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BANKS OR HEDGE FUNDS
WHICH IS BETTER?

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Executive Summary

The demise of Long Term Capital Management gave a new importance to **Systemic risk**- a term used to describe a series of correlated defaults among financial institutions- and it has been further reinforced by the recent sub prime crisis. It is now becoming increasingly clear that hedge funds and banks have a **symbiotic relationship**. The distinction between hedge funds and traditional banks is now being blurred with banks operating propriety trading units that are organized much like hedge funds. With the Basel Capital Accord and securitization, systemic risk has increased in banks and has further been exacerbated by the similarity between banks and hedge funds

However, there is **disproportionate regulation** associated with the blurring distinction. While banks are heavily regulated, hedge funds operate in secrecy with voluntary disclosures. Thus, disclosures are few in number and inherently biased. **Hedge fund activism** in which hedge funds could harm the company where it invests at the cost of generating returns has further boosted the need for regulation.

This paper examines the **reasons for hedge funds to avoid registration** and further goes on to examine the laws within which hedge funds find safe harbour. Analysis of the possible reasons for the discrepancy is carried out with the similarity in functions between banks and hedge funds being brought out. **Trading strategies** of hedge funds are brought into focus to see if their dynamic nature allows getting higher risk adjusted returns. The importance of hedge funds as a **diversification tool** in financial markets is also analyzed. **Behaviour of the fund manager** is analyzed to bring out important conclusions. Further, returns in the banking sector and hedge funds are analyzed and compared to see which the riskier sector is. The ability of fund managers to generate excess return is discussed. Trends in the hedge fund industry since the demise of LTCM towards managing systemic risk are considered. Finally, a stand is taken that **hedge funds tend to do more good than harm and excessive regulation as in the banking sector would reduce performance, bring complex uninformative data in the market and undermine incentives of performing due diligence.**

Introduction

Banks are among the most heavily regulated incorporated intermediaries and have a portfolio that goes short in deposits and long in loans with a small capital base. They are associated with lending to retail customers. Thus, the reasons for regulation of banks can be two-fold- to **protect retail investors and for financial stability**. A bank going bust can bring down many other good banks with it thus creating the need for stringent regulation.

A hedge fund typically

- Is an investment vehicle for qualified investors
- Has concentrated portfolios (small number of holdings)
- Uses derivatives
- Takes either long or short positions in securities
- Uses leverage
- May invest in non public securities

Lack of transparency in the hedge fund market can be traced in part to regulations which prevent hedge fund marketing thus forcing them to target institutions and accredited investors. Apart from this, being privately organized and incorporated offshore enables few disclosure requirements and little or no subjection to regulations. This is done as most managers want to keep the activities secret so as to prevent potential profits from being arbitrated away.

In a simple economic system (no depositors), banks borrow from the central bank and lend it to investors at a higher rate after applying leverage to maximize profits. Hedge funds may apply the long short strategy or carry trades where they borrow cheap and lend dear and take on significant event risk. Just like a large borrower defaulting may drive the bank to insolvency, non occurrence or unexpected events could cause large losses in hedge funds. Also, redemption calls by large investors in hedge funds may cause them to

sell liquid holdings at significant losses due to the illiquid nature of many of their holdings.

Apart from the **operational similarities**, banks have also become similar to hedge funds **structurally** with many banks operating proprietary trading units that are organized much like hedge funds. Hedge funds also provide an attractive outlet for bank capital with the result that there is a highly symbiotic relationship between banks and hedge funds.

Due to the above reasons, there have been calls for increased regulation of the hedge fund industry. There is an increasing trend to **hedge fund self institutionalization** wherein hedge funds voluntarily follow procedures to satisfy the transparency requirements of institutional investors and also to avoid scrutiny of regulators. From small one person operations, hedge funds have now become multi office operations requiring the separation of duties of office for transparency. Apart from this, the increasing demand from institutional investors for hedge fund investments and calls for Government regulation after the failure of Long Term Capital Management has caused hedge funds to take this approach.

