documents include a gating provision, which allows the manager to postpone the release of a portion of requested redemption amounts. An **investor-level gate** is triggered by an investor attempting to redeem more than a certain percentage of its capital in the fund. A **fund-level gate** may be triggered if the aggregate amount of capital requested for redemption on any one date exceeds a certain percentage of assets under management. Redemptions postponed due to gates typically take priority over later redemption requests in the event that successive gates are triggered. Gates are typically applied at the discretion of the fund's board of directors. Many fund agreements include language that allows for a temporary suspension of all redemptions under extraordinary conditions. Funds generally also retain a modest portion of redeemed capital (usually 5% to 10%) until the completion of a year-end audit (also known as a **holdback**).

Some funds have the ability to segregate certain "special" (often private or otherwise illiquid) investments into **side-pocket** accounts (also referred to as **designated investments**), which generally are not subject to the investor's ordinary redemption rights and in which subsequent fund investors do not participate. This allows the manager to make investment decisions with respect to the side-pocketed investment that are unconstrained by the timing risk associated with clients' potential liquidity demands. Some funds also have the right to make **in-kind distributions**, assigning certain portfolio investments directly to investors rather than liquidating the positions and returning the cash. In-kind distributions are generally unpopular with investors that do not wish to be saddled with the responsibility of liquidating investments on their own; however, if a fund is winding down, a sophisticated investor may wish to take an in-kind distribution if the position will otherwise be sold by the manager at a discount to perceived fair value.

Finally, since most funds rely heavily on a portfolio manager's expertise, their documents often include a **key man clause**, which grants investors a special early redemption right in the event that this essential individual ceases to manage the fund.

Organizational Structure

The complexity of the hedge fund strategy, the number of products the firm offers, and the extent to which operational support can be outsourced are key factors in determining the number of staff appropriate to manage and support both investment research and operational infrastructure. There is no formula for determining the appropriate number of personnel needed to staff a hedge fund organization sufficiently. What is necessary, aside from a portfolio manager, is at least one individual to oversee the firm's relationship with its service providers, so that the portfolio manager can focus on implementing the fund's investment strategy. It is not unusual to see a hedge fund firm with as few as five individuals. On the opposite side of the spectrum, there are several hedge fund firms with over a thousand employees. A smaller firm would most likely have a less-complex investment strategy, such as long/short equity, conducive to outsourcing its accounting, administration, technology, and perhaps even its legal and compliance needs to third parties. It is important to note that simply because a hedge fund employs a less-complex investment strategy does not mean that the firm

will have or need only a small number of staff members—the number of employees and their level of experience must meet the needs of the fund's investment strategy and depends on the fund's size and how much control over the operational infrastructure the manager wishes to retain.

External Service Providers

The vast majority of hedge fund advisors, regardless of size or strategy, must rely on a variety of service providers during every phase of the fund's existence. Prior to launching a fund, the advisor must obtain—at a minimum—legal counsel, a qualified auditor, and a prime broker. For advisors with offshore funds, an administrator is also required. These service providers are instrumental to the fund's ongoing operations. Additional service providers that an advisor may wish to engage include custody banks, compliance consultants, and IT consultants.

Prime brokers provide hedge funds with custody, clearing, asset servicing, reporting, securities lending, financing, and cash management. Larger prime brokers can also offer capital introduction services, trading capabilities, consulting services, office space, and even disaster recovery and IT support. Well-known prime brokers include Credit Suisse, Deutsche Bank, Goldman Sachs, J.P. Morgan Chase, Morgan Stanley, and UBS.

Administrators—which are required for offshore hedge funds, but optional for onshore funds—provide various levels of service, depending on the specific agreement. Service agreements range from full service to "NAV lite" (see below) to shareholder and corporate services only.

A full-service administrator can be a valuable asset to an advisor, offering front-, middle-, and back-office support, as well as investor relations services. Front-office services include, but are not limited to, trade processing, real-time daily profit and loss reporting, position monitoring, and post-execution trade capture. Middle-office services include monthly independent valuation of the fund, daily position and trade reconciliation with the prime broker(s), trade- and position-break reporting, independent security pricing, and security-master maintenance. Back-office services include monthly independent portfolio verification, fund accounting and administration, position and balance reconciliation, daily cash reconciliation, fee- and expense-accrual calculation, fund and investor profit and loss allocation, and cash-wire request verification. A full-service administrator will also provide investor relations services, anti–money laundering compliance, corporate and legal services, and various other ad hoc services, such as tax reporting and financial statement preparation. Full-service administrators include, but are not limited to, Citco, Citi Hedge Fund Services, Goldman Sachs Administration, IFS (a subsidiary of State Street), Morgan Stanley Fund Services, and UBS. The industry's best practices call for full-service administration. Many managers that have full-service agreements for their funds may maintain secondary sets of books and records for redundancy.

