Regulating hedge funds

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Due to the ever-increasing amounts under management and their unregulated and opaque nature, hedge funds have emerged as a key concern for policymakers. While until now, hedge funds have been left essentially unregulated, we are seeing increasing calls for regulation for both microprudential and macroprudential reasons.

In our view, most calls for the regulation of hedge funds are based on a misperception of the effectiveness of financial regulations, perhaps coupled with a lack of understanding of the positive contribution of hedge funds to the financial system.

There are real concerns about consumer protection following from the expansion of the consumer base. However, it would be misguided to relax accreditation criteria. A more important issue is the investment of regulated institutions, in particular pension funds, in hedge funds. Since such institutions to enjoy direct or indirect government protection, the investment in hedge funds has to be regulated. However, such regulations are best implemented on the demand side by the pension fund regulator, rather than by directly regulating the hedge fund advisors themselves.

Hedge funds provide considerable benefits, not only to their investors and advisors, but more importantly to the economy at large by facilitating price discovery, market efficiency, diversification, and by being potentially able to put a floor under a crisis, a function not easily implemented by regulated institutions due to a minimum capital ratios, relative performance evaluation and other considerations.

It would however be imprudent to leave hedge fund advisors completely unregulated since the failure of a systematically important hedge fund has the potential to create such uncertainty as to impede trading and in a worst case scenario cause significant damage to the real economy.

These issues cannot be addressed by standard regulatory methodology such as disclosure and activity restrictions. Indeed, supervisors would be well advised to leave the hedge fund sector unregulated in their normal day-to-day activities. However, the regulator needs to have the power to resolve the informational uncertainty caused by the failure of a systematically important hedge funds. Prime brokers and other client banks would in such a scenario have a de facto or a de jure obligation to participate in the expedient removal of the uncertainty. To this end targeted consultation and contingency planning is essential.

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Hedge funds have emerged as a key concern to policymakers due to the ever-growing amounts under management coupled with concerns about their opaqueness. Consequently, the current status of hedge funds as one of the few largely unregulated entities[1] within the financial system is increasingly being challenged, and we expect to see some forms of hedge fund regulation in the near future. Unfortunately, most demands for the regulation of hedge funds are based on a misperception of both their threat to the economy and benefits to the financial system, as well as on overconfidence in the efficiency and accuracy of financial regulations.

Most calls for the regulation of hedge funds are based on misperceptions about the effectiveness of financial regulations, perhaps coupled with general mistrust of markets and an inflated belief in the effectiveness of government policy, perhaps by anchoring this belief in the success of regulation from experiences in unrelated sectors, such as traffic. Furthermore, calls for regulation seem to be strongest in countries where the hedge funds have gotten in the way of vested interests, such as in Germany.

The failure of large hedge funds, such as Amaranth, has been used to justify the need for regulations. However, the failure of Amaranth, one of the largest hedge fund failures of all times, may have proven just the opposite. It brought home the risk of investing in the hedge fund sector while the orderly resolution of its failure demonstrated that the system is able to cope with sizable failures and with substantial, illiquid and concentrated positions. Indeed, the case of Amaranth may indicate that further macro prudential regulations are not needed.

Hedge funds do however contribute to systemic risk whereby the failure of a systematically important hedge fund has the potential to create sufficient uncertainty in the markets for liquidity to dry up and for trading to cease with potentially costly consequences. It is this externality that any regulations would need to address.

At the same time, hedge funds do provide considerable benefits not only to their principals and investors, but more importantly to the economy at large. They make financial markets more effcient than they otherwise would be, and they are in principle able to trade during financial crises. This potentially enables them to provide a floor under prices, something which regulated institutions may not be able to, perhaps due to Basel type minimal capital ratios. In turn this might reduce return correlations in downturns and provide diversification benefits to the economy at large.

Existing regulations as applied to other financial institutions are not likely to be effective for regulating hedge funds. Activity restrictions, such as leverage or short-sale constraints, or disclosure will either negate the economic benefits contributed by hedge funds or would not be effective since they would not internalize the perceived externalities, others may be more dangerous still, offering only a veneer of protection, such as its registration requirements. On top of that, there always remains some risk that localized regulation causes hedge fund advisors to relocate to more favorable jurisdictions, removing regulatory oversight further.

