Hedge Funds: A Methodology for Hedge Fund Valuation

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The valuation of closely held firms or firms that are not publically traded remains a perennial problem in financial management. Context hedge funds are more difficult to value than traditional asset management companies largely because of the variability of hedge fund revenues. This valuation difficulty represents one of the obstacles limiting the scale of consolidation in the industry to date. Other limitations to consolidation would include the inherent independence of hedge fund managers, the typical hedge fund's reliance on a small group of traders, and the relatively small client base that comprises a large portion of a typical fund's assets under management.

It is useful to establish a baseline for hedge fund valuation by reviewing the methodology that is typically used to value companies in a mergers and acquisitions context. In general, as shown in Exhibit 1, company valuation is comprised of a blend of three methods: discounted cash flow, comparable transactions, and publicly quoted companies method. The final valuation is normally based on a formula that assigns weights to each of these methods, depending on their relevance in a particular situation. For example, a company that has no publicly quoted peers would clearly be valued with little weight assigned to the Publicly Quoted Companies method. In the case of hedge funds, the Discounted Cash Flow method will carry the most weight since there are few comparable transactions and there are effectively no publicly quoted hedge funds.

PUBLICLY QUOTED COMPANIES

The universe of publicly quoted traditional investment management companies provides limited guidance for hedge fund valuation, as the differences in fee structures and hence earnings are substantial. However, market participants do evaluate firms by reference to the public markets as a matter of course. For example Exhibit 2 details key financial statistics for the publicly quoted traditional asset management companies and asset management master limited partnerships.

As noted above, the valuation of hedge funds is clearly different from that of the typical asset management company. On the plus side, hedge funds may enjoy potentially much higher revenues for a given asset base than mutual funds and investment management firms, when performance fees are included. However, the fees tend to be much more volatile than their asset management counterparts. Another advantage is that hedge fund assets tend to have longer lock-up periods, which can be beneficial during adverse market conditions. A negative is that hedge funds tend to be more susceptible to catastrophic risk than traditional asset management companies because of their leverage and lack of regulation.

Whether hedge funds' greater expected returns offset their greater risk depends on

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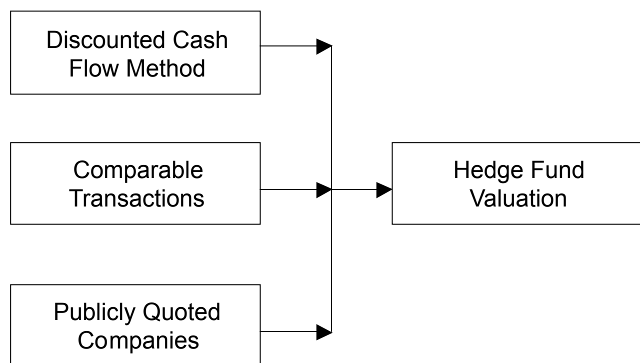
EXHIBIT 1
Comparable Firm Valuation Methods



the type of hedge fund and is a matter of analysis. There is thus no a priori expectation of whether hedge funds will trade at higher multiples than traditional asset management firms. However, if hedge funds' fee structure begins to fall into line with other asset managers and the volatility of their earnings comes down, the financial drivers of traditional asset management companies may serve as better indications of hedge fund valuations.

COMPARABLE TRANSACTIONS

There have been no publicly disclosed purchases of hedge fund managers to date. However, the valuation of a hedge fund could reference the values achieved in transactions involving traditional money management firms. Historically, the valuation of investment managers and mutual funds is based on three key variables: assets under management (AUM), revenues, and earnings before interest, tax, depreciation and amortization (EBITDA). The central ranges of the multiples for these variables in transactions occurring for the last several years, according to Berkshire Capital Corporation's database, are given in Exhibit 3.

It is possible to make some valuation assumptions according to the key economic drivers of a hedge fund's cash flow. The drivers are relatively straightforward: revenues (which are comprised of 1% management fee and 20% or higher performance incentive) less expenses (comprised of operating expenses and compensation, the latter of which is the most critical). By extension, assets under management and performance are the keys to hedge fund revenues. For the typical hedge fund, both of these—assets under management and investment performance—are highly variable and unpredictable.

It is useful to treat the two revenue sources of hedge funds—management fees and performance incentive—separately.

Management Fees

Multiplying the funds under management by 1% gives us the revenue from management fees. Reducing this amount by approximately one-third to two-thirds (depending on size) to account for operating expenses yields the income from management fees. The income from management fees is comparable to the income of mutual funds and institutional investment managers since they also are based on a percentage of assets under management. Thus, a starting place for translating hedge fund income into a firm's valuation is to multiply the income from management fees by the median multiple for asset management firms of around 12 times pretax earnings.

Performance Fees

Translating performance fees into company valuation is more complicated since these fees depend on both the assets under management and the fund's performance. In order to translate the revenues from performance fees into income, analysts typically average the last 2–3 years' results and allocate between 50–75% of the top-line revenue for compensation and bonuses. The remaining income then needs to be multiplied by a price/earnings multiple to arrive at the fund's valuation. Because of the high volatility of hedge fund performance fees, the median traditional company multiple of 12 times earnings is typically reduced here by 50–60%, to around 5–6 times earnings. However, there is a great deal of flexibility depending on a fund's particular performance history and trading approach. In addition, various deal structures that provide for a longer earn-out, or an earn-out based on average returns, may result in higher multiples.

