

Hedge funds and their role in the financial markets

The financial market turmoil during the past few years has drawn attention to the activities of the globally operating hedge funds and raised the question of the associated dangers to the stability of the financial system. The following article examines the role played by hedge funds in the financial markets and the possible measures that could be taken to limit the risks to which they give rise. On balance, it is found that in principle hedge funds contribute to greater efficiency of the financial markets. However, their investment strategies also contain specific risks. Possible ways of countering this potential danger include imposing direct restrictions on the activities of hedge funds and, above all, taking measures to improve the transparency of their operations as well as applying stricter requirements to the risk management system of banks which have business dealings with hedge funds.

What are hedge funds?

The term hedge funds has established itself as a generic term covering an extremely heterogeneous group of investment partnerships for which no legal definition or other generally accepted definition exists. On the one hand, hedge funds operate largely in a regulatory and supervisory "No man's land". On the other hand, they engage in activities which are also pursued by traditional institutional investors such as banks, insurance en-

Definition

terprises or “conventional” investment funds. For this reason certain features that are regarded as being typical are normally used to characterise hedge funds. They may thus be defined as investment partnerships which operate very flexibly to achieve specific return targets and whose providers of capital are a mostly very small number of other institutional investors or high-net-worth (i. e. extremely wealthy) individuals. Additionally, hedge funds are subject to very few regulations and, in particular, to no direct financial supervision.

*“Hedge funds”
or “risk funds”?*

The name “hedge funds” dates from their beginnings in the early fifties when a certain type of fund dominated the scene (see box for details). However, this term is rather confusing as it suggests that these funds mainly pursue hedging strategies (i. e. covering open positions). But that is not the case: on the contrary, hedge funds deliberately assume risks in pursuit of their performance targets. Their strategies are concentrated on identifying inaccurate valuations of individual securities or entire markets and exploiting such discrepancies profitably by adopting corresponding positions. “Hedging” only forms part of the strategy of such funds in that the portfolio is hedged against risks other than those deliberately assumed, so that the success of the investment strategy depends as far as possible exclusively on the adjustment of the presumed mispricing. Hence the commonly used term “risk funds” is perhaps more apposite than the word “hedge funds”.

Irrespective of the type of risk assumed, all hedge funds are characterised by the express

The original hedge fund concept

The first hedge funds pursued the following “market-neutral” strategy. Half of the capital was used to buy undervalued shares (long position) and half for short-selling equities regarded as overvalued (short position), so that the long position was more or less hedged by the short position. The capital requirement for the short-selling (forward sales of shares which the seller does not actually possess) arose from the fund’s obligation to maintain a deposit of an equal value with the broker from whom it had sold the paper short. In this strategy the sole purpose of hedging was thus to hedge the fund’s performance against general share price movements in the equity market (the “systematic” or “market risk”), so that the return on the portfolio depended solely on the deliberately assumed “unsystematic” or “specific” risks associated with the individual securities that are responsible for the relative changes in share prices. As a rule, however, the long positions were not hedged completely by short-selling but – depending on the assessment of the general share price trend – only partly, so that a certain market risk was added to the specific risk. Additional credit-financed resources were often used so as to raise the expected return per unit of capital employed. However, such a “leverage effect” increases not only the expected return but also the return risk.

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*Aim of hedge
funds: to
achieve a
"superior"
performance*

aim of offering their owners a "superior" performance in comparison with other investment vehicles. This may take the form of particularly high rates of return but also of a particular return-risk profile.¹ In order to achieve this aim, hedge fund managers continuously seek to identify overvalued or undervalued assets. Hence a hedge fund's performance hinges on the individual abilities and possibilities of its managers to identify and profitably exploit such "market imperfections". This presupposes a high degree of freedom of action and economic incentives.

*Basic operating
setting ...*

In line with these requirements, hedge funds usually choose their legal form, location and investors with a view to qualifying for exemption from certain legal provisions and minimising possible regulatory, supervisory and tax constraints. As a result, they are normally not subject to any "external" portfolio restrictions. What is more, many hedge funds prefer to base their head office in offshore centres in order to offer certain investor groups a more advantageous tax framework. Hedge funds frequently operate in highly liquid, low-cost spot and forward markets and employ dynamic trading strategies. Their managers are free to choose the investment markets, instruments and strategies, with their freedom to make decisions being limited at most by the partnership agreement. The use of credit-financed resources to increase the rate of return (leverage) is limited solely by contractual agreement or by self-limitation of the funds.

