

## Hedge Funds: What Do We Really Know?

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### Preface

The Economic Issues series aims to make available to a broad readership of nonspecialists some of the economic research being produced on topical issues by IMF staff. The series draws mainly from IMF Working Papers, which are technical papers produced by IMF staff members and visiting scholars, as well as from policy-related research papers.

This Economic Issue draws on material originally contained in IMF Occasional Paper [166](#), *Hedge Funds and Financial Market Dynamics*, by a Staff Team led by Barry Eichengreen and Donald Mathieson with Bankim Chadha, Anne Jansen, Laura Kodres, and Sunil Sharma, and "The Near Collapse and Rescue of Long-Term Capital Management" in [Chapter 3](#) of *World Economic Outlook and International Capital Markets: Interim Assessment, December 1998*, by Garry Schinasi. Readers may purchase the Occasional Paper (\$18; \$15 academic rate) and the WEO/ICM *Interim Assessment* (\$36; \$25 academic rate; also available on the IMF website).

## Hedge Funds: What Do We Really Know?

Each episode of volatility in financial markets heightens the attention of government officials and others to the role played by the hedge fund industry in financial market dynamics.

Hedge funds were implicated in the 1992 crisis that led to major exchange rate realignments in the European Monetary System, and again in 1994 after a period of turbulence in international bond markets. Concerns mounted in 1997 in the wake of the financial upheavals in Asia. And they were amplified in 1998, with allegations of large hedge fund transactions in various Asian currency markets such as those of Hong Kong SAR and Australia, and with the near collapse of a major hedge fund, Long-Term Capital Management (LTCM). Government officials, fearing this new threat to world financial markets, stepped in to coordinate a successful but controversial private sector rescue of LTCM.

Yet for all this attention, little concrete information is available about the extent of hedge funds' activities. And despite a plethora of suggestions for reforms, no consensus exists on the implications of hedge fund activity for financial stability, or on how policy should be adapted.

This paper discusses the size, number, and investment styles of hedge funds, and their interactions with global financial markets. It reviews the present state of their supervision and regulation, and assesses various suggestions for regulating them more closely, often as part of new regulatory approaches to the larger financial markets of which hedge funds are but a small part.

## Hedge Fund Operations

Hedge funds are eclectic investment pools, typically organized as private partnerships and often located offshore for tax and regulatory reasons. Their managers--who are paid on a fee-for-performance basis--are free to use a variety of investment techniques, including short positions and leverage (see Box), to raise returns and cushion risk. Although hedge funds generally use derivative financial instruments (securities like options whose value is "derived" from the value of other, underlying, financial assets, like common stock) in their investment strategies, they should not be confused with derivatives, which present different issues.

While hedge funds are a rapidly growing part of the financial industry, the fact that they operate through private placements and restrict share ownership to rich individuals and institutions frees them from most disclosure and regulation requirements that apply to mutual funds and banks. Funds legally domiciled outside the main financial market countries are generally subject to even less regulation.

Any attempt to generalize further about the features of hedge funds immediately confronts two problems: first, their investment and funding techniques vary enormously, and second, other individual and institutional investors engage in many of the same activities as hedge funds.

### Diversity Within the Hedge Fund Industry

For present purposes, three main classes of hedge funds can be identified:

- *macro funds*, which take large directional (unhedged) positions in national markets based on top-down analysis of macroeconomic and financial conditions, including the current account, the inflation rate, and the real exchange rate;
- *global funds*, which also take positions worldwide, but employ bottom-up analysis, picking stocks on the basis of individual companies' prospects; and
- *relative value* funds, which take bets on the relative prices of closely related securities (treasury bills and bonds, for example).

Within these categories, there is further diversity. Although most macro hedge funds take positions mainly in mature markets, some also take positions in emerging markets. A number of the largest macro funds do both and spread their holdings across equities, bonds, and currencies (taking both short and long positions), and in addition hold commodities and other less liquid assets such as real estate. But the majority of macro funds hold a more limited range of assets, typically allocating only a fraction of their portfolios to emerging markets, where risks of concentrated stakes and costs of establishing and liquidating large positions can be high. Most relative value funds similarly limit their holdings to the mature markets, because their expertise is limited to those markets.

