

Risks and return of banking activities related to hedge funds

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There are approximately 10,000 hedge funds worldwide, managing assets of over USD 1.5 trillion. Investment banking activities are more and more intertwined with hedge funds, as hedge funds obtain financing from banks through prime brokerage and are clients or counterparties of banks for all sorts of products. The development of hedge funds has therefore created many opportunities for investment banks.

Bank benefit from hedge funds activities directly to the extent that hedge funds are their clients. All capital market activities benefit from it, from brokerage and research to derivatives. Prime brokerage has become a growing source of income. Banks have a very important business of providing derivatives and products, from vanilla products to more complex, customized and exotic products. Hedge funds are also possible underlyings for derivatives. Many banks, including Société Générale, have developed a business of writing options on hedge funds as well as providing leverage to funds of funds.

Investment banks are not only making profits by transacting with hedge funds. They also benefit indirectly through more trading: on certain specific specialized market, like structured complex derivatives, there would be no market at all without the availability of hedge funds that are willing to take the risks.

Together, as two intertwined partners, hedge funds and investment banks have extended the reach and efficiency of capital markets. The benefits that this system brings to the economy as a whole is widely recognized.

Not only do hedge funds provide important benefits for the economy in general but their risks are manageable.

The risks for investors are overplayed. Whatever the risk measure, hedge funds are clearly less risky than equities. As regards operational risks, the market itself is able to generate protection solutions. Academic research has shown that operational risks can be dealt in the most extensive way by using managed account platforms, such as the Lyxor platform.

The risks for banks are under control and the move toward "risk-based margining" has improved very much their risk management. Banks in general invest a lot of resources in monitoring hedge funds qualitatively through due-diligences. They also put different types of limits in order to cover different aspects of risks:

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nominal limits, stress test limits, limits on delta, limits on vega, expected tail loss limits. Moreover, they regulate their capital requirements using not only Value at Risk, the usual tool used by banks to allocate capital to market risks, but also stress tests losses based on the worst possible scenarios. These very sophisticated models are quite convincing. There is no reason to believe that they will not work in practice under stress conditions.

There are also general consideration about a systemic risk that would be something else than banking risks, but it has no real argument to back it up.

Hedge funds are first of all the result of a significant improvement of asset management techniques. These improvements are here to stay, whatever the regulatory environment will become, since these techniques will be more and more part of the mainstream asset management world. Hedge funds are more and more institutionalized. They will eventually merge with "classical" asset management, while some forms of compromises between hedge funds and classical asset management, such as absolute return funds or 130-30 funds, are becoming more common. Hedge funds are just a nice new development of capital markets that, like all past capital market developments, will be irreversible and will contribute to a more efficient financial system.

There are approximately 10,000 hedge funds worldwide, managing assets of over USD 1.5 trillion. The hedge funds industry is expected to reach USD 2 trillion of assets under management ("AUM") by the end of 2008, with a planned annual rate of growth of about 16%.

Anecdotal evidence as much as data suggest that investment banking activities are more and more intertwined with hedge funds. A rough and conservative estimate is that more than 25% of investment banking revenues come from hedge funds.¹

Hedge funds and investment banks have always been intimate partners. Many hedge fund managers are ex-bank traders. Both businesses belong to the same technical culture, a culture of derivatives and risks management.

The development of hedge funds has thus created many opportunities for investment banks. It has also had a very stimulating effect on asset management, capital markets and the economy in general.

1 | HEDGE FUNDS ARE AN ASSET MANAGEMENT REVOLUTION

1|1 Short selling and leverage

It is said that the term "hedged fund" dates back to a fund founded by Alfred Winslow Jones in 1949. This fund was to sell short some stocks while buying others, thus some of the market risk was hedged. Borrowing securities and selling them, i.e. shorting securities, is undoubtedly a main characteristics of hedge funds, the distinctive feature that makes them different from traditional funds.

With short selling come completely new risk parameters and boundaries. Long-only funds can characterize their risks as direct exposure to a certain category of assets. This is not true any more for funds that have short positions as well as long ones. There is no simple anchor anymore. With borrowing comes leverage and the right level of leverage has to be determined. The resulting

¹ "European Wholesale Banks – Hedge fund and investment banks", CSFB research, 09/03/05, pp.1

degree of risk depends on a deliberate choice of the manager, subject to ratifications and limitations by the leverage providers, and among them, first of all, by the prime broker.

