Testimony of Richard Bookstaber

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Mr. Chairman and members of the Committee, I thank you for the opportunity to testify today. My name is Richard Bookstaber. Over the past decade I have worked as the risk manager in two of the world's largest hedge funds, Moore Capital Management and, most recently, Bridgewater Associates, and I have run my own hedge fund, the FrontPoint Quantitative Fund. In the 1990s I oversaw firm-wide risk at Salomon Brothers, which had a large internal proprietary trading operation. From my vantage point at Salomon I was familiar with the trading approach of some of the dominant hedge funds of the time, such as Long Term Capital Management.

I am the author of *A Demon of Our Own Design – Markets, Hedge Funds, and the Perils of Financial Innovation*. Published in April, 2007, this book warned of the potential for financial crisis resulting from the growth of leverage and the proliferation of derivatives and other innovative products.

Although I have extensive experience on both the buy-side and sell-side, I left my position at Bridgewater Associates at the end of 2008, and come before the Committee in an unaffiliated capacity, representing no industry interests.

My testimony will discuss the need for hedge fund regulation. I will limit my testimony specifically to the hedge fund regulation required to address systemic risk. I will argue that regulators must obtain detailed position and leverage data from major hedge funds in order to successfully monitor systemic risk.

The Benefits and Risks of Hedge Funds

Two characteristics that differentiate hedge funds from other investment funds are their ability to lever and to take short positions.[1] These tools give hedge funds more freedom than their traditional counterparts in executing investment ideas. If a hedge fund manager finds a trade that is particularly attractive, leverage allows him to borrow fund in order to put more exposure into that trade than can a traditional fund manager who is not permitted to lever. If a hedge fund manager wants to express a negative view, he can short a security, while the long-only fund manager's expression of such a view is limited to excluding the security from the portfolio. The ability to short also allows the hedge fund manager to eliminate exposures that are unavoidable for the traditional manager. For example, an equity hedge fund manager can construct a portfolio that has little market exposure by holding an equal weighting in long and short positions.[2]

Because hedge funds have more tools at their disposal, they have the potential to generate higher returns. Put another way, because hedge funds do not have some of the constraints of traditional investment funds, they can construct superior portfolios – portfolios that more precisely match the fund manager's intentions – when these constraints are binding.

But this freedom also means that hedge funds can take on more risk in more dimensions, and thus lose more money if things go wrong. And the risk posture of hedge funds is more difficult to assess, because the leverage and short positions give hedge funds a measure of complexity beyond that of traditional, long-only funds.[3] On the face of it, it is

[1] Another characteristic that can be argued to differentiate hedge funds from traditional funds is their fee structure. Hedge funds typically have a performance incentive fee. The fund manager receives a percentage of any positive returns. The manager does not, however, similarly share in losses. This leads to an incentive to take on risk, especially if the fund is 'under water'.

[2] The ability to reduce exposure to the market leads to the broadly-applied differentiation between portfolios with "beta" and "alpha" exposure. Beta refers to exposure to the market. A traditional equity fund has unavoidable beta exposure, because it holds nothing but long positions in equities. Its return will tend to move up and down with the overall equity market. Alpha refers to exposure that is unrelated to the underlying market. A hedge fund can largely eliminate its beta exposure by holding equal positions long and short. Its return is then alpha-based, because it will not be correlated with the underlying market.

[3] The leverage and short positions also lead to a greater demand for opacity, because if a leveraged or short position becomes known, others can trade against it to force the fund to cover its shorts or to reduce its leverage.

noteworthy that the most free-ranging, risky and opaque type of investment fund has been so lightly regulated.

Systemic Risk from Hedge Funds

The first task in managing systemic risk is aggregating position and leverage data. To understand why, let's look at the sources of systemic risk.

One source of systemic risk is leverage. Leverage amplifies risk in a meltdown. When a market drops, highly leveraged investment funds with positions in that market are forced to sell to meet their margin requirements, and their selling pushes prices down further. This in turn leads to more forced selling. The result is a cascading liquidity crisis.

And it can get worse from there. Those funds that are under pressure discover there is no longer liquidity in the stressed market, so they start to liquidate their positions in other markets. If many of the funds that are in the first market also have high exposure in a second one, the downward spiral propagates to this second market. This phenomenon explains why a systemic crisis can spread in surprising and unpredictable ways. The contagion is driven primarily by what other securities are owned by the funds that need to sell.[4] For example, when the silver bubble burst in 1980, the silver market became closely linked to the market for cattle. Why? Because when the Hunt family had to meet margin calls on their silver positions, they sold whatever else they could. And they happened also to be invested in cattle.