*... and
incentives*

The internal decision-making channels are short and clearly geared to giving the fund

managers a wide freedom of action to enable them to respond quickly whenever new market opportunities arise. The remuneration of the management is mostly performance-related and accounts for a fairly large slice of the profits (15 to 25%) in order to attract top-calibre people to these jobs and to spur them to exceptional efforts. The moral hazard associated with such a remuneration system, namely that excessively risky investment strategies might be pursued, is mitigated by the requirement that the managers must themselves usually hold a fairly high participating interest in the fund and in many cases by the stipulation that their right to a share in the profits is contingent on the prior offsetting of any previous losses ("high watermark" provision). Finally, the hedge funds enjoy a particularly great freedom of manoeuvre *inter alia* because they can employ the resources entrusted to them over fairly long periods as the investors are normally only allowed to withdraw their deposits at the end of a contractually agreed period of notice (30 days to 3 years).

Hedge funds assume very diverse and mixed forms in respect both of their trading strategies and their preferred markets and instru-

*Strategic
approaches:
exploitation of
absolute ...*

¹ The setting of "absolute" performance targets divorced from the average market trend is the chief feature distinguishing the investment strategy of hedge funds from that of conventional investment funds. The latter generally seek to spread the risk within particular markets. For this reason they are of necessity closely oriented to the average market trend and pursue "relative" performance targets. Moreover, in most countries investment funds are comprehensively regulated and transparent from the perspective of investor protection. Consequently, investment funds are normally only allowed to invest in certain categories of securities (e. g. bond-based funds or share-based funds) and may buy assets with borrowed money only to a limited extent or not at all.

ments (see box on page 33). Basically, two main strategic approaches to exploiting suspected distortions of financial market prices may be distinguished. One strategy relies on absolute price movements of an instrument or a market due to expected changes in issuer-specific or overall economic fundamentals. The fund builds up open positions which yield profits if the price of the asset moves closer to its "fundamental value". Such a strategy is pursued, for example, by macro funds and emerging markets funds by targeting a fragile arrangement of fixed exchange rates or speculating on a change in the monetary policy stance. A similar approach is pursued at the microeconomic level by event-driven funds or value funds, which set their hopes on price changes of individual securities – especially equities – resulting from enterprise-specific developments.

... and relative
price
movements

The other strategy is aimed at inappropriate valuations in the relative prices of more or less closely related financial assets and can be viewed as a kind of "arbitrage in expectations". In this case funds buy instruments that are considered to be undervalued and sell those considered to be overvalued, so that in principle two countervailing transactions always result. Such strategies based on changes in relative prices may relate, for example, to price discrepancies of bonds on the spot market and on the futures market or to anomalies in the term structure of interest rates. Examples of such "relative value funds" are market-neutral funds and short-selling funds.

The risk profile of hedge funds is just as diverse as their strategic orientation. If the strategy is aimed at exploiting inaccurate valuations of individual instruments, the inherent risks are predominantly those which bear little or no relation to the movement of the overall market ("unsystematic risks"). By contrast, if a fund bases its strategy on revaluating entire markets, it consciously assumes the risk of being affected by price fluctuations to the same degree as the market as a whole ("systematic risk"). The diversity of hedge funds is increased by the fact that some types of funds ("opportunistic funds", "several strategies funds") pursue quite different strategies depending on their assessment of the situation. It is therefore not possible to make a comprehensive and definitive classification.

Major
differences in
the risk profile

Size, structure and development of the hedge fund sector

Since its emergence in the early fifties, the hedge fund sector has grown considerably. Its growth has accelerated particularly since the late eighties (see chart on page 34). Based on fairly conservative estimates, the number of hedge funds (excluding funds of funds) increased from just under 1,400 in 1988 to over 5,500 at the end of 1997. The volume of assets managed by the funds expanded during the same period by as much as sevenfold from US\$ 42 billion in 1988 to around US\$ 300 billion at the end of 1997. Compared with a total volume of about US\$ 23,400 billion generated by traditional institutional investors in the OECD countries in 1995, how-

Rapid market
growth

Types of hedge fund as categorised by Van Hedge Fund Advisors

Macro: These funds speculate worldwide on price changes of shares, bonds, currencies or exchange-traded commodities (oil, precious metals) in connection with presumed changes in the economic or economic policy setting. Their "opportunistic" strategy is more top-down, as they focus more on identifying a country or a market rather than a specific financial asset.