### The Fuzzy Line Between Hedge Funds and Other Institutional Investors

Defining and describing hedge funds is further complicated by the fact that other investors engage in many of the same practices. Individuals and some institutions buy stocks on margin. Commercial banks use leverage in the sense that a fractional-reserve banking system is a group of leveraged financial institutions whose total assets and liabilities are several times their capital. The proprietary trading desks of investment banks take positions, buy and sell derivatives, and alter their portfolios in the same manner as hedge funds. For all these reasons, any line between hedge funds and other institutional investors is increasingly arbitrary.

### If Many Are Risky, Why Are They Called "Hedge" Funds?

To "hedge" a bet is to protect *against loss* by betting a counterbalancing amount against the original bet. Similarly, a "hedge" in the financial world is a transaction that *reduces* the risk of an investment. So why are *high-risk* partnerships that use speculative techniques called "hedge" funds?

In 1949 A.W. Jones established in the United States what is regarded as the first hedge fund. Jones combined two investment tools--short selling and leverage. *Short selling* involves borrowing a security and selling it in anticipation of being able to repurchase it at a lower price in the market, at or before the time when it must be repaid to the lender. *Leverage* is the practice of using borrowed funds. (Financially leveraged firms thus have high debt-to-equity ratios.)

Both short selling and leverage are regarded as risky when practiced in isolation. Jones is credited with showing how these instruments could be combined to limit market risk. Jones's insight was that there were two distinct sources of risk in stock investments: risk from individual stock selection and risk of a drop in the general market. He sought to separate out the two. Jones maintained a basket of shorted stocks to hedge against a drop in the market. Thus controlling for market risk, he used leverage to amplify his returns from picking individual stocks. He went long on stocks that he considered "undervalued" and short on those that were "overvalued." The fund was considered "hedged" to the extent the portfolio was split between stocks that would gain if the market went up, and short positions that would benefit if the market went down. Thus the term "hedge funds."

Jones's fund had two other notable characteristics that, with variations, continue to this day: he made the manager's incentive fee a function of profits (in his case, 20 percent of realized profits) and agreed to keep his own investment capital in the fund (ensuring that his incentives and those of his investors were aligned).

Hedge funds proliferated in the "go-go" years 1966-68, as the stock market rose and Jones's fund garnered favorable publicity. A 1968 U.S. SEC survey enumerated 215 investment partnerships, 140 of which were categorized as hedge funds. These funds concentrated on investments in corporate equities. With the market on an upward trend, fund managers relied more on leveraging, since hedging a portfolio with short sales was difficult, time consuming, and costly. As a result, managers increasingly resorted to strategies with only token hedging--rendering the funds vulnerable to the extended market downturn that started at the end of 1968. By one estimate, assets under management by the 28 largest hedge funds had declined by 70 percent by the end of 1970.

Those hedge funds that survived and new entrants experienced a resurgence in the 1980s associated with global financial liberalization that opened new investment opportunities. "Macro" funds increasingly departed from the traditional hedge fund strategies that had focused on stock picking to take positions on the overall direction of broad global shifts in stock markets, currencies, and interest rates. Managers built internationally diversified portfolios of government bonds, currencies, and other assets. Hedge funds became particularly fashionable starting in 1986, a year of favorable press commentary on the Tiger Fund (and its offshore counterpart, the Jaguar Fund). These funds reaped high returns in 1985 on a "global macro play" involving a large investment in foreign currency call options purchased in the expectation that the U.S. dollar, having risen sharply for four years, would decline against the European currencies and the yen. Subsequent years saw the establishment of hundreds of new hedge funds following a variety of investment strategies, most of which utilized short sales, leverage, and derivative instruments even more specialized than currency call options.

### **How Big Is the Hedge Fund Industry?**

A variety of commercial services report on hedge funds, but they are given information voluntarily, and no authoritative estimates exist either of the number of such funds or the value of their capital. Double counting can be a problem, too, since some commercial services combine data for funds of funds--hedge funds that invest in other hedge funds--with other categories.

