

# ARE HEDGE FUNDS A POTENTIAL THREAT TO FINANCIAL STABILITY?

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***Abstract** This study aims to examine whether hedge funds are a potential threat to financial stability. In the light of financial crisis and systemic risk, the studies shows that hedge funds are not responsible for financial crisis. There is no evidence that hedge funds were a cause of financial crisis. In addition, hedge funds is not related to systemic risk, directly. Therefore, hedge funds are not a main culprit of financial instability in market disruption.*

***Keywords:** Hedge Funds, Financial Stability, Systemic Risk, Financial Crisis*

## **1. Introduction**

The hedge fund industry has expanded rapidly over the past decade. The growth in this industry has provided benefits to the financial system by contributing to increased liquidity in financial markets and possibly by boosting the pace of financial innovation. [1,11] A hedge fund's goal is to remit to those investors a high rate of return on their capital contributions through sophisticated trading strategies in securities, currencies, and derivatives. [21] In addition, hedge funds play a valuable arbitrage role in reducing or eliminating mispricing in financial markets. They add depth and breadth to capital markets. By taking risks that would otherwise have remained on the balance sheets of other financial institutions, they provide an importance source of risk transfer and diversification. [14]

However, there has been increased debates over hedge fund regulation, and hedge funds have been placed to the center of financial instability. Because some hedge funds can have the potential to disrupt the functioning of financial markets. According to some observers, hedge funds are responsible for large and sometimes disruptive market movements in vulnerable economies. With the expansion of the industry has come increased concern about troubles in the hedge funds are a potential threat to financial stability.

In this regard, this paper aims to examine whether hedge funds are a potential threat to financial stability. This paper will also provide a contribution for debates related hedge funds regulation because there is not a study assessing the relationship between hedge funds and financial stability in terms of financial crisis and systemic risk as a whole. To achieve this aim, the paper is organized as follows. Section 2 provides the characteristics of hedge funds. Section 3 assesses the relationship between hedge funds and financial stability in terms of financial crisis and systemic risk. Section 4 provides a conclusion.

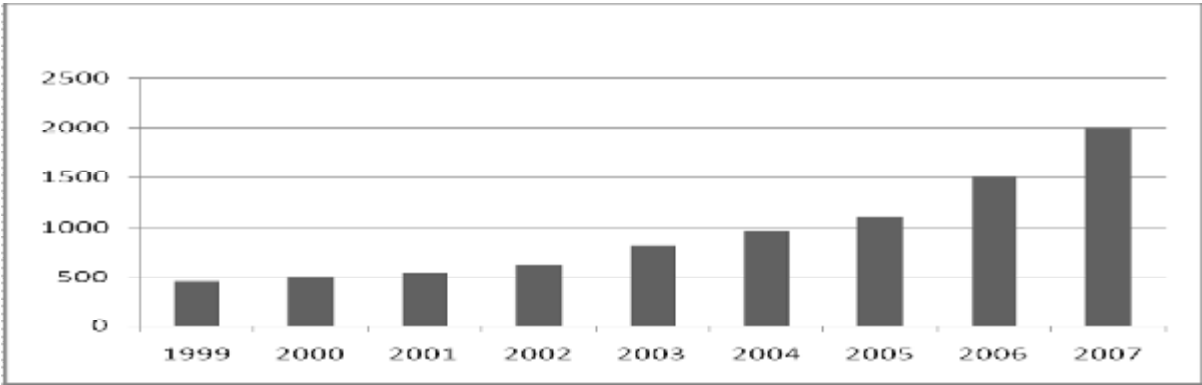
## 2. The Characteristics of Hedge Funds

### 2.1 The Definition and Size of Hedge Funds

Before hedge funds are discussed, they must be defined clearly. There is no legal or even generally accepted definition of a hedge fund, although the US President’s Working Group on Financial Markets [24] characterised such entities as “*any pooled investment vehicle that is privately organised, administered by professional investment managers, and not widely available to the public*”.