Short selling and leverage, and also the fact that they can use less liquid instruments, make hedge funds more flexible in terms of investment options or strategies than traditional collective investments. Hedge funds encompass a wide range of different investment objectives, strategies, styles, techniques and assets, offering a wide spectrum of risk/return profiles.

Because of this flexibility, hedge funds have embedded over time a whole set of sociological and market characteristics that also makes them very distinct from traditional asset management.

1|2 A specific structure of competence and fees

Shorting securities have allowed different benchmarks from the one of the traditional long-only funds and have created a strong appeal for new ideas, new methods and new people.

This entrepreneurial spirit has led to a structure of fees where performance fees are the main source of income for the manager. The industry standard is 2% of AUM and a 20% performance fee. It is said that this standard has been created by the first hedge fund manager, A.W. Jones. His reasoning was that "when Venetian merchants returned from a successful voyage, they took 20% from their patrons".

This fee structure has caused wealth creation to the tune of close to USD 40 billion a year. This has allowed asset managers to become mature companies, and to compete with traditional asset management companies and investment banks for the most talented human resources.

The hedge fund universe has been filled with talented managers that have been able promote new ideas, raise the stakes, take higher views and in the end undoubtedly provide some consistent return, independent of classical benchmarks. In all fields of asset management,

whether it is quantitative or fundamental, they brought new techniques and they improved the degree of professionalism of the industry.

This new sociological structure has in the end become one of the characteristics of hedge funds, to the point where it is debatable whether shorting securities is still the main characteristics of hedge funds, as is exemplified by the new concept, a bit provocative, of "long-only" hedge funds.

"Classical" asset management has indeed reacted and is now striving to assimilate and incorporate this sociological structure. It is now itself following an enormous transformation to counter pure hedge funds. In the end, it seems that the two worlds are coming closer and closer. This raises an issue for regulators: does it make sense to discuss specifically about hedge funds when they are only a part of the asset management world? Wouldn't it be more relevant to discuss about asset management in general? There is however one significant difference: most hedge funds are not regulated or lightly regulated.

1|3 Unregulated funds

Hedge funds happen to be lightly regulated because classical asset management regulations were not allowing short selling and leverage.

Hedge funds have thus been created out of the bound of regulation, in some off-shore jurisdiction or using some legal structure like US partnerships. Since they were not regulated, they have been chasing initially investing population that was allowed to purchase them, mostly high net worth individuals and some institutions.

Alternative management industry still accounts for only 5% of the traditional asset management. However, hedge funds have seen their client base move from family offices and individual investors to financial institutions such as pension funds and insurance companies. Financial institutions were 2% of the investors in 2000, 38% in 2005 and will probably reach 50% in 2008. This will double the size of the alternative industry in the 3 to 5 coming years.

This tends to "institutionalize" hedge funds, with an immediate consequence: a search for more transparency, control, reporting and financial robustness and a potential change in the risk profile with a lower volatility (and potentially return) required by such investors. Hedge funds now compete head on with "classical" asset management.

As a reaction, asset management regulations are now going to be more and more flexible and allow "classical" asset management to use the same techniques as hedge funds. In general, regulators do not oppose for a long time the use of new techniques. They rather tend to accommodate them because they want the best techniques to benefit the broader public.

Already the new European UCITS Directive published in 2002 accepts short positions through derivatives. New regulations, for example the European recommendation on derivatives² goes further and allows leverage in UCITS without any limit, provided that the VaR of the fund stays below unspecified limits.

Regulators tend also to favor more free marketing of hedge funds, as is clear in the new European Commission white paper on asset management, which proposes a European private placement regime for the marketing of hedge funds.³

While both worlds move towards each other, we see emerging, at the same time, new concepts that are sorts of compromise between hedge funds and classical asset management, such as "absolute return". Absolute return funds, like hedge funds, are not benchmarked, but they use leverage and short selling "moderately". In the United States, we are seeing for example classical asset managers promoting "130-30" funds, funds that are long 130% and short 30%, managed either by "classical" asset managers or by hedge funds.