Regulation

Hedge funds come under the purview of the following bodies

- U.S. Treasury Department
- Securities and Exchange Commission (SEC)
- Commodity Futures Trading Commission (CFTC)
- National Futures Association (NFA)

The laws applicable to hedge funds may be summarized as given in Table 1.

Table 1: Regulations in Hedge Fund Industry		
Act	Relevant Section	Implication
Securities Act, 1933	2(a)(1)	Limited partnership unit of hedge fund is considered as a security
	4	Permits non registration of private offerings
	Regulation D (Rules 501 and 506)	Provides safe harbour from registration No safe harbour from anti fraud provision
	Rule 501	Calculation of number of investors Defines accredited investor
	Rule 506	Exemption from registration if less than 35 non accredited investors
	17	No exemption from anti fraud provision
	Securities Exchange Act, 1934	10b-5
Investment Company Act, 1940	3(c)(1)	Provides exemption from reporting, disclosure and record keeping required of mutual funds if there are less than 100 investors
	3(c)(7)	Allows exemption from reporting, disclosure and record keeping as long as there are only qualified investors
	12(g)(1)	Limits number of investors in funds over \$1 million to 499. Thus, it sets a cap to 3(c)(7)
Investment Advisors Act, 1940	203(a)	Exemption from registration if fund is less than \$25 million and not an advisor to mutual fund
	203(b)	Exemption from registration if clients in the past year have been less than 15, no public advertising as an investment advisor
	206	Subjection to anti fraud provisions of IAA
	203(b) amended	Change in definition of client with aim of bringing more hedge funds under scrutiny 203(a) still applies and funds with a lock up period of 2 years are exempted from registration
Commodity Exchange Act, 1974	4.5	Exemption from registration if they are regulated by some federal agency or if commodity instruments are used only for hedging
	4.13(a)	Commodity pool operator is exempt from registration if compensation is not received from the pool, only one pool is operated, does not advertise the pool and is not required to register under other provisions of CEA
	4.13(b)	Sets cap on capital contribution and number of investors (15) for non registration of CPO
	4.21-4.25	Exemption from registration and annual report filing with CFTC and NFA provided funds are sold to qualified eligible participants

Apart from the exemptions, hedge funds also manage to get around these laws by being domiciled in exotic islands. They are however subjected to anti fraud provisions

and make substantial disclosures to prospective investors and are not prohibited from leveraged trading, short selling or concentrated investing.

The Fund Manager

The aim of the fund manager is to generate an absolute return due to which he should be unaffected by the movements of the market. One of the reasons why investment professionals are attracted to the hedge fund industry is the level of flexibility **and freedom** that they get while investing by employing strategies that could not have been possible in say the mutual fund industry. **Fees are related to the returns** generated and help solve the agency problem. **Career concerns** however plague the manager and motivate them to take less risk with increasing experience. Creditors and counterparties also monitor managerial conduct providing additional safety to investors.

Hedge fund strategies

Hedge fund returns are a function of both the **asset class selection as well as of the trading strategies**. Owing to the fact that managers in most cases want to generate absolute returns, the strategies are **dynamic and also risky**. Table 2 summarizes the various strategies.

Table 2: Hedge fund strategies

Hedge Fund Strategy	Major Risk Exposures	Mean	Std. Dev.	Skew	Kurtosis	Sharpe Ratio
Equity Long/Short	Market (double alpha strategy)	1.36%	2.55%	0.19	1.41	0.38
Short Selling	Opposite of market	0.32%	6.10%	0.14	1.55	-0.01
Equity MarketTiming	Market. Minimal leverage	1.03%	1.95%	0.09	-0.52	0.32
Distressed Security	Event risk (Bankruptcy)	1.21%	1.75%	-0.67	5.69	0.47
Merger Arbitrage	Event risk. Use of leverage	0.82%	1.22%	-2.63	11.64	0.34
Event Driven	Event risk. Use of leverage	1.17%	1.89%	-1.32	4.83	0.41
Fixed Income Arbitrage	Event risk(Non convergence)	0.68%	1.23%	-1.72	10.6	0.23
Convertible Arbitrage	Event risk (Redemption)	0.81%	1.03%	-1.12	1.96	0.39
Equity Market Neutral	Minimize market and Credit Exposure with zero beta	0.74%	0.91%	0.17	0.38	0.38
Statistical Arbitrage	Quant models zero out other risk factors	0.69%	1.13%	-0.06	0.5	0.26
Relative Value Arbitrage	Event risk(Short volatility). Magnified by leverage	0.95%	1.04%	-0.83	10.51	0.53
Global Macro	Broad investment spectrum	1.25%	2.40%	0.36	0.57	0.35
Fund of Funds	Investment in other hedge funds	0.80%	1.61%	-0.24	4.34	0.25