Above all, which investors to include is a puzzle. Should individuals or family groups be counted? What about limited partnerships or limited liability companies that invest primarily in assets other than public securities and financial derivatives, or that do not use leverage or short selling? Should one include managed futures funds, which limit their activities to futures markets? Different services answer these questions differently, which largely accounts for their widely varying estimates of the number of hedge funds and the value of their capital.

Still, it is useful to see how far the available data allow us to go. Data from Managed Account Reports Inc. (Mar/Hedge) puts the number of funds at the end of 1998 at 914, of which about a quarter are funds of funds. They managed capital of \$110 billion including funds of funds, and \$92 billion without them. Of the \$110 billion total, \$38 billion is in macro funds, and \$27 billion in global funds. Mar/Hedge uses a relatively narrow definition of what is a hedge fund, so its estimates are at the low end. But by any measure, hedge fund capital pales in comparison with capital of other institutional investors, which exceeds \$20 trillion just in mature markets.

### **Use of Leverage and Derivatives**

Some long-established macro funds find the fees on complex derivatives prohibitive. They find it cheaper to use conventional forwards and futures to take positions ahead of the market moves they foresee. Some newer macro funds pursue more specialized trading strategies using complex derivative securities. Relative value funds are also inclined to use derivatives because the mispriced securities they are seeking can be hidden within complex derivatives that combine several underlying assets.

Hedge funds leverage the capital they invest by buying securities on margin and engaging in collateralized borrowing. Better-known funds can buy structured derivative products without putting up capital initially but must make a succession of premium payments when the market in those securities trades up or down. In addition, some hedge funds negotiate secured credit lines with their banks, and some relative value funds may even obtain unsecured credit lines. Credit lines are expensive, however, and most managers use them mainly to finance calls for additional margin when the market moves against them. These practices may allow a few hedge funds, like Long-Term Capital Management (prior to its reorganization), to achieve very high leverage ratios, but industry observers regard LTCM's practices as exceptional.

## **Hedge Funds and Market Dynamics**

From an international perspective, a vital question about hedge funds is whether they destabilize foreign exchange markets. One key issue is whether hedge funds that trade in currency markets have acquired a distinctive role as lead steers in the herding by investors that sometimes characterizes these markets. Another issue is whether hedge funds are more or less likely than other institutional investors to join in a generalized move against a weakening currency.

### **Herding**

Hedge fund managers are often regarded as astute and quick off the mark. Mere rumor that they are taking a position may encourage other investors to follow. Although pension funds, insurance companies, and mutual funds are subject to

prudential restrictions on their foreign exchange market positions, they still have some freedom to follow. And their financial assets are far larger than those of hedge funds.

Despite the possibilities, the evidence on whether other investors engage in such copy-cat behavior is mixed or even negative. Analysis of reported large transactions gives no evidence that other traders are guided by the positions taken by hedge funds in prior periods. When big moves are under way, the data show hedge funds often act as contrarians, leaning against the wind, and therefore often serve as stabilizing speculators.

### **Feedback Trading**

Although hedge funds have the flexibility to take short positions (that is, be on the selling side), they can also be the first to take long positions (buying side) in currencies that have depreciated in the wake of a speculative attack, providing liquidity to illiquid markets and helping the currency establish a bottom. Clients' expectations that hedge funds will make above-normal returns--as they often do--will discourage managers from buying the same assets being purchased by other investors since these asset prices already reflect others' moves.

Hedge funds' greater flexibility makes them less inclined than other investors to buy and sell in the same direction as the market. Hedge funds are not bound by their prospectuses, as mutual funds often are, to invest new inflows of capital in the same manner as existing capital. When a market is falling, hedge funds can wait it out, while mutual funds may be required by their internal controls to liquidate positions, or they may have to pay off withdrawals by their investors. Hedge funds--except for those with very high amounts of leverage--are often able to await a market reversal, either because they may have credit lines to draw on to put up more margin or collateral, or because their investors are locked in for substantial periods.

## **Supervision and Regulation**

Governments supervise and regulate collective investment vehicles for three reasons: to protect investors, to ensure the integrity of markets, and to promote stability.