Emerging markets: Like macro funds, these bet on fundamental changes of direction of financial market prices. But they specialise more in spotting particularly profitable-looking assets (bottom-up strategy) in specific regions (e.g. Asia, Latin America, Eastern Europe).

Market-neutral: These take up long and short positions that are wholly or partly hedged in terms of value in more or less closely related securities in order to minimise the market risk. They buy undervalued assets and sell overvalued instruments. They invest, for instance, in various financial assets issued by the same borrower – e.g. shares and convertible bonds – (**arbitrage**) or, say, in different shares in a particular market (**securities hedging**).

Event-driven: These funds seek to profit from specific events in the life-cycle of an enterprise. Such events include recapitalisation and restructuring in the event of bankruptcy (**distressed securities**) or also share buy-backs (**special situations**).

Short-selling: Borrow shares from brokers that they regard as overvalued and sell them immediately in the market in the hope that they will be able to repurchase them later at a lower price in order to return them to the broker. The resources raised are invested in other securities (e.g. Treasury bills) which

normally also serve as collateral for the securities borrowing operation.

Opportunistic: Depending on their assessment of the situation, they choose from among a wide range of strategies or instruments which they also apply simultaneously.

Several strategies: This type of fund typically uses two or three specific, predetermined strategies for the sake of diversification.

Value: These buy or sell securities of enterprises which they regard as overvalued or undervalued compared with their fundamental value on the assumption that the market will soon recognise their "true" value.

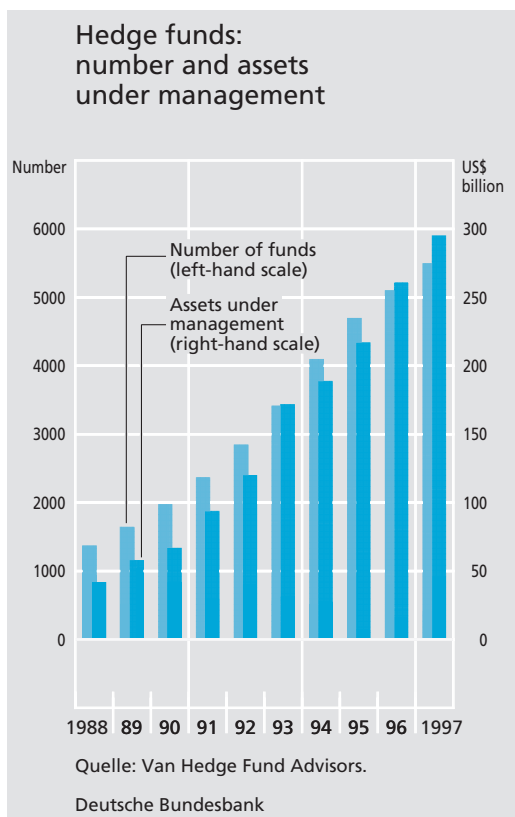
Income: These funds concentrate on generating a steady stream of income from holding financial assets; capital gains are of secondary importance.

Aggressive growth: Invest in shares for which they expect a sharp rise in the earnings per share; normally shares of small or medium-sized enterprises.

Market timing: Switch between markets according to their presumed cyclical position. Invest in shares, bonds, investment funds or money market funds.

Funds of funds: These invest their resources under management in a portfolio of different hedge funds, sometimes using leverage. In this way "smaller" investors, for example, can invest in "big" funds or diversify their hedge fund investments.

Sectoral: Specialise in particular branches of industry such as financial services, technology, health and media/communications.



ever, this amount is still rather small.² Moreover, the rate of market growth appears to have suffered a slight setback in 1998 in the wake of the financial market crises as some investors reduced or even ceased their commitment on account of increased risk aversion and also in connection with liquidity problems which affected some hedge funds.

