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# Regulation of hedge funds

**Briefing paper prepared as a Member of a Panel of Experts in Financial Servicesfor the Financial Experts Rountable of the Committee on Economic and Monetary Affairs of the European Parliament**

**September 2007**


## Didier Davydoff



## Executive Summary

The role of supervisors when monitoring hedge funds is to ensure the protection of savers who invest in hedge funds either directly or indirectly through pension funds and other intermediate savings vehicles. Supervisors should also seek to limit systemic risk generated by the development of hedge funds. The two main channels of systemic risk are the credit exposure of prime brokers to hedge funds and the crisis of confidence which might happen on a specific class of assets if a hedge fund goes bankrupt. Following the near-collapse of LTCM, the Financial Stability Forum released in 2000 recommendations focused on market discipline and on risk management procedures of banks lending to hedge funds.

Although a specific regulatory regime has been implemented in several European countries for hedge funds proposed to the general public, only a minority of hedge funds are registered in the country where such funds are sold and they account for a small part of total investment funds outstanding. Hence indirect supervision on banks and institutional investors who interact with hedge funds seems to be the only realistic solution. The second pillar of the Basle II agreement already includes provisions which are relevant for the interaction of banks with hedge funds. The Basle banking Committee has published standards for the supervision of banks interacting with "Highly Leveraged Institutions".

Supervision by the regulators in the United States and in the United Kingdom are relevant examples of "good practices" which are significant, given the number of hedge funds managers active in those countries. The US Federal Reserve has implemented regular controls of hedge funds managers. In the United Kingdom, the FSA runs a biannual survey on risk exposure of hedge funds and uses the results of that survey in its dialogue with hedge funds which have the biggest market impact.

It has also been argued that a "code of conduct" could help to improve the overall stability of the financial system. In the case of hedge funds, a code of conduct focusing on transparency seems at first sight to be very interesting as supervisors tend to rely partly on market discipline: a code of conduct which would be the basis for proposing services to institutional investors could be a means to creating a top-rated segment of hedge funds. However there is a risk that the most efficient fund managers would be reluctant to provide information on their investment process to less efficient competitors. The recent example of rating agencies has also recently shown that codes of conduct can be a first step in supervision but that a certain "hard regulation" stage becomes necessary.

In this short paper, I intend to answer four questions which were put to me:

1. What is the role of supervisors when monitoring hedge funds ?
2. What are the respective merits of direct and indirect supervision of hedge funds ?
3. Would the implementation of a code of conduct be sufficient ?
4. Does the second pillar of the Basle II agreement include relevant provisions for the supervision of hedge funds ?

## 1. The role of supervisors when monitoring hedge funds

The goal of the supervisor when monitoring hedge funds should be twofold:

- To ensure investor protection: individuals have an indirect risk exposure to hedge funds as pension funds and other institutional investors have invested a growing part of their assets in hedge funds. Moreover some private investors allocate a part of their savings to hedge funds or funds of hedge funds. However, despite the leverage that hedge funds can have, market exposure of investors in most hedge funds is less risky than for equity funds. In the crisis of the first two weeks of August 2007, the HFR index (a recognized hedge funds index) fell by no more than 5%.

- To limit systemic risk: The near-collapse of Long Term Capital Management (LTCM) threatened the stability of the global financial system in 1998. Following this event, the Financial Stability Forum released recommendations focused on market discipline and on risk management by banks lending to hedge funds. Fears of systemic risk generated by hedge funds also come from the size of the business: the 8,000 to 10,000 hedge funds active in the world hold 1,700 to 2,000 billion dollars. Although many hedge funds are not highly leveraged, some big ones are. Risk exposure of banks acting as prime brokers is not always clearly disclosed and a minor failure can evolve into a general liquidity crisis if confidence is negatively impacted by a general lack of confidence in banks solvency. A hedge fund going bankrupt can also evolve in a crisis of the market of its assets, if a general lack of confidence in the valuation of assets follows the bankruptcy of the fund: investors can be massive sellers, liquidity can disappear and prices can collapse, at least temporarily. In that case, Central Banks have to intervene on the money market to provide liquidity to players who directly or indirectly invested in this market and who cannot withdraw from the market. However, it is worthwhile noting that hedge funds were not at the origin of the recent sub-prime market crisis.

## 2. Direct versus indirect regulation of hedge funds

Supervisors can regulate and control hedge funds either directly or indirectly.

### a. Direct regulation

Regulators in several countries have created a specific regime for hedge funds dedicated to private investors. However, these new instruments have not yet attracted major flows of funds from private investors.

In France, the AMF regulates ARIA, which are reserved to institutional and High Net Worth individuals who invest at least 10,000 euros, and Funds of Alternative Funds. In Ireland, three categories of funds are developed - retail funds of unregulated schemes (i.e. funds of hedge funds), retail funds of regulated hedge funds and qualified investors funds. In Spain, “Instituciones de Inversion Colectiva de inversion Libre” (IICIL) and “Fondos de Invercion Libre” (FFIL) were created in 2006. IICIL can be sold to individuals investing at least 50,000 euros). In Germany, only funds of hedge funds can be sold to private investors.

The regulators in Luxembourg, France, Ireland and the United Kingdom allow all strategies whereas Germany and Italy are more restrictive. Short selling and investing in derivatives are allowed within certain limits, which differ from one country to another. Limits of concentration are also set by the regulation, as well as limits of leverage: for instance, ARIA and funds of alternative funds in France may borrow up to 100% of their assets but this percentage rises to 400% for a specific vehicle named “ARIA EL”.

The law also requires investment management companies to disclose investment limits, and limits of leverage. In the US, intermediaries may propose hedge funds investment only to investors with a portfolio of over 2,5 million dollars (not including the dwelling).

Finally, some hedge funds got an exchange listing, which broadens their investor basis and gives the regulator the opportunity to control their prospectus.

Regulated hedge funds development has been rather limited up to now. There are no more than 30 German hedge funds with total net assets of 1,6 billion euros (0.2% of total net assets of investment funds in Germany.) In France, 222 ARIA funds were created totalling 29,9 billion euros in net assets ( 2.4% of total net assets of UCITs). In Spain 13 IICLs were created.

Thus, although the creation of regulated schemes for private investors has been a positive initiative, direct regulation of hedge funds is far from being sufficient.

### b. Indirect regulation

Most hedge funds are not registered in countries where they are sold. Therefore supervisors can only monitor their activity indirectly through regulated market participants which interact with hedge funds.

Supervisors can require institutional investors to improve the due diligence controls when they invest in hedge funds. They can require banks to improve the quality of ratings when they fund hedge funds or enter into derivative transactions with hedge funds.

Bank supervisors can implement regular reviews of banks’ practices. These controls are all the more crucial so as there is a strong competition between prime brokers. This competition might diminish the willingness of banks to strengthen controls in case of necessity.

Rather than selecting supervisors who would implement “best practices” it is interesting to take into account the experience of regulators who where earlier confronted with a strong local industry of hedge funds management as in the USA and the United Kingdom.

Thus, the US FED regularly controls:

- Due diligence on institutions in which the bank has a counterparty risk
- Implementation of quantitative limits of risk exposure
- Sound practices regarding evaluation and risk control
- Sound practices regarding internal control concerning operational risk.

On its side, the Financial Services Authority (FSA) in the United Kingdom runs a biannual survey of prime brokers in order to evaluate their risk exposure to hedge funds. The FSA also uses this survey in its dealings with hedge funds which have the biggest market impact in the United Kingdom.

## 3. Would the implementation of a code of conduct be sufficient?

Codes of conduct of financial service providers are often presented as an efficient alternative to regulation, and regulators themselves can support them. There are several arguments in favour of codes of conduct:

- Codes of conduct implemented by professionals can be an initial approach to regulate financial innovation in an emerging stage. Implementation of a code of conduct can be gradual and in the whole more rapid than the long process of regulation, especially for international matters which necessitate an agreement between numerous regulators. A code of conduct is also more flexible - additions or changes are easily introduced when they happen to be considered as necessary. When the experience has proven the relevance of a code of conduct, regulators can endorse it or include its content in the “hard” regulation in order to make it legally binding and to generalize its applicability to all market players, including those who are not members of a professional association.

- Market participants can comply “in letter” with “hard regulation”, without complying with its spirit. On the contrary, codes of conduct are the basis for market participants business. If a player does not comply with the code of conduct it will de-facto be excluded from the “club” of professionals and it will be unable to develop its business further. However, although codes of conduct appear to be efficient for the majority of players, they are not efficient towards some market participants who do not base their business on their long-term reputation and who might be tempted to “take the money and run”.

One of the most recent examples of codes of conduct is the code of conduct supported by the European Commission for post-trade activities in cash equities. This Code covers Clearing and Central counterparty services provided by CCPs, settlement and custody services provided by CSDs and trading activities. Different deadlines have been fixed for each type of standard. An assessment of the implementation of the code of conduct has been established by the European

Credit Sector Association user Task Force. It concludes that the first step of the implementation (concerning transparency) has been completed, but that progress is still necessary.

Another example is the code of conduct of credit rating agencies of IOSCO (2004). Credit rating agencies are supposed to implement their own internal code of conduct in compliance with IOSCO's code. If a particular provision of the code of conduct is not incorporated in the rating agency's own code, the rating agency should disclose and explain this fact, in order to allow market participants to judge whether ratings are reliable. An interesting feature of this code in Europe is the procedure that the European Commission and CESR implemented in order to evaluate the compliance of internal codes of conduct and actual practices. In a report in December 2006 to the European Commission, CESR concluded that CRA codes comply to a large extent with the IOSCO Code. There are however some areas or provisions where the CRA codes do not comply. Some of them are common to all four CRAs, and some of them are specific to individual CRAs. Furthermore the recent crisis of the sub-prime market has been attributed to shortcomings in rating agencies evaluations.

Major rating agencies were very slow in revising the rating of Collaterized Debt Obligations (CDOs) although clear signals existed for several months. Although the European Commission has not yet decided whether it considers that a directive is necessary, it seems that the code of conduct was not a sufficient approach in that case.

In the case of hedge funds, a code of conduct could make sense, firstly because these funds are not in the oligopolistic situation of rating agencies, and secondly because market discipline is considered a key dimension of hedge funds surveillance.

Indeed supervisors partly rely on market discipline - a hedge fund which publishes relevant information on its risk exposure diminishes the uncertainty of investors and should in theory attract more flows of funds. It also enables its counterparties to better evaluate their own risk so that it should benefit from better conditions when hedging its risks. Pressure for more transparency should not only come from supervisors, but from institutional investors as well as from counterparties. Doing so, these regulated institutions will require hedge funds to become more transparent. Transparency will be an incentive for hedge funds to improve their own risk management.

Against this background, a code of conduct focused on transparency, approved by the community of institutional investors and implemented by hedge funds managers, could generate the emergence of a segment of "top-rated" hedge funds.

However, some sophisticated managers might prefer to protect their strategy from being copied by competitors. Consequently, transparency will not be sufficient to limit the risks as "bad" hedge funds managers delivering poor information could benefit from being wrongly considered by the market as efficient managers willing to protect their expertise from competitors.

Moreover the usefulness of transparency can be limited as hedge funds can change their open position very rapidly. Published information can be misleading if it is only about open positions. Transparency should therefore focus on the process of investment, although such information is often commercially confidential.

## 4. The second pillar of Basle II and hedge funds supervision

The second pillar of Basle II deals with the Supervisory Review Process. Among others, it is intended to deal with risks which are not covered or not fully captured by capital requirements (pillar 1). The agreement mentions four key principles of supervisory review. The first of these principles states that banks should have a process for assessing their overall capital adequacy in relation to their risk profile. Concerning the monitoring of credit risk the agreement focuses on internal risk ratings as an important tool. This provision is key in the relationship between banks and indebted hedge funds.

The agreement also states that “Banks should evaluate the adequacy of capital given their own liquidity profile and the liquidity of markets in which they operate. “. This is a very important statement as hedge funds raise the issue of interdependency between the credit risk and the liquidity risk. But in practice, tools measuring this interdependency at a bank level do not exist - banks required to report about their credit risk to hedge funds usually only provide their total exposure to these funds. There is no consensus on the valuation of the less liquid assets. Consequently, hedge funds managers tend to use this lack of recognized standard to smooth their returns.

Following the near-collapse of the LTCM, the Basle Committee published in 1999 reports on “Banks’ interaction with highly leveraged institutions (HLI)” and on “sound practices for banks interactions with highly leveraged institutions”. These recommendations are deemed to be part of pillar 2 as they take into account some of the specific risks related to hedge funds activity that include liquidity risk, concentration risk, tail risks and model risks. The “sound practices” recommended by the Basle Committee included:

- Clear policies and procedures of banks involvement with HLI
- Information gathering, due diligence and credit analysis of HLI
- Meaningful measures of credit exposure and incorporation of these measures into the management decision-making process
- Establishment of overall credit limits at the level of individual counterparties
- Closely monitoring of credit exposures vis-à-vis HLIs, including their trading activities, risk concentration, leverage and risk management processes.

The additional pillar 2 measures under the Basle 2 agreement include requirements for banks to hold sufficient internal capital to hedge funds risk exposures, taking into account stress testing and internal valuation adjustments. Banks are expected to operate above the minimum capital ratios when they interact with hedge funds, because of the specific risks related to their leverage and to their location in non regulated environments.

Pillar 2 of Basle II also provides that the measurement of counterparty credit risk must include daily monitoring and intra-day usage of credit lines and that the bank should have a routine procedure of stress testing.

On the whole the second pillar of Basle II seems to be the most promising manner to limit the risks generated by the development of hedge funds.

# Regulation of hedge funds

**Briefing paper prepared as a Member of a Panel of Experts in Financial Servicesfor the Financial Experts Rountable of the Committee on Economic and Monetary Affairs of the European Parliament**

**September 2007**

**Jane Welch**

## Executive summary


- There is no generally agreed definition of a hedge fund. They are normally unregulated collective investment schemes which have traditionally been distinguished by their use of certain investment strategies ,but these strategies are increasingly used by other asset managers , banks and insurance companies.
- Hedge funds comprise a number of separate entities , each of which may be established in a different jurisdiction. The funds themselves are normally established in an offshore jurisdiction .
- There are a wide range of EU measures which apply to the activities of the fund manager, the prime broker and other counterparties. These will be reinforced by the provisions of the Markets in Financial Instruments Directive (MiFID) and the Capital Requirements Directive (CRD) when they come fully into force .
- The main risks to financial stability posed by hedge funds appear to arise out of the relationship between hedge fund managers and investment banks acting in a variety of roles as prime broker, counterparty, lender and adviser. The profits from hedge fund business have led to an erosion of counterparty discipline and complacency about risk.
- Recent market turbulence has highlighted the difficulty of valuation and pricing of illiquid hedge fund assets, particularly complex structured products.
- There are many examples of conflict of interest affecting fund managers , prime brokers and other investors.
- There is some evidence that compliance with the Market Abuse regime and the Money Laundering requirements is patchy
- Consumer protection does not appear to be a significant issue since hedge funds do not target retail investors
- The paper concludes that the most effective way of tackling the identified risks is by strengthening counterparty and fund manager risk management practices and by improving the transparency of hedge funds, both in terms of investment structure, investment strategy and performance

## 1. What are hedge funds?

Hedge funds are an ill-defined class of investment. They have traditionally taken the form of a collective investment scheme (cis) - a pooled investment vehicle, managed by a professional investment manager- which is marketed only to investment professionals and not to the general public. While EU Member States will all have a legal definition of a collective investment scheme, it is believed that none have a definition of "hedge fund". The same is true of the jurisdictions surveyed in the November 2006 final IOSCO Report on hedge funds [1].

Although there is no generally accepted legal definition of a hedge fund , with the result that they tend to be a self-defining class, they are perceived[2] as sharing certain characteristics such as the use of:

- Derivatives for investment purposes
- Short selling
- High levels of debt leverage

Those hedge funds which are based in the EU are unregulated collective investment schemes - they are not subject to the product regulation of the UCITS directives, which are essentially designed to allow funds suitable for retail investors to be sold cross-border. though with the modifications introduced through UCITS III[3], regulated UCITS are now allowed to use investment strategies and leverage very similar to those used by hedge funds. [4]

So-called " hedge fund techniques" are now commonly used by other regulated financial institutions, such as banks, insurance companies and investment

firms [5] while hedge funds themselves in practice pursue a wide range of investment strategies. The charging policies of hedge funds - an annual charge, coupled with a percentage of the increase in the value of assets under management , once regarded as almost unique to hedge funds , have been adopted more widely by other asset managers . Similarly, the pursuit of positive absolute returns , rather than outperforming industry benchmarks is no longer an approach adopted by hedge funds alone.

## 2. Where are hedge funds based?

Hedge funds typically consist of a number of different entities , each of which may be established in a different jurisdiction. The fund itself, i.e., the collective investment scheme , is usually set up for tax reasons in an offshore jurisdiction such as the Cayman Islands. The majority of fund managers responsible for managing the assets of hedge funds are located in the USA or, within the EU, in the UK and are authorised firms..

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[1] Final Report of the IOSCO Technical Committee on the Regulatory Environment for Hedge Funds - A Survey and Comparison, November 2006.
[2] FSA Discussion Paper , "Hedge Funds: A Discussion of Risk and Regulatory Engagement", June 2005.
[3] The UCITS Product Directive, Directive 2001/108, OJ [2002] L 41/35 and Recommendation 2004/383 EC on the Use by UCITS of Financial Derivatives , OJ [2004] L144/33.
[4] The IOSCO report, n.1 supra, found that several non-EU jurisdictions also allowed regulated collective investment schemes to adopt hedge-fund like strategies.
[5] UCITS III , for example, allows UCITS to leverage through the use of derivatives up to 100% of net asset value.

A hedge fund may also have a third party administrator ( rather than having an internal administration function) who is usually based in a different jurisdiction from the manager- typically in Ireland , Luxembourg or the Cayman Islands. Fund assets , including cash and

securities , may be held by a third party custodian , who may also act as prime broker to the hedge fund. Prime brokers - investment banks- provide a range of services to hedge funds, such as trade execution, provision of finance , stock lending and research.

## 3. Existing EU Regulation

The distinction between the fund itself and the asset manager is crucial when considering regulation , because of the obvious difficulty in seeking to regulate non-EU entities or activities . Again , when considering regulatory responses, it is important to identify the precise activities carried on by entities within the EU and the risks posed by those entities and activities.

MiFID[6] will regulate the separate investment activities of dealing in investments, portfolio management and investment advice , but not the management of the collective investment schemes themselves. Any collective investment scheme which met the definition of a UCITS and was established in an EU Member State would have to comply with the requirements of the UCITS directives.[7]

Prime brokers providing trade execution and stock lending services to hedge funds will thus be subject to the requirements of MiFID and to the capital requirements of the Capital Requirements Directive (CRD).[8] The marketing of hedge funds to EU investors , by bank and non-bank investment firms , will also have to comply with MiFID and if marketed on line , must meet the requirements of the E-Commerce Directive . The distance marketing of hedge funds to EU consumers ( which would include high net worth individuals) is already covered by the EU Distance Marketing Directive [9].

Shares in some hedge funds may be admitted to trading on an EU regulated market , following publication of a prospectus complying with the 2003 Prospectus Directive [10]. They may then be sold to the public in other Member States on the basis of the prospectus. The London Stock Exchange recently announced the launch of a specialist fund market starting in November 2007, which will allow the trading of specialist funds, whether domiciled in the UK or elsewhere in the EU, targeted at institutional , professional and highly knowledgeable investors. Such funds would be subject to the Prospectus Directive and the Transparency Directive, requiring the production of consolidated annual reports, six monthly reports and interim management statements.

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[6] Markets in Financial Instruments Directive, OJ [2004] L 145/1. MiFID comes into force in November 2007. Dealing and asset management have been regulated by the ISD since 1996.

[7] Directive 85/611/EEC, OJ [1985] L 375 /3; Directive 2001/107/EC, OJ [2002] L 41/20;Directive 2001/108/EC, [2002] L 41/ 35.

[8] Directive 2006/48/EC, OJ [2006] L 177/201.

[9] Directive 2002/65/EC, OJ [2002] L271/16.

[10] Directive 2003/71/EC , OJ [2003] L 345/64.

The EU Market Abuse Directive[11] which is designed to combat insider dealing and market manipulation , applies to the dealing activities of fund managers in relation to investments traded on a regulated market in the EU.

Hedge funds buying shares in companies admitted to trading on an EU regulated market are subject to the disclosure rules of the Transparency Directive[12] and to the Takeover Directive[13] provisions .

