HEDGE FUNDS AND THE FINANCIAL MARKET

HEARING

BEFORE THE

COMMITTEE ON OVERSIGHT AND GOVERNMENT REFORM

HOUSE OF REPRESENTATIVES

ONE HUNDRED TENTH CONGRESS

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HEDGE FUNDS AND THE FINANCIAL MARKET

THURSDAY, NOVEMBER 13, 2008

HOUSE OF REPRESENTATIVES,
COMMITTEE ON OVERSIGHT AND GOVERNMENT REFORM,
Washington, DC.

The committee met, pursuant to notice, at 10:06 a.m., in room 2154, Rayburn House Office Building, Hon. Henry A. Waxman (chairman of the committee) presiding.

Present: Representatives Waxman, Towns, Maloney, Cummings, Tierney, Lynch, Yarmuth, Norton, Cooper, Van Hollen, Sarbanes, Davis of Virginia, Souder, and Issa.

Staff present: Phil Barnett, staff director and chief counsel; Kristin Amerling, general counsel; Stacia Cardille and Erik Jones, counsels; Theodore Chuang and John Williams, deputy chief investigative counsels; Roger Sherman, deputy chief counsel; Michael Gordon, senior investigative counsel; Karen Lightfoot, communications director and senior policy advisor; Caren Auchman, communications associate; Zhongrui Deng, chief information officer; Mitch Smiley and Alvin Banks, staff assistants; Jennifer Owens, special assistant; Brian Cohen, senior investigator and policy advisor; Earley Green, chief clerk; Jennifer Berenholz, assistant clerk; Leneal Scott, information systems manager; Lawrence Halloran, minority staff director; Jennifer Safavian, minority chief counsel for oversight and investigations; Ellen Brown, minority senior policy counsel; Jim Moore, minority counsel; Christopher Bright, minority senior professional staff member; Brien Beattie, Molly Boyl, and Adam Fromm, minority professional staff members; John Cuaderes and Larry Brady, minority senior investigators and policy advisors; Patrick Lyden, parliamentarian and Member services coordinator; Brian McNicoll, minority communications director; and John Ohly, minority staff assistant.

Chairman WAXMAN. The committee will come to order. The focus of our committee today is the hedge fund industry. Our four previous hearings have looked at failure. Our first two hearings examined the collapse of Lehman Brothers and AIG. We learned that these companies took on massive risk. When the bottom fell out, senior management walked away with millions of dollars, while shareholders and taxpayers lost billions. Our third hearing focused on the role of the credit rating agencies. At that hearing, we learned about the colossal failures of these gatekeepers of the financial markets. As one internal document said, "We sold our soul to the devil for revenue."

At our fourth hearing, we examined the role of financial regulators. Former Federal Reserve Chairman Alan Greenspan told us that he had identified a flaw in the deregulatory ideology he had championed. Today's hearing has a different focus. The five hedge fund managers who will testify today have had unimaginable success in the financial markets. Although there is a variation on how much they made individually, on average our witnesses made over $1 billion a year. That is on average $1 billion a year.

There are two reasons we have invited these hedge fund managers to testify. First, these are some of the most successful and knowledgeable investors in our financial markets. They each have valuable perspectives to share about what has gone wrong and what steps we need to restore our financial system. Second, their testimony and the testimony of the independent experts on our first panel will help the committee to examine three important issues. What role have hedge funds played in our current financial crisis? Do hedge funds pose a systemic risk to our financial system? And what level of government oversight and regulation is appropriate?

Currently, hedge funds are virtually unregulated. They are not required to report information on their holdings, their leverage, or their strategies. Regulators aren't even certain how many hedge funds exist and how much money they control. We do know, however, that hedge funds are growing rapidly and becoming increasingly important players in the financial markets. Over the last decade, their holdings reportedly have increased over five-fold, to more than $2 trillion. We also know that some hedge funds are highly leveraged. They invest in assets that are illiquid and difficult to price, and sell rapidly.

And we know from our hearing into Lehman and AIG, combining these factors can cause financial institutions to blow up. And we will hear today some experts worry that the failure of large hedge funds could pose a significant systemic risk to our financial system. We also know that hedge funds can receive special tax breaks. The five witnesses we will hear from today earned on average of a billion dollars last year, yet the tax law allows them to treat the vast majority of their earnings as capital gains. That means that at least some portion of their earnings could be taxed at rates as low as 15 percent. That is a lower tax rate than many school teachers, firefighters, or even plumbers pay. In our prior hearings, we have focused on what went wrong in the past. Today's hearing lets us ask what could go wrong in the future so we can prevent damage before it occurs. Both types of hearings are essential. We need to understand both what happened and what could happen in order to solve the immense economic problems we are facing.