The significance of the individual types of hedge fund likewise underscores the sector's heterogeneity. At the end of 1997 the macro funds and the emerging markets funds, which share a similar global orientation, accounted for around 3 % and 9 %, respectively, of all the 4,100 funds considered in this article.³ In terms of fund volume, however, the share of the macro funds is much greater owing to the very high volume of assets man-

aged by a handful of funds.⁴ The market-neutral funds, which are geared to exploiting relative discrepancies in valuations, had a share of 13 %, of which the arbitrage funds (which have a more aggressive leverage on average) accounted for slightly more than half. The funds of funds, which themselves invest in hedge funds, made up 14 %.

The reasons for the soaring growth of the hedge fund sector are to be found in the motives of the respective providers of capital. While the sketchy information available indicates that high-net-worth individuals also played a role, the principal driving force was the institutional investors such as pension funds and investment funds, insurance enterprises, foundations and banks. These groups of investors placed resources increasingly in hedge funds in order to optimise their portfolio. Another factor favouring the hedge funds' growth was that a number of banks outsourced or closed down their proprietary trading arms.

Many people believe, however, that there is now a certain "surfeit" of hedge funds. It is said that more and more inadequately qualified and inexperienced managers – attracted by the sometimes very high profits which many hedge funds earned during the prolonged bull market in recent years – have launched funds, thus giving rise to the danger that the performance of the hedge fund sec-

Driving forces behind market developments ...

... and growth prospects

Shares of individual types of fund

² See OECD, Institutional Investors: Statistical Yearbook 1997, Paris 1997, page 20.

³ End-1997 figures. Source: Van Hedge Fund Advisors.

⁴ See Eichengreen et al., Hedge Funds and Financial Market Dynamics, International Monetary Fund, Occasional Paper No. 166, Washington, D.C., May 1998, pages 7 and 8.

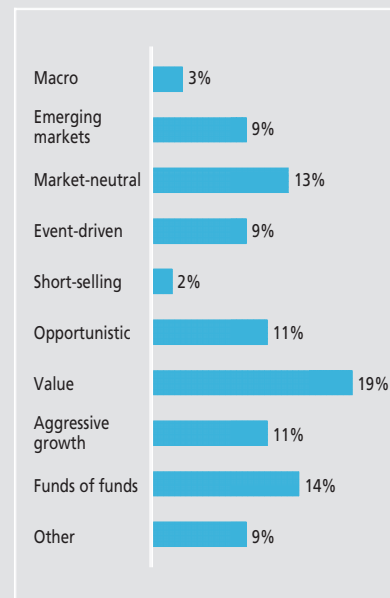
tor and hence future sales prospects might deteriorate. Furthermore, it remains to be seen whether the substantial losses sustained by individual hedge funds last year will have a lasting effect on market growth. But irrespective of these factors, the growth of this market segment is presumably bounded by "natural" limits anyway in line with the law of diminishing marginal returns. As the success of hedge funds depends on the exploitation and hence simultaneously the elimination of market imperfections, it is likely to become more and more difficult for them to find high-yielding investment opportunities. This might cause more and more funds to rely to a greater extent on the leverage effect of borrowed capital and to engage in riskier "price bets". This, too, could lead to a deterioration in both the expected and the actual performance of this sector in the long-term.

Impact on financial markets

Hedge funds a cause of crises?

Hedge funds have frequently been accused – for example following the crises in the EMS in 1992 or in East Asia in 1997 – of triggering market distortions with price surges and high volatility and hence of playing a major role in engendering financial market turbulence. Moreover, there are fears that the insolvency of hedge funds could jeopardise the stability of the financial system. In this context, calls for the regulation of hedge funds appear warranted. However, any assessment of such moves demands a careful analysis of the role that hedge funds play in the financial markets. From the point of view of the ongoing

Breakdown of hedge funds by type



Source: Van Hedge Fund Advisors.

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optimal use of economic resources, both the stability of financial institutions and markets and the criterion of financial market efficiency are key considerations.

Price effects and market conditions

Certain groups of investors or even individual economic agents may trigger financial market turmoil or affect its course if they exercise a significant influence on the price formation process. Hedge funds can do this in principle via two channels: either directly, by building up or running down proprietary positions, or indirectly, if the decisions of hedge funds affect the operations of other market players (herd behaviour). It is difficult to verify either of these channels of influence owing, in particular, to a lack of data. Only a few case stu-

Possible channels of influence

dies exist on individual markets and relatively short periods; any attempt to draw general conclusions must therefore inevitably be based in addition on plausibility considerations and individual cases.