Another interesting development is the increasing number of big banks and insurers that are taking stakes or acquire hedge fund firms. This is the recognition of HFs as a definitive pillar of an asset management activity.

The universe of hedge funds and capital markets, on one side, and classical asset management on the other side, will eventually merge into the same regulatory and cultural framework. For now, it is however still reasonable to sideline the hedge fund universe as characterized by short selling, leverage, light regulation or no regulation, and a specific culture based on entrepreneurship, innovation and result-based performance.

This universe is a great opportunity for capital markets, the economy and banks in particular. It is also a source of multiple risks.

2| HEDGE FUNDS ARE A SOURCE OF OPPORTUNITIES FOR CAPITAL MARKETS, THE ECONOMY AND THE BANKS

2|1 Hedge fund provide capital at risk for capital markets

Since hedge funds are more flexible than classical asset management, they should be able to perform better their economic functions. As long as market theory assumes that investors play a positive role in the economy by contributing to allocating capital resources in an efficient way, we should expect hedge funds to do it also, and better.

In the words of the European Expert Group on hedge funds:⁴ "hedge funds improve the functioning of financial markets. They provide markets with liquidity and have a significant stabilizing influence by spreading risks across a broad range of investors. Indeed, hedge funds often take alternative market views (contrarian trading strategies), can leverage their positions and generally change their portfolio composition much more frequently than traditional funds. Hedge funds also tend to be active in newer developing markets, often creating sufficient liquidity to allow mainstream managers to follow

² *Corrigendum to Commission recommendation 2004/383/EC of 27 April 2004 on the use of financial derivative instruments for undertakings for collective investment in transferable securities (UCITS)* (OJ L 144, 30.4.2004) - [http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32004H0383R\(01\):EN:HTML](http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32004H0383R(01):EN:HTML)

³ *White paper on enhancing the single market framework for investment funds* - http://ec.europa.eu/internal_market/securities/docs/ucits/whitepaper/whitepaper_en.pdf

⁴ *Report of the Alternative Expert Group (July 2006)* - http://ec.europa.eu/internal_market/securities/docs/ucits/reports/hedgefunds_en.pdf

(e.g. credit derivatives markets, over-the-counter markets and syndicated bank loans). Hedge funds increase market efficiency through the arbitrage of price differences between similar securities across markets or by providing price discovery".

2|2 Hedge funds are a source of business for banks

Bank benefit from such activities directly to the extent that hedge funds are their clients. All capital market activities benefit from it, from brokerage and research to derivatives.

According to some research,⁵ hedge funds generate, for major investment banks, 40% of total equities trading, 20% of total fixed income trading revenues and 80% of all trading in distressed debt markets. Greenwich associates (2006) reports that hedge funds now account for more than 50% of all trading on the US fixed income markets.

In 2005, hedge funds generated USD 25.8 billion for major investment banks. Of which:

- USD 17 billion (65%) attributable to execution (sales & trading) activity,
- USD 8.8 billion (35%) attributable to prime brokerage:
 - USD 1.2 billion of Clearance & Custody,
 - USD 3.4 billion of Trading & Execution within the prime brokerage department,
 - USD 4.2 billion of Financing (USD 3.3 billion of Securities lending and USD 0.9 billion of Margin lending).

Investment banking activity with hedge funds in 2005 constituted roughly 25% of revenue across the industry, up from 15% in 2004, which represented USD 25 billion. These amounts will continue to grow as hedge funds AUM continue to grow steadily.

EXECUTION ACTIVITIES AND OTC DERIVATIVES

Hedge funds are believed to have paid record fees for brokerage services in 2005, equating to USD 7.5 billion, up 32 percent from 2003.⁶

Banks have also a very important business of OTC derivatives with hedge funds. They provide derivatives and products, from vanilla products to more complex, customized and exotic products.

Investment banks are not only increasing profit from transacting with hedge funds. They also benefit indirectly through more trading: on certain specific specialized market, like structured complex derivatives, there would be no market at all without the availability of hedge funds that are willing to take the risks.

As ultimate risk takers, hedge funds frequently take a layer of risk that most institutions are reluctant to consider. They provide the missing link in a complex transaction or, more simply, takes the risks that others, including banks, are not willing to take or cannot take above certain limits. In short, they provide a hedge for banks themselves. This has opened a specific bank business of selling bank risks to hedge funds or other institutions, named "alternative risk transfer (ART)".