## 4. Risks posed by hedge funds

**Financial Stability**

The recent update[14] by the Financial Stability Forum (FSF) of its 2000 Report on hedge funds identified various risks to financial stability posed by hedge funds. The relationship between core intermediaries such as investment banks, and hedge funds through their prime broking and counterparty activities has become more critical to the stability of the global financial system. Systemic risks can be divided into "direct" and "indirect risks" to those core intermediaries who play an increasingly significant role in wholesale market activities such as OTC derivatives dealing and securities financing , clearing and settlement ." Direct" risks can arise through direct credit exposure to hedge funds , while "indirect risk" could affect intermediaries dramatically if hedge funds were forced to liquidate positions suddenly, thereby causing a sharp deterioration in market liquidity and sales of securities at fire sale prices.

The FSF reported an erosion of counterparty discipline , a trend which has been confirmed by other commentators. This appears to be the result of competitive pressure for hedge fund business because of the huge profits generated hitherto for investment banks, coupled with complacency about market risks. This has resulted in the weakening of covenants in credit contracts , as well as the possible under-pricing of credit, market and liquidity risks.

The need for counterparties to strengthen their counterparty risk management practices was stressed by the FSF, highlighting the need first to demand accurate and relevant information from hedge funds and then to act on the basis of this information. Intermediaries needed to be able to aggregate exposures across the firm's activities . The UK Financial Services Authority ( FSA) in its 2005 Discussion Paper[15] had already identified the growing problem for investment banks in assessing their total risk exposures to hedge funds through their combined trading, prime brokerage and investment relationships.

These issues have been around for some time. An IMF paper published in 1999 concluded that, ideally , to manage credit risk associated with lending to hedge funds , prime brokers and banks should recalculate their positions daily at market prices, request daily payments and collateralise their lending. They should monitor the fund's investment strategies , monthly returns and investor withdrawals. Based on this monitoring , they should establish limits on credit exposure to each fund. But they needed also to monitor exposures to creditors that also lend to hedge funds. The paper noted that heavy use of derivatives compounded problems of information and evaluation.

[11] Directive 2003/6/EC, OJ [2003] L 96/16.
[12] Directive 2004/109/EC, OJ [2004] L 390/38.
[13] Directive 2004/25/EC, OJ [2004] L142/12.
[14] Financial Stability Forum, "Update of the FSF Report on Highly Leveraged Institutions", 19 May 2007.
[15] See n. 2 supra.

In addition there was and is nothing to stop a hedge fund obtaining credit from banks in other jurisdictions , which means that no national regulator can know total exposure of regulated intermediaries to hedge funds.[16]

**Valuation and pricing of Hedge Fund Portfolios**

Valuation and pricing of hedge funds assets is now proving to be a major headache , not only for the funds themselves , but also for investors, prime brokers and creditors , trying to calculate their exposure following the recent turbulence in the financial markets.

Hedge funds have increasingly been investing in structured products such as collateralised debt obligations (CDOs), collateralised loan obligations and asset -based securities , often funded by borrowing. CDOs represent a claim on a pool of assets such as a portfolio of loans . US sub-prime mortgage loans,which have been at the root of the recent problems in the financial market, have been packaged and repackaged into bonds , with varying degrees of risk and return . Each securitisation can result in a senior bond and two or more junior bonds. The most senior bond receives the lowest return but also bears the lowest risk, because they have first claim on the monthly mortgage interest received from the borrowers and on the mortgage principal received. This can result in the senior bond receiving an Aaa credit rating , despite the fact that it is ultimately based on sub-prime mortgage debt. Conversely, holders of the junior bonds bear the highest risk ( and will be rated accordingly) and are entitled to the highest return.

When the market is liquid , it is easier to determine a market price for such complex instruments but where the market is frozen , pricing and valuation on the basis of market prices becomes virtually impossible. Marking positions to market in the case of complex products and illiquid markets is likely to force many financial institutions to write down values dramatically.

The alternative is to "mark to model", by using mathematical models based on assumptions about the behaviour of the relevant market. Unfortunately assumptions based on past behaviour in liquid functioning markets are unlikely to prove reliable in illiquid , non-functioning markets. Moreover there appears to be no industry consensus on model assumptions. It is not surprising that this approach has been described by Warren Buffett as "mark to myth" .

Some of the model assumptions relate to the correlation between various asset classes and assume different volatilities for different asset classes. These predictions have not been born out in practice , as asset classes assumed to be independent of one another , have moved together[17].

The valuation of complex financial instruments is likely to be problematic for the foreseeable future and is likely to place auditors of financial institutions under the spotlight . Questions are increasingly being asked about the application of "fair value" accounting standards to the valuation of complex financial instruments in times of market turmoil.

**Conflicts of interest**

Conflicts of interest arise where fund managers are themselves responsible for valuation of complex financial instruments . Conflicts of interest can also arise in the prime broker relationship with hedge funds , for example through the prime broker giving preferential treatment to hedge fund clients , when executing trades. It remains to be seen whether the

[16] IMF Economic issues paper, no 19, 1999 " Hedge Funds: What do we really know?".
[17] Speech by Callum McCarthy, FSA Chairman, December 2006.

provisions in MiFID[18] will be effective in dealing with such conflicts. Conflicts of interest are likely to have an adverse effect generally on the prime broker's assessment of risk because of the large commissions, fees and trading profits generated by hedge fund clients. It has been suggested that the fees paid by hedge funds to pension fund consultants have been instrumental in the consultants encouraging pension fund trustees to favour investment in hedge funds rather than other investment vehicles.[19]

Questions have also been raised about the potential conflict of interest for credit rating agencies when rating structured financial instruments[20] The European Commission has now asked CESR[21] to extend its enquiry into the rating of structured financial instruments and has asked CESR to consider the interaction between arrangers of such products and rating analysts in the design of such products, and the independence of the rating process generally.

**Insider Dealing and Market Manipulation**

There are clearly opportunities for insider dealing and market manipulation by hedge fund managers . Managers are often privy to information about impending corporate events , which could allow them to deal on the basis of that information. In the UK there appears to be patchy awareness of the requirements of the market abuse regime ( reflecting the EU Market Abuse Directive ) to which all fund managers are subject, and over-reliance on having compliance manuals in place without any real understanding of how staff should operate on a day-to-day basis.[22]

Concern has also been expressed that hedge funds , by generating high commissions and through their close relationship with counterparties , may create incentives for others to pass inside information to them.

**Money Laundering**

Hedge Fund managers established in the EU have been subject to anti-money laundering (aml) requirements since the implementation of the First Money Laundering Directive[23] on January 1, 1993. Assessing compliance with aml requirements such as customer identification and verification of identity is complicated by the relationship between the fund manager, the fund itself and investors in the fund, where the fund is a client of the fund manager and investors are clients of the fund. It is apparently common practice for the fund to delegate responsibility for identification to the administrators of the fund who may be in an offshore jurisdiction.

**Consumer Protection**

There are signs of increasing retailisation of hedge funds , with initial investment thresholds being steadily lowered . The consumer protection risks attached to the marketing of hedge funds to retail investors are similar to those arising in relation to the marketing of other unregulated collective investment schemes or even UCITS III funds , which have many of the characteristics

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[18] See Arts.13.18, 21 of MiFID, supra n.6.
[19] FSA Discussion Paper, n.2 supra.
[20] CESR questionnaire regarding the rating of structured financial instruments , CESR/07-394.
[21] September 12, 2007, www.cesr-eu.org
[22] FSA Discussion Paper on Hedge Funds, n. 2 supra.
[23] Directive 91/308/EEC , OJ [1991] L166/77; amended by the Second Directive in 2001 and now replaced by Directive 2005/60/EC, OJ [2005] L 309/15.

traditionally associated with hedge funds. Consumers may not understand the risks attached to any investment vehicle. But on the other hand they can suffer from lack of choice because they may not be fully aware of the range and variety of investment vehicles available, because of restrictions on distribution imposed by EU law which can produce arbitrary results.

**Regulatory Options**

Hedge funds operate globally and therefore require a co-ordinated international response, both in terms of policy and supervision. Unilateral action , on a national basis or even on an EU basis is likely to ineffective in the face of the mobility of firms and the globalisation of financial services.

Secondly, regulatory action should only be considered in relation to identified risks and should be proportionate to those risks. This would involve considering at the very least the impact of any proposed action in relation to hedge funds on other asset managers and on other unregulated collective investment schemes. The suggestion, for example, that supervisors should approve the software used by hedge fund managers would impose an unnecessary burden on supervisors, which, in any event, they do not have the competence to discharge , with no discernible benefit to the managers, supervisors or investors.

Although what follows are described as regulatory options, it is not yet clear that any of these would require additional legislation , as opposed to supervisory action reinforcing existing requirements. It is also too early to say whether the additional protections which have been put in place ( but not yet fully implemented) ,such as MiFID and the Capital Requirements Directive[24] implementing Basel II, deal adequately with the risks which have emerged in relation to hedge funds, in view of the recent turmoil in the financial markets. Similarly , while the proposals for Solvency II for insurance companies should do much to improve the risk management practices for insurers, and improve the valuation of assets and liabilities , the proposals as a whole need to be re-examined in the light of recent events to see whether they would have stood up to the challenge.

**Basel II and the CRD**

The FSF concluded in its May 2007 report that the Basel II framework should significantly strengthen the capital treatment for exposure to hedge funds, including counterparty credit exposures relating to derivatives, securities financing , prime brokerage and unsettled trades , direct lending activities and equity investments in hedge funds. As far as indirect exposure to hedge funds is concerned , the Basel II framework strengthens the capital treatment for trading – related exposures, requiring firms to improve the way that market risk models capture risks associated with complex and illiquid products. Firms must also develop methodologies that capture the default risk embedded in credit-sensitive trading exposures. Basel II introduces , for the first time, a capital requirement for operational risk, including operational risks associated with complex derivatives and capital markets activities. But since the CRD will not be fully operational until January 2008, it is a matter for speculation as to whether, had it been in place before the recent crisis, its provisions would have helped to avoid some of the problems which have emerged.

[24] N.8 supra.

**Financial Stability**

It has become increasingly clear that the risks to financial stability posed by hedge funds are best addressed by strengthening counterparty risk management practices. The FSF concluded in its recent report that "relative to other alternatives, it provides the highest likelihood of achieving tangible gains."[25] Counterparties such as investment banks should be able to aggregate and measure their exposure across the bank's activities. This requires a better understanding of the pricing and valuation of complex structured products and the associated liquidity management risks , where market liquidity dries up and asset prices drop.

IOSCO is currently working on Principles for Hedge Fund Valuations . Draft Principles were published in March 2007 ; the final version will no doubt take account of the lessons of the summer.

Credit ratings do not at present address liquidity risk or correlation risk ; they are restricted to the risk of loss of principal and interest on fixed income securities , taking into account both the likelihood of loss and the potential severity of loss, should it occur. It has been suggested that ratings covering liquidity risk should be introduced.

**Transparency**

Counterparties and investors should insist on greater transparency from hedge fund managers , particularly on the composition and valuation of complex structured products . Credit and investment should be dependent on adequate and reliable information about the hedge fund's valuation methods and risk management processes, both initially and on a continuing basis. The Alternative Investment Management Association ("AIMA") , the hedge fund trade association, has issued guidance to the industry on risk management and operational controls. In June 2007 , a group of the largest hedge fund managers in Europe set up a working group under Sir Andrew Large[26]to produce a Code of Conduct for the industry, which is likely to look at relevant investor protection and financial stability, building on the standards which already apply to those fund managers who are authorised in the UK. The fund managers are already subject to prudential supervision and conduct of business rules which will follow the requirements of MiFID after November 2007. Specifically , the Code of Conduct is expected to spell out what compliance with the FSA's Principles for Business[27] means for FSA -authorised hedge fund managers.

**Increased Regulation of Hedge Funds themselves**

There appears to be no evidence that regulation of the funds themselves by , for example, introducing a form of product regulation on the lines of UCITS , would address any of the risks identified above. Moreover, those funds which are at present based within the EU could easily relocate if necessary to avoid increased regulation and to obtain equally favourable tax treatment.

[25] See n.14 supra.

[26] Former Deputy Governor of the Bank of England and former chairman of the Securities and Investments Board, the predecessor of the FSA.

[27] There are 11 Principles which apply to all FSA-authorised firms, covering such matters as integrity, skill, care and diligence, management and control and financial prudence.

# Regulation of hedge funds

**Briefing paper prepared as a Member of a Panel of Experts in Financial Servicesfor the Financial Experts Rountable of the Committee on Economic and Monetary Affairs of the European Parliament**

**September 2007**

**Natalja Stosicki**

## Executive Summary

There are three potential regulatory objectives for regulation of hedge funds and hedge fund managers: investor protection, market integrity protection and financial system protection.

Several Member States have recently introduced national regulatory regimes to provide environment for the onshore management, constitution and distribution of hedge funds and funds of hedge funds. Those regimes typically impose a governance system of regulated Collective Investment Schemese (CIS). Some Member States have established authorisation regimes for funds. These may regulate some aspects of product performance or investment policy (such as diversification limits, use of leverage, valuation and other portfolio constraints). In some Member States hedge funds can be offered to the public, but at the price of a significant restriction of the asset manager's freedom to determine the content, policies and practices of the investment.

The hedge funds are typically domiciled offshore and as such they are lightly regulated. For off shore nature of hedge fund's domicile the regulators and industry in EU is concerned on the impact of regulation on the atractiveness of a member state as a location for hedge fund managers and hedge funds. Increase in level of regulation could result in managers moving to more lightly regulated locations.

Policy makers have addressed the systemic and finanial stability concerns surrounding hedge funds by favoring an indirect approach to regulation. Several industry-led initiatives resulted in principle-based approach by setting out best practice standards and voluntary code of conducts for hedge fund managers, which enhance more flexibility compared to direct regulation.

Given the global nature of the hedge fund industry greater international cooperation and coordination of regulatory action is needed in order to achieve a level playing field for the hedge fund industry.

# I. Best practice examples of EU Member States, regulating hedge funds

**Hedge Funds structures** in EU Member States vary substantially, with respect to:

- type and complexity of investment strategy and instruments traded,
- the jurisdiction within which the fund is formed and the local legislative treatment of the fund,

The Hedge Fund should be structured and maintained so as to preserve or improve upon its tax neutrality.

Different structures may have different advantages for different investors. To determ the most appropriate structure for a Hedge Fund, needs and preferences of the anticipated core investors should be taken into account - their domicile, taxable status, base currency and appetite for potentially complex fund structures.

Intervention of supervisors in hedge funds structures would make the ability to accommodate different types of investors harder and narrow the investors ability of choice.

## A. Germany

**Hedge Funds Management companies domiciled in Germany:**

- must be licenced by BaFin[28] for financial portfolio management,
- are subject to capital requirements,
- must submit to BaFin transactions in financial instruments for all managed funds to enable BaFin to monitor compliance with the investment rules and with the rules of good conduct,
- must notify the infrigements of the fund's investment limits to BaFin,
- are obliged to manage its funds with the diligence of a prudent businessman, with due expertise, care, in the best interest of the funds managed and in the sole interest of the unit holders,
- must be organised in a way as to minimise the risk of conflicts of interest,
- must disclose in the annual report the total costs charged to a fund during a financial year and the performance-related management remuneration.

In Germany hedge funds and funds of hedge funds are permissable.

**Single hedge funds (»Funds with additional Risk«)[29]*:***

- observe the principle of risk diversification, otherwise there is no investment limitations,
- max. 30% of the fund's value can be invested in private equity,
- no limit on leverage and/or the use of the derivatives and/or short sales, however BaFin may limit leverage/short sales if necessary to prevent abuses,
- are required to use the custodian bank, may use prime broker,

[28] BaFin – Federal Agency for Financial Services Supervision
[29] Freshfields Bruckhaus Deringer :German Investment Modernisation Act, October 2004

- can only  be offered as private placement,
- may only be marketed through credit institutions and financial services providers,
- contractual terms and conditions of the hedge fund management company must contain additional information on the features of the product;

**Funds of hedge funds (Funds of funds with additional risk):**

- are publicly marketing to retail investors,
- funds must provide a detailed sales prospectus,
- min. 50% of the fund's value can be invested in units of single hedge funds or foreign investment asset pools with comparable investment policies,
- foreign target funds may be acquired if their assets are held by a custodian or prime broker and if they are domiciled in states that co-operate with the Financial Action Task Force with regard to combating  money laundering,
- max. 20% of the fund's value may be invested in a single underlying fund,
- all issued units of a underlying fund may be acquired,
- funds may not invest in more than two underlying funds of the same issuer or fund manager,
- investment in other funds of funds is not permitted,
    - investments in bank deposits and money market instruments only up to 49% of the fund's value,
    - short sales/leverage are not permitted at the top fund level,
    - unrestricted borrowing is prohibited,
    - cannot enter into derivatives transactions,
    - requirements on selection and control of target funds must be fulfilled,
    - redemption of units and determination of NAV at least once every quarter,
    - there is a notice period for redemption.

The public <u>marketing</u> of units in a <u>foreign single hedge fund</u> is not permitted, but their private placement is allowed.

Foreign funds of hedge funds may be notified (registred) for public marketing to BaFin if they meet certain conditions.

## B. Luxembourg

Hedge Funds, their prime broker and a designated custodian bank are subject to approval by the CSSF. All Luxembourgh Funds must be audited anually by a local auditor. The choice of auditor must be approved by the CSSF.

4 broad categories of Hedge Funds are available in Luxembourgh:[30]

[30] Price WaterhouseCoopers: Luxembourg Hedge Funds, 2007

- UCITS III sophisticated Funds for retail investors, which use hedge fund's techniques, with a lot of investment restrictions and risk management constrains; short selling and borrowing are prohibited, prime brokers may be appointed if 10% limit of the counterparty risk is respected;
- **Funds investing mainly in derivatives** for retail, qualified and institutional investors, follow investment restrictions expressed in terms of margin deposits, allowing a significant level of leverage; can use OTC derivatives if commitment restrictions are added in the prospectus; they can be constructed to follow standard Hedge Fund prospectus;

- **Funds using alternative investment strategies (hedge funds and funds of hedge funds):**
  - can be sold to retail investors (no minimum investment requirement),
  - are not subject to minimum investment requirements,
  - are subject to CSSF approval,
  - transfer of ownership of the Funds' assets to the prime broker can exceed the debt of the Fund by 20%,
  - for the long portfolio, the fund cannot invest more than 20% of its assets in any one issuer and
  - unquoted securities should not exceed 10% of the fund's assets,
  - on the short side the proceeds from short selling applicable to any one issuer cannot exceed 10% of the fund's asset; there is a stop loss limit when short sale results in an unrealised loss representing 5% of the fund's assets,
  - the aggregate commitment of the fund resulting from short sales may at no time exceed 50% of its asset,
  - fund must hold sufficient assets to close the open position from short sales at any time,
  - max 10% investment in securities issued by any one issuer,
  - borrowings of funds are limited to 200% of the net asset value from first class professionals (for strategies with high level of correlation between long and short positions can be up to 400% );
  - the counterparty risk in respect of a single lender is max. 20% of the fund's asset,
  - derivatives of any kind can be used on the principle of risk spreading; total margin deposits and/or total unrealised losses for OTC derivatives cannot exceed 50% of gross asset,
  - securities lending is possible and limited,
  - Funds of Hedge Funds: can invest in an non-regulated underlying Hedge Fund max. 20% of net asset; it is possible to invest in 5 sub-funds of the same umbrella for 100% of net assets; it is possible to hold up to 100% of the shares/units issued by the underlying funds; the use of leverage is not allowed;

- **Specialised Investment Funds (SIF):**

- can be sold to qualified and institutional investors only on the basis of offering document,
- are subject to CSSF approval and supervision,
- CSSF approves SIF constitutive documentas and depositary,
- diversification requirement remains but the quantitative limits are determined by the managers, all investments are permitted,
- no requirement for publication of the NAV,
- no requirement to subscribe and redeem at NAV,
- the valuation of the fund's assets is based on the fair value,
- no requirement for semi-annual non-audited reports or long form reports / annual report is required.

The quotation of hedge funds on the Stock Exchange is possible.

## C. UK:

Retail investment in hedge funds is at a very low level in the UK at present. Retail investors can be sold hedge fund products under advice or buy them over the internet. In addition, products listed on EU recognised exchanges and fund of hedge funds listed in the UK can be marketed where accompanied by a prospectus. However, where a hedge fund is structured as an unregulated colletive investment scheme (CIS), as many of them are, they can only be marketed to very limited classes of investors.

**Hedge fund managers domiciled in UK** must be authorised by FSA and are required to follow the following FSA rules:the Principles for authorised firms and those for individuals, FSA rules on Senior Management Arrangements, Systems and Controls, Dealing an Managing Conduct of Business rules, the Code of Market Conduct/Market Abuse regime, and the relevant sections of FSA's Conduct of Busines Sourcebook.

In March 2007 FSA published consultation paper[31] in which FSA proposed introduction of retail-oriented funds of alternative investment funds (FAIFs) into the existing well-regulated non-UCITS Retail Scheme (NURS) regime.