### **Protecting Investors**

To date, regulators have generally been satisfied that there is no need for more intensive investor-protection regulation affecting hedge funds, because investors in such funds are high-income individuals or institutions that can fend for themselves. Hedge funds offer their securities as private placements, on an individual basis, rather than through public advertising, and need not register as securities issuers or publicly disclose their financial performance and asset positions. They must, however, provide investors with all material information about their securities and activities through an offering memorandum and regularly audited financial statements, and they are subject to statutes governing fraud and other criminal activities.

### **Protecting Market Integrity**

Hedge funds are subject to regulations in the United Kingdom and the United States designed to detect when individual participants are attempting to dominate or manipulate markets. In the United States, investors active on currency futures markets, including hedge funds, must regularly report large positions in the pound sterling, Canadian dollar, deutsche mark, Swiss franc, and Japanese yen through the Federal Reserve System. The U.S. Treasury may require information from participants on positions in to-be-issued and recently issued securities to ensure that large players are not squeezing other market participants. Many options exchanges have set up Large Option Position Reporting Systems to track changes in large positions and identify outsized short uncovered positions.

In many other countries, hedge funds along with others must report large foreign exchange transactions, typically denominated in the home currency. These reports are rooted in attempts to limit money laundering or in the ongoing enforcement of capital controls.

The U.S. Commodity Futures Trading Commission (CFTC) requires daily reporting of all futures positions above certain levels. Position information by customer or individual trader is collected on the futures exchanges of Brazil, Canada, Hungary, Japan, the Netherlands, Singapore, the United Kingdom, and the United States. Malaysia and Hong Kong SAR also require position reporting. Other countries--for example, France, Germany, Italy, and South Africa--do not routinely collect futures position information at the level of the customer but can obtain it from their trading systems to monitor the positions of clearing members.

### **Managing Systemic Risk**

Regulatory policies seek to avert systemic threats to the financial system by limiting imprudent extensions of credit. These regulations include margin requirements, collateral requirements, and limits on the exposure of financial intermediaries to individual customers. All of them affect hedge funds' business with banks, brokers, and other intermediaries.

In order to manage credit risks associated with lending to hedge funds, prime brokers and banks recalculate their positions vis-à-vis hedge funds daily at market prices, request daily payments, and collateralize their lending. They monitor the funds' investment strategies, monthly returns, and investor withdrawals. Based on the results of this monitoring and the length of their relationship with each fund, creditor banks and brokers establish limits on their credit exposure to each fund.

In spite of these procedures, risk management by financial institutions has not always been adequate. Thus, it is important for bank supervisors to monitor banks' exposure to creditors that lend in turn to hedge funds, and to demand corrective action when that exposure is excessive or poorly managed. The constituents of adequate supervision and regulation are well known, and are by no means peculiar to the business banks do with hedge funds. The heavy use that some hedge funds make of derivative financial instruments, however, compounds problems of information and evaluation for bank management and supervisors alike.

A further concern is that no single national regulator can know the exposure of financial intermediaries as a whole to hedge funds that obtain credit from international banks based in different countries. This problem arose with LTCM, where U.S. regulators may have known the outlines of U.S. banks' exposure and Swiss regulators may have been aware of the exposure of Swiss banks, but they did not know the exposure of one another's banks and therefore the risks to the international financial system as a whole. This problem is generic, applying to all large borrowers, not just hedge funds; the generic solution is for bank supervisors to share information more systematically, as recommended by, among others, the Basle Committee in their Core Principles for Banking Supervision. Hedge funds differ from other borrowers in this respect only insofar as they tend to be highly leveraged, so that when things go wrong, they go very wrong.

### **Hedge Funds and the 1997 Crisis in Emerging Markets**

Since hedge funds have been charged with playing a pivotal role in the 1997/98 crisis in emerging markets, their role is worth examining, starting with the devaluation of the Thai baht.

Hedge funds' forward sales of baht (commitments to sell at some future time) are impossible to estimate precisely. Of the Bank of Thailand's \$28 billion forward book at the end of July 1997, about \$7 billion is thought by market participants to represent transactions directly with hedge funds. Hedge funds may also have sold

baht forward through offshore intermediaries, onshore foreign banks, and onshore domestic banks, which then off-loaded their positions (commitments to purchase) to the central bank. Hence, there is no way of accurately estimating their total transactions.