It is important to point out that these are guidelines and not hard and fast rules. Because of the complexity of the issues, a detailed analysis of the circumstances of each hedge fund needs to be conducted before a valuation is calculated.

DISCOUNTED CASH FLOW ANALYSIS

This leaves discounted cash flow analysis as the dominant method of valuing hedge funds. This analysis consists of projecting income and expense items (normally

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EXHIBIT 2
Valuation of Publicly Traded Asset Management Companies

Asset Management Companies	Ticker	Market Capitalization ($mm)	Price (2/9/00)	Price/Earnings 1999
Franklin Resources	BEN	$ 8,431	$ 33.56	14.1x
T. Rowe Price Associates	TROW	4,397	35.94	15.9
Federated Investors Inc.—CL B	FII	1,822	21.88	11.8
Waddell & Reed Financial A	WDR	1,760	30.88	13.5
Eaton Vance Corp	EV	1,484	42.13	13.8
John Nuveen Co.—CLA	INC	1,122	36.06	10.5
Affiliated Managers Group	AMG	923	40.13	15.2
Liberty Financial Companies	L	916	19.19	5.6
United Asset Mgmt. Corp.	UAM	869	15.00	12.2
Phoenix Investment Partners	PXP	312	7.00	9.0
Median				**12.2**
Asset Management Master Limited Partnerships				
Alliance Capital Mgmt. Holdings	AC	6,551	38.69	12.0
NVEST L.P.	NEW	117	18.56	8.9
Median				**10.5**

for the coming three to five years) and then calculating the present value of this cash flow using a relevant discount rate. Ideally, one would want to assign a risk or probability to future cash flows and would want to have returns over a series of relevant cycles (interest rates, foreign exchange rates, equities) and at least one or two cataclysmic events. This is a complex exercise that can only be done on a case-by-case basis.

A complicating factor is the rapid growth of assets in the industry, partly as a result of the bull market, which has inflated recent income figures. To forecast future cash flows, it is necessary to incorporate a view of future inflows and outflows for alternative investments and any anticipated correction in the stock market, keeping in mind that the latter will reduce both the existing assets under management and new funds coming into the sector.

A crucial element of this difficult analysis can be quantified to some extent: the volatility of returns and, therefore, performance incentive fees. As Exhibit 4 indicates, there are widespread differences in the performance variability of various hedge type funds, with global emerging funds showing a 23.66% annual variation of returns compared to only 4.5–5% for market-neutral funds. The widespread differences in return and standard deviation of return should lead to large differences in the valuation of funds with market-neutral funds, considering their extremely low volatility, having a higher multiple—all other things being equal.

FUTURE OF HEDGE FUNDS AND HEDGE FUND VALUATION

Numerous studies have indicated that the primary determinate of investor capital flows is the recent performance of that strategy. Capital flowed to macro strategies in the early 1990s in response to the volatility in currency, commodity, and interest rates that took place in the late 1980s. Lower volatility in these markets and a resulting compression in credit spreads in the early 1990s led to a huge increase in market-neutral fund assets in the mid-1990s. The financial crisis of 1998 exposed the risks of these strategies in terms of liquidity and transparency. This, along with the bull market in global equities, triggered the current flood of capital into highly liquid, transparent equity-based strategies. It remains to be seen if the recent plunge in the technology stocks favored by equity hedge funds will sour investors on this approach as well.

It seems unlikely that investors will suddenly over-

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EXHIBIT 3
Investment Management and Mutual Fund Firms Valuation 1993-1999

Benchmark	Range of Values
Percentage of Assets Under Management	2%-3%
Multiple of Revenue	3-4 times
Multiple of EBITDA	8-12 times

Source: Berkshire Capital Corporation.

EXHIBIT 4
Hedge Fund Performance

Hedge Fund Type	Mean Return (1990–1999)	Mean Standard Deviation of Return (1990-1999)
Global Emerging	15.16%	23.66
S&P 500	16.13%	14.27
Short Sellers	0.22%	13.47
Global Macro	16.76%	13.24
U.S. Treasury Bonds	9.29%	12.29
Global Established	17.86%	10.38
Event Driven	14.66%	8.22
Market Neutral	10.51%	4.33

come the urge to invest in last year's strategy. However, there are several things that can be said about what we've learned about hedge fund strategies and their investors in the past decade, and the likely response of the hedge fund industry and its investors going forward:

- Greater emphasis is being made on risk management—both by financial intermediaries who trade with and lend to hedge fund managers and by the hedge fund managers or investors themselves.
- As in the traditional markets, where mutual fund families dominate the landscape, new organizational structures are being created to group together various hedge funds in a single financial entity, providing for cross-marketing opportunities and more efficient management of back-office functions.
- New means of trading hedge funds are being developed. Internet-based trading platforms can circumvent the sell-side in the same way online exchanges (ECNs) have altered the traditional asset markets. Financial institutions are now acting as market-makers to particular sets of hedge funds and offering them via their own trading platforms, thereby creating a liquid market in the underlying funds.
- Managers are increasingly concerned about capacity constraints within their particular strategies. The need to ration capacity more efficiently is resulting in new structures that more closely resemble closed-end funds and increased use of tracking portfolios.

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