**Proposed Funds of alternative investment funds (FAIFs) arrangements:**

- marketed to retail investors,
- are non-UCITS open-ended scheme (NURS), and operate in a modified NURS regime,
- depositary supervise the manager's activities, also the operation of FAIFs,
- <u>due dilligence approach in selection of underlying fund</u>s must be carried on:
- max 35% of the fund's value may be invested into the units of any underlying scheme,

[31] Financial Services Authority: Funds of Alternative Investment Funds (FAIFs), march 2007

- max 20% of the fund's asset can be invested into unapproved securities.[32]
- must to invest at least in 3 underlying funds,
- may invest up to 100% of its asset into unregulated collective investment schemes; the underlying funds may use short selling, derivatives and leverage
- limited borrowing up to 10% of the value of the fund,
- limited redemption - but at least once in every six months,
- notice period for redemption is not allowed,

## D. Spain:

**Hedge Fund Managers:**

- authorisation and registration is needed (follows the general rules established in CIS Law), but more strict requirements
- must have risk measurement and control systems that are appropriate to the specific investment strategies
- must periodically perform stress tests and simulations of specific crisis situations
- Management companies of Funds of Hedge Funds must have mechanisms for overseeing the liquidity of the underlying investments
- managers must not participate in the determination of the net asset value of the managed CIS,
- the relation between management companys and its prime brokers is regulated.

Spanish regulation recognizes Free investment funds (hedge funds) and Funds of Free Investment funds (Funds of Hedge Funds).

**Free investment funds (hedge funds)** are a subject to the following requirements:

- marketed exclusively to qualified investors/ min. 25 investors
- min. investment of €50.000,
- subscription/redemption in cash or in kind in any qualified asset or financial instrument
- NAV publication and liquidity provision at least quarterly (half-yearly in certain cases)
- no limits on commissions and investment/concentration restrictions,
- master-feeder structures are not possible,
- max leverage up to five times NAV, no limits on exposure in derivatives,
- the investor must declare in writing that they acknowledges the risks of this investment.

[32] FSA proposed the abolishment of the 20% limit for NURS investment into unregulated schemes but not to unapproved securities

**Funds of Hedge Funds:**

- are destined for the retail market,
- investor protection and diversification requirements are similar to those of conventional collective investment schemes,
- min. 60% of the asset value must be invested in Spanish hedge funds or in similar foreign CIS or investment companies and comparable vehicles and structures (hedge funds) located in an OECD country or managed by a fund manager supervised[33] by an OECD regulator,
- investment in the same undertaking is limited to 10% of assets,
- it is not expressly forseen whether investments can be made in funds of hedge funds,
- selection of underlying funds is regulated.

The rules on prospectuses and periodic reporting of Hedge funds and Funds of Hedge Funds are similar to those applicable to conventional CIS. Investors are required to sign a consent form that they are aware of the peculiar features of hedge funds and of their differences with respect to conventional funds.

Foreign open-ended hedge funds may be marketed (if expressly authorised by CNVM) in Spain so long as the structure is comparable to Spanish recognized fund structures and if they are managed by an OECD-domiciled entity and supervised accordingly. Close-ended funds would follow the provision of the Prospectus directive.

## E. Ireland:

Irish domiciled hedge funds must comply with the following authorisation requirements:

- the hedge fund promoter and investment manager (which is normally based outside of Ireland) must be approved by the IFSRA[34],
- the hedge fund itself must be authorised,
- fund must appoint an Irish domiciled trustee or custodian.

Hedge Fund managers/advisors are regulated under the Investment Intermediaries Act 1995. Hedge Fund Managers are subject to the Capital Requirement Directive (CRD).

Hedge funds/ Funds of Hedge Funds in Ireland can be set up as[35]:

- Qualifying Investor Funds (QIFs),
- Professional Investor Funds (PIFs) or
- Retail Funds of Unregulated Funds.

The vast majority of Irish domiciled hedge funds are established as single Qualifying Investor Fund (QIF)

[33] Supervision means authorisation of the entity and its rules of operation by a regulatory authority or registration with such an authority
[34] IFSRA – Irish Financial Regulatory Authority
[35] PricewaterhouseCoopers, Hedge Funds, Ireland-the location of choice for alternative investment funds, 2007

**Single QIF:**

- may be sold only to private investors with net worth at least € 1,25 million and to any institution which owns or invests on a discretionary basis at least € 25 million or to qualifying investors on their own right,
- min. initial subscription per investor must be for at least € 250.000,
- no restrictions on the min./max. number of investors,
- very few investment concentration or leverage restrictions,
- no borrowing restrictions,
- there is no limit on the extent to which assets may be passed to the prime broker,
- all investment strategies are permitted.

**Single PIF:**

- may be sold to investors subject only to a minimum initial subscription per investor of €125.000 (aimed on sophisticated investors),
- limitations on leverage is 200%, other investment restrictions are more relaxed compared to UCITS,
- value of assets of a PIF passed to the prime broker must not exceed 140% of the level of the hedge fund's indebtedness to the prime broker,
- PIF's are not a preferred vehicle for the establishment of a hedge fund in Ireland.

**Irish domiciled funds of hedge funds (FOHF):**

- may not invest in other funds of hedge funds,
- if open - ended: at least 1 dealing day per month,
- can retain up to 10% of the redemption proceeds, where this reflects the redemption policy of the underlying scheme,
- underlying unregulated schemes must be subject to independent audit,
- FOHF QIF: may invest up to 100% in unregulated schemes, subject to a maximum of 40% in any one unregulated scheme, if invest more than 40% in any one scheme is regarded as a feeder type,
- FOHF PIF: may invest up to 100% in unregulated schemes, subject to a maximum of 20% in any one unregulated scheme and a maximum of 40% in any one regulated scheme, if invest more than 40% in any one scheme is regardes as a feeder type,
- Retail FOHF: may not invest more than 20% of NAV in the units of any one scheme, but this can be increased to 30% for one of the underlying schemes; may not invest more than 10% of net assets in unregulated schemes.

**The following activities must be performed in Ireland:**

- the calculation of the fund's NAV and actual dealing price,
- all accounting records must be maintained in Ireland,
- the shareholders or unitholders register must be maintained and serviced in Ireland,
- the preparation of the financial statements twice yearly,
- all correspondence to shareholders/unitholders of the fund, and/or its management company,
- no rules regarding the publication of prospectuses.

Non Irish domiciled hedge funds may not be marketed to the public. It is possible for such funds to be sold under private placement arangements or could be listed in Irish Stock Exchange.

## F. France[36]:

It is not permitted to offer foreign investment funds in France where such funds do not conform to the UCITS directive.

French alternative funds can be divided into two types of authorised fund structure, namely “Contractual Funds” and “OPCVM RIA”.

**Contractual Funds:**

- Can invest in any type of financial instrument or bank deposit
- are not subject to any asset diversification rules.
- are able to invest in foreign funds without such funds having to meet the investment conditions applying to all other OPCVM
- are authorised to use a prime broker without any limit on the leverage or on the rehypothecation level
- quarterly NAV calculations (instead daily or monthly),
- 3 month notice periods for redemptions,
- a potential lock-up period of up to two years,
- minimum investment treshold for qualified and other individualinvestors.

There are three types of **OPCVM RIA funds**: simple (standard RIA), leveraged (leveraged RIA) and funds of hedge funds (Funds of alternative funds).

**Standard OPCVM RIA (“Standard RIA”):**

Can invest up to 100% of their assets in shares (or units) of foreign funds complying with certain AMF requirements (the “**Target Funds**”), otherwise the same investment restrictions and rules relating to diversification as for Standard Funds apply, there are no requirement to invest in Target Funds that are listed on a regulated stock exchange, a leverage of up to 100% of the fund's asset is allowed, there is a minimum investment treshold for qualified and other individual investors.

[36] Jerome Sutour, Simmons&Simmons: The evolution of the regulation of alternative management in France, February, 2005

**ARIA EL ("Leveraged RIA"):**

Leveraged funds' are subject to identical rules regarding diversification and minimum investment thresholds as Standard RIA, except that they are also authorised to operate under less constrained investment rules, to use a prime broker (with rehypothecation limited to 140% of the debt obligations of the fund), leverage by up to 400% and make monthly asset valuations. There is a minimum investment treshold for qualified and other individualinvestors.

**OPCVM FA (Funds of Alternative Funds):**

OPCVM FA can invest 100% of their assets in Target Funds. Fund-of-alternative funds' may leverage up to 200% of net assets and are required to invest in a minimum of 16 underlying funds. Where investors are provided with a guarantee of capital preservation, there is no minimum investment threshold.

## II. Hedge funds Code of conduct

### A. Examples of Best practices and Codes of conduct

To improve investors protection and market discipline, as well as to establish a higher standard of professional conduct and business practices for hedge fund management firms, several regulatory actions as well as industries sound or best practices and voluntary Codes of conduct developed, usually in the form of guidelines or recommendations, which could serve as a benchmark against which conduct could be assessed, providing a framework of internal policies, practices and controls for Hedge Fund managers.

On August 2005 **MFA** published updated **Sound Practices for Hedge Fund Managers**[37] that address:

- requirements to **determine investment, risk and trading policies,**
- requirements to **impose appropriate controls over portfolio management and trading activities,**
- carefull selection of third-party service providers,
- **disclosure requirements** (disclosure of the Hedge Fund's investment objectives, strategies to be employed, range of permissible investments, material risk factors, disclosure of conflicts of interest, performance, use of »side letters«, financial and risk information to be provided to creditors/counterparties),
- **sound valuation practices proposals** (external audit of annual statements, incorporation of the »fair value« concept in valuation policies and procedures, consistency and veryfication of valuation policies and procedures, use of reliable pricing sources, mark NAV at fair value),
- **practices for risk measurement and monitoring** (establishment of a risk monitoring function for review risk position and sources of risk and resulting exposures to changes in market conditions, obligation of market risk evaluation, employment of a consistent framework for measuring the risk of loss for a portfolio (VAR), performance of stress tests for potential changes in maret conditions impact on the value of the Hedge Fud's portfolio, employment of

[37] Managed Funds Association: MFA's 2005 Sound Practices for Hedge Fund Managers, 2 August 2005, Washington

liquidity measures and liquidity assessment relative to the risk of portfolio and investment strategies, monitoring of leverage, management of trading counterparties' defaults, limitation of exposures),

- **regulatory controls and compliance issues**_(obligation to establish written compliance policies that address for e.g. portfolio management processes, disclosure controls, safeguarding assets, creating and maintaining records, valuation and fee assessment processes, trading rules and restrictions, confidentiality requirements, policies designed to ensure compliance with all rules and regulations applicable to business operation e.g. anti-money laundering, insider trading and market manipulation, sales practices, etc.),

- obligation of a Hedge Fund Manager to **develop a written code of ethics,**

- **establishment of transaction execution and documentation management practices,**_which would enable track the status of documentation, timely and best execution and enforceability of transaction,

- **recommendations to develop and improve business continuity and disaster recovery plans and to establish contingency plans**_for responding to the failure of a third party administrator, credit provider or other mission-critical party that would affect the market, credit, or liquidity risk of a Hedge Fund.

On February 2006 **The Greenwich roundtable** released its latest guide to due diligence for hedge fund investing: Best Practices in Hedge Fund Investing: Due Diligence for Global Macro and Managed Futures Strategies.

On May 2007 **AIMA** published it's updated **Guide to Sound Practices for European Hedge Fund Managers**[38], which sets out sound practices for:

- **creating and managing a hedge fund business** in a manner that:
    - ensure appropriate systems, procedures, and controls to mitigate and manage the risks, facing the busines;
    - develop compliance procedures;
- **the investment process and portfolio risk management**_including sound practices relating to:
    - the creation of an investment process and investment dealing risk management;
    - disclosure of investment process in the Hedge Fund's offering document (an explanation of how funds are to be invested, identification of investment restrictions, factors that will influence investment performance and risks associated with a particular investment strategy),
    - investments in non-listed instruments and their pricing;

[38] AIMA: Guide to Sound Practices for European Hedge Fund Managers, 21 May 2007

- creation of risk management process for identification of risk factors and their interaction, for identification of Hedge Fund managers' appetite for risk with respect to given investment strategy, for monitoring and managing the level of risk in the portfolio;
- carrying out stress tests on their portfolios and the scenario analysis,
- the impact of leverage on the overall risk of a portfolio and the maximum level of intended leverage;
- monitoring of the liquidity of individual positions and the overall portfolio
- a review of the quality and creditworthiness of the counterparty;

- **portfolio administration and operational controls, in particular:**
  - oversight and monitoring procedures for prompt matching of trades and to address unmatched trades;
  - controls for regular reconciliation of stock and trading cash positions,
  - policies and procedures for valuing the underlying positions within the Hedge Fund and for calculating the Fund's Net Asset Value;
  - the policy and methodology for the calculation of performance, management and administration fees and to check these calculations;
  - reconciliation of funds and instruments;
  - operational and risk management process to handle dealing with prime broker (e.g. exposure to the credit of the prime broker);
  - due diligence process when recommending an administrator of the fund, etc.;
- **raising capital and investor relations, hedge fund structures and organisation.**

**AIMA Guide to Sound Practices for Hedge Fund Valuations**[39] gives recommendations on governance, transparency, procedures, processes and controls, sources, models and methodology for Hedge Fund valuations.

In March 2007 IOSCO published consultation report **Principles for the Valuation of Hedge Fund Portfolios**[40], to ensure that hedge funds' financial instruments are appropriately valued, and in particular that these values are not distorted to the disadvantage of fund investors. In its report IOSCO among others, reccommended establishment of documented policies and procedures for the valuation of financial instruments held or employed by a hedge fund, identification of methodologies used for valuation, consistency of valuation, periodically review of valuation policies and procedures and independent review of the individual values.

**Examples of Codes of Conduct in other sectors:**

In september 2002 the **European mortgage Code of Conduct** as a voluntary initiative came into effect. When new regime of mortgage regulation came into effect it included all the provisions

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[39] AIMA, Guide to Sound Practices for Hedge Fund Valuations, March 2007
[40] IOSCO consultation report: Principles for the valuation of hedge fund portfolios, march 2007

and requirements of the Code of Conduct and the Mortgage Code ceased to have effect from that date.

In november 2004 IOSCO issued **Code of Conduct fundamentals for credit rating agencies** operating worldwide, to promote investor protection by safeguarding the integrity of the rating process. The role of Credit Rating Agencies with regard to hedge funds focus on rating of hedge funds' operational and credit risks. They base their assesment of the hedge fund manager's processes rather than the probability of default of the hedge fund itself.

As opposed to proposing a Directive, in november 2006 **European Code of Conduct for clearing and settlement** as a voluntary industry-led self-commitment, was signed.

In some cases Codes of conduct are included in the regulation, e.g. **MIFID** lay down **conduct of business obligations for investment firms when providing investment services** - discretionary asset management and investment advice inter alia (including rules on best execution and handling of client orders, disclosure of appropriate information to clients, investor kategorisation, etc.).

**B. Is Code of Conduct for Hedge Funds usefull? Is sufficient?**

**Benefits of Code of Conduct for Hedge Funds:**

- it may lead to an overall reduction in risk,
- it would strengthen market discipline,
- it would avoid misallocation scarce regulatory resources,
- it would not require any direct regulatory interference with regard to market pricing,
- it would be market-friendly,
- it would improve risk management and operational practices,
- it could have a constructive effect on the risk appetite of the most important prime broker dealers,
- the risk of over reaction to market development may be mitigated, if hedge fund investors and counterparties have confidence that hedge fund managers will behave responsibly, openly, fairly and in line with pre-determined guidelines,
- usefull especially for those entities, who may not fall under existing laws or regulations,
- provide greater flexibility compared to regulation and promote self-regulation in this dynamic sector,
- can be used by supervisors as benchmarks against which to evaluate the counterparty risk management practices of regulated firms.

Code of Conduct for Hedge Fund have **limitations** such as:

- its non-binding (voluntary), serve more as a guidance,
- they set minimum principles and standards, and are not exhaustive,
- difficulty of agreeing an effective code amongst hedge fund managers,

- a sizeable number of hedge funds do not follow the risk management best practices of the hedge fund industry,[41] indipendent valuation of illiquid assets also raises fundamental questions, disclosure practices within the hedge fund sector vary widely in terms of their quality.

In the highly regulated and complex business of investment management, **a code of conduct is not sufficient by itself**. The principles and standards embodied in the Code must be supported by appropriate compliance procedures, which should be subject to on-going supervision. Due to light-regulatory off-shore regimes, rules-based approach would be supported if a level playing field for standards would be achieved on an international level.

## III. Indirect measures to contain risks associated with hedge funds

US, UK and other major regulators hold the view that direct regulation of hedge funds is inappropriate.[42] Policy makers have addressed the systemic and financial stability concerns surrounding hedge funds by favoring an indirect measures/supervision aimed at the hedge funds' counterparties and creditors (banks and securities firms), which are subject to several European Directives including the Market Abuse Directive, Capital Adequacy Directive, Money Laundering Directive, Capital Requirement Directive, the Prospectus Directive and the Markets in Financial Instruments Directive (MIFID).

Principle-based regulations such as Basel II for investment firms and credit institutions and soon Solvency II for insurance companies, presents powerfull regulatory safeguards to contain hedge fund-related systemic risk.

The **Basel II** framework significantly strengthens the capital treatment for the main sources of firms' direct exposures to Highly Leveraged Institutions (HLIs). These include counterparty credit exposures related to derivatives, securities financing, prime brokerage and unsettled trades, direct lending activities, and equity investments in hedge funds. For counterparty credit exposures, Basel II enables firms to model their potential future exposure using portfolio simulation methodologies that reflect netting and collateral. On the basis of Basel II capital treatment for trading related exposures has been strengthened, requiring that firms improve the way that market risk models capture risks associated with complex and illiquid products. Additionally firms must develop methodologies that capture the default risk embedded in credit-sensitive trading exposures. Stress tests should enable banks to capture their full exposure to a sufficiently broad range of adverse conditions, including their overall exposure to market dislocations that might be associated with the failure of one or several hedge funds (second round effects).

**Solvency II** would introduce more sophisticated solvency requirements for insurers, in order to guarantee that they have sufficient capital also against market risk, credit risk, liquidity risk and operational risk. Insurers would be required to focus on the active identification, measurement and management of risks (by using tools such as stress testing and sensitivity analysis), and to consider any future developments, that might affect their financial standing.

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[41] Axel A. Weber, Hedge funds: a central bank perspective, FSR Financial Stability Review, Special issue: Hedge funds, A pril 2007

[42] William A. Ryback, Hedge Funds in emerging markets, FSF Financial Stability Review, Special issue: Hedge funds, April 2007

**MIFID** could have significant implications for all asset managers including Hedge Fund Managers located in EU/EEA. Hedge Fund Managers are required to have an independent risk management function and an internal audit function in addition to a compliance function. MIFID require the establishment, implementation and maintenance of adequate risk management policies and procedures to identify and manage risks.

The implementation of **Market Abuse Directive** creates a Europe-wide framework for combating market abuse. Supervisors monitor markets and market conduct looking into all allegations of market abuse, also where hedge funds are involved.

**Exposure of institutional investors to hedge funds is restricted also by Member States national regulatory regimes** - investor restrictions on hedge funds investments for pension funds and insurance companies is specified in Annex I.[43]

Finally, many **EU recognised exchanges already have in place procedures and rules** for identifying and dealing with dominant market users such as hedge funds or hedge fund's counterparties.

## IV. Role of the supervisor when monitoring hedge funds (especially in the light of the Financial Stability Forum's recommendations)

In order to strengthen protection against systemic risks, the FSF makes the following recommendations as regard the role of supervisors when monitoring hedge funds[44]:

- **supervisors should act so that core intermediaries continue to strengthen their counterparty risk management practices,**
- **supervisors should work with core intermediaries to further improve their robustness to the potential erosion of market liquidity,**
- **supervisors should explore and evaluate the extent to which developing more systematic and cosistent data on core intermediaries' consolidated counterparty exposures to hedge funds would be an effective complement to existing supervisory efforts,**
- counterparties and investors should act to strengthen the effectiveness of market discipline including by obtaining accurate and timely portfolio valuations and risk information,
- the global hedge fund industry should review and enhance existing sound practice benchmarks for hedge fund managers in the light of expectations for improved practices set out by the official sectors (e.g. from supervisors and regulators) and private sectors.

Areas of continuing weakness in many funds have also been identified:

- pricing and valuation of illiquid securities,
- analysing market correlations
- lack of stress testing,
- absence of concentration limits,

[43] Report of the Alternative Investment Expert Group: Managing, Servicing and Marketing Hedge Funds in Europe, European Commission, Internal Market and Services DG, July 2006

[44] Financial Stability Forum: update of the FSF Report on Highly Leveraged Institutions, 19 May 2007

- over-reliance on statistical value-at-risk measures,
- inadequate tracking of liquidity,
- insufficient use of electronic platforms, and the need to further standardise industry documentation,
- issues exist about the accuracy and independence of valuations at hedge funds.

The public sector can play a role in encouraging the continued review and enhancement of industry's best practices.