Although hedge funds apparently sold some long-dated forward contracts on the baht in February 1997, the bulk of their forward sales to the Bank of Thailand seems to have occurred in May. Thus, even if herd behavior worsened the situation, hedge funds were not obviously at the front of the herd. The investors first off the mark appear to have included domestic corporations, domestic banks, and international commercial and investment banks.

The baht is the only Asian currency for which the hedge funds collectively took significant short positions (an excess of sales over purchases), according to market participants. The spread of currency instability to other Asian countries appears to have caught the hedge funds off guard. In the view of market participants, the main short sellers in Indonesia, Malaysia, and the Philippines were money center commercial and investment banks and domestic investors, who were better able to short owing to their superior access to interbroker markets and domestic credit.

The other significant buildup of hedge fund positions, besides on the baht, was on the Indonesian rupiah. Most, however, were long positions (an excess of purchases over sales) taken after the initial depreciation, reflecting the view that the rupiah had fallen too far and would soon recover. Domestic banks and corporations not only had incurred large amounts of external debt but had sold options against the rupiah's depreciation, using the premiums as a source of income. These moves helped trigger foreign investor flows out of the currency, led by the international commercial and investment banks but accompanied by little if any activity on the part of hedge funds.

A few hedge funds took modest positions on the Malaysian ringgit. None appears to have ridden the ringgit for any substantial range of its fall from 2.5 to 3.5 ringgit per U.S. dollar, but many incurred losses on their holdings of Malaysian equities. The initial pressure on the currency appears to have come from institutional investors closing out long positions in stocks.

Hedge funds seem to have taken no significant positions against the Philippine peso. Mainly, domestic banks and international commercial and investment banks with onshore operations sold the peso short. International investors, including hedge funds, claim to have believed for some time before the crisis that economic and financial fundamentals warranted taking short positions against the Korean won, but there were few avenues for doing so. Domestic entities appear to have put the main pressure on the won.

### **The Rescue of Long-Term Capital Management**

The story of Long-Term Capital Management is one of a systemic threat generated by the investment activities of a hedge fund, and of a rescue operation facilitated by government officials worried about the macroeconomic and financial implications. Whether the LTCM episode significantly strengthens the case for more hedge fund regulation turns on whether the LTCM situation was unique, or instead is indicative of hazards posed by the hedge fund industry.

LTCM manages a hedge fund (Long-Term Capital Portfolio) that invested primarily in the U.S., Japanese, and European markets but in other markets also. The firm's traders--legendary as the best and brightest technicians in the hedge fund community--recorded total returns, after fees, averaging 33.7 percent in 1995-97, compared with 29.3 for the S&P 500.

In the week of September 21, 1998--amid rumors about LTCM and some of its major creditors, and concerns over potential liquidity problems in financial markets--the Federal Reserve Bank of New York (FRBNY) helped to coordinate a \$3.6 billion private rescue of LTCM by a consortium of 14 major international financial

institutions.

LTCM specialized in fixed-income and convergence strategies, taking complex, leveraged positions in order to profit from (often small) discrepancies in the relative prices of bonds, swaps, and options, as well as stocks and their derivative instruments. The bulk of its investments were convergence trades in U.S., Japanese, and European bond markets--essentially bets that interest rate spreads would narrow. LTCM purchased or borrowed large volumes of relatively illiquid, low-quality securities (mortgage-backed securities and industrial country junk bonds) and sold short liquid, high-quality securities (U.S. treasuries and other Group of Seven sovereign credits). These positions were leveraged using funds borrowed from international commercial and investment banks.

At the beginning of 1998, on capital of just \$4.8 billion, LTCM managed balance sheet positions totaling about \$120 billion, implying an average of 25 times capital. At the same time, LTCM was managing total gross notional off-balance-sheet derivative contracts amounting to about \$1.3 trillion.