Hedge fund managers expertise, experience and appetite for high returns provides them with an incentive to invest in the riskiest component of an issue, such as CDO equity tranches, high yield bonds or distressed stocks, or complex and exotic market risk, such as correlation or volatility skew. Other investors, like most institutional investors, naturally avoid these areas due to regulation or a lack of knowledge. By allowing investment banks to place or to transfer risks, hedge funds give banks more space to continue developing business with corporate, institutional and even retail clients.

Hedge funds may also hedge other institutions, like insurance companies. Every step made by the regulators, notably through IFRS and Solvency 2, to increase the risks awareness and sensitivity of insurance companies, will lead to an added demand for

⁵ ABN-AMRO Research 2006, Bernstein Research

⁶ Sanford C. Bernstein analyst Brad Hintz estimates, quoted in "The money makers", www.thestandard.com, 28/11/05

hedge funds to take those risks. As mentions a research from Edhec Research Centre:⁷ "Solvency 2 should integrate the issue of asset-liability adequacy in the level of capital required, which should lead to (...) more structured and sophisticated interest rate products and a transfer of some of the risks of mass insurance and large insurance risks towards the financial market". With Solvency 2, regulators are pushing the risks of insurance companies towards unregulated investors willing to take the risks: hedge funds.

PRIME BROKERAGE

Prime brokerage has become a growing source of income. Start-up services, capital introduction, credit intermediation, risk management, straight through processing (STP), futures and options clearing, research, contracts for difference and swaps are among the more sophisticated components of packages offered by prime brokers. It is estimated that global prime brokerage revenues will rise by over 60% to USD 15 billion by 2010.⁸

Many investment banks are also widening their services to hedge funds, as recently exemplified by Fortis' acquisition of Hedge Fund Services (HFS), the largest fund administrator in the British Virgin Islands (March 2006).

Prime brokerage service is however becoming a commoditized business with declining margins. This decline is offset by new revenue opportunities and more industrial operational efficiency. Revenue mix is changing, from predominantly equity originated revenue streams to fixed income, commodities, foreign exchange and volatility ones, and a marked increase of related listed and OTC derivatives.

In 2001, 70% of the funds were invested in equity strategies. During the first semester of 2006, 35% of the allocated funds were invested into "blended strategies" i.e. which are multi assets and 12% were invested in pure fixed income. In 2007, more than 50% of the investments will probably be made outside of the equity asset class. Prime brokers should benefit from this trend since the financing spreads are higher. The trend will favor prime brokers that

are able to offer multi-asset services and may lead to consolidation in the sector.

STRUCTURED PRODUCTS BASED ON HEDGE FUNDS

Hedge funds are also possible underlyings for derivatives. Many banks, including Société Générale, have developed a business of writing options on hedge funds as well as providing leverage to funds of funds.

The business of structured products on hedge funds allows, like any structured products business, to redefine and restructure the risks according to the wishes of clients. As an example, this allows investment banks to provide capital guarantees to investors that do not wish to take capital risks. More usual structures used to be CPPI.⁹ From CPPI, Société Générale has developed structures like Astaris,¹⁰ which have been widely replicated in the industry. The industry has been more and more creative and now embeds many types of exotic options that existed before only in the equity world. Structured products will play their role in the hedge fund world as they have done in the equity market, by customizing pay-offs to the precise investors' needs.

Société Générale, which is a leader in this business, estimates the annual worldwide revenues coming from this business at around USD 2 billion. We expect this business to continue to grow fast.

The business of providing leverage is the part of the structured product business where the aim is to increase risks rather than reducing them, by adding leverage to products instead of providing guarantees. This business applies mostly to funds of hedge funds, which have a very low risk profile: by providing leverage, banks increase the returns of the product, at a price of more risks.

The universe of manageable risks determines the range of actual transactions. Transactions are therefore based on sophisticated risk models that incorporate different layers of risks and different types of risks. The improvement of risks models is permanent. Models now allow new types of transactions that were not possible a few years ago.