## V. Supervisory bilateral and global cooperation

Ongoing cooperation among financial authorities in taking forward SFSs recommendations and in spreading good practices is esential.

Recently, supervisors have begun to work collaboratively to assess the risk management practices of the financial intermediaries that deal most closely with hedge funds. For example, the Federal Reserve, SEC, UK FSA, BaFin and Swiss Federal Banking Commission (SFBC) currently are engaged in an ongoing review of the management of counterparty exposures by core intermediaries, especially as these relate to hedge funds.

In many EU member states distribution of foreign hedge funds is allowed by the host supervisory authority only if there is a good cooperation practice established with the supervisory authority of the home Member State. Such precondition already became a standard in national regulatory regimes and was stipulated by provisions of MIFID and UCITS provision about supervisory cooperation.

Because most important key creditors and counterparties to hedge funds and other private investment pools are active in many different jurisdictions, international policy collaboration through an international industry-led initiative, or a multilateral approach led by international organisations (e.g. IOSCO), is essential if positive results are to be achieved.

## ANNEX I:[45]

**INVESTOR RESTRICTIONS ON HEDGE FUND INVESTMENTS VARYING TREATMENT IN EUROPE MEMBER STATES**

| Member Sate | Insurance Companies | Pension Funds |
|---|---|---|
| **France** | ▪ **Allowable subject to severe restrictions**<br>▪ **Up to 10%** of eligible assets in hedge fund, PE and non-regulated funds so called "*other assets ratio*"<br>▪ Foreign funds, if UCITS yes, if not fall under non-regulated funds, above | ▪ **Not allowable**<br>▪ AGIRC and ARRCO 05 guidelines<br>▪ Forbid access to hedge funds or funds of hedge funds<br>▪ Sometimes access possible via structured products, under certain conditions |
| **Germany** | ▪ **Allowable subject to restrictions**<br>▪ White funds only (and limited choice)<br>▪ Can buy certificate and package<br>▪ Limited to **5% of assets**<br>1% in each fund<br>▪ Restriction on foreign funds which must be managed in EEA regulated company<br>▪ Must respect risk ratio | ▪ **Allowable subject to restrictions**<br>▪ *''Pensionskasse''* (traditional occupational schemes) are subject to the same restrictions as insurance companies (see above)<br>▪ *''Pensionsfonds''* (more recent form of occupational schemes) are not subject to the same quantitative investment restrictions but are restricted by the requirement to invest in white funds/certificates with tax transparency |
| **Italy** | ▪ **Not allowable**<br>▪ ISVAP refused to relax rules despite lobby from Italian industry<br>▪ Structured products – not acceptable<br>Tax Italian funds favoured by lower 12.5% rate. Therefore investments typically via Italian SGRs | ▪ **Allowable**<br>▪ YES: subject to quantitative restrictions typically 15% of pension fund assets.<br>▪ 5% maximum for non OECD products. |
| **The Netherlands** | ▪ **Allowable – No restrictions** other than prudent, diversified investment using agreed risk management tools | ▪ **Allowable – No restrictions** other than ALM to determine ALM surplus funds and no increase in overall risk |
| **Spain** | ▪ **Not allowable**<br>▪ No for technical provisions but new rules could allow allocation to Spanish funds<br>▪ Foreign funds may also be possible if managed in OECD – up to 10%<br>▪ No restrictions on free capital | ▪ **Not allowable** except if based in Basque country. |
| **United Kingdom** | ▪ **Allowable subject to restrictions**<br>▪ Limited by capital resources requirement<br>▪ Invested in ''admissible assets''<br>▪ If CIS – they must invest in admissible assets<br>▪ If hedge funds not admissible assets not likely to be attractive | ▪ **Allowable**<br>▪ Required to invest primarily in regulated markets<br>▪ May therefore prefer listed hedge funds<br>▪ Limited use of derivative contracts means very restricted use of managed accounts |

[45] Data taken from Report of the Alternative Investment Expert Group: Managing, Servicing and Marketing Hedge Funds in Europe, European Commission Internal Market Service DG, July 2006, p 34

# Risk Issues relating to Hedge Funds

# Risk issues relating to hedge funds

**Briefing paper prepared as a Member of a Panel of Experts in Financial Servicesfor the Financial Experts Rountable of the Committee on Economic and Monetary Affairs of the European Parliament**

**September 2007**

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## A. Functioning of Hedge Funds

### 1. Definition and delimitations

Over the past decade, hedge funds have grown extremely rapidly in size and importance. A wider range of more "sophisticated" and wealthy investors were trying to be exposed to these investment schemes. The current demand is coming from many institutions, like e.g pension funds. Recently, these products have become increasingly appealing to retail investors, given they can be offered indirectly, through fund-of-hedge-funds type schemes. It was observed that, in many jurisdictions, while direct retail participation in a hedge fund is prohibited because it does not comply with the normal regulatory restrictions on collective investment schemes (CISs), in some jurisdictions, CISs are permitted to invest in funds which in turn invest in hedge funds.46

The investment style of the original funds was designed to be neutral to general market movements, through long and short positions in assets, in order to achieve absolute returns, offsetting overall market movements. The variety of the investment strategies and styles hedge funds are adopting, suggests that we should not consider them as a single asset class, but rather as a specialized vehicle for gaining access to the risks and returns of more fundamental asset classes.

The term hedge fund is not a legal term, but rather a term introduced by the industry. Despite the lack of a clear, legal and common definition of a hedge fund,47 the concept represents "unregulated collective investment schemes using alternative investment techniques, in order to locate and exploit market imperfections".48 In other words, we might say that "hedge fund refers to a strategy rather than a structure".49 In this sense, in order to provide a consistent definition for hedge funds it is necessary to consider some of their typical features:

**(a)** Hedge funds are trying to locate and exploit market imperfection, such as information asymmetries, by using both short and long positions in assets that seem to be priced not accordingly to their fundamentals, for unjustified reasons. To achieve this, hedge fund managers employ alternative market instruments and strategies, such as short-selling and derivative products for investment purposes in order to increase their investment volume and their returns,

[46] IOSCO (2003).
[47] IOSCO (2006b).
[48] Klinz (2007), p. 14-15.
[49] IOSCO (2006a).

by borrowing money from banks and other financial institutions (leverage) since their market exposure often exceeds the investment capital of the fund.

**(b)** Hedge funds have limited liquidity. Typically investors can only get into funds on certain dates and can only get their money out of funds on certain dates.

**(c)** Their investors consist mainly of large institutions and wealthy sophisticated investors, such as net worth individuals, insurance companies, pension funds and endowments.

**(d)** Hedge funds do not release detailed information about their asset holdings or their trading strategies (models), however, they usually provide qualitative information about their investment style.

**(e)** Hedge funds are lightly regulated, typically domiciled in offshore jurisdictions (though their managers usually are located on –shore), in order to achieve simplification of tax consequences of their trading activities.

Having taken under consideration the above we can say that hedge funds are collective investment vehicles identified as alternative investment funds because of the different management styles employed and the types of risks adopted within the investment strategy. What a hedge fund is, therefore, is subject to some amount of interpretation. We provide some definitions here:

*A very specialized, volatility open-end investment company that permits the manager to use a variety of investment techniques usually prohibited in other types of funds. These techniques include borrowing money, selling short and using options. Hedge funds offer investors the possibility of extraordinary gains with above average risk.*[50]

*The term "hedge fund" includes a multitude of skill-based investment strategies with a broad range of risk and return objectives. A common element is the use of investment and risk management skills to seek positive returns regardless of market direction*.[51]

It has become quite hard to distinguish the boundaries between hedge funds and other types of managed CIS. Also, it has become difficult to distinguish between hedge funds and private equity investors, especially since the former are using the same investment strategies as the latter.

On the other hand, a ‘fund of funds’, for example, does not employ alternative investment strategies itself, but instead invests in a number of different underlying hedge funds to spread risk across these funds. Investors rely not only on the expertise of the fund of funds manager to pick a lucrative combination of hedge funds, but also on the skills of the underlying hedge fund managers. However, this might be offset by the herd behavior of some managers, especially of smaller boutique funds, and consequently, it might offset managers’ skills adequacy control, if imposed.

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[50] Scott (1997).
[51] Goldman Sachs (1997).

## 2. Typology

Since most funds attempt to exploit imperfections in the market, fund managers have become increasingly specialized in the market segments they deal in resulting to a multiplication of investment styles. The investment styles of hedge funds vary widely. However, we can distinguish three major categories: *market trend/directional strategies, event driven strategies* and *arbitrage strategies.*[52]

**(a) Market trend/directional strategies** take positions based on market or security trends.

- **Macro funds** make directional bets based on macroeconomic fundamentals in the equities, interest rates, currency and commodities markets.
- **Long/short funds** buy securities they believe to be underpriced and sell securities they deem overpriced. Unlike mutual funds, these funds commonly employ leverage, take short positions and use derivatives. In other words, they derive returns from going long assets they judge to be undervalued, while shorting assets in the same class that are deemed to be overvalued.

**(b) Event-driven strategies** seek to exploit mispricing caused by discrete events. They specialize in taking long or short positions on potential future events that they consider as not adequately reflected in existing prices.

- **Distressed securities funds** attempt to exploit mispricing of securities involved in, or at risk of, bankruptcy or reorganization.
- **Risk/merger arbitrage funds** seek to profit from trading the stocks of companies involved in mergers, takeovers, or buyouts.

**(c) Arbitrage strategies** seek to exploit small pricing inefficiencies between closely-related securities.

- **Convertible arbitrage funds** generally take long positions in a company's convertible debt, preferred stock, or warrants while shorting the company's common stock.
- **Fixed-income arbitrage funds** seek to exploit small pricing inefficiencies in similar fixed income instruments.
- **Statistical arbitrage funds** uses econometric and/or mathematical models to try to find pricing inefficiencies.

[52] Ferguson and Lester (2007), p. 45-54.

## 3. Benefits and risks

### 3.1 Benefits

The main benefits of hedge funds could be summarized as it follows:

**(a)** Hedge funds contribute to a dispersion of risk, competitiveness between market makers and intermediaries, as well as substantive proprietary market research that leads to better information and price discovery by using the full range of techniques to back their estimations, without being constrained in the instrument they use (e.g. short-selling). We could say that the more effective hedge funds are in correcting price anomalies, the fewer opportunities they will leave for profitable arbitrage.[53]

**(b)** Moreover, funds of hedge funds provide portfolio diversification through exposure to various asset changes and strategies, thus reducing the risk inherent in single strategy hedge funds.

**(c)** Hedge funds are a major source of liquidity and can significantly enhance market efficiency. By helping to diversify illiquid risk away from the core intermediaries, hedge funds may have increased the resilience of the financial system. Increasingly, they are fundamental to the efficient reallocation of capital and risk and provide a mechanism for increasing investment portfolio diversification, which appears to have the potential to earn attractive returns with less risk than equities.

### 3.2 Risks

Apart from all the above positive impacts on financial stability many risks, direct and indirect, might arise.

**(a)** Firstly, hedge funds are accused of using too much leverage. However, considering that Basel II allows banks to twelve times leverage, the percentage of such funds having violated the Basel I and II capital adequacy requirements has been relatively small.[54]

**(b)** Secondly, counterparty credit risk arises from over-the-counter derivatives trading and financing transactions such as equity margin lending, repurchase agreements and securities lending. Banks may also be exposed to market risk by investing in the equity of a hedge fund, if markets move against the hedge fund.[55]

**(c)** Thirdly, because many innovative products remain untested under stress conditions, their correlations, volatilities and liquidity under such conditions are particularly uncertain.

**(d)** Fourthly, there might be systemic stability risk arising through the operations of the firms providing prime brokerage services and in particular the risk of over-concentration of intermediary liquidity.[56] When counterparties have concentrated positions, losses on these positions are more likely to lead to substantial losses in liquidity.[57]

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[53] Crocket, (2007), p. 19-28.
[54] Danielsson and Zigrand (2007), p. 29-36.
[55] Cole et al, (2007), p. 7-17.
[56] FSA (2006).
[57] Cole et al. (2007), 7-17.

**(e)** Fifthly, the risk arising from fraud and the risk of assets being diverted outside the fund should not be underestimated.[58] The opaque nature of hedge funds and the occasionally long lock-in periods may make it easier for hedge funds to commit fraud. However, there is little evidence of hedge funds committing disproportionately much fraud.[59]

## B. Regulatory intervention in the operation of hedge funds

### 1. Rationales of regulatory intervention

A big dilemma rises from the above analysis and that is, what regulatory approaches can be used to address concerns like systemic stability, financial integrity, market dynamics, investor protection, investor suitability and potential for market abuse and anti-money laundering, and how can this be achieved without causing unintended reversing consequences to the growth of the industry. Specifically, the risk of an unanticipated destabilization of financial markets integrity arising from the failure of a large or several smaller hedge funds, the turn into market price manipulations and insider trading leading to speculative profits, the risk of the governance of listing companies through the pressure to the management and the sale of inappropriate alternative products to uninformed retail investors[60] can be some of the risks that urge regulatory intervention. Perhaps, the best way to achieve that is to have in place an effective resolution process to deal with the potential or systemic consequences from a hedge fund failure by means of a rapid unwinding process.[61]

### 2. Means for effective regulatory intervention

Regulatory approaches could be recognized in three categories: *direct regulation* of the funds (or their investment advisers or managers, see below, under 2.1)), *indirect regulation* (through the regulated counterparties with which they deal, under 2.2), and *"self-regulation"* (through greater disclosure and transparency, under 2.3).

### 2.1 Direct regulation

*Direct regulation* is the approach adopted mainly by US SEC. It can be achieved either by the liability side, by restraining access to individual investors or institutions that have limited awareness/knowledge of the specific characteristics of that particular market, or by the asset side, by imposing registration requirements to hedge funds advisers (requirement already imposed by UK FSA). However, this approach could be considered as being quite unfair, because it implicitly discriminates between sophisti-cated, well-informed (and probably already wealthy investors) and less wealthy investors. And in practice the result could not be the desired one, since retail investors can have access to other types of collective investment schemes, like for example funds of funds, which facilitate hedge fund exposure to investors with no sufficient financial requirements.

[58] FSA (2006).
[59] Danielsson and Zigrand (2007), p. 29-36.
[60] Prada (2007), p. 127-135.
[61] Danielsson and Zigrand (2007), p. 29-36.

## 2.2 Indirect regulation

### 2.2.1 General remarks

*Indirect regulation* or *indirect supervision* can be addressed through the imposition of measures aimed at improvement in counterparty credit risk management practices. Those measures could be more rigid, the closer to the payments systems is the involvement of the counterparty financial intermediaries. Banks and other financial institutions are much involved in lending to hedge funds, so a failure could cause seri-ous damages to the financial stability. If there is sufficient supervisory control from the counterparties' side, then there should be no reason for additional supervision for the hedge funds themselves.

Such controls could be adequacy of capital to cover default risk, collateral and margin requirements and oversight of the internal compu-tational systems in order to sufficiently measure risk exposure.[62]

The US Federal Reserve, for example, routinely examines counterparty risk management practices to ensure that banks,

- perform appropriate due diligence and gather sufficient information to assess the business, risk exposures, and credit standing of their counterparties,
- establish, monitor, and enforce appropriate quantitative risk exposure limits for each of their counterparties,
- use appropriate systems to measure and manage counterparty credit risk, and
- deploy appropriate internal controls to ensure the integrity of their processes for managing counterparty credit risk.[63]

Another aspect of indirect regulation implementation could be through the oversight of operational systems. Management information systems for counterparty credit risk have improved substantially over the last decade. Banks have made significant investments both to monitor and control counterparty exposures. However, the systems requirements for managing counterparty credit risk to hedge funds are quite complex and demanding, taking under consideration that banks may not afford to acquire or develop the necessary IT systems required for regular gathering and analysis of data across different internal systems.

The vast increase in computing power has also done much to encourage programmatic trading strategies that enables instantaneous and widespread position taking based on estimations for price anomalies and also permits managers to deal with risk exposure on real time. It should not be neglected, however, that the success of computerized risk management depends on the realism of the underlying models.

A particular element has been added the last ten-twenty years, and that is the existence of complicated mathematical models used for complex trading strategies. Such models promise that one can protect himself from losses by taking advantage of the imperfections in the behavior of investment assets in the market. However, these anomalies are eliminated as soon as numerous

[62] Recommendation No. 1 of FSF.
[63] Cole et al. (2007), p. 7-17.

investors use those models and the investors are suddenly found to be exposed to dangers which were thought to have already been covered.

Therefore, supervisors must monitor the IT systems of supervised institutions to make sure they are up to date and capable of measuring and monitoring risk.64,65 Indeed, it must be consistent with a number of required guidelines given by the supervisory authorities, taking into account the investors' needs for information and protection.

As far as the implementation of stricter oversight on hedge fund managers, the hedge fund industry itself has developed various sets of sound practices and guidelines. Moreover, herd behavior could be widely recognized among hedge funds managers, especially of smaller funds, a situation that definitely offsets controls imposed upon managers' skills.66 It might be more useful to better understand how the risks arising from the relationship between hedge funds and the manager itself will be distinguished.

It might be counterproductive to increase the burden of regulation if it resulted in managers moving to more lightly regulated locations (regulatory arbitrage). Increased contact of supervisory authorities with hedge fund managers would improve the understanding of hedge fund manager structures such as valuation processes.[67]

### 2.2.2 Indirect measures in pillar 2 of Basel II deemed to contain some of the risks associated with hedge funds

Hedge funds exposures can be fitted into the banks prudential supervision framework without doubt, although the revised capital adequacy framework (Basel II) does not explicitly provide for any specific treatment of such exposures.

Within the first pillar of revised capital adequacy framework (Basel II) and as far as the Standardised Approach is concerned, the 100% risk weight for unrated corporate obviously does not really reflect financial characteristics of hedge funds, such as their potentially high leverage and opacity. However, the Standardised Approach of Basel II gives supervisors the discretion of assigning a 150% risk weight to certain high risk asset categories which may constitute a somewhat more adequate treatment for hedge funds exposures. And this is the truth in most countries.

Under the Internal Ratings Based (IRB) Approach of Basel II, devising more accurate risk weights of hedge funds' risk will be a considerable challenge. The modelling of the required risk parameters of credit exposures will need to be adapted to the specificities of hedge funds. In that respect, the lack of sufficient information and adequate transparency as well as the complex risk structure of hedge funds' assets are particularly challenging.

Undoubtedly the supervisory review process ("Pillar II") of Basel II provides a useful framework to ensure that the bank adequately addresses the risks resulting from its interaction with hedge funds. Under the supervisory review process of Pillar II the management of the bank has to make sure that the bank has adequate capital available to support its overall risk profile. On the other hand supervisors should take measures necessary to address such risks, including additional

[64] Cole et al. (2007).
[65] Recommendation No.4 of FSF.
[66] Recommendation No. 5 of FSF.
[67] FSA (2006).

capital requirements, as for example, requiring the bank to strengthen its risk management, improve internal controls, increase provisions.

### 2.3 Self-regulation

One of the basic characteristics of hedge funds is that in general, they are not regulated or they are lightly regulated, especially as regards their degree of transparency. An appropriate degree of transparency is an essential prerequisite for market integrity and financial stability as it improves the quality of information, reduces uncertainty and helps market participants to make more efficient decisions.[68]

However, the expected benefits of detailed information about hedge funds portfolio could be outweighed by the rapidity with which portfolios turn over. Additi- onally, enhanced shared information could harm hedge funds competitiveness rising from its prerogative not to reveal its positions taken on the basis of the information. This could have negative consequences to market efficiency.[69] Several firms remain skeptical about regulatory interventions and, while welcoming continued discussion between national regulators, would prefer industry-led solutions to promote greater consistency of standards.[70]

## 3. The case for international cooperation in regulatory intervention

The focus of the activity of hedge funds in capital markets suggests and justifies completely the extended activity of IOSCO in the field. Moreover, the implications that hedge funds may have to banks requires also the Basel Committee's on Banking Supervision monitoring. However, the variety of issues that may arise with respect to the financial stability as a whole makes the presence of the Financial Stability Forum more than necessary. Thus, the intense activity in the field of the latter remains crucial.[71]

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[68] Weber (2007), p. 161-168.

[69] Recommendation No. 3 of FSF.

[70] FSA (2006).

[71] The following recommendations are based on the assessment of potential systemic risks in the Update of the Financial Stability Forum Report on Highly Leveraged Institutions launched in May 2007.

1. Supervisors should act so that the core intermediaries continue to strengthen their counterparty risk management practices.
2. Supervisors should work with core intermediaries to further improve their robustness to the potential erosion of market liquidity.
3. Supervisors should explore and evaluate the extent to which developing more systematic and consistent data on core intermediaries' consolidated counterparty exposures to hedge funds would be an effective complement to existing supervisory efforts.
4. Counterparties and investors should act to strengthen the effectiveness of market discipline, including by obtaining accurate and timely portfolio valuations and risk information.
5. The global hedge fund industry should review and enhance existing sound practice benchmarks for hedge fund managers in the light of expectations for improved practices set out by the official and private sectors.