A third-party administrator may only verify the net asset value (NAV) produced by the manager; in this case, the administrator serves in what is referred to as a "NAV lite" capacity. An administrator that provides only shareholder or corporate services for the hedge fund manager acts solely as a transfer agent or a registered agent.

The role of the **auditor** is to provide independent, yearly verification of the fund's assets and valuation. The auditor can also offer advice on operational techniques, perform quarterly reviews of agreed-upon procedures, review partnership agreements to determine proper partner allocations, review interim books and

records to facilitate investor contributions and withdrawals, and even provide consultation on regulatory issues. Auditors in the hedge fund industry include Deloitte & Touche, Ernst & Young, PricewaterhouseCoopers, and Rothstein Kass.

Legal counsel provides advice and services with respect to the fund's formation, terms, structure, documentation, regulation, and registration issues, as well as ongoing, general advice to investment managers. Legal counsel also advises on fund marketing materials and negotiates agreements with prime brokers and administrators. Legal counsel can add tremendous value to the drafting of an advisor's compliance manual, as well as guidance on ongoing compliance or legal issues the advisor or fund may face. Domestic hedge funds require U.S.-based legal counsel, while offshore funds require legal counsel with expertise in the jurisdiction in which the fund will be registered.

Managers that are registered as advisors with the SEC must maintain comprehensive compliance policies and procedures. Because regulatory requirements can and do change often, it is imperative that the manager stay on top of these changes. Many firms rely on compliance consultants to help management stay abreast of regulatory developments, provide feedback on their current compliance policies and procedures, and conduct compliance training for employees. Managers not registered with the SEC may find the services of a compliance consultant invaluable if they wish to create and maintain compliance policies that are similar to those of registered firms. Adviser Compliance Associates and National Regulatory Services are examples of compliance consultants in the United States. They will work with firms to conduct mock SEC exams, assist with both state and SEC registration, offer filing support (13F, 13G), and perform forensic testing of the firm's policies and procedures. In the United Kingdom, IMS Consulting provides similar services.

As stated previously, prime brokers can provide a fund with **financing**. Margin financing is a key source of financing for hedge funds and of revenue for the prime brokers. Types of margin financing that are generally available to hedge funds include Regulation T (Reg T) margin (see below), enhanced leverage, and portfolio margining. Margin financing allows investors such as hedge funds to purchase securities by borrowing money from a regulated U.S. broker—in the case of hedge funds, their prime broker. Margin requirements, however, limit the amount of money that may be borrowed relative to the amount and characteristics of collateral held in the prime-brokerage account. The initial margin requirement for accounts with U.S. broker-dealers is set by federal law—Reg T—and varies depending on the security being purchased. To buy stock on margin, the account holder must have at least 50% of the purchase price available as collateral.

After the initial transaction, margin maintenance rules apply that are set by self-regulatory organizations, such as the New York Stock Exchange and the National Association of Securities Dealers. Under those rules, the account holder is required to maintain a minimum of 25% of the margined investments' total market value in the account at all times. Individual prime brokers may set their maintenance requirements higher—at 30% or 35%, for example—depending on the hedge fund's credit quality, the liquidity of assets held, and their concentration in the portfolio. The maintenance margin is generally determined by the prime broker's credit- and/or market-risk department. If collateral in the account falls below the maintenance level, a margin call will be issued for additional collateral in order to bring the account value back above the minimum. In order to lock in margin rates for a certain period of time (e.g., 30, 90, or 180 days), the manager

may negotiate a margin lock-up agreement with the prime broker. Under such an agreement, the margin on eligible securities cannot be increased. Typically, only investment managers with high-quality credit will be granted such an agreement; either party may terminate it based on the criteria it sets forth. Agreements vary from broker to broker and manager to manager.

For hedge funds that require greater margin financing than the U.S. broker-dealer system allows, enhanced leverage is an option. Enhanced leverage allows clients to borrow with reduced margin requirements through a securities lending agreement with an offshore affiliated broker-dealer. The reduced margin requirements provide additional buying power. Not all prime brokers have enhanced-leverage capabilities. This type of financing also carries a greater degree of risk, as customer assets are not protected as they would be by a U.S. broker-dealer.