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[4]As an illustration, the proximate cause of Long Term Capital Management's (LTCM's) demise was the Russian default in August, 1998. But LTCM was not highly exposed to Russia. A reasonable risk manager, aware of the Russian risks, might not have viewed it as critical to LTCM. But the Russian default hurt LTCM because many of those who did have high leverage in Russia also had positions in other markets where LTCM was leveraged. When the Russian debt markets failed and these investors had to come up with capital, they sold their more liquid positions in, among other things, Danish mortgage bonds. So the Danish mortgage bond market and these other markets went into a tail spin, and because LTCM was heavily exposed in these markets, the contagion took LTCM with it.

Another source of systemic risk from hedge funds can come from the potential for widespread manipulation of critical markets.[5] When it comes to market manipulation, the ability of hedge funds to lever multiplies the impact of their capital base, and their ability to short means that they can take actions to depress prices. The potential for this risk can be appreciated by reflecting on the markets in the weeks surrounding the failure of Lehman Brothers in September, 2008. During that period short-selling contributed to a spectacular decline in equity prices, and there was huge pressure on the credit default swaps of the major financial institutions. The credit default swap spreads widened to a level that had previously been all but unimaginable. Because the spreads were viewed as indications of creditworthiness, and indeed were used in various loan covenants, the extreme widening of the spreads threatened the viability of these institutions.[6] The role of hedge funds in precipitating these market events remains to be studied, but given the history of this crisis it is not difficult to imagine the potential for a coordinated assault on the credit default swap market or on some other critical market precipitating a crisis in the future.

Regulating Hedge Funds for Systemic Risk

To control the systemic risk posed by hedge funds we must be able to measure crowding, the unintentional concentration of separate funds in the same trade. This means knowing the positions of the individual hedge funds and then being able to aggregate those positions. Whatever their own risk management capabilities, the individual funds – and regulators that might be providing oversight on an institution-by-institution basis – cannot keep systemic risk in check because they do not have this aggregate information.[7]

[5] Manipulation is the intentional concentration of positions in a market with the objective of distorting the market price. This distortion can be intended to convey the impression of information, or to trigger actions that are price-dependent.

[6] The SEC issued a temporary ban on short sales in the wake of the Lehman crisis. But the SEC had no control over hedge fund trading in the credit default swap market. Indeed, regulators did not have transparency into the activities of that market.

[7] For example, over a few days in August, 2007 a number of large, quantitatively-oriented long-short equity hedge funds saw their value plummet by twenty to forty percent. Among these were highly regarded funds, including Greenwich, Connecticut-based AQR Capital and Goldman Sachs's flagship Global Alpha

It is as if each fund is sitting in a darkened theater unaware of how many others might run for the exit. To regulate and monitor the systemic risk arising from manipulation, the first task again is for the regulator to know the positions of the hedge funds that are capable of such manipulation, and know those positions on a frequently updated basis.

Thus an essential task for the regulation of hedge funds is to get data on leverage and positions from the institutions. We must be able to track the concentration of hedge funds by assets and by strategies to understand how the failure of one firm might propagate out to affect others. This is missing in the current regulatory structure, and is at the core of systemic risk.

Position data must be reported in a standardized form so that similar positions can be aggregated across the various hedge funds. This sort of data management task has been accomplished in other settings. For example, when salmonella was found in a peanut factory in Georgia, the Food and Drug Administration identified the contaminated products across the nation and tracked them all the way to the store shelf. This was possible because consumer products are tagged with a bar code. We should do the same for financial products; have the equivalent of bar codes so that regulators know what financial products exist and where they are being held. This will help us anticipate the course of a systemic shock. It will identify cases where many investors may be acting prudently, but where their aggregate positions still lead to a level of risk which they themselves cannot see. It also will give us the means to evaluate crises after the fact. Just as the National Transportation Safety Board can use "black box" flight recorders to help improve airline safety by determining the causes of an airline accident, this position and

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Fund. These funds all used high leverage; after the debacle hit, Goldman reported its fund was leveraged six to one. These hedge funds had strategies in common, indeed they shared common lineage: The principals of AQR came from Global Alpha, and the principals of Tykhe Capital came from DE Shaw, both other funds embroiled in the crisis. An exogenous shock initiated a drop in their primary strategies, and due to their high leverage they were forced to reduce their positions. With many funds running for the door at the same time, this precipitated a leverage-induced liquidity crisis. These funds had substantial investments in risk management talent and systems. But what they did not appreciate – and would have had difficulty knowing given the secrecy with which the quantitative portion of the hedge fund industry operates – was the potential crowding from having many large competitors in the same strategies.

leverage data will act as the black box data to help us understand how a crisis started, and help us understand what we need to do to improve the safety of the markets.