## C. Conclusions

Hedge funds have emerged as a necessary innovation of the modern financial system, bringing substantial benefits to financial markets. They are criticised, however, for opaque investment strategies and excess leverage. While the systemic risk needs to be addressed by the authorities, this should be done without off-setting the benefits provided by hedge funds. For that reason, an optimal regulatory regime might aim to indirect supervision of a combination of elements, like internal controls of hedge funds counterparties, oversight of the operational systems used for asset valuation and risk exposures, as well as capital adequacy control and enhanced transparency.

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# Risk issues relating to hedge funds

**Briefing paper prepared as a Member of a Panel of Experts in Financial Servicesfor the Financial Experts Rountable of the Committee on Economic and Monetary Affairs of the European Parliament**

**September 2007**

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## Executive Summary

In order to protect investors in hedge funds it is important to ensure that they have the ability to understand the strategies the hedge funds run and that they can trust the valuations of the fund.

Investors can be either sophisticated investors or retail investors. For a measure of sophistication, either wealth based measurements or competency based measurements can be used. Retail investors, should be restricted to investments in Funds of Hedge Funds only, which should exclusively be done through EU regulated distribution channels and only up to a certain percentage of total investable assets. This is because investors and hedge funds are so diverse that it is impossible for all investors to understand all strategies. By only allowing investments in Funds of Hedge Funds for retail investors, there is automatic diversification. Also, the employees of the Fund of Hedge funds would be industry specialists and would be assumed to understand the risks involved. In addition, only Fund of Hedge Funds, which provide the necessary transparency on their activities to an European Supervisory Authority should be open to retail investors.

In general, investors cannot be expected to independently understand or verify the NAV calculations, and therefore the Administrator should always be an independent 3rd party entity. The NAV calculations should follow industry standards, here the best practise guidelines already laid out by a number of industry bodies could be used.

Concerning risk management issues for hedge funds and its market counterparties, the current risk management practices employed by leverage providers to hedge funds seem to be generally sound. While it will always be the case that Banks will utilize slightly different methodologies to measure, monitor and control hedge fund risk exposures, such practices are generally consistent across market participants. For example, the use of multiple NAV and performance based ISDA termination events, the use of daily mark to market and collateral margining are tools which have been successfully employed for many years by Banks to minimize hedge fund exposure.

Despite the risks inherent in many hedge funds strategies, historical hedge fund defaults have been relatively moderate, as have the credit losses incurred by Bank's as a result of these defaults. The main reason for this experience is the above mentioned use of tight ISDA covenants, collateral and stringent initial and ongoing due diligence performed by Bank's on hedge fund managers. Through various recommendations made by industry and regulatory

working groups in recent years such as the Corrigan Report, leverage providers and hedge funds themselves have taken steps to improve risk management practices.

While significant progress has been made in developing risk mitigation tools for direct credit exposures, it has to be emphasized, that the same level of risk awareness should be adopted with respect to investments by banks in hedge funds, whether for hedging purposes for derivatives contracts or as a customer driven product.

Extensive due diligence processes (also to address operational risks), strict transparency requirements have to be in place, including transparency on investments of the funds and specific limitations to address the less liquid nature of these investments. The necessity for these measures is again proven in the current market conditions.

The above mentioned progress notwithstanding, there still remains a fairly high degree of systemic risk concerning the Credit Default Swap / CDO market. While innovations in these products have numerous and substantial risk benefits (i.e. spreading of credit default risk across market participants, additional price transparency, liquidity, etc), the overwhelming growth and innovation in these products also introduces substantial operational risks concerning for example large volumes of unsigned trade confirms, less than ideal settlement procedures and a lack of a centralized mechanism to record and track all transactions. However encouraging signs are given by the market's successful efforts to improve some of these areas in recent years, as well as very recent initiatives such as a planned CDS auction and netting process and DTCC's plans to establish a CDS information / data warehouse to improve transparency and information follow.

To summarize, given the investment flexibility enjoyed by hedge funds, these vehicles will continue to pose risks to both individual investors and leverage providers. However, if such risks are entered into only after careful due diligence, are monitored & controlled using appropriate risk management tools and portfolio diversification is adhered to, potential loss exposure to this sector can be kept to a level which would not pose an unacceptable risk to market participants.

## Risk Issues Related to Hedge Fund

One of the main problems for allowing investments in hedge funds is that many investors cannot be expected to actually understand the risks they face. Therefore, hedge funds have traditionally been sold only to sophisticated investors. Currently, the most common method of determining an investor's level of sophistication takes its roots in the US concept of "Qualified" and "Accredited" investors, which are competency and wealth based respectively. Several European regulators have already gone for the same concept, albeit sometimes focusing on minimum investment rather than wealth.

Some ways of measuring sophistication could be:

- <u>Setting minimum investment requirements:</u> If the minimum investment requirement is set high, then it is fair to assume that only High Net Worth Individuals (HNWIs) can invest. Traditionally HNWIs have access to independent advice and/or are seen to be informed investors. This is by far the easiest route, as it replicates existing methodology. An overlay could be requirements that the investors make formal statements that they have liquid net worth above a certain threshold. Also, it follows that if an agent manages money for the investor, then the agent should be regulated and the asset management should be done on the basis of a written asset management agreement.
- <u>Allow only investment through regulated introducing agents:</u> This could be banks, brokers, insurance companies, or any other regulated distribution channel. This gives the ability to ensure that all investors get professional advice as it would be fairly easy to establish rules for the level of sophistication the regulated agent must achieve. This replicates the UK FSA requirement that many customer facing financial transactions may only be sold by FSA regulated persons. As a possible over-lay to that, it could be made a requirement that the agent must have professional indemnity insurance. A further logical over-lay would be introduction of a Continuous Professional Development (CPD) requirement, similar to the rules for many UK professions.

In addition to being able to understand the activities of the hedge fund, the investors should also be able to trust the NAV calculations. However, usually investors are not in a position to be able to judge the correctness of the NAV directly as (i) they normally do not get position-level transparency of the hedge funds portfolio and (ii) calculating the NAV is a work-intensive process.

However prior to investing, investors – or regulated persons acting on their behalf – should perform operational due diligence to ensure that hedge funds operate robust portfolio valuation policies and procedures, which are verified and performed independently by a 3rd party Administrator. By doing this investors can indirectly ensure the correctness of the NAV.

There should be an industry standard for valuation of hedge funds assets and NAV calculation. This should be in line with the recommendations by the Alternative Investment Management Association (AIMA) and by the Technical Committee of the International Organisation of Securities Commissions (IOSCO) published earlier this year.

The main themes can be summarised as follows[72]:

- Creation of Policies, Procedures and Controls for the Valuation of Assets

  The Governing Body of the hedge fund (e.g. the fund's Board of Directors) should be responsible for the creation of a document outlining policies, procedures and controls for the valuation of assets. The fund's investment manager may play a role in drafting this, as may other relevant parties dependent upon inherent complexities (such as the fund's administrator or auditor).

  The document should set out the obligations, roles and responsibilities of the various parties and personnel who are involved in the valuation process. It should also detail the methodology for the valuation of each instrument type (including identification of price sources) and a practical escalation or resolution procedure for the management of exceptions.

  AIMA advocates that the document should be drafted prior to the launch of the fund. They note that it is not necessary for the whole document to become part of the fund's offering document. However the offering document should contain a high-level summary of valuation policies and an indication that the whole document is available for review if required. The offering document should also name the party responsible for calculation, determination and production of NAV.

- Fund's Governing Body to Retain Overall Responsibility for Ongoing Governance

  The Governing Body should periodically review the procedures to seek to ensure their continued appropriateness.

  The Governing Body should ensure that the written procedures enables it to review any positions where the investment manager has material input into its valuation, or where the investment manager wishes to override the valuation service provider (this may occur for hard-to-value instruments).

  The Governing Body should conduct initial and ongoing due diligence on third parties that are appointed to perform valuation services.

  The Governing Body should approve deviations from the pricing policy, as applied by the valuation service provider.

- Segregation of Duties in the NAV Determination Process and Valuation and Investment Processes

  The Governing Body should ensure adequate segregation of duties in the NAV determination process. The NAV of the fund should be produced independently from the investment manager by an independent 3rd party administrator.

[72] AIMA, IOSCO, IMS Consulting Ltd

This segregation principle also applies with respect to the valuation process.

- Sufficient Transparency to Investors

  The AIMA Guide states that NAV reports should be addressed directly to investors by the administrator (or qualified as such where produced by the investment manager).

  The IOSCO Report states that arrangements in place for the valuation of the hedge fund's investment portfolio should be transparent to investors. Relevant information should be made available to the investors upon request.

- Procedures, Processes and Systems

  The valuation procedures should be capable of implementation by the administrator.

  Where the investment manager provides prices, the valuation service provider should be furnished with sufficient supporting information. This is where the investment manager is the primary source of the valuation e.g. thinly traded instruments, complex over-the-counter derivatives and private equity positions.

  The administrator and valuation service provider (if applicable) should use reasonable endeavours to consistently apply pricing policy.

- Sources, Models and Methodology

  Where possible, the valuation of the instrument should be checked against a primary and secondary price source. If this is not possible, e.g. where the investment manager is the only party competent to produce a best estimate of fair value, suitable disclosures to investors should be made.

  Where the Governing Body approves the use of broker quotations when valuing an instrument these should be sourced consistently and, where possible, multiple quotes should be obtained.

  These quotes should be obtained independently of the investment manager.

  If a pricing model is to be used to price instruments, this must be approved by the Governing Body and justified by testing. The testing should be independent where the model is provided by the investment manager.

- Side Pocket Investments

  The decision to place investments in side pockets should always be approved by the Governing Body.

  The Governing Body should ensure that side pocket policies are clearly communicated to all investors.

The criteria for the use of side pockets should be as consistent as possible.

If the investor is restricted to only investing in funds, where the Administrator follows these rules, sufficient Investor protection should be ensured.

As well as understanding the NAV, the investor should understand the risks and strategies of the hedge fund. However, whether this is possible depends on both the investor and the hedge fund in question.

Some investors, such as high quality family offices, institutional investors or funds of hedge funds will invest considerable time to ensure that they know exactly which risks are run by the funds they are invested in. However others are purely passive, trusting the Investment Advisor to choose an appropriate risk/return profile.

The level of complexity of hedge fund strategies varies significantly, from leveraged long-only funds, which most investors ought to understand the risks of, to complex mathematical strategies where the risk profile could change rapidly.

A sophisticated investor should be able to investigate the risks and should also be able to know whether he understands them. If he does not understand them, then he should either not invest or rely on his advisors. However, as many hedge funds have unrestrictive investment guidelines, he also has to regularly monitor his investments to ensure that there has not been a change of direction (Style Drift), which could change the risk.

The overall set-up, strategy and risk should be covered by an offering documentation, which should be prepared by legal counsel and approved by the Governing Body of the hedge fund and usually also by the regulatory body the fund is registered with or authorised by. If the fund is listed also the relevant stock exchange needs to approve the offering documentation.

A typical hedge fund will have a number of external service providers, including amongst others Investment Advisor, Investment Manager, Administrator, Prime Broker and Custodian. While the Investment Advisor is important for choosing the strategies that should achieve the desired asset growth, the Administrator is important for investor protection, as it is typically the Administrator who is responsible receiving subscriptions and paying redemptions of hedge fund shares, calculating the NAV, maintaining books and records, etc. For this reason it is recommended that the Administrator should always be a 3rd party independent entity.

However, a 3rd party Administrator is *per se* not sufficient for investor protection. It has to be ensured that the Administrator independently performs full administration, processes the trades, values the portfolio, calculates all the fees and produces the NAV and thereby adheres to the points as outlined above.

The operational due diligence has to cover the Administrator and the Custodian (including the custody and prime brokerage agreement) to ensure that prudent cash management procedures are in place.

Despite the protection that can be achieved through the independence of service providers as well as through the professional advice available, risks still remain to the investor if he invests in a hedge fund where he does not understand the underlying risk.

However, an investor who is invested in equities and bonds can sometimes benefit from having an added investment in hedge funds, as hedge funds are often aimed at being uncorrelated with traditional asset classes. Therefore it would not be reasonable to prevent retail investors from investing in hedge funds. It would however appear prudent that retail investors should not be fully invested in hedge funds, but should only use them as an add-on to more traditional asset classes.

Also, so as to not risk retail investors being heavily invested in risks they do not understand, it would in general be prudent to allow retail (i.e. non-sophisticated or accredited) investors only to invest in funds of hedge funds, as those offer a diversified investment into the hedge fund space.

As an additional recommendation retail investors should only be allowed to invest in fund of hedge funds up to a certain percentage of their investable assets and only be allowed to invest in hedge funds through EU regulated distribution channels. Further the Investment Advisor should be regulated if the hedge fund is sold to retail investors and be required to provide information to a European supervisory authority. It should then be up to the regulated entity selling the hedge fund shares to the investor to determine what amount and types are appropriate for the individual investor.

Sophisticated HNWIs and institutional investors should be allowed to invest in single hedge funds as well. For these investor types it should be a recommendation that the Investment Advisor is regulated and provides detailed data to a European supervisor, but it should not be a condition.

European financial supervisory authorities should join forces to harmonize and improve their information regarding hedge funds and make their findings available in consolidated form to market participants. This could be the first step to an information base for hedge funds. As the hedge funds industry is a global industry, Europe should aim via an international dialogue at achieving such transparency on an international basis – the Financial Stability Forum in Basel could be one location for this undertaking.

Reporting requirements for banks in relation to hedge funds already are in place in many countries and should be improved, but the main source of the reporting should be obtained directly from the hedge fund advisors and administrators. The reporting should include detailed risk reporting, covering amongst others risks relating to pricing, volatility, liquidity and credit. In this context documentation is seen as critical. By having such a pan-European supervision and reporting system, it would be possible for regulators to request fully detailed information whenever a stress scenario might occur in the market. In the current market it could have given a valuable tool for understanding the risks in asset backed securities, credit markets, conduits, etc. That would have been a useful platform for policy makers to manage the overall market risks.

The current market dislocation and the lack of trust amongst market participants show, that more transparency is not only needed on hedge funds. In general, all SPVs and Conduits should be consolidated in order to be covered by the upcoming Basle II regulations. For all ABS / Structured Products investments – not only by hedge funds – additional reporting requirements should be implemented, since the current market situation has shown, that a risk evaluation and reporting based only on external ratings is not sufficient.

In addition to providing transparency to regulators, as a general statement, hedge funds should provide high levels of transparency to investors as well, and importantly, they should provide the same transparency to all investors and potential investors. This includes fees, where the transparency should include amongst others Management fees, Performance fees and all rebates granted via side-letters as well as special terms related to investments by the management / employees of the investment manager. It should also include that all material side letters need to be disclosed to all fund investors.

In this context, it is not crucial for hedge funds to provide 100% transparency related to their investment strategies to investors. It should be up to the investor to decide whether the level of transparency the hedge fund offers is sufficient to make an investment decision. However, again, transparency should be the same for all investors.

**Risk Management Issues Regarding the Hedge Fund and its Market Counterparties.**

Overall current risk measures and procedures utilized in the market today by leverage providers to hedge funds seem sufficient to monitor the associated counterparty credit risk. Listed below are some of the key risk tools used by both Commerzbank and its peers in connection with hedge fund risk management.

a) The majority of Banks manage their hedge fund credit risk primarily by use of the ISDA and Credit Support Annex (i.e. CSA). Most CSA's have a zero unsecured threshold, except for the top tier hedge funds which sometimes command thresholds in low single digit USD millions. If a daily margin is missed the customer can be subject to Event of Default and trades can be unwound. The widespread use of the CSA effectively minimizes and in many cases eliminates a Bank's unsecured exposure to a single hedge fund.

b) The ISDA documents contain several "standard" termination events related to Net Asset Value and performance declines over 1-month, 3-month and 12-month periods and usually also include a hard NAV "floor". "Key Man" clauses are also standard. The triggering of any of these events gives the banks the right to terminate all trades.

c) It is common practice to require Initial Collateral / Margin on OTC derivative trades with hedge funds. Such collateral is intended as a "buffer" to cover the "unwind" or "gap" risk that may occur when an event of default occurs under the ISDA or CSA and Bank's are forced to unwind transactions.

d) Given the existence of CSAs, most Banks, including CB, utilize a 10 day risk horizon and either 97% or 99% confidence interval when calculating line usage and/or initial margin requirements in their VaR models. It is generally acknowledged by most Banks that while this procedure should insulate them from losses in most "normal" market environments, all banks are exposed to varying degrees to "tail" or "event" risk. The general consensus on how to deal with the latter is through periodic stress testing of riskier portions of the portfolio and where possible, adjusting margin terms, trading volumes, accordingly.

e) It is commonly accepted in the industry that there is no substitute for sound, ongoing, qualitative due diligence with hedge fund managers. This not only includes periodic discussions / meetings, but a review of monthly NAV / performance data to identify and potentially troubling trends. The latter actually enabled CB to identify an increase in volatility in Amaranth's monthly returns which led to a due diligence discussion and eventually to the cancellation of CB's credit line prior to the fund's massive losses and liquidations.

As a recommendation banks should only lend to hedge funds on a collateralized basis and do OTC Derivatives only on the basis of collateral with daily margin calling ability. As a rule, haircuts should be applied. For structured products and/or products where the depth of liquidity in the relevant market is mainly provided by the hedge fund community, the complexity and/or liquidity risk should be taken into consideration through increased haircuts.

Additionally, banks own investments in hedge funds - either for the purpose of offering a hedge fund related investment product to its customers or as a hedge for derivatives contracts on hedge funds offered to customers - should be categorized as such. It should be taken into consideration that an investment into a hedge fund provides funding to the hedge fund market, and the bank should ensure that sound risk management procedures are applied to the risk it runs through its investments.

The less liquid nature of an investment in a hedge fund should prohibit, that a banks risk management treats these investments as "normal" equity holdings in a trading book.

While extensive due diligence processes with the funds should be a standard, additional focus has to be placed also on the risk controlling side, since the investor is exposed to a gap risk in stressed market conditions with his hedge fund investments, where he has only very limited possibilities for risk reducing activities.

The current market dislocation in the ABS / CDO market has caused many hedge funds to report losses and redemptions. It is precisely an environment such as this which underscores the need for improved risk transparency from hedge funds. Without a clear picture of which asset classes a fund is invested and to what extent it is leveraged, substantial risks exist for investors and liquidity providers to hedge funds. For example, there is a significant degree of refinancing risk to the extent a hedge fund is unable to roll its Repo funding positions on a regular basis. Since such financing tends to be very short term (i.e. 1-3 months on average), providers of Repo financing may be reluctant to refinance anything but the most liquid, high-grade collateral during this volatile market climate. There is also a risk that financing will be available, but at prohibitively large haircuts, potentially forcing the hedge fund to unwind its positions at a loss. Hedge funds that utilized sophisticated and conservative liquidity management procedures prior to the start of this market downturn will have the best chance to successfully navigate the liquidity crisis.

Given that transparency from hedge funds is less than ideal, there is a risk that Banks either cut off financing for hedge funds or insist on terms so onerous that it actually causes otherwise healthy funds to go out of business. The same scenario can occur with respect to hedge und investors, who may redeem out of transparency concerns or a general "flight to quality" scenario whereby they redirect their investments into Money Market funds or other high grade vehicles.

To summarize, while pockets of risk still exist in the hedge fund space, such as CDO / CDS event risk, it is fairly clear that U.S regulators have decided to indirectly regulate and control potential systemic hedge fund risk by closely scrutinizing the lending and risk management practices of hedge fund leverage providers. Many large Banks are now being asked by regulators for detailed reports on their hedge fund exposure to ensure, among other things, that hedge funds are not being allowed to employ excessive leverage.

The industry proposals and current on-going leaderships with respect of clearing and settlement of OTC trades have been making enormous efforts to satisfy the increased demand of dealer protection and smoothing the traffic of OTC trading products as they become more and more complex. As an example, International Swaps and Derivatives Association Inc ("ISDA") has been making revisions of definitions of complex OTC transactions such as CDS and single tranche CDO transactions to reduce legal risk, as well as releasing protocol to avoid any confusion after the event. In the meantime, in order to accommodate the increased trading volume of such complex OTC products, a clearing and settlement organization started warehousing service to act as a clearing house / trade information provider.

Regarding the proposal to use an auction on Credit Default Swaps in case of market failures (i.e. bankruptcies), in response to the increased demand and concern, ISDA has coordinated with numbers of application of cash settlement auction protocols on those CDS trades which requires physical settlement after credit events for names actively traded in the single-name and index-trade market where the notional value of CDS contracts dramatically exceeds the notional value of deliverable bonds. For example, the following companies' auction protocols have been applied successfully after the credit events: Collins & Aikman Products Co., Delphi Corporation, Delta Air Lines and Northwest Airlines, Calpine Corporation, Dana Corporation and Dura Operating Corp.