Bankers familiar with LTCM's portfolio suggest that LTCM engaged in transactions involving total return swaps, which allow investors to profit or lose from price movements on securities without actually purchasing them. LTCM is reported to have borrowed aggressively, and on relatively favorable terms, to increase its exposure and leverage as spreads widened, presumably on the strong belief that spreads would ultimately narrow.

In the event, spreads widened and market volatility soared.

By Tuesday, September 23, LTCM's equity (net asset value) stood at just \$600 million and supported balance-sheet positions in excess of \$100 billion, implying balance-sheet leverage of 167 times capital; the hedge fund's losses on its highly leveraged positions (but not necessarily on the securities that it was holding) had wiped out 90 percent of its equity.

At some point--probably culminating on Sunday, September 20, when staff of the FRBNY and the U.S. Treasury visited fund headquarters in Greenwich, Connecticut--the assessment was made that the potential for market disruption called for a private sector solution. The implication for derivatives markets of forcing LTCM into receivership--derivatives are specifically exempt from bankruptcy provisions and therefore could be sold off en masse by the creditors if LTCM was liquidated--were particularly worrisome. If the fund were forced into a sudden and disorderly liquidation, markets around the globe could be disrupted.

The rescue by creditors was organized, in part, to allow for a more orderly unwinding of positions and to remove the potential for a rapid draining of liquidity from world securities markets. The pooling and internalization of risk were possible because the consortium included many, if not all, of the financial institutions that would necessarily have been involved in the closing out and deleveraging of LTCM's positions. Thus, the rescue of LTCM can be seen as an out-of-court bankruptcy-type reorganization in which LTCM's major creditors became its new owners, hoping to salvage as much value as possible. Critics saw the rescue as an unwise government intervention into a crisis that the markets should have resolved.

### **An Appraisal**

In light particularly of the Asian financial crisis and the rescue of LTCM, is additional regulation of the hedge fund industry needed? What proposals for reform are under consideration?

#### **Systemic Stability**

In the wake of the LTCM rescue, regulators worry that some banks under their supervision are failing to monitor adequately the credit risk in their exposure to



particular hedge funds. The dearth of information on hedge funds' positions may make it difficult for financial institutions to assess the creditworthiness of their hedge fund customers. Although major banks typically analyze detailed financial statements before extending credit to hedge funds, regulators also recognize that others lack the sophistication to understand fully all the risks associated with the hedge fund industry. They conclude that a significant risk to systemic stability may remain.

These dangers could be addressed by raising capital risk weights and other prudential requirements on bank lending to hedge funds and other highly leveraged institutions and by applying capital surcharges to banks lending to funds that fail to disclose information on their trades and positions. The risk that distress sales of securities by a major hedge fund might destabilize securities markets could be addressed by raising margin and collateral requirements on exchange-traded products, further limiting the ability of hedge funds and other investors to leverage their capital. Derivatives traded over the counter rather than on centralized exchanges pose special problems since they are not subject to formal margin requirements. An obvious way to proceed here was the recent agreement by 12 leading international banks, together with senior Federal Reserve officials and the chairman of the Securities and Exchange Commission, to try to set voluntary guidelines for the extension of credit to participants in derivatives markets.

Unfortunately, there is reason to doubt the effectiveness of such measures. Banks have grown sophisticated in using regulatory arbitrage to circumvent the intent of differential capital requirements. Margin requirements on stocks tend to be undermined by competition among exchanges and by the ability of business to move to where such requirements are least. Even though the 12 leading international banks are the counterparties (that is, the other parties to contracts) for the majority of global derivatives transactions, any effort on their part to limit the extension of credit will encourage other banks not party to their agreement to enter the market. In the end, there may be no alternative to relying on the hedge funds' counterparties themselves to manage the risk.

The U.S. President's Joint Task Force on Hedge Funds, Leverage, and the Lessons of Long-Term Capital Management has called for quarterly disclosure by hedge funds to the public of summary information on their portfolios, with the goal of strengthening market discipline of their bank creditors. This proposal is controversial because it is not obvious what *public* disclosure--as opposed to disclosure to the regulators or to the hedge fund's bank creditors themselves--will achieve. (The idea may be that the public, with this information in hand, will pressure bank creditors to regulate their exposure to highly leveraged borrowers more carefully, reducing risk.) Nor is it clear that disclosure statements issued at quarterly intervals would be particularly useful, given the speed with which hedge fund positions can change.