Because of their nature, hedge funds are restricted to large-scale investors. Historically, they have attracted high-net-worth individuals and institutional investors, and the array of the latter has widened significantly in recent years to include pension funds, charities, universities, endowments, and foundations. [23] Typically, the fees of fund managers are related to the performance of the fund in question and managers often commit their own money. In addition, they are an unregulated or loosely regulated fund which can freely use various active investment strategies to achieve positive absolute returns. [13]

By the end of 2007, the global hedge fund had about \$ 2 trillion in assets under management. However, because hedge funds are not required to register with any financial regulator or supervisor, these numbers can only be estimated. According to graph 1, hedge funds had less than \$ 500 billion in 1999 in assets under management, and the \$ 1.9 trillion mark was passed in 2007.



**Fig. 1: The Size of Hedge Funds, 1999-2007, Billion Dollar**

Source: Hedge Fund Research (HFR), 2Q 2007 Industry Report.

Hedge funds are also dominant players in several markets: in 2005, they accounted for 89 percent of U.S. trading volume in convertible bonds, 66 percent of volume in distressed debt, 33 percent of volume in emerging market bonds and in leveraged loans, 20 percent of speculative-grade bond volume, and 38 percent of credit derivatives volume. By early 2006, their estimated share of credit derivatives trading had increased to 58 percent. [19] As these Fig.s suggest, hedge funds are engaged in a broader range of activity than in the past, especially in the trading of credit instruments.

In addition, estimates of hedge fund survival rates vary between 85 percent and 95 percent per year, depending on the year and the style of fund. A study [7] reports that 30 percent of funds do not make it past three years, and 40 percent of funds do not survive past the fifth year. The average one-year attrition of hedge fund is less than 4 percent. [4] Another study [15] also reports that nearly 90 percent of dead funds in their study were adequately capitalized at the time of closure.

Hedge funds can provide value to high net worth individuals with a high absolute return and provide even more value to institutional investors as an alternative asset class with lower correlations to other asset classes. A recent research has substantiated the value enhancing benefits of hedge funds for institutional investors over high net worth individuals. Within the hedge fund industry there are many different strategies including fixed income arbitrage, equity market neutral, convertible arbitrage, merger arbitrage, distressed securities, event-driven, macro, sector, equity hedge, emerging market and short selling. Each strategy has its own risk and return profile. Additionally, each fund has its own lock-up period and minimum initial investment. [8]

## **2.2 Benefits and Risks of Hedge Funds**

Hedge funds are generally regarded as investments which offer risk and return opportunities that are not easily obtained through traditional long-only stock and bond investment vehicles. Such opportunities are made possible primarily through the ability to participate in a wide variety of financial products and global markets not available to the traditional investor, as well as through their ability to take both long and short security positions. Hedge funds are therefore capable of providing more opportunities to profit within various economic environments. [6]

Their active role in markets makes them much more important than their size alone. The input of hedge funds is very significant, as they often take alternative market views, can leverage their positions and change their portfolio composition much more frequently than traditional funds. They thrive on perceived inefficiencies by arbitraging away price differences for the same risk across markets. In this way, hedge funds contribute to the price discovery process. As a result, hedge funds have contributed to the further integration of financial markets. [13]

Hedge funds also tend to be risk-takers in a number of markets. The credit derivatives market is just one example of such a market. According to the British Bankers' Association, hedge funds' share as sellers in the credit derivatives market has surged from 5% in 2001 to 15% in 2003, while their share as buyers rose in the same period from 12% to 16%. According to another survey by Greenwich Associates, hedge funds account for 15-30% of the trading volume in each of the high yield bond, credit derivatives, collateralised debt obligations, emerging bond, leveraged loans markets and for more than 80% of trading in distressed debt. [13]