The market for credit derivatives became so large, in many instances the amount of credit derivatives outstanding for an individual name are vastly greater than the bonds outstanding.

An example of how this auction would work is as follows; all open CDS contracts submitted to the auction of a particular issuer would be netted against one another to come up with a single net long or short CDS position. For example, if there were $5.3 billion of long positions submitted versus $5.0 billion of short positions, rather than settlements being required against $10.3 billion of gross contracts, only the net $0.3 Bln would be put out to bid in the auction process. All participating Dealers would be required to post a binding bid. This process dramatically reduces the volume of settlements in the marketplace and allows for a transparent and efficient close-out process.

Another benefit to the proposed auction process is the avoidance of a "short-squeeze" in CDS. For example, when an issuer defaults in the above case, there could be numerous counterparties simultaneously trying to cover their short positions by purchasing bonds at market price (40% for Sr. Unsecured Corporate bonds would be a reasonable mean expectation) to deliver at 100% under their CDS contracts resulting in a 60% gain. If the short squeeze drives up the price to 80% the gain for the CDS protection buyer will only be 20%, well below expectations due to this technical factor. This scenario would negatively impact those firms which used CDS to hedge risks other than the deliverable bonds (equity risk, trade finance risk, vendor financing risk, etc.). While they would lose money on their long position the hedge would not result in the expected recovery due to the short squeeze.

Presently, The Depository Trust & Clearing Corporation ("DTCC"), a US-based clearing, settlement and information services provider for equities, fixed income and over-the-counter derivatives, has developed the Warehouse and offers warehousing service since November 2006. The Trade Information Warehouse provides a securely managed central database of contract information, offering the support in handling event processing and payment calculations, as well as settlement capabilities.

Over time, the Warehouse significantly reduces operational risks and costs, reinforcing the safety of the market and contributing to its expansion, such as:

- Reduces errors in corporate and regulatory reporting by helping firms ensure correct balance sheet information through immediate and accurate trade reporting to the Warehouse.
- Reduces risk through greater transparency in terms of outstanding contracts and trading counterparties. Helps firms manage credit risk and maintain adequate collateral based on correct and fully reconciled contract information.
- Promotes accurate and complete payments based on the most current contract records, along with the capability to easily track and identify payments flows between firms.
- Helps firms manage credit events more smoothly (especially multiple credit event scenarios) by eliminating ad hoc reconciliation and supporting standardized messaging.

Their Trade Information Warehouse is initially supporting credit derivatives; however, the Warehouse is designed to be extended to other OTC derivatives products including rates, equities, and commodities.

# Risk issues relating to hedge funds

**Briefing paper prepared as a Member of a Panel of Experts in Financial Servicesfor the Financial Experts Rountable of the Committee on Economic and Monetary Affairs of the European Parliament**

**September 2007**

**Richard Pratt**
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## Executive Summary

E.1. The growth of hedge funds over the past decade has been one element in the increasing complexity of financial markets. A key development has been the ability of banks to make loans and then sell the rights to receive the loan repayments to other investors. Other complex instruments have been developed to match investors' and borrowers' needs. Hedge funds have bought many of these instruments in addition to more conventional investments, including equities and bonds.

E.2. These developments have increased the resilience of the financial system by dispersing risk and have improved liquidity and efficiency. However, the complexity has made risk management more difficult and created uncertainty as to where the risks in the financial system lie.

E.3. Risks created by hedge funds *per se* can be divided into three categories: risks to investors, to market integrity and to financial stability.

E.4. Investors are at risk because of the difficulty of assessing the risks of investments. Retail investors may not have the necessary skills. Professional investors may find that the absence of proper disclosure practices, uncertain valuation processes and obscure redemption rights make accurate risk assessment challenging.

E.5. Like all investors, hedge funds might engage in market abuse. Their less developed internal controls may make them more vulnerable. In addition, their innovative trading strategies may increase the temptation to obtain inside information and for others to give it to them.

E.6. The failure of a group of funds may affect the creditworthiness of a counterparty financial institution. Moreover, the investment and hedging strategies of hedge funds could create uncertainty about asset prices and could reduce liquidity. Credit concerns, falling asset prices and reduced liquidity could reinforce each other in such a way as to result in restricted credit to the real economy and adverse effects on growth, incomes and jobs.

E.7. There are regulatory responses to these issues. However, the typical organisation of a hedge fund, with its domicile and administration offshore, makes regulatory response more complex. The solution for EU regulators is to press EU regulated institutions to insist on better corporate governance, enhanced risk management and stronger disclosure by hedge funds.

## 1. Introduction

1.1. This brief for the European Parliament discusses the risks created by the growth of hedge funds. The precise terms of the briefing request are at Appendix A. The brief sets the growth of hedge funds in the context of the developments in the world's capital markets over the past decade. It describes the nature of hedge funds, and addresses the risks.

## 2. The Development of the Financial Markets

2.1. Appendix B gives a description of the growth in complexity of financial markets in the past decade. In particular it describes the growth of new instruments including Asset Backed Securities (ABSs) and Collateralised Debt Obligations (CDOs). Such financial instruments, often issued by Special Purpose Vehicles (SPVs), tend to be sold to investors in a series of tranches. The senior tranche has first claim on the assets and income of the SPV, has the lowest risk and the lowest return. The most junior tranche is paid last, is most at risk and receives the highest return. Increasingly, the instruments paid by such SPVs are bundled together with other assets into new SPVs which then issue obligations in tranches as before. Risk is thus transferred through the financial system as obligations are sold, re-packaged, sliced and sold again. In some cases, the process involves credit enhancements or further borrowing embedded within the instruments.

2.2. Many banks, insurance companies, pension funds and other investors have shown themselves willing to invest in these instruments. Hedge funds have been particularly enthusiastic investors. Hedge funds collect funds from high net worth individuals (HNWIs), pension funds, investment banks and other institutions.

2.3. The following characteristics of the financial markets as they have developed are relevant to this brief:

2.3.1. The ability of the originators of credit to transfer the risk of non payment to other market participants;

2.3.2. The increased resilience of the financial markets because of the wider dispersal of risk;

2.3.3. A high degree of complexity in the nature of debt and other obligations that exist between different market participants, many of which have both offsetting and reinforcing obligations to each other;

2.3.4. The difficulty in assessing the value of instruments that are the result of the process of packaging of assets, slicing into tranches and then re-selling, as described above (and which may not be traded sufficiently to have a readily available market value);

2.3.5. The difficulty in assessing the creditworthiness of counterparties which may have borrowed from multiple lenders and whose assets are complex and may include undisclosed embedded leverage.

## 3. Hedge Funds

3.1. There is no universally accepted definition of a hedge fund. However, they usually have the following main characteristics:

3.1.1. They are offered only to a restricted circle of investors and, as a result, are not subject to detailed regulation;

3.1.2. They adopt a wide range of investment strategies and invest in a similarly wide range of investment instruments, often enhancing risk and return by borrowing;

3.1.3. Investors have restricted redemption rights which permit them to withdraw funds only on certain dates and with minimum notice;

3.1.4. The investment managers are usually rewarded by a remuneration package that includes substantial performance fees typically amounting to 20% of the gains over benchmark levels.

3.2. A diagram of the typical organisation of a hedge fund is at Appendix C. Hedge funds will usually be registered in an offshore jurisdiction (in 67% of cases, in the Cayman Islands). The main reason for the offshore location is the absence of tax and the imposition of light touch regulation.

3.3. The fund will have an investment adviser and manager. Some 60% of such managers are in the US and 20% in the UK. The fund will also have a prime broker (whose definition is at Appendix D). There will be an administrator, again usually offshore, that prepares accounts and conducts valuations.

3.4. There are estimated to be approximately 9,000 hedge funds, managing $1.6 trillion ([73]) in assets, having grown from $200 billion in 1998 ([74]). In the EU, the assets under management are estimated at $325 billion, of which 80% are managed from within the UK ([75]). Although widely assumed to be capable of generating high returns, the chart at Appendix E ([76]) shows that, between 1994 and 2006, hedge funds achieved returns over the period similar to equities but with less volatility.

3.5. Hedge funds are active investors. Holding about 5% of assets under management, they account for between one third and one half of trading activity on the New York and London Stock Exchanges ([77]) as well as 15% of fixed income markets, 45% of emerging market bonds and 58% of trading in credit derivatives. The top 100 hedge funds account for 65% of the total hedge fund assets. The largest funds have assets of $20 - $30 billion each ([78]).

[73] Financial Stability Forum, "Update of the FSF report on highly leveraged institutions", May 2007
[74] Speech by Callum McCarthy, Chairman, UK Financial Services Authority, December 2006
[75] European Commission, "Report of the Alternative Investment Expert Group", July 2006
[76] Transcript of speech by Sir John Gieve, Deputy Governor of the Bank of England, 17 October 2006
[77] FSA Discussion Paper 05/04, "Hedge Funds: a discussion of risk and regulatory engagement", 2005
[78] FSF 2007 op.cit.

3.6. The chart at Appendix F shows that, in 1996, 62% of investors in hedge funds were individuals and 38% were institutions. In 2006, the proportion of individual investors had fallen to 42% and the proportion of institutional investors rose to 58%. Within the institutions, the share of funds of funds grew from 16% to 30%.

3.7. As a result of these developments, hedge funds now exhibit the following characteristics:

3.7.1. They are no longer the preserve of HNWIs but are increasingly used by pension funds and other institutions to diversify their portfolios (pension funds have on average 7% of the assets in hedge funds), with increasing exposure by retail investors through funds of funds;

3.7.2. Some individual funds have become very large and aggregate hedge fund trading is significant in a range of major markets;

3.7.3. As hedge fund activity has grown, some hedge fund strategies, which relied on using arbitrage to profit from small inefficiencies in the market, are no longer available and hedge funds have been forced to look for new sources of profit;

3.7.4. Hedge funds have shown a particular appetite for CDOs and other complex, sometimes highly geared, derivatives and have shown themselves willing to borrow to increase returns.

3.8. These characteristics create risks which can be categorised as affecting investor protection, market integrity and the stability of the financial system. These risks are discussed in the next three sections.

## 4. The Risks Posed by Hedge Funds to Investor Protection

### (a) The Retail Investor

4.1. The retail investor may have an inadequate appreciation of the risk of loss. The professional investor may be unable to assess the risk, notwithstanding having the knowledge and experience to do so, because of an inability to rely on the disclosures by the hedge fund. This in turn could be because of weak corporate governance in the fund management; poor valuation policies and procedures; insufficiently managed conflicts of interest, and undisclosed favourable redemption rights granted to certain investors. These risks are discussed below.

4.2. In respect of retail investors, there are two possible reasons why it would be inappropriate to accept the enhanced risk associated with hedge funds. Firstly, some investors may not be able to invest in hedge funds, maintain a well diversified portfolio and be in a position to absorb losses in riskier hedge fund investments. Secondly, the retail investor may not have the experience or knowledge to appreciate the risk.

4.3. The main regulatory intervention, adopted by most countries, is to prohibit or limit the marketing of hedge funds to retail investors. Marketing may only be undertaken to investors who meet certain criteria such as having a minimum portfolio size, experience of regular and frequent investment activity, or professional expertise ([79]). Some regulatory

[79] Similar tests are included in Paragraph 2 of the Prospectus Directive 2003.

authorities impose a minimum investment size in hedge funds. Intermediaries responsible for marketing such funds are subject to conduct of business regulation.

4.4. This approach is subject to disadvantages. Some hedge fund strategies are appropriate for some retail investors provided they are part of a balanced and diversified portfolio. The duty owed by an intermediary to a retail client is very different from the duty to an institutional client. However, there are many institutions and individuals between the two extremes for whom the position is less clear. Binary qualifying criteria are insufficient. Minimum investment requirements can have the perverse effect of forcing certain investors to place too high a proportion of their portfolio in a hedge fund in order to meet the minimum threshold.

4.5. The optimal solution should be some relaxation of the prohibition of marketing hedge funds to retail investors, while emphasising the duty of an intermediary to assess the ability of a client, on a case by case basis, to understand and absorb the risks faced.

4.6. Many countries within the EU are allowing retail investors to gain exposure to hedge funds through funds of funds. Regulators will need to impose certain conditions on managers of such funds so that they avoid excessive concentration, monitor the competence and investment strategies of the funds and provide full disclosure of the risks to the investor.

**(b) Professional and Institutional Investors**

4.7. Professional and institutional investors should be expected to safeguard their own interests. However, certain standards need to be imposed on hedge funds to enable investors to make appropriate judgements.

4.8. Hedge funds may not have the appropriate **corporate governance** arrangements. There may be no proper segregation of duties between those responsible for investment, for valuation and for other back office activity. There may be inadequate controls to enforce risk management practices, or even to ensure that prospectuses are accurate and implemented.

4.9. Hedge funds are usually domiciled offshore. It is difficult for such offshore centres to impose corporate governance requirements without prompting a flight to less fastidious centres. An alternative approach for EU regulators is to impose corporate governance requirements at second hand through their regulatory jurisdiction over prime brokers, investment managers and custodians. A regulator could insist on EU regulated institutions conducting due diligence in hedge funds and monitoring their corporate governance as well as arrangements for managing conflicts of interest and valuation (on which there is further discussion below).

4.10. Such an approach suffers from the drawback that prime broking activity for hedge funds is not, of itself, a regulated activity – although the institutions that offer such services are invariably conducting other activities, such as the provision of credit or stock lending that are regulated. The UK FSA has considered making prime broker activity a regulated or notifiable activity of itself but has concluded that it is unnecessary (and would, in any case, be difficult in the absence of any accepted definition of a hedge fund). This may well be the correct conclusion but there remains a danger that the regulatory reach of the EU regulators may not always be sufficient.

4.11. Hedge funds have potential internal **conflicts of interest.** One example of this relates to the **valuation** of assets. Investors cannot calculate such values for themselves and must be able to rely on valuations provided by the hedge funds. However, the valuation of many instruments is difficult because they do not have a ready market. Where the instruments are complex, there may be a great reliance on models and judgement. According to the Alternative Investment Managers Association (AIMA) ([80]), approximately 23% of hedge fund assets are in hard-to-value instruments. There is a clear incentive on the manager to make judgements on valuations that result in a level of apparent asset growth that will boost fees.

4.12. Both the International Organisation of Securities Commissions (IOSCO) and the AIMA have drafted principles of valuation designed to introduce a degree of independence and transparency in the valuation of hedge funds. The IOSCO draft principles are at Appendix G. Both sets of principles avoid insisting on an independent third party valuation because there are many circumstances when such a valuation would be less competent than that made by the fund itself.

However, they insist on properly documented valuation procedures, the oversight of the fund governing body, a procedure for handling difficult cases and segregation of duties within the manager, when the manager produces valuations.

4.13. To be effective, such principles would have to be imposed by a hedge fund's offshore regulator. The solution may have to be the imposition of such principles second hand through the institutions in the EU as suggested in paragraph 4.9.

4.14. As noted in paragraph 3.1.3, most investors in hedge funds have limited **redemption rights.** However, hedge fund managers sometimes allow certain major investors more flexible arrangements. By giving superior rights to certain investors, hedge funds are potentially increasing the risk to other investors without their knowledge. Regulations should insist that special redemption conditions for favoured investors should be disclosed to investors.

## 5. Risks to Market Integrity

5.1. Hedge funds may engage in market abuse. While this is true of all market participants, there are certain features of hedge funds that, according to some commentators, increase the likelihood of such activity. These features are innovative investment strategies, shareholder activism, and inadequate internal controls.

5.2. Some hedge fund strategies involve taking positions in anticipation of market or global events. It is inevitable that hedge funds will seek information to improve the likelihood of success. It is possible that they will gain access to inside information, whether knowingly or not. This risk may be exacerbated where the hedge funds play a significant role in shareholder meetings. Keen shareholder interest in a company's activities is good. However, where the aim of the hedge fund is designed to bring about the very event necessary to realise a profit, the actions may be market abuse.

[80] AIMA, "Guide to Sound Practices for Hedge Fund Valuation", March 2007

5.3. For regulated institutions, the internal policies and controls, competence and training of individuals and arrangements for segregation of functions are subject to oversight by regulators. This is not the case in respect of hedge funds themselves, whose controls may consequently fall short of best practice, although the prime brokers, investment managers and other supporting institutions based in the EU will be subject to such oversight.

5.4. It is easy to exaggerate the risks of market abuse. The hedge fund can only act through the prime broker and investment manager, each of whom is subject to regulation. Institutions and investors will be pressing hedge funds for improved controls for their own protection. It is probably safe to take the view that the existing arrangements for preventing market abuse – legal prohibitions on the market as a whole, with oversight of regulated institutions - are sufficient to deal with any additional risk of market abuse by hedge funds. However, continual vigilance remains necessary.

## 6. Systemic Risks

6.1. The Counterparty Risk Management Policy Group (CRMPG) ([81]) – a private sector body - distinguishes between financial disturbances and financial shocks. Shocks are said to have occurred where market turbulence affects perceptions of the creditworthiness of major financial institutions, asset price falls and reduced liquidity in certain instruments. Such changes prompt actions which can exacerbate asset price falls, creditworthiness and liquidity, causing a downward spiral. In some circumstances, the subsequent pressure on banks can result in less credit being available to the real economy, resulting in lower growth. Shocks of that kind are relatively rare but very difficult to predict.

6.2. The Working Group on Highly Leveraged Institutions (HLI or hedge funds) of the Financial Stability Forum (FSF) ([82]) identified five areas for action in mitigating the systemic consequences of hedge funds: stronger counterparty risk management; stronger risk management by hedge funds; enhanced regulatory oversight of credit providers; a firmer market infrastructure; and enhanced public disclosure by HLIs. The following paragraphs examine developments in these fields.

6.3. The CRMPG and the FSF agree that there have been strengthened **risk management practices by prime brokers and other key financial institutions** since the collapse of the hedge fund Long Term Capital Management (LTCM) in 1998. For example, there have been improvements in institutions' ability to assess their aggregate exposures. The UK FSA survey of prime brokers found average collateral at 100% of relevant exposures.

6.4. The FSF also states that there have been improvements in **hedge funds own risk management practices**. The UK FSA's survey of prime brokers suggests that the leverage of hedge funds is, on average, less than 3:1, as compared with LTCM's 50:1 at the time of its collapse. The UK FSA has also suggested that it is not probable that the actions of an individual hedge fund, given their present size, will have systemic consequences, although such consequences could follow from failures of clusters of big funds ([83]). The FSF, in its

[81] CRMPG, "Towards Greater Financial Stability: A Private Sector Perspective", July 2005
[82] Financial Stability Forum, "Report of the Working Group on Highly Leveraged Institutions", April 2000
[83] FSA Discussion paper 05/04, "Hedge Funds, a discussion of risk and regulatory engagement", June 2005

update to its 2000 report ([84]), also concluded that there had been improvements to hedge funds' own risk management practices.

6.5. Some progress has been made in respect of **market infrastructure**, such as clearing and settlement. The FSF noted substantial progress in resolving the backlog of trade confirmations and the elimination of the practice of assigning contracts without the consent of one of the parties. This has enhanced the clearing and settlement process for "over the counter" (OTC) derivatives, especially credit derivatives. This work was extended to other derivative products, especially equity derivatives.

The FSF notes with approval the decision by the Depository Trust and Clearing Corporation to build an industry trade information warehouse and support infrastructure to standardize and automate processing of credit derivatives. Exchange traded derivative products may also reduce operational risk.

6.6. The International Swaps and Derivatives Association (ISDA) has drafted a protocol for an auction for the settlement of credit default swaps in the event of default. The protocol was drawn up in respect of the Dura Operating Corp, a U.S. company that filed for bankruptcy on October 30, 2006. Dura was included in various credit derivative indices, as well as various credit derivative transaction types. The protocol offered market participants an efficient way to address the settlement issues relating to credit derivative transactions referencing Dura. The protocol will offer institutions the ability to amend their documentation for various credit derivatives transactions in order to use an auction to determine the final price for certain Dura bonds. Although a voluntary process, it gives greater certainty than a series of bilateral deals. This kind of initiative is continuing to improve the public infrastructure.

6.7. Notwithstanding these positive developments, the changes in financial markets described in Section 2 may have had the effect of creating new threats to the financial system. For example, the ability of banks to shed the risk associated with normal lending (through ABSs) may have the effect of reducing their focus on the ability of the borrower to repay. The innovation in financial instruments and the increased willingness of hedge funds and other institutions to accept financial risk that has been packaged through such instruments, means that it is very difficult to determine where risk lies in the financial system and whether any institutions are likely to suffer credit problems. Competition amongst prime brokers for the business of hedge funds may have reduced margin and collateral requirements.