Some regulators also favor an international clearinghouse or credit registry that would assemble information from national sources on the borrowings of hedge funds and other highly leveraged financial entities. Supervisors could collect information on their banks' exposure and report it to an international registry. The result would resemble the Bank for International Settlements' quarterly publication of figures on international banks' cross-border exposures. A worry is that assembling these figures might create a spurious sense of precision--that all participants really know their exposure to high risks when in fact they may not. Such an approach might also lead to moral hazard for lenders, if they thought that the authorities managing the clearinghouse would run to the rescue of investment banks and others providing information.

### **Large Trade and Position Reporting**

The question of market integrity remains. Here, the concern is that hedge funds may be able to dominate or manipulate markets. An obvious way of addressing this concern is for countries with large trade and position reporting systems in place to extend their coverage and for countries without such systems to adopt them.

Although transaction reporting can be difficult to carry out when transactions occur in the interbank market rather than through a centralized exchange, U.S. experience suggests periodic large-position reporting is feasible even in a decentralized environment. To be totally effective, such requirements must apply in all jurisdictions in which foreign exchange transactions can be booked. Otherwise, reporting requirements regarded as too onerous (because, for example, of fears of repercussions when large trades became known to national authorities) could prompt foreign exchange transactions to migrate offshore. A partial response would be to subject domestically owned bank and nonbank subsidiaries abroad to national reporting requirements, as the United States does. But a high degree of effectiveness would require international coordination and the cooperation of offshore financial centers--things that cannot simply be assumed.

### **Limits on Position Taking**

Policymakers might contemplate a variety of measures to limit the ability of hedge funds and other international investors to take positions in domestic financial markets. By taxing short-term capital inflows (as, for example, Chile has done), hedge funds and others could be discouraged from taking long positions that they might wish to close out suddenly. Hedge fund managers, who emphasize the importance they attach to being able to put on and take off positions with a minimum of transaction costs, would be particularly sensitive to such measures.

A more radical step aimed at limiting the ability of hedge funds and other investors to take short positions would be to prohibit domestic financial institutions from extending the domestic credit needed to short the currency and to lend the securities needed to short equity and fixed-income markets. But strong limits on position taking could prevent hedge funds and other international investors from acting as contrarians. In addition, attempts to impose position limits or margin requirements will provide incentives for financial market participants to arrange transactions in unregulated or offshore jurisdictions, neutralizing efforts to constrain their activities.

Along the same lines, by slowing the development of active and liquid bond markets, it might be possible to discourage trading in those assets by hedge funds and other investors that prefer to transact in markets where positions can be easily taken and liquidated. But the costs in terms of economic growth of suppressing the development of domestic financial markets are high. If measures are taken to discourage position taking by hedge funds and other investors, it is critically important that these do not encourage a relapse into inflexible financial markets that retard economic growth.

### **Conclusion**

Government authorities are moving cautiously as they consider whether new policies or regulations are needed to control the activities of hedge funds. Certainly, the record of the past decade suggests instances of large position taking, either directly by hedge funds, or by other investors with greater capital at their command who may take their cues from hedge fund activity. Yet this recent history is far from clear that hedge funds, on balance, do more harm in precipitating the fall of asset prices than they do good by helping break the free fall that can afflict oversold markets, including markets for currencies. Thus, new restrictions on hedge funds may do as much harm as good.

Some of the clearest excess involves instances of very high leveraging of hedge fund capital, as with Long-Term Capital Management. This has led to the consideration of measures to ensure that banks and their regulators are fully informed about hedge funds' total borrowing. But difficulties persist in determining how and where to collect such figures on a global basis, and whether, if they are required, some funds might shift their legal domiciles to offshore havens.

As governments sort out these difficult policy issues, they can take steps to improve the functioning of financial markets by providing them with more complete

information about national financial and economic policies, intentions, and conditions. Such transparency encourages all investors, including hedge funds, to trade on fundamentals rather than to run with the herd.

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