I believe this is a regulatory task that can be readily accomplished. Initially the task need only focus on the largest hedge funds, and those funds already amass the required position data as part of their daily risk management process. And the task can bear fruit even if it does not exhaustively pull in and tag every position. The exhaustive reporting of all positions for all hedge funds would be difficult, but it is not necessary, because what matters for evaluating systemic risk is getting a critical mass of positions that reflects the biases and interdependencies that can lead to a crisis.[8]

The data acquisition and analysis must be done by the regulator in a secure fashion. I am not an expert in such security issues, but I can make two observations related to the feasibility of achieving an acceptable level of data security. First, an acceptable standard for position security already exists, because hedge funds allow these data to be held by various agents in the private sector, such as their prime brokers and clearing corporations. Second, the government successfully secures data in areas that are far more sensitive than position data such as the military and the intelligence community where a failure can cost lives and where there are concerted efforts by adversaries to root out the data.

Hedge Funds that should be Monitored for Systemic Risk Regulation

For purposes of systemic regulation, hedge fund oversight should be extended to include the large proprietary trading operations within banks. From the standpoint of leverage and the ability to short, these operations act the same as hedge funds.[9] They too can contribute to liquidity crisis events, and can participate in systemically relevant market

[8] There are many thousands of hedge fund, most small and inconsequential for systemic risk. And there are a range of customized and complex financial products – which with regulatory pressure might move over time into increasingly standardized forms – that will be time consuming to identify and tag. However, if we do get to the point where position information is provided on an exhaustive basis, then this process can also be used as a tool to detect fraud. The regulator can cross-check the reported positions against the fund's registered prime broker or clearing corporation for verification. Once verified, the returns from the reported positions can be cross-checked against the hedge fund's reported returns.

[9] Also, compensation within proprietary trading groups is generally incentive-based, similar to that of hedge funds.

manipulation. However, venture capital firms and private equity funds can be excluded. Venture capital and private equity funds operate outside the publicly traded markets, they do not short, and, because of the nature of their collateral, they do not employ the degree of leverage of the hedge funds that operate in the public markets. They also have long-term holding periods with positions that they recognize as being illiquid from the outset. Their business model is more that of creating a conglomerate of embryonic businesses than it is of trading like a hedge fund. The so-called 130-30 types of investments funds also can be excluded.[10] These funds can employ leverage and can short, but only within tight limits.

Conclusion

My testimony has focused narrowly on what is required to regulate hedge funds, looking specifically at the issue of systemic risk, and within that at the data required to measure and monitor this risk.

Systemic risk regulation is seen by some as the key to averting market and economic crises like those we have faced over the past two years. But while systemic risk is fresh on our minds given recent events, it is just one of many risks that require regulatory oversight. And it is not that difficult to address. Granted we failed to do so this time around, and that failure exacted a huge toll. But if we make the effort to look, systemic risk is more visible than many other risks. Compared to risks from insider trading or fraud, where the whole objective is to remain hidden, it is hard to be stealthy when there are hundreds of billion of dollars of assets and multiple financial institutions involved. And that is the scale for a risk to build to systemic proportions.

Obtaining the position and leverage data is not invasive to a hedge fund. It does not affect day-to-day business, and once the systems for transferring these data to the regulator are in place it will be an essentially costless adjunct to the funds' daily risk analysis. But I have not addressed the next critical component of hedge fund regulation, the component

[10] The 130-30 type of funds add a limited degree of leverage and ability to short to a traditional long-only structure.

that can be invasive: what to do if the analysis of the hedge fund data shows a systemic risk lurking on the horizon. Who pulls the emergency brake? Who bears the responsibility for having the hedge funds reduce their exposure or leverage? Such regulatory authority must exist for hedge funds, just as it must exist for banks and other financial institutions of systemic import.[11] However, the task of acquiring and analyzing data can be separated from that of taking action; indeed, I believe there are advantages to such a separation. And acquiring the data is the first task to address, because we cannot manage what we cannot measure.

[11] This means that the task of data aggregation also must extend to these other institutions, as must the ability to control leverage. For banks, the regulatory authority already is in place to obtain these data.