Strong direct influence on prices only in isolated cases

The small stock of assets managed by hedge funds compared with those of other institutional investors argues against inferring that hedge funds have a generally strong direct influence on prices. However, that does not rule out the possibility that transactions of this fund group may determine prices in particular situations or in individual markets, e.g. if macro funds or emerging markets funds operate in illiquid market segments. Moreover, with the aid of derivatives hedge funds can build up market positions that exceed their asset base several times over. The available evidence suggests that hedge fund transactions may have played a major role in the EMS crisis of 1992. By contrast, there is little sign that this was the case during other turbulent phases (bond market crisis of 1994, Mexico crisis of 1994-5, East Asia crisis of 1997); in those instances other investor groups such as credit institutions and pension funds appear to have deployed very big positions.⁵

Hedge funds and herd behaviour

The reputation of some hedge fund managers of being especially competent and successful might cause other market players to deliberately track the actions of the fund in question. In this case transactions of one hedge fund could have a significant effect on prices on account of the – possibly rational – herd behaviour of other investors. Although it appears probable that such a “market leader-

ship” of hedge funds exists, there is no hard evidence. This “genuine” herd instinct should not be confused with the situation in which a similar pattern of behaviour is shown by hedge funds and other market players owing to the widespread use of similar trading techniques or risk management methods.

Irrespective of the nature of the influence exerted by hedge funds, the question arises as to whether this has a stabilising influence or a destabilising effect on financial market prices. They have a destabilising effect, for example, if additional sales orders are placed in a falling market (positive-feedback trading). By contrast, if hedge funds feature more on the buyers’ side in such a situation (negative-feedback trading), they tend to exert a stabilising influence. Owing to their greater freedom of action, hedge funds are more capable than “conventional” funds of acting counter to the general market trend. In particular, the fact that their capital is locked in for specified periods makes them less vulnerable to sudden outflows of resources which could force them to liquidate positions when prices are falling. The few studies that have been carried out do indeed provide some indications of negative-feedback trading, especially by large hedge funds. Such “stabilising speculation” may result from the assessment that a particular price movement represents a temporary exaggeration that will later correct itself.

The precondition for such a “long-termist” approach by hedge funds, however, is that no

Stabilising or destabilising influence on prices?

⁵ For a detailed account of the empirical evidence see Eichengreen et al., op cit.

liquidity bottlenecks occur for other reasons. Some hedge funds assume selected unsystematic risks; that tends to make them more vulnerable to shocks than other investors who have diversified portfolios. In these circumstances, unexpected, sharp movements of asset prices may lead to such funds having to close out positions on a large scale in order to meet additional margin requirements in derivatives markets. Similar effects are likely to arise whenever hedge funds have to reduce short-term loans due to the falling value of the securities normally used as collateral. This would tend to reinforce price movements in the financial markets.

Stability of the financial system

No doubt also on account of their susceptibility to shocks, the danger of illiquidity and insolvency is greater in the case of hedge funds than it is for other financial enterprises.⁶ However, the failure of individual funds – as part and parcel of the market mechanism – is a problem only if it jeopardises the viability of the financial sector (“systemic risk”). For that to happen, the problems of one or more large hedge funds would have to spill over to the banking sector – the core of the financial sector – on such a massive scale as to undermine the system’s intermediation function and the smooth operation of the payment system.⁷ Therefore the degree of financial integration of the funds with the banking system is a crucial factor in this context.

It follows that the destabilisation potential of hedge funds is particularly great whenever they use a high degree of “credit leverage” fi-

nanced by banks. However, relatively few hedge funds appear to have a high leverage (see table on page 38). Around one-third of the funds state that they do not rely on the leverage effect of credit-financed positions. Half of all funds have a leverage of 2:1 or less. Of the other funds, this ratio exceeds 10:1 only in rare cases; consequently, the risks associated with using a high proportion of external capital are restricted to just a few funds. It is above all the market-neutral funds that choose to employ a somewhat higher leverage – and they are less vulnerable to market risk.

A systemic risk might well ensue from the insolvency of large hedge funds that are closely integrated with credit institutions, in particular, if the risk management strategy of the banks – as the providers of credit to and shareholders in hedge funds – were so imprudent that writing down their hedge fund positions pushed them to the brink of insolvency themselves. Hence a danger to financial market stability may arise, above all, if the failure of a hedge fund occurs when the banking system is already in a parlous state.

