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WHY REGULATING HEDGE FUNDS?*

The risks of hedge funds are embedded in their strategies in the pursuit of high performance. A combination of leverage and dependence on market liquidity makes them vulnerable to financial crises. Their reactions under stress can cause the spread of systemic risk. This is why the indulgent attitude traditionally adopted by regulators is changing. Registering hedge fund managers, limiting leverage, disclosing specific information about the risks they take and making management fees less twisted against investors are legislative proposals currently being discussed.

Hedge funds are paradoxical entities. They present themselves as managers of private wealth, whereas actually most of their clients are major institutional investors. They claim to be able to provide absolute yields under any circumstances and thus to be immune to crises, although they fell sharply during the financial crisis. They are currently largely unregulated, although they are vehicles for the transmission of systemic risk.

The hedge fund industry grew at an exceptional rate from 2002 to the worsening of the financial crisis in mid-2008. The number of hedge funds worldwide went from around 3,800 in early 2000 to over 10,000 in late 2007. The ensuing crisis then led to the disappearance of almost 2,000. Assets under management also grew significantly between 2002 and 2008, going from 490 to 1,860 billion dollars, and the crisis wiped out around 530 billion dollars in March 2009 (Hedge Fund Research, 2009).

The extent of these losses is a matter for public concern, as hedge funds are not merely means of managing private wealth. As early as 2005, private clients represented only 6% of assets, and institutional investors (pension funds, insurance companies, government agencies and academic institutions) represented 61%, whether directly or via funds of funds. The other major clients are banks, which are directly involved with hedge funds and represent 18% of the clientele (Thomson Financial, 2005).

Because of the change in the investing community, hedge fund losses have a severe impact on financial systems. They contribute to increasing systemic risk via their reactions in stress situations on financial markets. These circumstances justify the imposition of appropriate regulation.

* This Letter is based on the work of M. Aglietta, S. Khanniche & S. Rigot (2010), *Les Hedge Funds : entrepreneurs ou requins de la finance ?*, Ed. Perrin.

Hedge funds have atypical risk profiles

To combat any suggestion of restrictive regulation, supporters of the laissez faire approach assert that hedge funds reinforce markets' efficiency and bring forth liquidity. In efficient markets, however, the only way of obtaining better yields than the market indices is by taking more risk. In spite of this, hedge funds systematically claim to be able to achieve 'absolute'returns. In other words, they claim to be capable of taking less risk than the other participants in the market for the same average yield, or of achieving a superior yield at a constant risk level. The key to this 'anomaly' lies in leverage, which is created either by borrowing against securities or by transactions in derivatives, which boost yields from capital, and in the atypical risk profiles of the strategies they devise.

Leverage can be used to apparently beat the market, because it increases the exposure to a security, a sector or a market from a low initial investment, while reducing the volatility of their returns in creating tail risk. A leveraged hedge fund will have high, regular yields on the capital invested, until an extreme event occurs that has a low probability of occurring but that always happens in the end. The losses are then passed onto the tails of distribution of the risk factors. Leverage thus acts as a source of both high yields and massive losses. As long as the extreme event does not occur, there is an illusion of absolute yield. The reputation of hedge fund managers lasts for as long as luck allows the fund to continue to exist. However, hedge funds cannot do better in the long term than the yield of a passive diversified portfolio, which costs investors a lot less in commissions.

Hedge funds are especially vulnerable to extreme events by virtue of the fact that they devise strategies to protect themselves from the volatility of markets in normal circumstances, so as to show regular profits. These strategies incorporate selling short options and selling assets that are very sensitive to extreme risks. This peculiarity enables hedge funds to claim that they do not take much risk, until the time when they suddenly lose two thirds, three quarters or all of the capital entrusted by their investors.

The vulnerability of a hedge fund's strategies is typically measured by statistical indicators of asymmetry (skewness) and extreme risks (kurtosis). A negative skewness coefficient indicates that the asset position is more likely to make losses than gains. A kurtosis coefficient greater than 3 (the value for the normal law) indicates a thick tail of distribution, *i.e.* higher probabilities of extreme losses than indicated by the normal law.