As argued by Daníelsson *et al.* (2006), regulating hedge funds for reasons of consumer protection would be a mistake, where any regulatory system needs to recognize the benefits from hedge funds. Consequently they argue that any regulation of hedge funds should target the specific systemic concerns and not impede their day to day operations. The best way to achieve this goal is to have in place an effective resolution process to deal with the potential of systemic consequences from a hedge fund failure by means of a rapid unwinding process. The regulator furthermore needs to have a clear idea of the systemically important hedge funds, their prime brokers and main counterparties.

1| MICROPRUDENTIAL CONCERNS

Hedge funds have traditionally attracted investments from accredited investors, i.e., individuals who are sufficiently wealthy. Since such investors neither demand nor require government protection, hedge funds remained unregulated. In this context, we can view hedge funds as an extension of individual investors' investment activities. As long as hedge

1 *Hedge funds are of course not entirely unregulated since they are, among others, subjected to the regulations of the exchanges on which they trade.*

fund investments were limited to accredited investors and assets under management by hedge funds were relatively small, hedge funds remained under the radar.

However, in recent years the investor class of hedge funds has broadened considerably, raising concerns. First, accreditation requirements have relaxed over time and in some countries few if any limits exist on who can invest in hedge funds. Second, regulated institutions investing on behalf of third parties, in particular pension funds, are increasingly investing in hedge funds, further raising concerns.

Retail Investors. The traditional investor base of hedge funds consists of wealthy individuals while smaller retail investors have been limited to the regulated funds, such as mutual funds. Retail investors have traditionally been protected by regulations because it was felt that they lacked sophistication to make investment choices without adequate disclosure and limits on funds activities. In recent years the boundaries between the two investor groups has been breaking down, the accreditation requirements in the United States have until recently remained static in nominal terms, and some countries, such as Australia, do not impose restrictions on hedge fund investments. We now simultaneously see calls for increasing retailization of hedge funds and for some form of protection alongside it.

The arguments in favor of retailization are generally based on fairness. Why should only the wealthy be allowed to enjoy superior hedge fund returns? Indeed, it appears sometimes that certain supervisors have called for retailization, rather than the hedge fund advisors or the retail investors.

We however feel that retailization cannot be recommended. There are good reasons why mutual funds catering to retail investors are regulated, and subsequent to large investment losses by the general public we observe clamoring for increased regulation. Indeed, following the collapse of Amaranth there where some calls in that direction. In the long run we do not see unregulated hedge funds catering to retail investors as a viable concept. We are therefore heartened by the recent SEC decision to strengthen accreditation requirements to USD 2.5 million excluding the investor's home.

This does not mean that retail investors need to be entirely excluded from hedge fund investments. First, hedge funds advisors increasingly offer standard "regulated" products, such as long-only or 130-30 funds. Such funds may be regulated without the hedge fund advisor being regulated, yet offering access to talented investment professionals.

Second, hedge fund replicators, funds that mimic the return characteristics of hedge fund indices, have some promise in offering hedge fund like returns at lower costs and more transparency. Just as with structured products, it should be possible to regulate replicators *via* precise rules based term sheets to an extent deemed acceptable for retailization. While such products would be unlikely to generate much alpha, they potentially do provide the diversification benefits that seem to have become the primary incentive to invest in hedge funds in recent months.

Regulated institutions. Regulated institutions, in particular pension funds, are increasingly investing in hedge funds. This raises legitimate concerns, whether such investments are consistent with the mandate of pension funds, in particular the risk profile, and whether pension fund managers are sufficiently sophisticated to understand the investment choices. Indeed, since pension funds are regulated and generally are underwritten by the government, either explicitly or implicitly, these are legitimate concerns. If pension funds continue were to invest aggressively in hedge funds in the current regulatory environment, we feel it is inevitable that the hedge fund industry will be regulated following the next big loss.

However, that would be the wrong approach to regulation. The public concern is with pension funds not fulfilling their mandates, but not with hedge funds. Consequently, the regulations should be on the demand side not the supply side. The regulators for pension funds should specify the requirements for investments in hedge funds, such as disclosure, investment amounts and risk. Hedge fund advisors may then decide whether to agree to such a mandate.

2| MACROPRUDENTIAL CONCERNS

The main concerns about the hedge funds relate to macroprudential issues, in particular financial stability. These concerns were identified by Daníelsson *et al.* (2006).