Hedge funds have become an important source of risk capital. In the fledgling market for insurance-linked securities such as catastrophe bonds and life bonds, hedge funds have become increasingly active investors. Some funds have been launched to invest exclusively in insurance risk. Over time, hedge funds will become an

increasingly important financing source for insurers, complementing reinsurance in areas such as peak catastrophe risks, for which industry capital is insufficient. On a larger scale, hedge funds absorb credit risks from other financial institutions, notably banks, thereby distributing these exposures across a broader range of investors holding diversified portfolios. [10]

The reality is that hedge fund activity makes financial markets more efficient and more liquid, as has been widely recognized by the U.S. Federal Reserve, the Security Exchange Commission and the IMF. Not only do hedge funds contribute to the adjustments of markets when they overshoot, they also help banks and other creditors unbundle risks related to real economic activity by actively participating in the market of securitized financial instruments. And because hedge fund returns in many cases are less correlated with broader debt and equity markets, hedge funds offer more traditional investment institutions a way to reduce risk by providing portfolio diversification. [23]

Hedge funds' activity may lead to lower market volatility because they are less likely to engage in "momentum trading" (i.e. buying into a rising market and selling into a falling one) and impose longer redemption horizons on their investors. Another element that may support this argument is that they are willing to put their capital at risk in volatile market conditions so that market shocks can be absorbed. Through their ability to engage in short-selling and to take contrarian approaches, they may also act as a counter balance to market herding. [13]

The improved risk sharing that hedge funds facilitate can enhance market stability. By assuming some of the escalating volume of credit and catastrophe risks in the market place along side banks and insurers, hedge funds join other institutions in serving as shock absorbers, potentially limiting the spread of damage from recessions, credit crises and natural catastrophes. Moreover, hedge funds can help improve market stability in tumultuous times. When liquidity dries up and other market participants avoid trading a particular security, hedge funds often enter the fray, in areas such as distressed debt. Increased trading contributes to market liquidity, which causes a reduction in the risk premia associated with financial assets. This ultimately means a lower cost of capital. [10]

However, hedge funds can also carry some risks. The near-collapse of Long Term Capital Management underscores how hedge fund activities can harm financial institutions and markets. A sequence of negative events can start with losses on leveraged market positions. Liquidity shortages then come into play, which are further exacerbated by asset illiquidity in stressed markets. Thus, leveraged market risk can, if not supported by adequate liquidity reserves or borrowing capacity, force a fund to default on its obligations to prime brokers and other financial institutions. The spill-over effect on markets depends on the fund's size and the relative importance of its positions in certain markets. The sequence of negative events can also be triggered by mass exits from markets where hedge funds and proprietary trading desks of large banks have taken relatively similar positions. The concentrations, linkages and spill-over effects could therefore ultimately lead to a systemic crisis. [13]

Hedge funds could affect financial markets either by providing the impetus for a shock or by augmenting the effect of a shock originating elsewhere. Part of this

concern results from the fairly extensive use of leverage by hedge funds as well as the imprint made by the spectacular collapse of Long Term Capital Management. [18,11]

Poor returns and investment outflows are associated with increased likelihood of failure. A study [5] finds that restrictions on the ability of investors to withdraw funds and performance incentives for managers can reduce failure probabilities. In addition, hedge funds are more likely to fail in periods when U.S. stock markets are declining and the dollar is depreciating. Volatile markets are bad for some funds, while other funds appear to benefit from turbulent markets.

Another concern that often arises is whether hedge funds stabilise or destabilise financial markets. In this context, two forms of trading can be distinguished: positive and negative feedback trading. [13] The former refers to the buying of financial instruments after price increases and selling after price decreases. This practice can amplify price swings and lead to overshooting or bubbles. Positive feedback or momentum trading can be generated by dynamic hedging, stop-loss orders, similar position-taking by other market participants, forced liquidations related to margin calls or just by simple trendfollowing strategies. By contrast, negative feedback or contrarian trading can have a stabilising influence on markets.