Our calculations carried out for the 1994-2008 period show that hedge funds are heavily exposed to extreme risks in most strategies[1]. The average skewness is –0.70 and the average kurtosis is 5.79. For event-driven strategies, however, which aim to take advantage of events in the life of companies, the figures are –1.40 and 7.61 respectively. The most dangerous are arbitrage strategies, because the leverage is very high. Thus, relative value, which arbitrages between fixed-yield securities, shows a skewness of –3.43 and a kurtosis of 21.49. Even for strategies that claim to diversify risk (multi-strategy), the figures are –3.26 and 20.68.

If, therefore, one relies on the traditional measurements of mean and variance when estimating the performance of hedge funds, one will be seriously mistaken. This misunderstanding comes alongside the multiple slants produced by the opacity in which hedge funds shroud themselves. Hedge funds are not obliged to disclose information about their strategy or their performance; only the managers who achieve good performances and who want to attract funds are encouraged to disclose. Where it is possible to obtain detailed information about certain samples that is not subject to these slants, the corrected yields are much lower than the published ones (Table 1).

Table 1 – Average yields of hedge funds with or without adjustment for selection bias (in %, per year)

	1994-2003	1995-1999	2000-2002	2003
Uadjusted	11.11	18.16	4.09	15.47
Adjusted	2.32	9.37	-4.66	6.72

Source: B. Malkiel & A. Saha (2005), "HFs: Risk and Return", *Financial Analysts Journal*, CFA Institute, Vol. 61, Number 6.

The size of these hidden risks suggests that hedge funds are channels which propagate systemic risk wherever it arises.

Hedge funds propagate systemic risk

By virtue of their leverage of debt against collateral, their illiquid assets and their dependence on wholesale currency markets with regard to liquidity, hedge funds are unregulated shadow banks. In addition, betting for extraordinary yields encourages hedge fund managers to resort to akin exposures. It ensues an increase in yield correlations between hedge funds using the same strategy, as well as between strategies. In such configurations, a market event can lead to simultaneous unwinding of similar positions. It is why market correlations

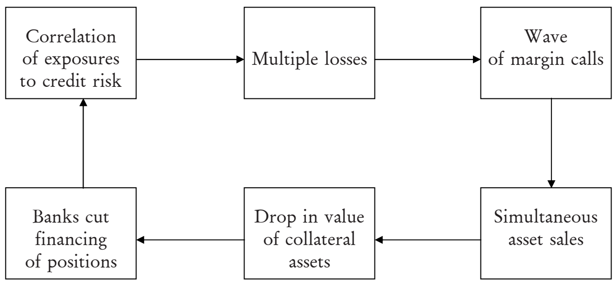
1. "Les Hedge Funds : entrepreneurs ou requins de la finance ?, *op. cit.*, Table 4 p. 151.

increase significantly with market instability. A high increase in correlation in times of stress is contagious. Such an increase stems from extreme risks Co-variation in yields between investment styles in periods of stress occurs because the probability of extreme losses increases drastically for all strategies. Contagion between extreme losses exists in a spectacular fashion between strategies that are negatively correlated in normal market conditions.

Because hedge funds depend heavily on investment banks (prime brokers) for financing their leverage, excess leverage on the hedge fund side and imprudent credit risk assessment on the prime broker side magnify counterparty risk.

When money markets, which financed hedge funds' positions, froze during the financial crisis, hedge funds were unable to meet the margin calls made by prime brokers without selling distressed assets. They became transmitters of systemic risk. The strong contraction of hedge fund leverage then led to contagion between markets. A vicious circle occurred that could not trigger countervailing forces (Figure 1).

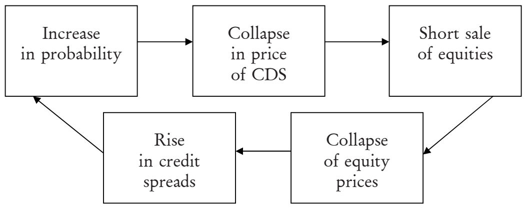
Figure 1 – Interaction of credit risk and liquidity



The disappearance of liquidity in critical segments of the market leads to a self-fulfilling process between the rise in credit spreads and the fall in share prices, which is characteristic of systemic risk in financial markets (Figure 2).