6.8. Many financial instruments, in which investments are made by hedge funds, have limited liquidity in normal conditions. It is difficult to judge what may happen to that liquidity in stress conditions. Similarly, instruments whose performance characteristics appear to be negatively correlated (and therefore contribute to portfoilio diversification) may prove to be positively correlated in stress conditions. Hedge funds relying on models for dynamic hedging strategies may, at times of stress, find that they are all seeking to sell (or buy) the same instruments at the same time.

6.9. The FSF has drawn attention to weaknesses in the pricing and valuation of illiquid securities; the analysis of market correlations; the lack of stress testing and correlation

[84] FSF 2007 op cit

limits; over reliance on value at risk models; inadequate attention to liquidity; insufficient electronic platforms and non standard documentation.

6.10. The CRMPG points out that there remains a need for a range of risk management techniques. It is not possible to rely on models to reduce risk exposure to a single number or index. Common sense and professional judgement, combined with rigorous stress testing, remain essential.

6.11. Hedge funds have proved particularly reluctant to adopt systems of public **disclosure**, perhaps because of the commercial significance of their trading strategies. This problem is exacerbated by the desire of hedge funds to maintain flexibility such that prospectuses state only very general investment objectives and investors may not be aware what strategies are actually being followed. There is little scope for imposing disclosure requirements on hedge funds because their domicile is offshore. However, the UK FSA concludes that there has been better disclosure to investors and counterparties. Even so, the recent market turbulence suggests that there remains insufficient transparency about hedge fund exposures even amongst counterparties and investors. Credit assessment agencies have also been criticised for failing to assess the risks taken on by major institutions and this could also be due to inadequate transparency.

The kind of disclosure that would be helpful for both counterparties and credit reference agencies would concern fee structure, redemption policy, valuation, investment strategy, administration (including outsourcing) and results reporting. In the latter context, disclosure to investors and counterparties is essential. Disclosures to regulators may be helpful in focussing regulatory priorities but could never be rapid or granular enough to allow regulators to monitor overall exposures – indeed, any attempt to do so would run the risk of moral hazard.

6.12. As the FSF has pointed out, stronger **regulatory oversight** remains essential. However, it remains difficult for regulators in the EU to impose better risk management practices and disclosure because the hedge funds are domiciled offshore. Future progress may well come through pressure from institutional investors, supported by due diligence from prime brokers and other counterparties (prompted by firmer action and better data gathering by regulatory authorities). Harmonised accounting standards would also be an important step.

## 7. Conclusion

7.1. At the time of writing (September 2007), it is difficult to make a definitive assessment of the risks associated with hedge funds. Markets have developed over the past decade in a way that increases the system's resilience but has also created new risks, particularly through the complexity of some of the new instruments that have been developed. The market turbulence of 2007 has resulted in a number of those risks being realised.

7.2. Hedge funds add to complexity and hence the risks because of their multi jurisdictional organisation and unregulated status, including their normal legal domicile offshore.

The main risks relate to investor protection, market integrity and systemic contagion. Investor protection will be made more difficult as a result of the pressures to relax the blanket prohibition on access by retail investors to the hedge fund market. Market abuse should continue to be tackled through regulatory oversight and enforcement, with particular focus on corporate governance and controls in regulated institutions. Systemic issues will remain a key focus, with a need for better disclosure by hedge funds of their overall risk position, improved risk management by hedge funds, stronger counterparty risk management by prime brokers and other key financial institutions, enhanced public infrastructure, and continued private sector development of standard documentation and codes of best practice, reinforced by effective regulation.

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## Appendix A

## Briefing Request

The Committee on Economic and Monetary Affairs has requested a briefing paper on the subject of Risk Issues related to Hedge Funds which should include answers to the following:

In this briefing paper we would like our experts to analyse risk as a broader concept: in case of failure for the investor the hedge fund can find itself with risk management issues. It seems therefore interesting to have illustrated both sides of the market, the investors' perspective as well as the relation between hedge funds and their counterparties:

a) Investor protection from a risk management point of view: how can the sophistication of investors be estimated? (Can he judge the correctness of the Net Asset Value (NAV) calculation (should there be an industry standard for NAV?)). Regarding pricing models and correctness of prices for illiquid instruments, what is the investor's protection? Can he assess what the underlying risks are? Who oversees the correctness of the offering documentation? Is the 3rd party Administrator sufficient for investor protection? Do you think that hedge fund investment should be restricted to certain kinds of investors only? If so, could you suggest qualification criteria for consumers capable to invest? Should there be standards as to transparency of fee structures and investment strategies of hedge funds?

b) Risk management issues for the hedge fund regarding the hedge fund and its market counterparties: Currently there is only one calculation need for all Value at Risk (VAR) for a firm's position, however counterparty credit risk is different for different partners and time horizons; are the current measures to deal with counterparty credit risk sufficient? Regarding operational risk, are the industry proposals to deal with Over the Counter (OTC) derivatives and complex structures sufficient regarding their clearing and settlement? Does, in your opinion, the proposal to use an auction to deal with Credit Default Swaps in case of market failures work? Is the idea to create a warehouse of industry trade information in order to standardise automatic processing of credit derivatives an idea that could be used in other OTC derivatives?

# Appendix B

## Growth in Complexity of Financial Markets

B1. Risk Spreading in Global Financial Markets

1.1. The purpose of financial markets is to match the terms on which borrowers wish to obtain finance and lenders wish to advance finance. For example, borrowers are likely to want:

1.1.1. to receive funds that will not be withdrawn arbitrarily but which could be repaid whenever the borrower wishes;

1.1.2. to seek funds at low cost, which will not suddenly rise unexpectedly in the future but which could benefit from future reductions in the cost of finance;

1.1.3. to have a predictable stream of payments which, so far as possible, matches the borrower's expected stream of income in terms of currency and timing.

1.2. On the other hand, lenders are likely to want:

1.2.1. to secure a long term source of income;

1.2.2. to have access to funds either when a predicted event occurs (such as the need to finance investment or make a consumer purchase) or when an unpredicted event occurs (such as a loss or catastrophe against which the saver is insuring);

1.2.3. to receive income that will not reduce in the future but which does not prevent them from benefiting from future increases in market yields;

1.2.4. to receive a steady stream of income but one that matches their other outgoings in terms of currency and timing as far as possible.

1.3. Financial markets have grown adept at finding innovative ways of matching these mutually contradictory demands. The main ways in which this has been done have been:

1.3.1. for intermediaries (such as banks or insurance companies) to provide finance on terms that differ from the terms on which they receive finance (such institutions manage the risk thus created through diversification, strict credit control, sharing risks with other intermediaries and maintaining reserves of capital, of which at least some can be readily accessed if necessary);

1.3.2. the growth of instruments for supplying finance (particularly bonds and equity) and mechanisms for trading these instruments both through formal exchanges and directly (over the counter) and often using intermediaries such as securities businesses or investment banks;

1.3.3. the growth of derivative instruments that provide means of altering the risk and return profiles of underlying instruments.

1.4. All of these are mechanisms for transferring risk and providing opportunities for investment. They have been used in some form or another since financial markets first began. Moreover, there have also been market participants that have used the instruments to provide insurance against certain adverse events in the financial markets. There have been others who have used them to achieve returns not normally available through holding more traditional instruments. Other market participants have sought to speculate – ie to take a view about likely future events and to back that view by purchasing instruments whose value will grow if the speculator's view is correct. Such speculators may also seek to increase the return they could get by borrowing so as to increase the quantity of assets in their possession that would react favourably if their predictions about the future were correct. Others have been prepared to take the risk of supporting such speculators through lending or by supplying finance in return for a share of profits. Such supporters have been willing to do so, either because of the track record of the speculators' predictions, or because the speculators are likely to be capable of repaying finance even if the predictions are wrong.

B2. <u>The Growth of Complex Instruments</u>

2.1. The past ten years has seen a rapid expansion in more sophisticated and complex methods of transferring risk. The description that follows will divide the various techniques into those which involve an agreement with a specified counterparty – and which therefore carry the risk that the counterparty might default on its obligations – and those which remove such counterparty risks. Those that have continuing counterparty risk are described as "unfunded" and those that have removed counterparty risk are known as "funded".

2.2. Unfunded risk transfer techniques involve a promise from a counterparty that a payment or stream of payments is made in return for a promise of a stream of payments on another basis (such as floating rate interest payments, or alternatively a specified event, or an alternative "reference event"). Examples of this kind of payment include:

2.2.1. Interest rate swaps where a stream of fixed interest payments are swapped with a stream of floating rate interest payments;

2.2.2. Other derivatives, where payments are made based on exchange rates, commodity prices, bond prices and equity indices;

2.2.3. Reinsurance contracts;

2.2.4. Credit default swaps (CDS), in which one counterparty acquires the credit risk associated with a specific reference entity over a fixed term in exchange for a fee from the other counterparty;

2.2.5. Total return swaps whereby one counterparty pays an equivalent to the total return received from a reference index (such as an equity index like the FTSE 100), while the other pays a fixed income stream based on a reference index such as LIBOR;

2.2.6. Catastrophe swaps, whereby the investor receives a stream of payments in return for a promise to pay out in the event of specified catastrophic events.

2.3. For each of these techniques, the original risk taker retains the risk. If the contracts work as intended, the risk will be offset by the counterparty. However, the original risk taker depends on the ability of the counterparty to meet its obligations and therefore retains counterparty credit risk. There may also be legal risk if the contract does not follow a standardized form.

B3. <u>Asset Backed Securities and Collateralised Debt Obligations</u>

3.1. In the case of funded risk transfer instruments, the original risk taker has no ongoing counterparty risk. The funds necessary to pay for the reference event are provided at the beginning of the arrangement so that they are always available to meet any obligations that may be due. The person or institution to which the risk is transferred is exposed if the underlying reference event occurs.

3.2. In addition, funded risk transfer often involves structured transactions. One of the most significant forms of funded structured risk transfer is the asset backed security (ABS). A typical form of asset backed security might operate as follows:

3.2.1. A company is established (often known as a special purpose vehicle or SPV), owned by a trust, which is separate from the originator;

3.2.2. The SPV issues bonds to investors and uses the proceeds to buy from the originator the rights to a stream of payments – which could be, for example, the ticket receipts from a football stadium, mortgage repayments, credit card debts or any other payments;

3.2.3. The originator uses the funds to build the football stadium (as in the example above), lend to mortgagors or to credit card holders;

3.2.4. The SPV uses the stream of payments to which it has bought the rights to pay any premiums to a credit enhancer (if there is one), interest to the bond holders and, eventually, to repay the principal on the bonds.

3.3. The key feature of an ABS is that there is no counterparty risk for the original risk taker, whether it be the sponsor of the football stadium, the institution granting mortgages or supplying credit card finance (in the examples given above). The bond holders (or any others supplying finance to the SPV) bear the risk that ticket receipts may be below expectations, that mortgagors will pay back mortgages early, late, or not at all, or that credit card holders default. In the context of the examples given above, the originator receives the funds for the stadium construction, the mortgage loans or credit card debt and is no longer at risk. The bonds are issued on the strength, primarily, of the security of the assets (the stadium receipts, the mortgages or credit card debt). Investors do not have to concern themselves with the creditworthiness of the original stadium builder or issuer of mortgages or loans because the credit worthiness of the SPV is unconnected with the originator. The SPV may well be located offshore perhaps because of the tax treatment.

3.4. In practice, many instruments have more complex characteristics. In particular, a common feature is that the bonds will be sliced and issued in tranches. The owners of the first slice, or most senior tranche, will receive their interest payments and principal first. They are the most secure and will receive the more modest returns. The owners of the next or mezzanine tranche(s) will receive their returns only when the senior tranche obligations have been satisfied. The owners of the most junior tranche will be paid last. The latter tranche bears the highest risk of loss and gains the best return.

3.5. ABSs usually have homogeneous assets and a substantial number of obligors. In the examples given above, the assets giving rise to a stream of payments came from a single originator (the stadium financier, the mortgage lender, or the credit card supplier). However, there is no reason why this should be so and the assets could be pooled from multiple originators. Clearly the greater the variety of assets packaged together into an SPV, the more difficult the assessment of quality and the pricing of the bonds it issues. There is no reason why the bonds issued by an SPV should not be packaged with those of other SPVs into a further SPV which would then issue tranches or slices of debt in the same manner.

3.6. Collateralized debt obligations (CDO) tend to have more heterogeneous assets. The CDO is a structured instrument, on similar lines to an ABS that is created by pooling a number of assets with particular risk characteristics (such as a portfolio of bank loans). As with ABSs, the bonds that are issued will usually be in tranches with varying risk characteristics. CDOs can be financed through bonds (collateralized bond obligations) or loans (collateralized loan obligations).

3.7. It is not necessary for CDOs to hold the assets giving rise to the stream of payments. They can hold other assets with comparable risk / return characteristics. Such CDOs are then called synthetic CDOs. These are a form of credit derivative. In other respects, they operate like ABSs and CDOs.

3.8. Commercial banks, investment banks, securities businesses, insurance companies, pension funds and other investors have shown themselves willing to invest in CDOs.

B4. <u>Hedge Funds</u>

4.1. One developing form of investor has been the hedge fund. This is a generic term that encompasses mutual funds with many different investment strategies – some of which involve securing protection (hedges) against certain events but others of which involve more speculative approaches. Hedge funds have shown an increasing appetite for the kinds of instruments described above.

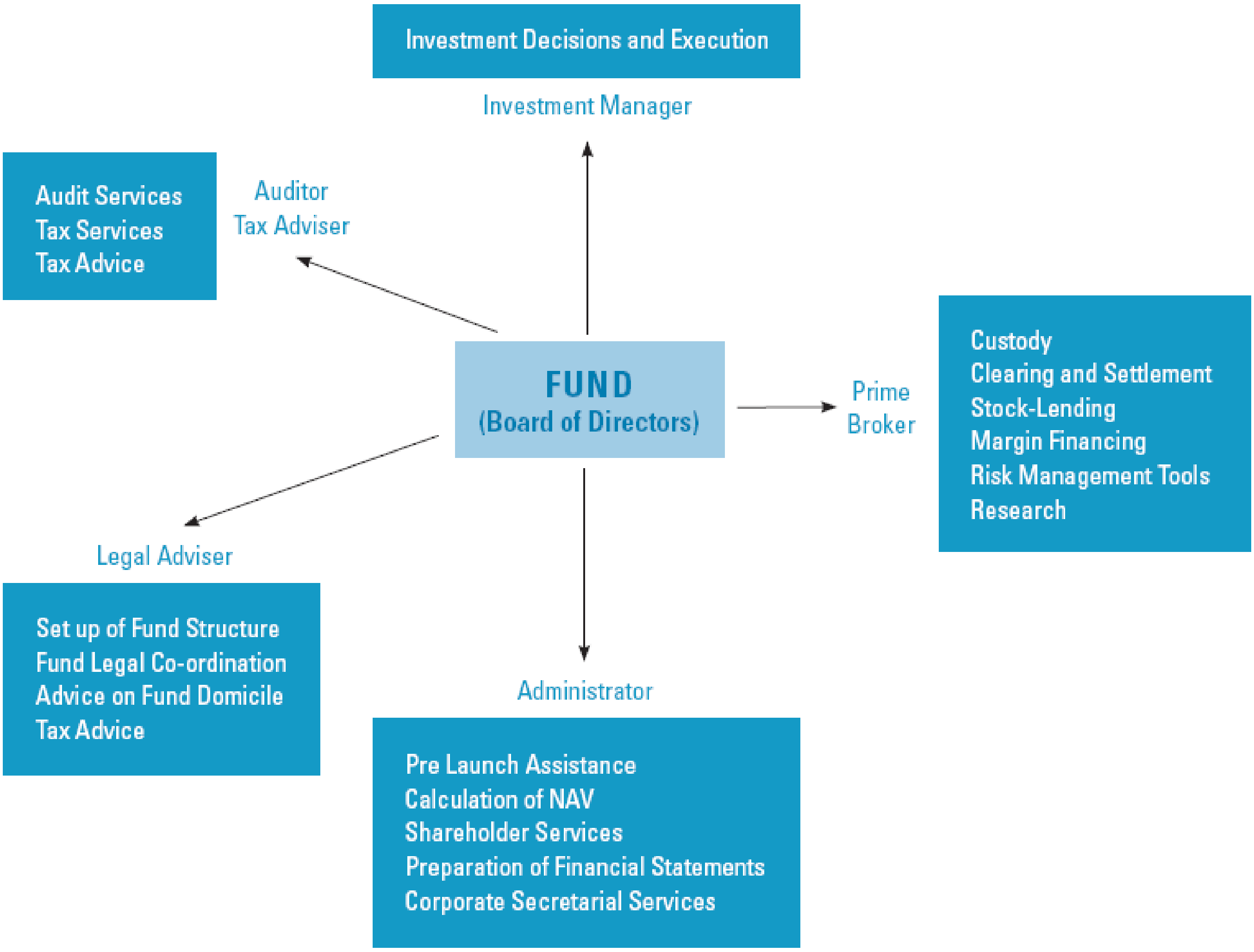
4.2. Hedge funds have obtained their funds by issuing equity and debt. Many institutions, including banks, have lent to hedge funds. Most of the major banks have established their own hedge funds, in which they are major investors and to which they have made loans. The terms on which hedge funds have raised funds have also varied considerably, with some long term funds in forms equivalent to equity investment and, at the other end of the range, short term (perhaps three month) loans, which they seek repeatedly to renew (roll over).

4.3. All of the institutions that are described above engage in risk assessment and risk mitigation. Risks are managed using complex models and mitigated in a variety of ways. Where the nature of the risks faced by an institution (whether a hedge fund, bank or anyone else) are constantly changing, with changes in the current prices of assets, the institutions engage in dynamic hedging. This involves making frequent trades of instruments designed to produce a satisfactory risk profile for a group of assets if not the entire institution. In many cases, these trades are prompted by models and are all but automatic responses to market events.

4.4. Almost all of the investors in these markets are professionals and mostly institutions. Some high net worth investors make direct investments. In the very recent past, it has been possible for retail investors to become involved indirectly through the creation of "funds of funds" – mutual funds that invest in a portfolio of hedge funds. Retail investors are also indirectly involved through their pension funds, although the proportion of pension fund assets invested in hedge funds remains relatively low.

## Appendix C

## Hedge Fund Structure Diagram




Source: Alternative Investment Managers Association

## Appendix D

## The Role of a Prime Broker

The business advantage to a hedge fund of using a Prime Broker is that the Prime Broker provides a centralised securities clearing facility for the hedge fund, and the hedge fund's collateral requirements are netted across all deals handled by the Prime Broker. The Prime Broker benefits by earning fees ("spreads") on financing the client's long and short cash and security positions, and by charging, in some cases, fees for clearing and/or other services.

The following "core services" are typically bundled into the Prime Brokerage package:

- **Global custody** (including clearing, custody, and asset servicing)
- **Securities lending**
- **Financing** (to facilitate leverage of client assets)
- **Customized Technology** (provide hedge fund managers with portfolio reporting needed to effectively manage money)
- **Operational Support** (prime brokers act as a hedge fund's primary operations contact with all other broker dealers)

In addition, certain prime brokers provide additional "value-added" services, which may include some or all of the following:

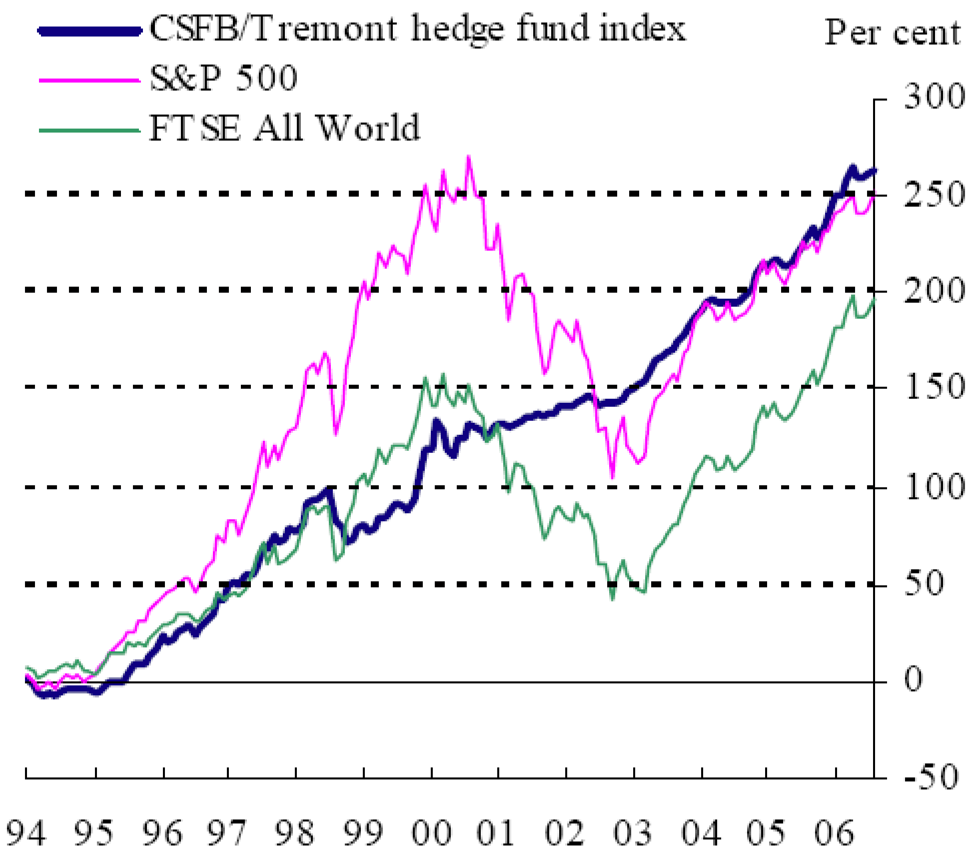
- Capital Introduction - A process whereby the prime broker attempts to introduce its hedge fund clients to qualified hedge fund investors who have an interest in exploring new opportunities to make hedge fund investments.
- Office Space Leasing and Servicing - Certain prime brokers lease commercial **real estate**, and then sublease blocks of space to hedge fund tenants. These prime brokers typically provide a suite of on-site services for clients who utilise their space.
- Risk Management Advisory Services - The provision of risk analytic technology, sometimes supplemented by consulting by senior risk professionals.