2|1 Common concerns

Destabilization. Hedge funds have been accused of destabilizing individual markets or even entire countries, such as in the aftermath of the Asian crisis. This is sometimes known as the Mahatir Conjecture. However, the evidence following the Asian crisis indicates that it was the local corporations who were the first to move money out of their countries, and hedge funds, if anything, seemed to have supported the currencies.[2]

Leverage. Hedge funds are sometimes accused of amassing too much leverage. This was an accusation leveled at the LTCM in 1998. Considering that under Basel I regulated banks are allowed to 12 times leverage and that most hedge funds operate with much lower leverage than that, leverage concerns seemed to be broadly unfounded.[3] Furthermore, we only observe extreme levels of leverage at times of a fund going under, as capital is vanishing.

Counterparty risk. There are concerns that because of their opaque nature, counterparties may not have suffcient information about the counterparty risk arising from hedge fund exposures. This was a key concern in the LTCM crisis. However, as a consequence, prime brokers have monitored hedge fund positions carefully with a view to better understand and hedge such risk. In addition, hedge funds are marked-to-market and mostly need to provide appropriate collateral. While some concerns remain, for instance due to the endogenous value of collateral posted, it seems that even the counterparty risk of the largest of hedge funds should currently not pose a serious threat to their trading partners.

Herding. We expect the most sophisticated hedge funds to lead the curve in implementing new trading strategies and investing in new assets and markets. Indeed, since flexibility and costly technical sophistication is the *raisons d'être* for such hedge funds they can be expected to lead rather than follow others and herd. There is however concern that smaller and less sophisticated hedge funds may opt to follow copycat strategies and herd. Generally, however, hedge funds are less likely to herd than other investors, such as mutual funds, insurance companies, banks and pension funds for reasons such as the absence of relative and benchmarked compensation schedules and the absence of governmental bail-outs.

Market liquidity. Hedge funds have been accused of being a user rather than a provider of valuable liquidity. Indeed, if a hedge fund is a large seller of an asset, perhaps forced by marking-to-market, or amplified by some hedge fund styles that imply the pursuit of similar strategies such as convertible arbitrage, it may have a significant price impact. However, compared to the rest of the market, hedge funds are more likely to be willing to trade, and thus are more likely to supply liquidity than simply use it up. Indeed, the presence of hedge funds in credit derivatives has allowed banks to issue more credit instruments and price them more fairly.

Fraud. 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.[4] Overall, in the first half of this decade, the SEC brought 51 cases against hedge funds, charging them with defrauding investors of more than one billion. This is still a small fraction of overall hedge fund investments. Furthermore, theft is illegal and criminal law may be sufficient to deal with hedge fund fraud.

2 *See e.g. Choe* et al. *(1998); Fung and Hsieh (2000); Fung* et al. *(2000); Goetzmann* et al. *(2000).*
3 *Gupta and Liang (2004) find that less than 4% of live and 11% of dead hedge funds in their sample would have violated the Basel II capital adequacy requirements as of March 2003, with the under-capitalized funds relatively small.*
4 *CFTC estimates suggest that in the five years up to 2003 hedge funds accounted for around 2% of SEC and CFTC enforcement actions (Testimony of Patrick J McCarty, General Counsel, Commodity Futures Trading Commission, in SEC, 2003). Also, the case of the Bayou hedge fund fraud is well known, with losses up to half a billion dollars.*

2|2 The real concerns

The main systemic concerns about hedge funds relate to the potential for the failure of a systemically important —i.e. a sufficiently large, opaque, and sophisticated— fund (or group of funds). Such a failure threatens to create considerable uncertainty. In this case it is not solely the size of the fund that matters but rather the opaqueness of its positions and the information uncertainty it causes in the markets. This may cause trading to be severely curtailed and market prices to be poor indicators of value. This is exactly what happened following LTCM in 1998. In turn these distorted valuations might lead to further inefficient allocations, preventing assets to be held by the institutions having the highest marginal valuations due to poor liquidity. A crisis may even lead to credit events involving institutions that are not directly affected by the hedge funds' operations, but whose collateral may become damaged as a result. Such repercussions can therefore affect Main Street over and above Wall Street. In such a situation the hedge funds do not bear all the costs of such an event, which creates an externality that has to be addressed. The backlash could be on par with the policy mistakes following the stock market crash of 1929 and the Great Depression.