We can see that all the strategies either exhibit skewness or kurtosis with equity market neutral and equity market timing coming closest to being described by a normal distribution.

A Diversification Tool

Various empirical studies have been carried out and have found that hedge funds have **low volatility measured by standard deviation and high returns** with most of the hedge fund strategies outperforming the S&P 500. As a result hedge funds have a high Sharpe ratio and have low correlation with other asset classes.

- A study by Brown, Goetzmann and Ibbotson [1] from 1989 to 1995 found that correlation coefficients with the S&P 500 ranged from -0.7 for short selling funds to 0.83 for opportunistic U.S. equity funds.
- A performance attribution study by Fung and Hsieh [2] that compared hedge funds to traditional asset classes found that 50% of the hedge funds had an R-squared of less than 0.25 and 25% of the hedge funds had a negative correlation with traditional asset classes. Also trading styles explained 45% of hedge fund returns as compared to asset classes which explained 25%.
- Fung and Hsieh [3] find a large range of R squares to traditional long only indices which indicate that traditional mean variance analysis does not fully capture returns distribution.
- Liang [4] finds that asset class selection is responsible for 77% of returns of emerging market hedge funds but explains only 20% of returns for foreign exchange hedge funds.

Hedge funds also are preferred by pension funds as they provide diversification by reducing losses when it is needed most- in down markets.

Asset Class	Expected monthly return	Standard Deviation	Sharpe Ratio
S&P 500	1.18%	3.98%	0.214
Lehman Aggregate	0.40%	1.05%	0.067
Russell 2000	1.78%	6.65%	0.218
MSCI EAFE	1.24%	5.40%	0.167
HFR FOF Index	1.10%	1.60%	0.481
T-Bills (cash)	0.34%	N/A	N/A

	S&P 500	Lehman Aggregate	Russell 2000	MSCI EAFE
S&P 500	1			
Lehman Aggregate	0.32	1		
Russell 2000	0.85	0.28	1	
MSCI EAFE	0.82	0.22	0.68	1
HFR FOF Index	0.35	0.18	0.4	0.34

From Table 3, it must be noted that skewness and kurtosis exist and standard deviation may not be the most appropriate measure of volatility. Use of mean as the expected return is also questionable as the mean gets pulled to some direction owing to the skewness of the distribution. Also, analysis was done over a **short period** with different strategies being exposed to similar exposures. Sharpe ratio as a means of measurement of risk adjusted return is also questionable apart from the above reasons due to **short volatility bias**.

Hedge Fund Indices

For a better comparison with traditional asset classes, to judge the risk adjusted return, indices may be used. Indices may be either equally weighted or capitalization weighted with the capitalization weighted index being more accurate. However, only one index (CSFB-Tremont) is capitalization weighted largely due to the increasing complexity of the index computation as the number of funds increase.

However, drawbacks exist with this method of analysis as well. Hedge fund indices utilize data provided from hedge fund databases which may not be accurate.

Sample selection bias: Since reporting of performance to databases is voluntary, fund managers make a choice as to which database to report to with the result that all

databases have different hedge funds. Even the same fund may begin reporting at different periods in different databases or may stop reporting in some databases.

Survivorship bias: It occurs when database vendors exclude historical performance of hedge funds that have been liquidated, merged or that have stopped reporting. This immediately causes an upward bias in the return and a downward bias on the risk associated with hedge funds. Estimates range from 0.16 [5] to 3% [6].

Backfill bias: Once the hedge fund manager decides to start reporting to a database he is also allowed to report data for the previous periods. Fund managers would start reporting from the stage when the fund started to generate consistent returns which would create an upward bias on returns and downward bias on volatility ranging from 1.2 to 1.4% annually.