Consulting Services - A range of consulting / advisory services, typically provided to "start-up" hedge funds, and focused on issues associated with regulatory establishment requirements in the jurisdiction where the hedge fund manager will be resident, as well as in the jurisdiction(s) where the fund itself will be domiciled.

Source: Wikipedia (http://www.wikipedia.org)

## Appendix E

### The Performance of Hedge Funds

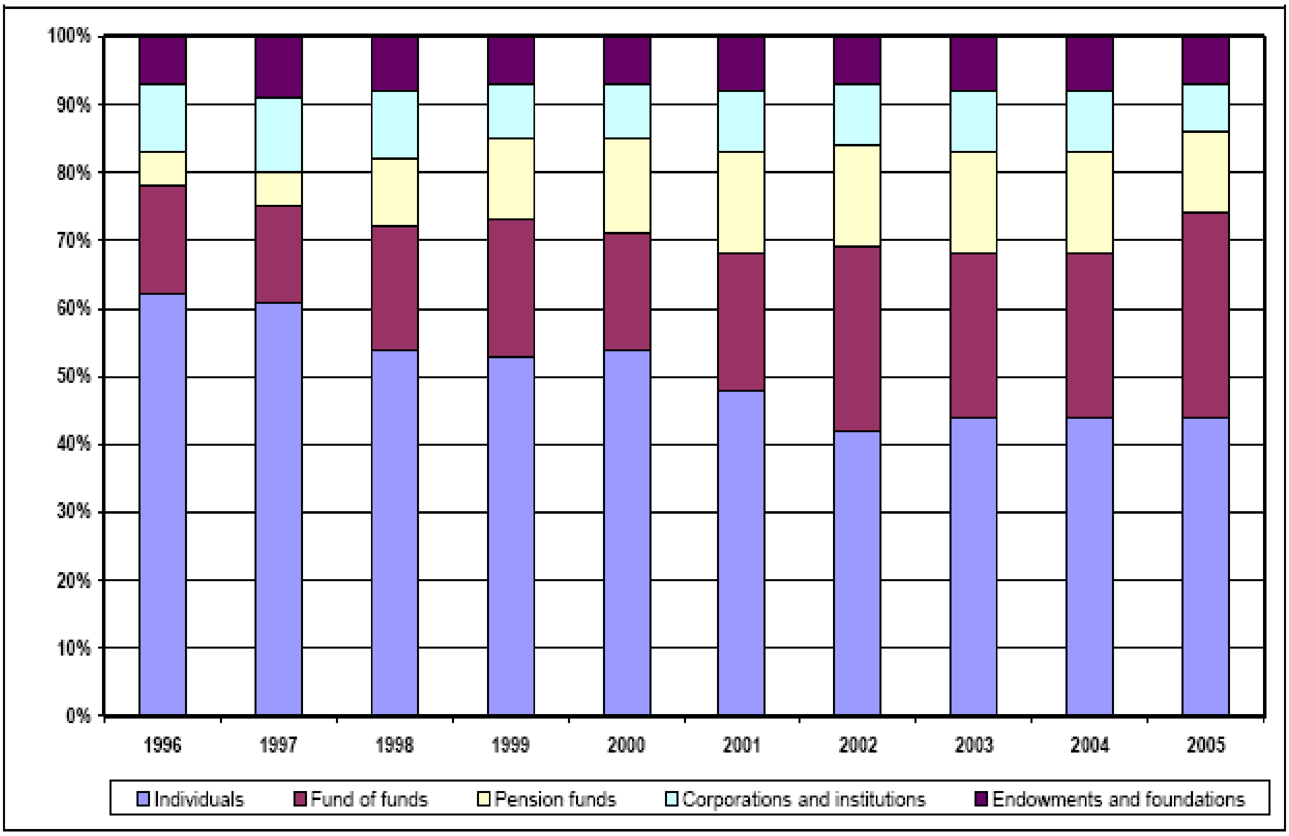



Sources: CSFB/Tremont, Datastream and Bank calculations

Extracted from transcript of speech by Sir John Gieve, Deputy Governor of the Bank of England, "Hedge Funds and Financial Stability", 17 October 2006.

## Appendix F

## Sources of Investment in Hedge Funds




*Source:* IFSL estimates based on EuroHedge and Hennessee Group data.

Extracted from "Hedge Funds: Heading for a Regulatory Hard Landing", Charles Gottleib, published by the European Capital Markets Institute, April 2007.

## Appendix G

## IOSCO Draft Principles for Hedge Fund Valuation

*1. Comprehensive, documented policies and procedures should be established for the valuation of financial instruments held or employed by a hedge fund.*

2. *The policies should identify the methodologies that will be used for valuing all of the financial instruments held or employed by the hedge fund.*

*3. The financial instruments held or employed by hedge funds should be consistently valued according to the policies and procedures.*

*4. The policies and procedures should be reviewed periodically to seek to ensure their continued appropriateness.*

*5. The Governing Body should seek to ensure that an appropriately high level of independence is brought to bear in the application of the policies and procedures and whenever they are reviewed.*

*6. The policies should seek to ensure that an appropriate level of independent review is undertaken of the individual values that are generated by the policies and procedures and, in particular, of any valuation that is influenced by the Manager.*

*7. A hedge fund's policies and procedures should describe the process for handling and documenting price overrides, including the review of price overrides by an Independent Party.*

*8. The Governing Body should conduct initial and periodic due diligence on third parties that are appointed to perform valuation services.*

*9. The arrangements in place for the valuation of the hedge fund's investment portfolio should be transparent to investors.*

# Risk issues relating to hedge funds

**Briefing paper prepared as a Member of a Panel of Experts in Financial Services for the Financial Experts Rountable of the Committee on Economic and Monetary Affairs of the European Parliament**

**September 2007**

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## 1. Objectives, chances and risks

Hedge funds first used to serve the purpose of hedging against market fluctuations; assets being at risk were protected by hedging (especially by strategies as short selling and leverage). Bit by bit new strategies and techniques were developed and it was speculated in new financial instruments with the objective of profit maximisation, especially in deriva-tives, but also in stock, bond, currency, commodity and other markets. The intention is to gather a lot of capital and to make profits in rising as well as in falling markets.

Hedge funds are of the fastest growing asset products. Their number and the assessed capital can however only be estimated. At the end of 2006 about 1,6 trillion US-$ were invested in hedge funds (concerning International Financial Services London). The number of funds added up to about 9.000; the largest hundred funds aggregated to 65% of all the invested capital. According to Reuters, investors poured 41,1 billion US-$ into hedge funds in the second quarter of 2007 which, combined with performance gains, swelled industry assets to an estimated 1,67 trillion US-$ by the end of June 2007.

In contrast to German hedge funds (see 4. below) Anglo-Saxon hedge funds are compa-nies where investors buy shares from. Often an offshore tax shelter is the registered office of such a hedge fund whose managers however are operating from a financial centre (55% of hedge funds had such an offshore registration; out of all offshore funds capital 63% were on the Caiman Islands).

The reasons for going offshore are linked to taxation and to less extensive restrictions of the national capital market legislation.  Funds managers prefer the USA (63% of the worldwide market volume in 2006); concerning emporiums New York is leading (36% of the worldwide assets) followed by London (21%, Europe 24% in total).

There are risks about hedge funds that must not be neglected:

- As the main objective is maximising the return the safeguarding of the funds could be neglected.
- Hedge funds have got the potential to dominate specific financial markets or sub-segments almost completely (like credit derivatives or non performing loans). Consequences from hedge funds being in trouble can then be enormous. Financial market stability could suffer.
- Short term investments of hedge funds can run against the interest of a sustainable corporate policy (see recent examples in Germany like CEWEColor).

- In order to receive credit hedge funds have to give information to banks; there is however no reconciliation if, for example, the same loan securities have been used in relation to not only one bank but to a number.
- The intransparency of hedge funds creates problems with investor protection and supervision
    - because of missing regulation there is concern for growing insider trade,
    - via institutional investors like pension funds or insurance companies consumers and retail investors would be affected by the collapse of a hedge funds,
    - if trade of derivatives is done more and more over the counter supervisory authorities cannot assess market and credit risk developments.
- Investment strategies of hedge funds are often not known as they have a lot of freedom regarding these strategies (from risk-averse to highly risky), products and risk allocation, and they use leverage effects to different degrees.

All these risks in combination with the US-subprime and crisis – which is not only a US crisis no more – and the handling of non performing loans being securitised with the help of hedge funds and private equity has led to a big uncertainty and confusion not only within financial markets as such, but also among normal consumers and small investors who hardly ever invest in hedge funds but fear that their investments, especially that of a long-term nature are endangered because of chain reactions in the markets that hit their bank, their pension funds, their insurance company. These fears have to be taken very earnest even if experts may hold the real threats behind all not that grave.

## 2. Consumers and small investors as investors in hedge funds?

Consumers and small investors are no direct investors in hedge funds. However if hedge funds get into a precarious situation banks, pension funds and whole financial markets could suffer. With this also consumers, small investors and tax payers would suffer.

## 3. International financial crisis: involvement of hedge funds (example)

Two hedge funds of the US-investment bank Bear Stearns „High Grade Structured Credit Strategies Enhanced Leverage Fund“ und „High Grade Structured Strategies Fund” had speculated on the US property and mortgage market with about 20 billion US-$. It was the wrong strategy to „bet“ on rising prices. Banks managing such funds seldom invest their own capital but try to get big investors in the boat who provide the money for “gambling”. The two funds reported losses of up to 18% in June 2007. The investors that had pinned their hopes on gains became nervous and claimed their money. The Merrill Lynch invest-ment bankers took care for the final breakdown not conceding a moratorium but to secure a valuable and well protected part of the funds assets in order to auction it and thus limit the own losses.

Everyone knows the case of Long Term Capital Management (LTCM). From 7 billion US-$ equity capital plus credits of 200 billion US-$ about 600 million US-$ equity capital were left at the end. Federal Reserve and commercial banks had to help out in an unprece-dented rescue operation.

## 4. Global economics and dimensions including G8-developments

In March 2007 the president of the German financial supervisory authority BaFin, Jochen Sanio, announced that the precarious situation of just one big hedge funds could have serious effects on the worldwide financial system; the hedge funds Amaranth alone had lost about 5 billion US-$ within a few days in autumn 2006 on speculations in rising gas prices.

On the meeting of the G7 finance ministers in February 2007 a common declaration was agreed upon: closer future control of hedge funds with the objective of assessing possible risks and thus preventing worldwide financial crises and domino effects. A voluntary code of conduct and a kind of seal of approval for funds by independent rating agencies were discussed.

On the Economic and Financial Affairs Council in May 2007 the Ministers adopted conclusions on Hedge Funds. First the Council emphasised the importance of hedge funds and acknowledged that they have contributed significantly to the efficiency of the finan-cial system. On the other hand the potential systemic and operational risks associated with their activities were stressed. The indirect supervision approach was praised. An adequate assessment of potential risks was reminded and an examination whether the current level of transparency of hedge funds activities was appropriate. All relevant institutions were encouraged to develop and apply an analytical and evidence-based approach in the proper monitoring of the financial stability impact. The Council noted its concerns regarding increased retail distribution of hedge funds in some Member States and recognised the need to ensure adequate investor protection. The European Commission was invited to produce a report and to take all relevant regulatory and market developments into account, in assessing the case for and against providing a Single Market framework for the retail-oriented non-harmonised fund industry funds of hedge funds.

On May 18-19, 2007 the G8 finance ministers met in Potsdam. It was the objecttive of the German presidency to agree on a code of conduct what failed. A soft declaration was published instead directed to supervisory authorities, hedge funds investors and partners and the hedge funds industry itself. First industry was asked to commit to ambitious standards/benchmarks concerning risk management of the funds, principles of valuating their assets and regulate the quality of their information for investors and lenders. The ministers clearly said that the existing 'sound practices' would not be sufficient in this respect. Second – in order to ensure market discipline - investors and banks should urge for those standards and their compliance. Third the supervisory authorities should – besides a closer cooperation - check if the risk management is sufficient which should include the question if there was provision in the case of fading market liquidity. The ministers agreed on these recommendations unanimously. Moreover, bur unsuccessfully, the German presidency tried to reach an agreement on a Code of Conduct.

On the G8-summit in Heiligendamm in June 2007 no decisions concerning a more binding code of conduct of the hedge funds industry were taken. Especially the USA and UK opposed to an agreement because these are the countries where most of the funds managers are operating from.

The heads of state and government however advised the industry to improve the existing codes of conduct for managers and they reinforced the issues addressed by the finance ministers before.

## 5. Jurisdictions and supervisory regimes regarding hedge funds: Example Germany

Classic hedge funds have never been funds as the expression is used in Germany accor-ding to the investment law. Until 2004 hedge funds were not admitted for public sales and distribution. A liberalisation took place in 2004 with the investment modernisation law (*Investmentmodernisierungsgesetz*) in 2004 when the distribution of ‚separate assets with additional risks' was allowed under specific conditions, and only by funds of (hedge-) funds that invest in single hedge funds. They are similar to UCITS funds (with a greater freedom than normal UCITS funds). They can make use of short selling and leverage. Shares in a fund must however not be distributed publicly, but only in the form of private placement. They must not invest in property and the investment in participations must not exceed 30%. The provider of a hedge fund of funds has to attach a warning notice to the prospectuses: "The Minister of Finance is warning: With this kind of investment investors must be ready and able to accept losses of the invested capital up to the total loss." The investment industry so far has made very limited use of floating hedge funds in Germany. The evaluation of risk management systems is subject to supervision, not the assets (often being in tax oases) and the investment strategies. Because of these rather strict rules little more than 50 funds are located in Germany, with about 0,2% market share. National regulation would have almost no effect. The market for certificates however has increased strongly (2003: 32 approved certificates, 2005: 105). German hedge funds are subject to the BaFin supervision; only limited use of credit can be made.

There are further safeguards against a total loss and threats to the account deposits, e.g. life insurance companies must not invest more than 5% of the premium reserve stock in hedge funds.

The German Central Bank (*Deutsche Bundesbank*) considers it possible that hedge funds will take over German banks (opinion Edgar Meister in April 2007). Such takeovers/ acquisitions could result in considerable risks in the financial system.

Regulation of UCITS funds and banks is much stricter than regulation of hedge funds. Funds must not use leverage and short sales. Risk strategies must be safe. If banks lend money they have to follow strict capital requirements; Basel II was agreed upon. Banks cannot simply move to "oases" without any regulation.

## 6. Conclusions and consequences

One serious problem is the fact that market cooperation and understanding is needed first and foremost as there is no ‚world government’ that could make binding rules. If one develops ideas too far going funds and funds managers would react like they have already done concerning ‚regulation oases’.

Hedge funds care for an efficient pricing on global stock markets and absorb certain risks, so they are indispensable for functioning markets and for enabling higher business invest-ments. On the other hand, they mainly finance their activities through leverage/credit. If these cannot be repaid markets and the whole banking sector suffer; global financial stabi-lity and investor protection would be in danger.

Markets are supposed to be successful, but sensitive markets can only be successful if their participants are subject to efficient rules. Banks, insurance companies and equity funds all follow strict rules – but hedge funds don’t (hedge funds managers are, for example, completely free as to their investment strategies). Every small retail bank has to undergo rules much more stricter than for hedge funds. Chain reactions could be possible, which could also bring whole countries in difficulties. Furthermore the current developments – from the growing engagement of institutional investors over the IPOs of hedge funds up to issuing bonds – show that hedge funds could, in the long run, develop to “normal” investment instruments as UCITS funds or financial market players. Legislation and supervision must also be prepared for such a development.

The hedge fund model offers a new set of legal loopholes which need to be regulated on a pan-European, if not global, level.

Because of this global nature and of the fact that legislation-free oases have been chosen for hedge funds not all problems will possibly be addressed within a short period of time. But confidence of markets, consumers and investors is of utmost importance for well-balanced stability of financial markets.

- Risks outside the balance cannot be detected properly by public accountants. Thus supervisory boards and supervisory authorities cannot get an overview on out-of-balance risks and cannot fulfil their controlling function. A special risk report is to be asked for supported by corresponding disclosure obligations of providers. Alternatively all risks of a bank/provider must be stated in the balance sheet. Risks have to be assessed, distributed and limited. One of the means achieving this could be a more direct hedge funds supervision taking into account that we don’t live any more in an age of banks, investment companies and insurance companies doing separate and different business.

- Rules for more transparency (esp. on credit risks) are needed as to private and institutional investors and other market participants, the banks in their functions as prime brokers and credit institutions and the supervisory authorities. More market transparency could be achieved by introducing a registration obligation concerning short sales on all world wide business places and more transparency as to OTC derivatives markets. Transparency regarding banks could be supported by introducing a credit register where all credits and their securities would be reported to supervisors and collected. Banks thus would be in a position to gather more information and being able to decide if they should allow hedge funds further borrowing. Supervisory authorities need more information on crowded trades, on banking involvement (easier with a credit register) and on hedge funds on the whole (a registration obligation following international standards would help).

- Regarding credit institutions a close supervisory monitoring of their exposures to hedge funds seems advisable. Progress should be made as to their internal risk management systems.
- Common European standards for hedge funds should be aimed at in the middle-term which then would make a directive along the lines, but not within the UCITS directive advisable.
- National supervisory authorities must coordinate their activities closer and exchange risk-relevant information; an European supervisory network or even supervisory authority (first steps have been done with CEBS, CESR and CEIOPS) ion for cross-border issues should be thought about.
- Rating agencies must give reliable evaluation/risk assessment; they should be liable for their rating. Moreover agencies and their rating methods should be under control because of their importance for the capital markets. The voluntary code of conduct (agreed upon after the Enron crash) has not worked. Among the reasons were the interest conflicts resulting from the fact that the agencies are paid by the companies whose creditworthiness and solvency they have to assess. The rating methods used should have to be disclosed and checked continuously in order to prevent these conflicts of interests and to secure quality.
- Hedge funds that are extremely susceptible to risk because of high leverage are almost unregulated. They should be subject to direct supervision, and risks that they can take should be limited and well distributed. Risk distribution could be fostered by limiting the percentage in volumes of the engagement of funds in market sectors (see the Amaranth case). Furthermore funds could be classified according to their investment strategies and the connected risk. Following from this classification there could be a risk adapted leverage limit.
- Market participants must get more information on the risks of investments. International agreements between – at least - G8-countries and the financial industry are therefore necessary and vital.
- Binding and manageable ‘best practices’ instead of the current ‘sound practices’ must be agreed upon; there must be an organisation in charge for their development and implementation (perhaps International Monetary Funds instead of the somewhat cautious Financial Stability Forum). The current ‚sound practices’ are too vague with regard to investors and don’t contain disclosure requirements concerning lenders. The ‘best practices’ could then be transformed into a binding Code of Conduct to reach a better market discipline and transparency. The binding character probably will be the most difficult step as at the moment everything is voluntary and no one is obliged to say if he doesn’t meet the recommendations. In order to achieve the binding character pressure on credit institutions could be exerted to give worse conditions to those hedge funds that don’t meet the Code of Conduct. Also ratings agencies could support this in covering the compliance with the Code of Conduct by the different hedge funds. Last but not least there could be higher minimum reserves of the banks than 100% if hedge funds are not registered and not transparent.

- The higher commitment and transparency should be supported by
    - a direct hedge funds supervision with requirements concerning the distribution of risk and the restrictions to the credit risks. Measures like a registration obligation for funds, a notification requirement for short sales and the introduction of a central credit register (where the credits with their corresponding securities should be reported to) should be considered.
    - rules for the distribution of risks/risk spread,
    - a more stringent cooperation of supervisory authorities.
- Besides the problem of "oases" where there is hardly any regulatory pressure must be tackled.