3| Benefits from hedge funds

Hedge funds provide benefits to the financial system and the economy at large by making financial markets more efficient and provide liquidity in times of financial crisis. Daníelsson *et al.* (2006) outline these benefits.

Price discovery and the invisible hand. Hedge funds aid price discovery by employing considerable resources for market research. When hedge funds trade with their proprietary research information, they affect prices and volumes and thus reveal some of this information to the market, helping (perhaps otherwise under-researched) assets stay close to fundamental values. This in turn benefits the entire financial system, allow allocating trades to happen that otherwise would not take place. Furthermore, their trading activities increase competitive pressures on the spreads of market makers and other intermediaries.

Diversification. The regulated sector of the investment universe is generally limited by a range of regulations in what they can and cannot invest in. Consequently, out of the possible combinations of risk and return, the regulated sector can only provide products covering part of that range. Investors seeking different combinations of risk and return have either the option of managing the money themselves or delegating the investment decisions to somebody, i.e., a hedge fund.

Market clearing and liquidity. Daníelsson and Zigrand (2006) identify the specific implications of keeping some financial institutions, such as hedge funds, unregulated when the remainder of the financial system is subject to regulations, e.g., Basel style minimum capital. If the economy is hit by a liquidity induced financial shock, regulated financial institutions are required to get rid of more risky assets. If all market actors are regulated, then there is no counterparty at any price and the financial crisis episode is likely to become much deeper than than it otherwise would become.

4| Policy options I

The authorities have a range of options available when deciding how to best address the issue of regulating hedge funds. The key challenge is that standard financial regulatory methodology, developed with problems such as consumer protection and bank runs in mind, is not directly applicable to hedge funds.

Restrict or shut them down. The authorities always have the option of closing down the hedge fund industry in their respective jurisdiction, and indeed some authorities have expressed a desire to do exactly that. This however would be a mistake, as argued above. Furthermore, in countries where the calls for a heavy regulation of hedge funds are the loudest, such as Germany, the criticism of hedge funds seems to originate from them exposing weaknesses in corporate governance.

Furthermore, it is not clear how the authorities could restrict or close down the hedge fund sector given global anonymous markets. Not only is it not clear how such a restriction could be enforced offshore, it also raises concerns about economic discrimination.

If the regulated institutions and private individuals are able to conduct most type of investments, how can outsourcing be banned?

Among the envisaged restrictions most applicable to hedge funds are leverage constraints. But as argued above, most hedge funds hold leverage that is much lower than that, usually between one and two, and very high leverage ratios are observed only when a hedge fund is in serious trouble. Leverage furthermore is difficult to monitor accurately, let alone to compare across firms, time and products, and it also is not clear regulators want to be made responsible for this. Also, it is by-and-large in the interest of prime brokers to monitor leverage. Finally, uniform leverage constraints would impede the hedge funds' role of improving upon the efficiency of markets and may add to the procyclicality and instability of markets.

Laissez-faire. Not addressing the issue of the regulatory status of hedge funds is equally misguided. As discussed above, there are real systemic concerns from hedge funds since the full costs of such an event could be quite sizable and would not be borne by the hedge fund itself.

Disclosure. The second main regulatory tool is compulsory disclosure, both privately to the supervisor and publicly to clients. Perhaps the main impetus for regulating hedge funds today is focused on disclosure. In banking, disclosure is useful, e.g. by enabling regulators to monitor compliance with activity restrictions and provide protection for unsophisticated retail clients. Neither issue is relevant for hedge funds. Indeed, in most calls for disclosure it is not clear what the objective is. Furthermore, some hedge funds, and in particular those who arouse systemic concerns, operate at the highest end of the technology curve, frustrating attempts to obtain useful information by disclosure.

One option on disclosure is private disclosure to the supervisor of detailed position level information or output from the risk engines. A technically sophisticated hedge fund specializes in localized risk management, and will have a unique risk management system. By contrast, the supervisor specializes in global risk management and would not only need to understand the risk of an individual hedge fund but would in addition need to aggregate these risk across other similar funds, a task that would seem to be all but impossible today. With the enormous trading volume and frequent style changes, it is akin to trying to drink from a fire hose.