The most tangible risk is a high degree of leverage. Although this may make it possible for a fund to make large profits, it also increases the risk that a fund will collapse if it makes the wrong investments. The high degree of leverage entails risks for the counterparties of the hedge funds and the failure of a fund may therefore have contagion effects in the financial system. The hedge funds' use of derivatives also entails certain risks. Derivatives make it possible to adopt large positions on the market for a small capital contribution, which gives the manager additional leverage. Derivatives can, however, be used for two purposes: for speculation or for risk protection. Hedge funds use derivatives for both these purposes. The use of borrowing and of derivatives can contribute to greater fluctuations in share prices as it leads to the adoption of larger positions. The more liberal investment rules for hedge funds can also be used to reinforce market movements for speculative purposes, so-called positive feedback trading. [22]

### **3. Hedge Funds and Financial Stability: Financial Crisis and Systemic Risk**

Following section assesses the relationship between hedge fund and financial stability in terms of financial crisis and systemic risk.

#### **3.1 Hedge Funds and Financial Crisis**

One question that often arises is whether hedge funds lead to a crisis in financial markets. Several research studies have found no evidence that hedge funds were a cause of the Asian crisis or other world economic turmoil. The unwinding of "carry trades" did contribute to Europe's 1993 exchange rate mechanism crisis, the 1994–95 peso crisis, and the 1997–98 Asian crisis. Studies suggest that herding occurred during the 1992 exchange rate mechanism crisis, while studies of the 1997 Asian crisis indicate that hedge funds provided liquidity and took opposing positions in many markets, reducing volatility and mitigating the fall in asset prices. The 2006 collapse of

Amaranth shows that other hedge funds may also view distressed sales as a buying opportunity and provide liquidity when it is most needed. [20] But the key problem underlying these events was the misalignment of exchange rates with respect to their fundamentals—not the intervention of financial market participants. Eichengreen found that hedge funds, by being willing to take the risk of buying some of the assets that had already fallen significantly in price, contributed to limiting the downfall during the Asian crisis and advancing the recovery.[9]

Researchers [3] also investigated whether hedge funds were responsible for the crash in Asian currencies in late 1997 in detail. The authors estimate the changing positions of the largest 10 currency funds in one currency—the Malaysian ringgit—against a basket of Asian currencies. The authors tested the hypothesis of currency manipulation by a fund by regressing the monthly percentage change in the exchange rate on fund currency exposure. Results show that exposures vary widely, both positively and negatively. The hypothesis of zero exposure can be strongly rejected for only a few periods; nevertheless, exposure seems not to correspond to currency shock. The authors cite several instances where the aggregate exposure of funds to the ringgit was highly positive or negative, though the exchange rate did not change at all. Conversely, from June through September 1997—a period when the net hedge fund exposure was negative—the ringgit dropped by 10 percent. Regression results seem to corroborate this circumstantial evidence that hedge fund managers in no way affected the ringgit. Regressions on a basket of Asian currencies—those of the Philippines, Taiwan, Thailand, Japan, Malaysia, Singapore, China, and India—also indicate that a change in the value of the currency basket was unrelated to any unusual exposure by the funds. Moreover, the top 10 hedge funds were buying into the ringgit as it fell in late summer and early fall 1997.

Similarly, the International Monetary Fund (IMF) found no evidence of hedge funds abnormally profiting from the Brazilian (1999), Turkish (2001), and Argentine (2001) currency crises. Rather than driving these currencies downwards, funds were engaged in negative feedback trading, which might actually have improved market liquidity and stability. [10]