... insufficient risk management by credit institutions ...

Systemic risk in the event of extensive integration with banks, ...

... high leverage, ...

⁶ This is reflected in the relatively low “survival rates” of hedge funds. According to Brown/Goetzman/Ibbotson (Offshore Hedge Funds: Survival and Performance 1989-1995, NBER Working Paper No. 5909, Cambridge, MA, January 1998), only a few funds last for longer than three years. Eichengreen et al. (op cit.) mention an average annual failure rate of around 7%. It must be said, though, that many hedge funds disappear for reasons unconnected with their performance.

⁷ The simultaneous insolvency of many hedge funds is rather improbable as the individual types of fund are subject to very different types of risk, so that even in phases of turbulence the likelihood of mass failure would be fairly small. One indication of this is that only two out of 18 groups of funds (emerging markets funds and short-selling funds) suffered sizeable losses in the crisis year 1998.

Degree of leverage of different types of hedge fund *

Percentage shares per type of fund

Type of fund	No leverage	Smaller than 2:1	Greater than 2:1
Macro	16.9	52.3	30.8
Emerging markets	36.1	56.6	7.3
Market-neutral arbitrage	18.2	22.7	59.1
Market-neutral securities hedging	31.5	42.5	26.0
Distressed securities	61.0	35.6	3.4
Special situations	19.9	73.0	7.1
Short-selling	22.2	75.0	2.8
Opportunistic	24.4	56.0	19.7
Value	35.7	61.0	3.3
Aggressive growth	35.0	58.4	6.6
Funds of funds	21.6	58.4	20.0
All funds	30.1	54.3	15.6

Source: Van Hedge Fund Advisors. — * As of December 1997.

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... and functional disruptions in financial markets

However, liquidity problems of individual large hedge funds might also trigger serious market disruptions if the sudden liquidation of extensive leveraged positions were to result in individual segments of otherwise liquid markets "drying up" and in other market players not being able to close out their positions. Similar effects could occur if hedge funds initiated massive price movements in what are already tight markets. The liquidation of large positions could lead – via widely dispersed "domino effects", the reciprocal spiralling of credit and market price risk and loss of confidence – to disruptions of market integrity, thereby triggering or reinforcing a system-wide crisis.

Financial market efficiency

Hedge funds typically display high and volatile rates of return that correlate very little or even negatively with the general market trend (see table on page 39). Owing to this specific return profile, investments in hedge funds generally offer an opportunity of portfolio diversification to high-net-worth individuals and institutional investors because adding such investment vehicles to the portfolio enables them to achieve more favourable return-risk ratios and hence more efficient portfolios. From this point of view hedge funds contribute towards completing the financial markets.⁸ In addition, hedge funds contribute towards raising informational and transaction cost efficiency if they are able, through arbitrage or speculative trades, to move financial market prices nearer to their fundamental value more quickly and to stabilise them at that level.

More favourable return-risk ratios ...

... and greater market efficiency

There is a danger, however, that transactions of hedge funds may themselves affect the fundamental value of financial assets, especially in tight markets in emerging-market countries. Thus the expectations of major market players (such as large macro funds) may be self-fulfilling if their transactions force certain policy responses (e.g. interest rate moves by the central bank, currency devaluations). At the macroeconomic level, this can result in growth losses.

Negative expectation effects possible

⁸ For the definition of the concept of "financial market efficiency" see Deutsche Bundesbank, Structural changes in the German capital market in the run-up to European monetary union, Monthly Report, April 1998, page 64.

Performance of hedge funds

The high flexibility of hedge funds gives them a comparative advantage over some traditional financial institutions, which usually have to observe certain investment rules and are subject to multi-step decision-making processes. The return profile of the individual types of fund indicates that hedge funds are indeed able to exploit these advantages on average.

Between 1988 and 1998 all hedge fund types bar one (short-selling funds) achieved higher rates of return than funds using a "buy and hold" strategy with globally diversified share or bond portfolios (see table). They retain their superiority even after the volatility of their returns is taken into consideration. While it is true that high rates of return normally go hand in hand with high volatility,

the short-selling funds were likewise the sole type of hedge fund to show a lower Sharpe ratio – a return-risk ratio – than the global share or bond portfolios. But precisely this type of fund has a specific advantage which makes it particularly attractive from the point of view of risk diversification: its rates of return show a pronounced negative correlation with the performance of all other types of fund, including the MSCI equity index, and are uncorrelated with the bond index. For the other types of fund the market correlations are as a rule only slightly positive. In principle, this specific return-risk profile of individual types of fund makes it interesting even for conventional institutional investors to complement their portfolios by, for example, investing capital of their own in hedge funds.