The alternative is public disclosure of aggregate performance or risk information to either investors[5] or the public at large. This however is again fraught with challenges, especially for the more sophisticated and systematically important funds. For example, even simple carry trades can provide a low volatility revenue stream for a considerable time, but then can go spectacularly wrong, such as the yen dollar carry in October 1998. Indeed, such strategies imply that volatility or value-at-risk can be seriously misleading as a measure of risk.

Reliance on prime brokers. Prime brokers provide banking services to hedge funds. Since prime brokers operate in the regulated part of the financial system it is sometimes proposed that they be used as a regulatory tool. This however misses the point about the relationship between prime brokers and hedge funds. It is true that the incentives of the prime brokers are to maintain the symbiotic relationship with the fund, and any potential problems with an individual hedge fund are likely to be discussed privately and resolved with the fund itself. But any prime broker viewed as an extension of the regulator would be viewed with suspicion by the hedge fund clients. Finally, regulatory arbitrage may induce prime brokers to relocate to unregulated financial centres, removing any sort of intelligent conversations between them and regulators.

Registration. In some jurisdictions hedge funds are required to register with authorities and there have been calls for registration requirements elsewhere, e.g. in the United States. While this has been struck down in courts, it is likely that the incoming Congress will give the SEC the power to require registration along with some disclosure. The benefits of blanket registration are generally hard to ascertain, but on the costs side it does induce moral hazard.

Targeted consultation. It is however essential for the authorities to have a clear view of the scope of the hedge fund sector, both operating within their jurisdiction, as well as globally. This requires the

5 *Hedge fund investors, such as funds-of-funds, bargain over the extent of voluntary disclosure along with issues such as fees and liquidity. If the bargaining power is on the investors side, the funds are likely to agree to more disclosure.*

authorities to be precise about what their information needs are. A good example of this is the FSA which maintains oversight of 31 of the largest hedge fund managers in Britain (50% of assets). Such thematic supervision covers a wide range of entities that have hedge fund mandates, and includes a regular survey of the main London prime brokers.

5| POLICY OPTIONS II

For the regulations to be effective and not too costly they need to focus directly on the externality meriting regulations, i.e., the potential failure of a systematically important fund or group of funds. Consequently, the object of the regulations is not to regulate the ongoing activities of an individual fund, but rather to address the failures. As discussed above, the systemic risk arising from hedge funds is liquidity and credit risk, including the endogenous and potentially pro-cyclical values of any collateral, induced by uncertainty about positions and how they get resolved.

Since the externalities cannot easily be prevented ex-ante without effectively shutting funds down, the best way this can be achieved is by having a robust resolution process in place in case a fund fails and the fund's positions need to be unwound. Client banks, prime brokers, and regulators may not be inclined to participate in such a process, or prefer to draw it out. The process therefore needs to be formalized, and there is little doubt in our minds that the regulators in the major financial centers then have the power to initiate such a process. While this may be viewed as accelerated bankruptcy process, the immediate key issue is rather to remove the uncertainty than to accurately resolve the final payoffs to the various counterparties. As with LTCM, Amaranth and others, sophisticated investment banks may be willing to take over parts of the affected hedge fund, after inspecting balance sheets and trading books. This is standard practice in banking. If no single bank has the required liquidity, such as with multiple failures, the monetary authorities might inject liquidity through a discount window. At the same time the supervisors do need to have contingency plans in place, and have an understanding of who the key players are. There also is a sense of urgency that might not exist in other crises. This is why targeted consultation is useful. Simulated crisis events, or stress tests, as performed by the Bank of England, the FSA, the Eurosystem Central Banks, and others, can be invaluable in planning for such contingencies.

Hedge funds have emerged as an integral part of the modern financial system, simultaneously making the financial system more efficient and inducing systemic risk. While the systemic risk needs to be addressed by supervisors, it is essential that it be done without negating the efficiency benefits provided by hedge funds. In this, rather than targeting the ongoing activities of hedge funds with traditional regulations such as activity restrictions and disclosures, it is sufficient and perhaps optimal to directly target the externality induced by hedge funds. The optimal regulatory regime for hedge funds directly targets this externality by having in place a robust resolution process in case a systemically important hedge fund or group of hedge funds trigger a systemic event.

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