The discussion concerning hedge funds and financial crises has arisen once again in connection with the current turmoil. One example is from the beginning of 2007 when Bear Sterns' hedge funds collapsed. These funds had highly leveraged portfolios with credit instruments related to the US market for housing bonds. According to a research [22] the crisis has affected them more than they have affected the crisis. The main argument for this is that the hedge funds have experienced more problems in handling this crisis than previous crises. A number of factors that distinguish the current crisis from previous crises and that have contributed to the poorer return for hedge funds such as changes in regulation, broad decline in asset values. The downturn has affected most asset types and markets, which has reduced the effect of diversification. In addition, the shortselling of shares was prohibited on many markets in September 2008 with the aim of preventing an acceleration of the fall in share prices. The cost of this ban was, however, that strategies that employ shortselling, irrespective of market conditions, were affected. This was unfortunate because, in the long run, restricting the possibility to conduct arbitrage reduces the effectiveness of the financial markets. The fact that hedge funds have been hit by the latest crisis does not, however, rule out that

they have played a role in the development of the crisis together with banks and other institutional investors.

According to another research [17], hedge funds were significant as the shock spillover channel and the amplifier of the global financial crisis. However, any conclusion viewing hedge funds as the main culprit of the global financial crisis is nearsighted. The banking system represented by hedge funds was a byproduct of the U.S. Glass-Steagall Act and other efforts in developed economies to increase the transparency of and toughen regulations on the banking system based on experiences with the Great Depression in the 1930s.

The above studies shows that hedge funds are not responsible for Asian, Brazilian, Turkish and Argentine financial crisis. There is no evidence that hedge funds were a cause of these financial crisis. In addition, although hedge funds are significant as the shock spillover channel of global financial crisis, hedge funds are not major reason in global financial crisis.

### **3.2 Hedge Funds and Systemic Risk**

Another interesting question from a financial stability perspective is whether hedge funds could potentially pose a systemic risk. Policy-makers and regulators have been examining both direct and indirect channels [20]:

A direct channel occurs when a collapse of a hedge fund holding large positions leads to forced liquidations of those positions at fire-sale prices. The impact on asset prices may be amplified through the use of leverage – whether created directly through the use of margin or indirectly through the embedded leverage of derivative positions. Such a disorderly unwinding could generate heavy losses to counterparties and ultimately contribute to severe financial distress at one or more systematically important financial institutions.[20] Commercial banks and securities firms are directly linked to hedge funds through their counterparty exposures, for example, short-run financing for leveraged positions, prime brokerage activity, and trading counterparty exposures in over the- counter and other markets. If a bank has a large exposure to a hedge fund that defaults or operates in markets where prices are falling rapidly, the bank's greater exposure to risk may reduce its ability or willingness to extend credit to worthy borrowers. [19]

During the collapse of Long Term Capital Management (LTCM) in the autumn of 1998, 17 counterparties, mostly large banks, would collectively have lost between USD 3 and 5 billion had LTCM not been bailed out by a group of its counterparties. Many of the counterparties had direct exposure to LTCM, mostly arising from over-the-counter derivatives. [10]

In the indirect channel, a forced hedge fund liquidation exacerbates market volatility and reduces liquidity in key markets. Systemic risk can occur when correlations in asset classes increase during times of stress, or when the potential for herding amplifies market movements. [20] Large commercial banks and broker-dealers provide substantial liquidity to the hedge fund sector by absorbing the counterparty credit exposure of trading positions, collateralizing financing, providing contingent credit lines, and making direct equity stakes. A hedge-fund-induced shock to a

commercial bank could have knock-on effects if that bank or other banks reduces the provision of liquidity to other hedge funds or to other banks, and thus further disrupts financial markets and credit provision. [19]

In addition, policy-makers and academics have identified the following factors that might contribute systemic risk: excessive leverage and liquidity shocks. One feature of hedge funds on which particular attention has now been focussed is that of leverage. Leverage can be defined in two ways: (i) balance sheet leverage, which is the ratio of assets to net worth; and (ii) as a form of risk, in which leverage is measured as economic risk relative to capital. Leverage relates equity capital to trading exposures. When leverage is excessive, even a moderate price swing could force hedge funds to liquidate positions to meet margin calls. As hedge funds seek to sell their most liquid assets first, shocks in one market might lead to ripple effects across markets. [13]