7 *The impact of IFRS and Solvency 2 on asset liabilities management and asset management in insurance companies (November 2006)* - <http://www.edhec-risk.com/edito/RISKArticleEdito.2006-12-14.5028/attachments/EDHEC%20Study%20Impact%20IFRS%20Solvency%20II%20on%20AM%20ALM.pdf>

8 *Source: m.a. partners 2006.*

9 *Constant proportion portfolio insurance. A structure that combines risky and non risky assets and where the exposure on risky assets is reduced when the net asset value of the funds comes closer to the present value of the guarantee.*

10 *"Astaris" is an "enhanced CPPI" structure that combines the benefits of options and those of CPPIs.*

Together, as two intertwined partners, hedge funds and investment banks have extended the reach and efficiency of capital markets.

The benefits that this system brings to the economy as a whole are widely recognized. As mentioned by the European Central Bank,¹¹ "hedge funds have a role as providers of diversification and liquidity, and they contribute to the integration and completeness of financial markets".

What is often debated, however, is the risks that are created by hedge funds, risks for investors, for banks or for the economy as a whole.

3| THE DEBATES ABOUT HEDGE FUNDS RISKS

In order to analyze hedge funds risks, it is crucial to differentiate between different types of risks for different actors:

- one issue is risks for investors. The debate is driven by some examples of fraud, or by some example of misunderstanding of risks, like in the Amaranth story;
- the other issue is risks for banks. This debate has been driven, obviously, by the LTCM episode. The Federal Reserve felt that it had to intervene, very lightly in fact since it did not use any public money nor had recourse to any legal action;
- another issue is systemic risk. Systemic financial risk has always been seen as a banking risk so this risk is first of all related to the preceding one.

3|1 Risks for investors

The first type of risks often mentioned is risks for the investors. Indeed, hedge funds are taking risks, like any fund, but there is ample proof that hedge

funds in general are not especially risky, as shown by the following table:¹²

Table 1
Distribution of maximum drawdown¹³ of hedge funds and funds of hedge funds vs. equity funds¹⁴

Drawdown	> 10%	> 25%	> 50%	> 75%
Hedge funds				
Funds of hedge funds	30.5	7.6	0.4	0.0
Single funds	77.0	40.4	10.2	2.1
Mutual funds				
Funds of funds	100.0	93.1	69.6	4.9
Single funds	99.7	97.1	73.7	5.1

This table shows, for example, that 73.7% of mutual funds have lost more than 50% of their value, whereas only 10% of hedge funds have lost as much as that. These data are also true if we use volatility, or any other risk parameter. Whatever the risk measure, hedge funds are clearly less risky than equities.

The intuitive feeling that hedge funds are risky is probably a result of the fact that they often bear operational and fraud risks. As mention in a research paper concerning operational risks,¹⁵ "with an average of approximately 15 fund collapses per year (to be compared to approximately 350 hedge fund closures per year) out of a universe of a few thousand funds open to investment, it becomes clear that the risks related to the operational weaknesses of hedge funds significantly outweighs the level of financial risks, which are usually the focus of managers' attention and investors concerns".

Hedge funds still face limited regulatory constraints and the industry still often lacks maturity as regards operational practices, in relation to valuation, reporting and risk management. The lack of transparency creates risk for investors, from pure fraud to style drifting or excessive and unpredictable risk taking, the type of risks that we have seen in the Amaranth story.

¹¹ European Central Bank, 2005, "Hedge funds and their implications for financial stability", Occasional Paper Series, No. 34, August

¹² Borrowed from a contribution of Edhec Research Risk Centre to IOSCO Standing Committee 5 on 14 June 2006.

¹³ Maximum drawdown is a commonly used statistic for measuring the risk of hedge funds. It looks at the worst possible loss an investor would have endured in a fund had he or she bought in at the worst possible time offering an idea of how risky the fund can be.

¹⁴ Data from 01/1999 to 12/2005, based on monthly return. There are 374 hedge funds and 236 funds of hedge funds coming from the CISDM database, and 1495 equity funds and 102 funds of funds coming from Europerformance database.

¹⁵ Edhec Risk and Asset Management Research Centre, Jean-René Giraud "Benefits and limitations of managed accounts", http://www.edhec-risk.com/latest_news/Alternative%20Investments/RISKArticle.2006-09-15.2338/attachments/Benefits%20and%20Limitations.pdf

These types of risks may affect some investors but are not a threat to the economic or financial system.