I want to thank all of our witnesses for appearing today. Some of the witnesses readjusted their schedules to testify. They all responded to our requests for documents. And I appreciate their cooperation, and look forward to their testimony. I want to now call on ranking member, Tom Davis for an opening statement.

[The prepared statement of Hon. Henry A. Waxman follows:]

Opening Statement of Rep. Henry A. Waxman
Chairman, Committee on Oversight and Government Reform
Hedge Funds and the Financial Market
November 13, 2008

Today we are holding the Committee's fifth hearing on the financial crisis. Our focus today is the hedge fund industry.

Our four previous hearings have looked at failure. Our first two hearings examined the collapse of Lehman Brothers and AIG. We learned that these companies took on massive risk. When the bottom fell out, senior management walked away with millions of dollars, while shareholders and taxpayers lost billions.

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I want to thank all of our witnesses for appearing here today. Several of the witnesses readjusted their schedules to testify today. They all responded to our request for documents. I appreciate their cooperation and look forward to their testimony.

Mr. DAVIS OF VIRGINIA. Thank you, Mr. Chairman. Thank you for calling the hearing today. Hedge fund losses, and in some cases, complete liquidations are an effect of the current financial crisis. It is unlikely they are the cause. The real origin of this market contraction is the continuing collapse of the U.S. housing market, triggered and fueled by preposterously lax lending standards, loose management, aggressive lobbying, and lavish perks, some at the quasi-governmental giants that dominated the market, Fannie Mae and Freddie Mac. They helped to create and enhance the ravenous hunger for mortgage-backed securities, credit default swaps, and other highly sophisticated byproducts of the housing boom that drew hedge funds into the abyss. As a result, hedge fund redemptions of stocks and others assets will continue to put downward pressure on the market.

It wasn't supposed to be this way. Billed as purely private gambles by sophisticated investors, hedge funds now pose very public peril when the bets go bad. Designed as a strategy to reduce investment risk, hedge funds now compound risk when complex deals start to unravel and throw off unintended consequences. Empowered by sophisticated computer models, hedge fund trading was meant to capitalize on, not cause, global market shifts. But now, due to their size and speed, hedge funds often accelerate wild market fluctuations. So when these unregulated private funds become a public problem, many see a need for greater transparency in their operations and tighter regulation on some hedge fund activities. Greater standardization, registration, disclosure, and some regulatory limitations could help the industry mature and survive. Remember the automobile started out as a purely private, wholly unregulated mode of transportation. But when widespread use of the new and powerful machines began to pose public safety issues, it became necessary to decide as a matter of public policy who was qualified to operate a motor vehicle, how fast they could go, where they could go.

We seem to be at the same crossroads for hedge funds. With as many as 8,000 funds managing up to $1.5 trillion, hedge funds are said to account for 20 to 30 percent of trading volume in the United States in U.S. stocks. They may handle even higher levels of transactions involving more specialized instruments, such as convertible bonds and credit derivatives. Their trades can move markets.

So this isn't just about sophisticated high stakes investors any more. Institutional funds and public pensions now have a huge stake in hedge funds' promises of steady above-market returns. That means public employees and middle income senior citizens, not just Tom Wolfe's masters of the universe, lose money when hedge funds decline or collapse altogether. Brittle complexity, huge transactions on computerized autopilot, and other structural inadequacies make hedge funds particularly, sometimes spectacularly vulnerable to financial contagion, the downward spiral of lost value, margin calls, and redemptions in the desperate search for cash. It is clear investors and regulators need to know more about fund investment strategies, leverage levels, and redemption terms to reduce their systematic risk posed by hedge funds. The hedge fund business model may become a casualty of the downturn or it will adopt to new global realities. Going forward, hedge funds will have to take account of a reduced tolerance by investors and governments for an unregulated parallel financial universe of exotic derivatives run by faceless quants that exerts unpredictable gravitational forces on the open marketplace.

But again, we need to remember in the larger implosion of the housing market, hedge funds are collateral damage. We should avoid Congress's natural tendency to overreact and bayonet the wounded. Today's witnesses bring extensive expertise and experience to our discussion of hedge funds in the current financial crisis. We appreciate their testimony.