Performance measures of hedge funds between 1988 and 1998

Type of fund	Annual rate of return 1			Average 1988–1998			Correlation 4 with	
	1996	1997	1998	Rate of return 1	Volatility 2	Sharpe ratio 3	MSCI 5	LBABI 6
Macro	14.6	19.9	5.8	18.7	11.3	1.2	0.30	0.28
Emerging markets	25.4	- 5.9	-28.4	15.8	23.1	0.5	0.44	- 0.14
Market-neutral securities hedging	24.1	18.3	8.3	16.9	4.5	2.7	0.28	- 0.05
Distressed securities	18.8	13.0	- 0.2	22.1	13.3	1.3	0.24	- 0.01
Short-selling	- 9.0	7.7	-14.8	2.4	30.3	- 0.1	- 0.65	0.00
Opportunistic	21.6	22.4	10.3	21.8	9.0	1.9	0.49	0.20
Income	7.8	7.4	0.3	10.6	5.2	1.1	0.42	0.41
Funds of funds	15.8	4.9	3.0	12.9	5.8	1.4	0.37	0.15
Compare:								
MSCI World Equity 5	11.8	14.1	22.8	10.2	14.6	0.4	1.00	0.19
LBA Bond Index 6	3.6	9.7	8.7	9.1	4.7	0.9	0.19	1.00

Source: Van Money Management Research. — 1 Geometric mean of quarterly net rates of return (excluding managers' remuneration) in % p.a. — 2 Standard deviation of the quarterly net rate of return in % p.a. — 3 Average net yield (net rate of return less money market interest rate) divided by standard deviation. — 4 Correlation coefficient

of the quarterly rates of return from 1988 to 1998. — 5 Morgan Stanley Capital International World Equity Index; measures the performance of a global equity portfolio. — 6 Lehman Brothers Aggregate Bond Index; measures the performance of a global bond portfolio.

*Overall
assessment
open*

To sum up, it is impossible to give a clear-cut answer to the question of whether hedge funds make a notable macroeconomic contribution to a more efficient allocation of financial capital. On the one hand, there are some indications that hedge funds generally make the financial markets more complete and price-efficient. On the other hand, a possible drawback from the point of view of allocational efficiency of national and international financial markets is their fairly large destabilisation potential, which can hinder the development of stable financial market conditions and financial relationships, particularly in emerging-market countries.

Regulation and policy options

Basic issues

In the wake of the financial market turbulence of the past few years, the call for stronger controls on hedge funds has grown more vociferous. But the search for the appropriate policy response poses a number of conceptual and practical problems. At the conceptual level it raises the question of whether, given the specific role that hedge funds play in the financial markets, regulation should be advocated and, if so, how far such regulation should go. At the practical level it raises the question of how regulatory measures can be made effective in the context of globalised markets and complex investment strategies.

*No case for
investor
protection*

There is broad agreement that the regulation of hedge funds for the purpose of directly protecting investors is not necessary. The clients of hedge funds are exclusively high-net-

worth individuals or institutional investors. Their capital deposits are generally regarded as not requiring special protection. Pronounced "information asymmetries", such as are assumed to exist between poorly informed retail investors and banks, constitute no grounds for the regulation of hedge funds as their clients ought to be able to assess the risks of their actions themselves. For this reason hedge funds in the United States and the United Kingdom, for example, are exempt from many legal provisions, thus enabling them to operate in a largely unregulated market structure – e.g. without any barriers to market entry.

Safeguarding market integrity

Regulations may also be designed to safeguard competition and hence a market's ability to function smoothly. For instance, a market may be subjected to limitations by the fact that individual market participants or particular groups exercise a controlling influence on the price formation process, at least for a time. In order to prevent this, measures could be considered which either make the transactions of individual market players transparent – and hence influence their behaviour indirectly – or which limit their involvement directly by means of quantitative restrictions.