Illiquidity bias: Many assets held by hedge funds are infrequently traded and hence, priced, with the result that risk adjusted returns are overstated. Prices are specified subjectively resulting in a smoothing of returns. While hedge funds suffer from illiquidity risk, banks have an advantage in hedging liquidity risk [7].

Hedge Fund: Alpha Returns

Hedge fund returns are based on asset class selection and to a larger extent on the trading strategies of the manager. Hedge funds invest in a large number of diverse and sometimes illiquid assets. Due to this, what is perceived as alpha or excess return may just be beta or compensation for the risk undertaken by the manager. Empirical studies have given mixed results. In a 2005 article in *The Financial Analysts Journal*, Burton Malkiel and Antanu Saha found that for the period from 1996 to 2003, industry provided returns in hedge funds were overstated by 4.5% due to biases and they actually underperformed the market. Work by Kosowski, Naik and Teo [8] suggests existence of alpha without the influence of backfill bias or serial correlation. Results have been generalized to funds of all sizes and overcome the short time period problem by using Bayesian and Bootstrap analysis.

Returns: Hedge fund vs Bank

Fig. 1 shows the returns of the CSFB Tremont index against the returns of EU banks. We can see that banks generate returns that are similar to that of hedge funds. At the end of 2001 when **banks became distressed, hedge fund index continued to rise**. Banks that provided loans and prime brokerage services to the hedge funds indirectly benefited from hedge fund returns. The bank index being more volatile would have a lower Sharpe ratio

Fig 2 shows a plot of Tremont Dedicated Short Bias hedge fund index against EU bank index. It is evident that short bias funds provide a hedge when banks do badly.