It should be mentioned also that the market itself is able to generate protection solutions. Academic research has shown that operational risks can be dealt in the most extensive way by using managed account platforms.¹⁶ For example, in the Société Générale Group, we have created a managed account platform, the Lyxor platform,¹⁷ that allows investing in hedge funds with a certain degree of transparency and independent monitoring. Regulators should not continue to ignore these structures but on the contrary encourage them by appropriate regulatory incentives.

3|2 Risks for banks

Banks encounter different types of risks in their several businesses related to hedge funds.

OTC DERIVATIVES

By entering into OTC derivatives with hedge funds, banks incur counterparty risks. They try to limit this risk by asking "independent amounts".

Independent amounts are for OTC markets the equivalent of "deposits" in the listed derivatives markets. Independent amounts are collateral amounts given to the bank, which represent an add-on precaution to the marked to market risk. Independent amounts are calculated on the basis of the global risk on the counterparty, using VaR and stress tests. They are often used for exotic derivatives. This approach is, however, not generally accepted by hedge funds, because it runs counter to their wish to optimize their capital usage.

Another technique that works for the benefit of all parties is the "give-up agreement". The give-up agreements effectively transfer the risk of hedge fund default to the prime broker. Give-up agreements are very useful because they tend to concentrate the risks on those who have a complete view on market risks, the prime brokers. The trend is that give-up agreements will become the market standard.

PRIME BROKERAGE RISKS

Numerous legal and risk issues are faced by prime brokers. Among them:

- credit risk for loans and financing;
- counterparty risk, market risk, credit risks and settlement risk for financial instruments;
- legal risks on the investment vehicle. The structure should be governed by bankruptcy law which recognizes the prime broker right to take security interest or other security.

Legal risks are mostly linked to the risk of not being able to seize and liquidate the collateral. The insolvency risk of the customer is the higher risk, which can defeat the contractual arrangement between the parties.

In addition to the classic law of security and contractual set off, modern techniques are available to prime brokers willing to mitigate legal risks in the event their customers become insolvent. Specific legislation on close-out-netting or particular master netting agreements or collateral arrangements has enabled individual transactions exposures to be reduced.

In the area of financial risks, the trend is towards "risk-based margining".

"Classical" prime brokerage used lending against collateral. Arrangement tended to be based on traditional lending fees and requirements for lending. This approach was not in itself unfavorable to good risk supervision. It could even be argued that such approach was in fact too conservative in terms of risks.

The "risk-based margining" idea is to better reflect the potential loss of the portfolio that underlies the risk of the prime broker, by recognizing hedges at single name, sector and portfolio level, by rewarding diversification between strategies and considering individual trades in the context of the wider portfolio.

Prime brokers are able to cross-margin the positions of their customers by using risk methodology and risk calculation tools applied to the global portfolio. Stress

¹⁶ See *ibid.*

¹⁷ <http://www.lyxor.com>

tests are then used to insure that the proper risks are taken into account, through the calculation of margins. All the identified risks are taken into account, in accordance with overall risks policies of banks, such as: sector risks (risk of sector surge or crash), concentration risks, relative risks values (decorrelation of long and short), market directional risks and liquidity risks. These risks are taken into account in their extreme occurrence, through stress tests that use the worst past observed modifications of the economic environment, as well as extreme imaginary scenarios.

These very sophisticated models are quite convincing. There is no reason to believe that they will not work in practice under stress conditions.

Moreover, hedge fund managers in general do not use all the leverage allowed by their prime brokers and current levels of leverage do not seem alarming. For example, where a classical long-short equity hedge fund would have a leverage of 4 (sum of long and short positions equal 4 times the net asset value), stress test models tend to show that, in many instances, a leverage of 8 or more would be possible. This shows that the leverage of a hedge fund is not generally linked to the limits required by the prime broker but is rather a consequence of the risk return profile sought by the manager.

One reason is that it is sound practice to limit the leverage to a reasonable level in order to leave room for more leverage should the market conditions so require. Another reason is that hedge funds managers tend to be conservative in terms of leverage in order to limit the volatility of their fund.

STRUCTURED PRODUCTS ON HEDGE FUNDS

This business is extremely technical and based on sophisticated risk models that include two types of risks: single hedge funds risks and liquidity risks.