The externalities created by hedge funds in the banking system have a systemic incidence when potential losses due to the exposure of a large-scale hedge fund involving banks make a significant share of the capital of those banks. This was true of LTCM, as well as of the Carlyle Capital hedge fund that led to Bear Stearns going bankrupt. The same applies when numerous hedge funds follow strategies that expose them to the same risk factors in the same manner. The reactions of all these funds create a downward price spiral. These phenomena had devastating effects on the securitised credit markets and the stock markets during the 2007-2008 crisis.

Figure 2 – Transmission of systemic risk to the markets



How can hedge funds be regulated?

Hedge funds, in symbiotic relationship with investment banks and spurred by the search for 'absolute' yield, accumulate uncontrolled risky exposures because their leverage is totally unsupervised and because the investors that supply them with capital are unable to penetrate the opaque risks that the hedge funds are running. Not only do hedge funds typically set up their headquarters in offshore locations (such as the Caiman Islands) in order to avoid national rules on investment funds deemed too restrictive; they also, as private funds, benefit from regulatory[2] exemptions. Therefore they are not governed by the same (direct) requirements as mutual funds in terms of disclosing information, liquidity, regulatory capital or limits on leverage and short sales.

Indirect regulation via their regulated counterparts (investment banks and institutional investors) was until the financial crisis believed to be the most appropriate regulatory combination for hedge funds.

This mild form of regulation, which allowed hedge funds to enjoy total freedom in how they invested and to act with complete opacity, can no longer be justified. Improvements to the regulation of hedge funds should first and foremost address their debt levels. Since hedge funds behave like unregulated banks, the debt levels of the entire system composed of the hedge funds and the banks that lend to them, chiefly via the derivatives markets, must be monitored. The other requirement is precisely to define the conditions for an effective market discipline, by giving institutional investors that invest in hedge funds sufficient information to make them able to perform their due diligence.

Following the recommendations made by the London G20, Europe and the USA have been drawing up projects to regulate hedge funds. The European[3] Union seems keen to set an example by proposing a directive targeted at

2 Three quarters of hedge funds are American. They are not subject to Federal laws (Investment Company Act, Advisor Company Act, Securities Act, *etc.*).
3 The USA is also moving in this direction, albeit more consensually.

excessive risk-taking. This proposal goes further than the G20 recommendations. It contains precise requirements: registering hedge funds with a market regulatory authority, obliging them to disclose information to regulators (such as strongly levered exposure and aggregated positions), a minimum regulatory capital, limits to leverage, reporting and standards for governance and risk management, restrictions on the sale of products, and the use of independent European depositories. Thus, only funds run by managers subject to the directive could be purchased by investors. In exchange, these funds would have a 'passport' enabling them to be sold in any country in the EU.

A new version of the draft directive was published in late November. The contents of the amendments give an idea of the resistance mustered by the various parties involved and show the intensity of the lobbying that takes place in Brussels. Certain amendments are steps forward: the registration of managers is extended, rules governing remuneration are specified for the first time, the limits to leverage are stipulated, and the requirement for regulatory capital is confirmed. Others clearly go into the wrong direction: the conditions associated with obtaining a European passport have been eliminated, as have those for agents/assessors. It is thus regrettable that efforts have been abandoned on both sides of the Atlantic to carry out a regulatory and fiscal reform worthy of the name for offshore locations, the dark side of hedge funds and finance in general.

These limits are important and reflect the difficulty to get a new consensus in regulation. Generally, the opponents of this draft directive criticise the high cost to both hedge funds and regulators of applying these measures. However, a cost/benefit analysis must also evaluate the gains that the regulations would bring to investors and other counterparts of hedge funds, and finally to society as a whole. Since transparency is a necessary condition for the efficiency of financial markets and theory presumes that economic efficiency is best served by efficient financial markets, the benefits outweigh the costs of organising transparency. It has been corroborated by the president of the European socialist party, Rasmussen: "The very essence of strong and fair competition lies in the fact that each party involved has as much information as possible on the other parties. Transparency and information symmetry are the key elements in ensuring better competition, reducing costs and preventing market abuses."[4]

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