In contrast to Reg T and enhanced margining, portfolio margining sets margin requirements for an account based on the greatest projected net loss of all positions in a product class or group, as determined by an SEC-approved options-pricing model using multiple pricing scenarios. These scenarios are designed to measure the theoretical losses of the positions, given changes in both the underlying price and implied volatility inputs. Accordingly, the margin required is based on the greatest loss that could be incurred in a portfolio if the value of its components were to increase or decrease by a predetermined amount. The purpose of portfolio margining is to set levels of margin that reflect, as precisely as possible, the actual net risk of all positions in the account. The benefit of portfolio margining is that the margin requirement calculated from net position risk can be lower than that of traditional margin methodologies. By permitting margin computation based on calculated net risk, members and member organizations—the prime broker in most cases—will no longer be required to compute margin requirements for each individual position or strategy in a customer's account. As a precondition to offering portfolio margining to customers, the member or member organization is required to establish procedures and guidelines to monitor credit risk to its capital, including intraday credit risk and stress testing of portfolio margin accounts. Furthermore, members and member organizations must establish procedures for reviewing and testing these required risk-analysis guidelines regularly (SEC Release No. 34-46576; File No. SR-NYSE-2002-19).

Assets held on behalf of the hedge fund in a domestic margin account or an account with an offshore affiliated broker-dealer are generally eligible for **rehypothecation** by the prime broker. Hypothecation refers to the pledging of securities (or cash) by the fund as collateral to secure a loan, such as a debit balance in a margin account. Rehypothecation occurs when a broker-dealer then pledges those hypothecated assets to another party. The prime-brokerage and/or margin-loan agreement between the fund and the prime broker typically states that pledged assets may be rehypothecated. The prime broker may not rehypothecate any pledged assets without prior written consent.

The prime-brokerage and margin-loan agreements are legal documents that may be negotiated heavily by both parties. In the United States, there are multiple customer protection rules in place. Customer protection rules governing offshore broker/dealers are much weaker. The importance of this fact may be seen in the case of Lehman Brothers International, an offshore broker/dealer that went bankrupt in 2008, as many assets that were pledged as collateral—including cash—are still locked up in bankruptcy proceedings 18 months later. It is imperative that the advisor know in which entity the fund's assets are being

held and the rules and regulations governing that entity.

To prevent rehypothecation, assets that have been fully paid for (i.e., not purchased on margin) can be segregated and held in a separate **custody account**. Bank of New York Mellon and J.P. Morgan Chase are examples of custody banks. A prime broker has no access to the securities held in a custody account, which thereby eliminates the possibility of rehypothecation. While J.P. Morgan Chase operates a prime-brokerage entity, its custody bank is a separate legal division. Recently, other prime brokers, such as Goldman Sachs and Morgan Stanley, have established custody or trust banks to enhance their product offerings while safeguarding client assets.

Fund Documents

Important fund documents that investors may receive or request from investment management firms include the following:

- **Subscription document.** Legal document to be filled out and signed by the investor; provides required information and representations in order to invest in the fund.
- **Offering document/confidential explanatory memorandum/private placement memorandum.** Detailed legal document describing the manager's background; the fund's investment program, structure, terms, and arrangements; and other important information.
- **Partnership agreement.** Legal agreement for investors entering a limited partnership.
- **Articles of association/incorporation.** Formation documents for the firm's business entities.
- **Form ADV/Form ADV Part II.** Forms detailing background information, which hedge fund managers provide to the SEC if they choose to register as an investment advisor.
- **Due diligence questionnaire.** Document answering frequently asked questions about a manager and its fund(s).
- **Audited financials.** The fund's audited fiscal year-end accounting statements.
- **Monthly data sheets.** Quantitative information, such as current portfolio exposures, top holdings, assets under management, and recent performance attribution.
- **Quarterly letters.** Manager's commentary on the last quarter and the current outlook for the fund.
- **Presentation materials.** Marketing slides highlighting important characteristics of a fund and its manager.
- **Valuation policy.** Document explaining the manager's investment valuation practices, including policies relating to hard-to-value securities.
- **Trade-error policy.** Document explaining the manager's practices with respect to mending trade errors.
- **Compliance manual.** Document detailing the manager's internal compliance policies.
- **Employee code of conduct.** Document detailing the firm's employee ethics code.
- **Administration agreement.** Legal contract detailing terms between the fund and its administrator.

- **Disaster recovery plan**. Document discussing the manager's operational plans and backup facilities, intended for use in the event of a disaster.

Conclusion

This report provided a basis for understanding basic hedge fund strategies, discussed common legal and fee structures of these investments (including lock-up provisions), reviewed the types of external service providers that a hedge fund would be likely to engage, and outlined important fund documents. We also briefly reviewed risk management, hedge fund capacity, the investor base, and organizational structure. Although U.S.-based hedge funds were the focus of our discussion, particularly in the sections on legal elements of investing in hedge funds, much of the information provided is applicable to hedge funds globally. ■