The 1998 collapse of Long-Term Capital Management provides a striking example of the impact of excessive leverage. The report of the President's Working Group on Financial identified excessive leverage as the key factor contributing to the collapse of LTCM. [20] LTCM managed assets in excess of 30 to 50 times its capital. It employed extreme leverage in part because its reputation as an elite hedge fund resulted in generous lending terms from commercial and investment banks. [25]

Second feature of hedge funds is liquidity. Liquidity is a key concept in the debate about systemic risk. Funding liquidity refers to the ability of an investor to raise cash to meet its financial obligations. A hedge fund may have liquidity problems even though the financial markets themselves are liquid. Financial institutions go bankrupt because of funding illiquidity. Funding illiquidity occurs when an institution runs out of cash and it cannot raise additional financing, even though it may have positive equity.

LTCM and Amaranth were brought down by funding illiquidity: their positions had a positive mark-to-market value, but they were unable to meet margin calls. LTCM was the victim of a market-wide liquidity shock with systemic effects. The devaluation of the Russian rouble and Russia's default in August 1998 caused a sharp reduction in market-wide liquidity, an increase in risk aversion, and a flight to quality. Bond-trading desks and investors sold high-risk, illiquid securities and bought low-risk, liquid securities. The high degree of leverage employed by LTCM amplified its losses. Amaranth Advisors LLC was the victim of funding illiquidity that was specific to its trading strategy. An unexpected fall in the price of natural gas futures for delivery over the winter caused Amaranth to lose more than \$2 billion. When Amaranth could not meet its margin requirements, its positions were sold at fire-sale prices. While volatility in the natural gas market increased, other markets were relatively unaffected. [20]

Significant experience about systemic risk is latest global financial crisis. According to a research [7] systemic risks contained in the banking system is one of the most important aspects of the current global financial crisis. As hedge funds are the part of banking system, hedge funds have contributed to the spillover of the shock to a wide range of areas and to the amplification of losses. But main problem is attributable not to the hedge fund business model itself, but to the fast increase in the entire



banking system's exposure to risks of hedge funds that came as hedge funds expanded rapidly on inflow of money from throughout the world.

LTCM and Amaranth experiences indicate that the potential for a systemic risk from hedge funds is considered small. However, the ability of hedge fund to weather a financial shock depends on the economic conditions. The collapse of LTCM in 1998 followed a prolonged period of difficult economic and financial conditions, due to the Asian crisis and the Russian default. The collapse of Amaranth in 2006 occurred during benign economic and financial conditions. The risk of a systemic shock from the hedge fund sector is therefore greater when economic and financial conditions are worse. [20]

The potential for a systemic risk from hedge funds may have increased due to the increased spread, complexity, and tighter linkages of the global financial system. One of the most important aspects of this is current global financial crisis. Current crisis indicates that the failures in banking system pose a systemic risk. Hedge funds as a part of banking system are tighter linkages of the global financial system, and hedge funds have contributed to the spillover of the shock to a wide range of areas. Hedge funds are not main reason of systemic risk. Therefore, hedge funds is not attributable to systemic risk, directly.

#### **4. Conclusion**

This study aims to examine whether hedge funds are a potential threat to financial stability. In the light of financial crisis and systemic risk, the studies shows that hedge funds are not responsible for Asian, Brazilian, Turkish and Argentine financial crisis. There is no evidence that hedge funds were a cause of these financial crisis. In addition, although hedge funds are significant as the shock spillover channel of global financial crisis, hedge funds are not major reason in global financial crisis. In terms of systemic risk, hedge funds is not related to systemic risk, directly. Hedge funds are not main reason of a systemic risk. The potential for a systemic risk from hedge funds may increase due to the state of economy, or tighter linkages of the global financial system. Therefore, hedge funds are not a main culprit of financial instability in many cases of market disruption.

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