In organised securities markets hedge funds are normally subject to the same code of conduct that is designed to prevent other major players, too, from exercising a dominant or manipulative influence on the market (e.g. certain disclosure rules or a requirement to re-

*General aims
and means*

*Measures to
improve
transparency,
and direct
provisions*

port large amounts).⁹ As a general principle, such rules are indeed suited to rendering large-scale transactions of hedge funds transparent. However, they are not comprehensive and therefore do not suffice to enable the business partners of hedge funds or the supervisory authorities to make a realistic assessment of the risk involved. From this perspective it would be desirable if hedge funds were obliged, under direct supervision, to comply with extended reporting rules and possibly also with investment and capital requirements. The prerequisite for this, however, is that a definition can be found for the extremely heterogeneous hedge fund sector which differentiates it distinctly from other financial intermediaries. In addition, it must be ensured that such measures are coordinated at the international level since they have an impact on the competitiveness of a national financial centre and so the hedge funds could be tempted to shift their activities, especially to offshore centres. Furthermore, without international coordination the information would remain fragmentary.

*Questionable
usefulness of
capital controls*

Some authors have suggested that emerging-market countries should tax short-term capital imports so as to make it hard for hedge funds and other international investors to build up speculative market positions.¹⁰ Whether such measures are warranted in the light of all the costs involved and the benefits of an unhindered international flow of capital is debatable, however. A basic prerequisite for avoiding speculative attacks is that the countries concerned do not offer international investors any "safe bets" by pursuing an in-

consistent and unsustainable economic policy.

Limitation of systemic risk

Regulatory steps to limit systemic risk in the financial sector are aimed at internationalising external effects of the actions of individual economic agents. The systemic risk associated with hedge funds as non-banks depends primarily, as mentioned above, on the degree to which they are financially enmeshed with the banking system. Consequently, measures to limit the destabilisation potential of hedge funds can either be applied directly to the hedge funds themselves or they may be designed to operate indirectly via the credit institutions.

*General
objectives*

In contrast to supervisory measures, some commentators have also recommended placing greater reliance on the learning effects of the market. On the one hand, that appears plausible, as the losses suffered by some hedge funds are said to have damaged the blind trust in the competence of their managers, with the result that in future hedge funds will have to rely more on the competition instrument of "transparency" in order to maintain or increase their business volume. This would help to curb systemic risk by improving the monitoring capability of the banks which have capital invested in hedge funds and strengthening market integrity. On the other hand, there is no guarantee that

*Market discipline
insufficient*

⁹ For a detailed account of the situation in the United States and the United Kingdom see Eichengreen et al., op cit. pages 12 to 14.

¹⁰ Ibid.

the learning effects that have been evident to some extent recently would not soon be forgotten again. Furthermore, efficient risk management can be obstructed – despite improved transparency – by the conflict of interests which arises when banks are concurrently investors in and lenders to a hedge fund. From this perspective, therefore, relying solely on the disciplining effects of the market is unlikely to suffice.

*Indirect
regulation via
tighter banking
supervision*

Measures intended to limit the systemic risk associated with hedge funds could also be targeted at banks. A step in this direction was taken in January 1999 when the Basle Committee on Banking Supervision at the Bank for International Settlements published its guidelines for banks' business dealings with hedge funds and indeed with all non-regulated or barely regulated financial institutions that are highly leveraged.¹¹ These guidelines are geared to achieving a more realistic and more cautious assessment of credit risk, in particular through more careful and more comprehensive risk analysis, risk management and risk control. The idea is

that this will lead indirectly to limiting the hedge funds' leverage and hence their counterparty risk. In this context mention should also be made of the possibility of setting up an international credit register to which all large exposures incurred by credit institutions would have to be reported. Such reports are already established practice in Germany at the national level. This would provide banks with a more efficient monitoring system which, in connection with more realistic risk assessment, could contribute towards crisis prevention. The crucial prerequisite for any effective "early warning system", however, is adequate standards of transparency that would need to be laid down for hedge funds and other large, barely regulated market participants. Another conceivable approach within the framework of indirect supervision could be to adjust the capital requirements applying to banks' investments in hedge funds in accordance with an increased risk.

¹¹ Basle Committee on Banking Supervision, Sound Practices for Banks' Interactions with Highly Leveraged Institutions, (Bank for International Settlements), Basle, January 1999.