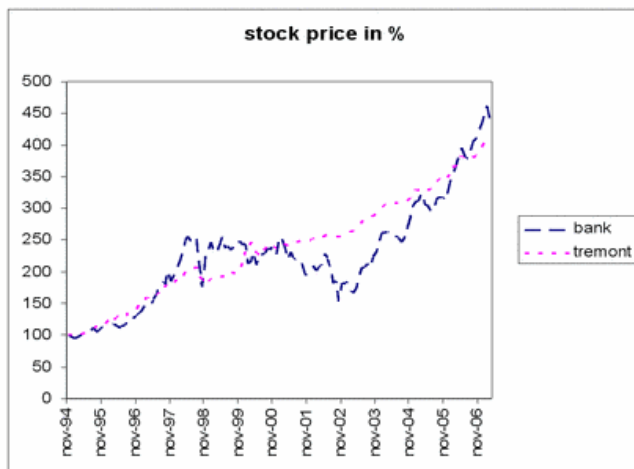


Fig.1

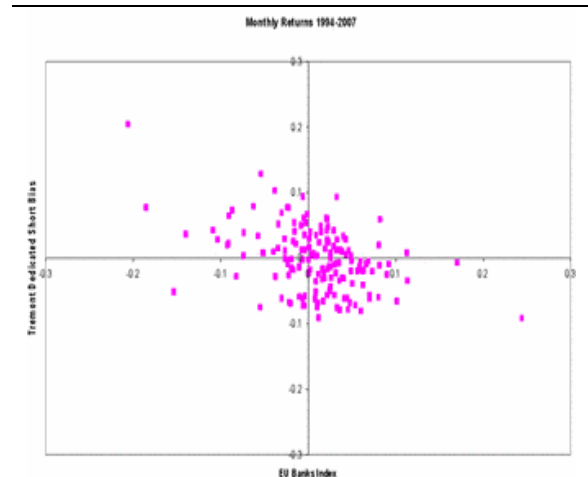


Fig.2

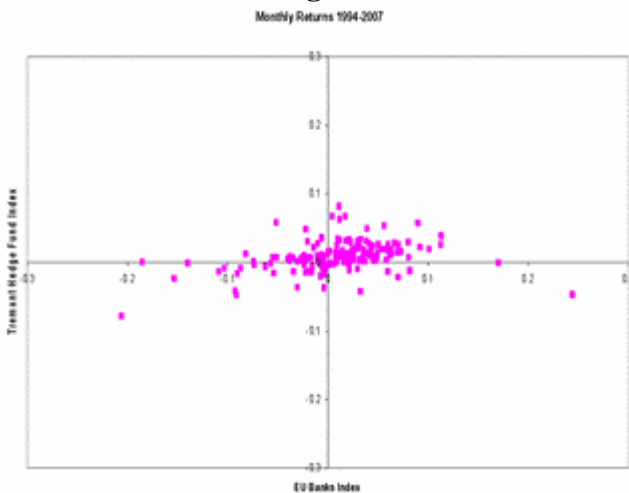


Fig.3

Banks would prudently have exposure to more than one kind of hedge fund strategy. Hence, it is more appropriate to compare Tremont Hedge Fund Index with the EU Bank Index (Fig. 3). Outliers in the vertical direction (in the corners to be precise) would indicate systemic risk as the EU bank index and hedge fund returns exhibit fat

tails[W1]. Since outliers in the horizontal direction are greater, we can conclude that banks are the more risky sector. High failure rate in hedge funds due to fraud is a concern

and hence **due diligence is important**. Reduction of systemic risk is done by hedge funds to an extent in case of bubbles where they short stocks. Hedge funds (unlike banks) in general **do not cause financial crises but they certainly used to exacerbate them**.

Trends

Ever since the demise of LTCM, hedge funds have been on a continuous path of improvement in their ability to handle systemic risk.

Leverage: Employment of **leverage has reduced** from 30:1 ratio of LTCM (which was nearly 300:1 due to derivatives: economic leverage) to saner levels of 2:1 in hedge funds. Fixed income arbitrage funds which employ the highest leverage have an average ratio of 4:1 and account for 7% of the industry. These numbers look conservative when compared to investment banks (20:1) or commercial banks (10:1). In a 2005 article for *The Journal of Financial Economics*, Anurag Gupta and Bing Liang found that **not leverage per se but undercapitalization (4% of all funds) was a better pointer to hedge fund failure**.

Risk Management: Improvements in the financial markets brought about by **enhanced risk management, financial innovation and greater liquidity** brought about by hedge funds and private equity trading have **reduced the already low probability of contagion events**. **Stress testing** is now commonplace as is monitoring and limiting exposure to concentrated securities. Standard and Poor and Moody's had started offering hedge fund risk rating services to address investor demand for the information.

Transparency: With **institutional investors** showing increased interest in hedge funds, transparency in hedge funds is on the rise. Hedge funds have found that it is in their interest to promote transparency as they can **get investors more easily, lower trade costs and also get more favourable terms for the fund (higher fees)**.

Conclusion

Hedge funds generally have high net worth individuals and institutions as investors who can do their due diligence more thoroughly than the average retail investor. One reason for regulation would be the **interdependence of banks and hedge funds** and the global nature of hedge fund holdings which could increase systemic risk. Another reason could be the increasing instances of **hedge fund activism** where hedge funds affect management control of firms after taking an initial stake of 5% by influencing decisions. Klein and Zur[9] found that they do not improve the financial results of the large company; however, they do manage to generate abnormal returns by paying themselves large dividends.

Regulation may be achieved in an **indirect manner through banks** [10] or direct manner which would require coordinated implementation at the international level. However, it cannot be denied that **hedge funds tend to do more good than harm** as they take risks that could not have been taken by parties and **infuse liquidity in illiquid assets**. By taking contrarian views when banks constrain credit for a firm in strife, hedge funds can affect the economy at large by driving recovery. Also, in systematic liquidity shocks, hedge funds can borrow from Government protected banks which not only provides low cost financing but also reduces information asymmetry for hedge funds [11] thus **reducing the impact on the market**. Moreover, due to **the rapidly changing industry structure**, new regulations are almost guaranteed to be redundant. Also, constraining hedge funds by **additional regulations could involve compliance cost, overwhelm regulators and reduce the incentive for investors to engage in due diligence apart from reducing performance**. Regulations in banking sector must not be reduced as they have a **higher probability of causing contagion which was evidenced by the sub- prime crisis**.

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