The types of risks that happen in this type of structures are "gap risks", typical for CPPI, which are the risks that a sudden downward gap in the value of the assets would not allow the timely rebalancing of the assets which is needed to insure the guarantee. On optional structures, the risks are the typical derivatives hedging risks (gamma and vega risks),

amplified by the low liquidity nature of the underlyings. There are also, as in prime brokerage, legal risks; managing the legal documentation of transactions is an important part of the business.

Banks mitigate their risks by putting in place guidelines on the allocation of hedge funds that underlie the structured product. They also invest a lot of resources in monitoring hedge funds qualitatively through due-diligences. They also put different types of limits in order to cover different aspects of risks: nominal limits, stress test limits, limits on delta, limits on vega, expected tail loss limits. Moreover, they regulate their capital requirements using not only Value at Risk, the usual tool used by banks to allocate capital to market risks, but also stress tests losses.

SYSTEMIC RISKS

In their quest for alpha, hedge fund managers are forced to look permanently for new strategies.

When one of these strategies proves to be viable, a number of managers often move into the same space, following a kind of "herd instinct".

A recent example could be the rush during the past 18 months into emerging markets,¹⁸ and then into commodities. Many managers launched new funds, or created new strategies within multi-strategy funds, specialising in these markets, creating rapid inflows that these markets struggle to absorb, thus adding to volatility and potential instability.

On the other hand, herding behavior has not been proven to be inherent to hedge funds, as have shown the history of bubbles, from the tulip bubble of 1636 to the internet bubble of 2000.

Through their ability to engage in short-selling and to take contrarian approaches, hedge funds may rather act as a counterbalance to market herding. Had short selling existed in the 1630s, nobody knows, however, whether a "soft landing" of the tulip market would have happened...

Hedge funds, which act on a view which is supported by first hand knowledge and detailed analysis of companies, help to ensure that they trade at true market

¹⁸ Money flowed faster into emerging markets than any other hedge fund strategy in the first quarter of 2006, according to Tremont Capital Management. Tremont reports that inflows into emerging markets grew at a rate of 7.97%, well above the overall average percentage of 3.18%. Also registering healthy increases were managed futures (4.73%), long/short equity (4.37%) and global macro (4.04%). Total inflows for the first quarter stood at USD 27.6 billion.

value which is a stabilizing influence on markets. After all, the first shot at the Enron share before the collapse of the company happened to come from a short seller.

Some have however argued that hedge funds should put their positions in a database that would be able to track the global systemic risks of hedge funds.

Skepticism about such database is general. Not only because its feasibility is debatable, but also because the database would have to include not only hedge funds but all capital markets. Since any transaction has a counterparty, it is difficult to see how such database would be useful. Moreover, some risks, like liquidity risks, would not be shown by such database.

Hedge funds are first of all the result of a significant improvement of asset management techniques. These improvements are here to stay, whatever the regulatory environment will become, since these techniques will be more and more part of the mainstream asset management world.

Hedge funds provide important benefits for the economy in general and their risks are manageable.

Investors, especially institutional investors, should however not be complacent about the risks. If they wish to reduce very much operational risks, they may use risks management technique like "managed accounts".

As regards their own risks, banks have put in place sophisticated risk techniques that address in a conservative way all sorts of risks. This is not to say that there will never be any bank failure because of problems with hedge funds, but the degree of risks seems manageable. As US Federal Reserve Board chairman Ben Bernanke told the Senate Budget Committee on 18 January. "The approach we have taken is a market discipline approach". "That system has worked pretty well so far."

There are also general consideration about a systemic risk that would be something else than banking risks, but it has no real argument to back it up, except that we have no understanding of what hedge funds are doing on a consolidated basis.

Well, there are certainly things that we don't understand in this world and we therefore have many reasons to be afraid of many things. But I would certainly not suggest that we apply a "precautionary principle"¹⁹ to finance. I tend to side with the optimists and believe that hedge funds – in spite of some problems that will inevitably happen from time to time – are just a nice new development of capital markets that, like all past capital market developments, will be irreversible and will contribute to a more efficient financial system.

¹⁹ The "precautionary principle" as applied to environmental policy stipulates that any risky practice may rightfully be reduced. According to this principle, the burden of proof lies with those asserting the harmlessness of the practice.