[The prepared statement of Hon. Tom Davis follows:]

HENRY A. WAXMAN, CALIFORNIA
CHAIRMAN

TOM DAVIS, VIRGINIA
RANKING MINORITY MEMBER

ONE HUNDRED TENTH CONGRESS

Congress of the United States

House of Representatives

COMMITTEE ON OVERSIGHT AND GOVERNMENT REFORM

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Statement of Rep. Tom Davis
Ranking Republican Member
Committee on Oversight and Government Reform
"Hedge Funds and the Financial Market"
November 13, 2008

Hedge fund losses, and in some cases complete liquidations, are an *effect* of the current financial crisis. It's unlikely they are the *cause*. The real origin of this market contraction is the continuing collapse of the U.S. housing market, triggered and fueled by preposterously lax lending standards, loose management, aggressive lobbying and lavish perks at the quasi-governmental giants that dominated the market – Fannie Mae and Freddie Mac.

They helped create and enhance the ravenous hunger for mortgage-backed securities, credit default swaps and other highly sophisticated by-products of the housing boom that drew hedge funds into the abyss. As a result, hedge fund redemptions of stocks and other assets will continue to put downward pressure on the market.

It wasn't supposed to be this way. Billed as purely private gambles by sophisticated investors, hedge funds now pose very public peril when the bets go bad. Designed as a strategy to reduce investment risk, hedge funds now compound risk when complex deals start to unravel and throw off unintended consequences. Powered by sophisticated computer models, hedge fund trading was meant to capitalize on, not cause, global market shifts. But now, due to their size and speed, hedge funds often accelerate wild market fluctuations.

So, when these unregulated private funds become a public problem, many see a need for greater transparency in their operations and tighter regulation of some hedge fund activities. Greater standardization, registration, disclosure and some regulatory limitations could help the industry mature and survive. Remember, the automobile started out as a purely private, wholly unregulated mode of transportation. But when widespread use of the new and powerful machines began to pose public safety issues, it became necessary to decide as a matter of public policy: who was qualified to operate a motor vehicle and how fast they could go. We seem to be at the same crossroad for hedge funds.

With as many as 8,000 funds managing up to $1.5 trillion, hedge funds are said to account for twenty to thirty percent of trading volume in U.S. stocks. They may handle even higher levels of transactions involving more specialized instruments such as convertible bonds and credit derivatives. Their trades can move markets. So this isn't just about sophisticated, high stakes investors anymore. Institutional funds and public pensions now have a huge stake in hedge funds' promises of steady, above-market returns. That means public employees and middle income senior citizens, not just Tom Wolfe's Masters of the Universe, lose money when hedge funds decline or collapse altogether.

Brittle complexity, huge transactions on computerized auto-pilot, and other structural inadequacies make hedge funds particularly, sometimes spectacularly, vulnerable to financial contagion – the downward spiral of lost value, margin calls and redemptions in the desperate search for cash. It's clear investors and regulators need to know more about fund investment strategies, leverage levels, and redemption terms to reduce the systemic risks posed by hedge funds.

The hedge fund business model may become a casualty of the downturn. Or it will adapt to new global realities. Going forward, hedge funds will have to take account of a reduced tolerance by investors and governments for an unregulated parallel financial universe of exotic derivatives run by faceless quants that exerts unpredictable gravitational forces on the open marketplace. But, again, we need to remember in the larger implosion of the housing market, hedge funds are collateral damage. We should avoid Congress' natural tendency to overreact and bayonet the wounded.

Today's witnesses bring extensive expertise and experience to our discussion of hedge funds and the current financial crisis. We appreciate their testimony.

Chairman WAXMAN. Thank you very much, Mr. Davis. I would like to introduce the four members of our first panel. Professor David Ruder is a professor at Northwestern University School of Law, and served as chairman of the SEC under President Reagan from 1987 to 1989. Professor Andrew Lo is director of the Laboratory for Financial Engineering at the Massachusetts Institute of Technology's Sloan School of Management. Professor Joseph Bankman is the Ralph M. Parsons professor of law and business at Stanford Law School. And Mr. Houman Shadab is a senior research fellow from the Mercatus Center at George Mason University. I thank each of you for being here.

It is the practice of this committee that all witnesses testify under oath. So I would like to ask if you would please stand and raise your right hands.

[Witnesses sworn.]

Chairman WAXMAN. The record will indicate that each of the witnesses answered in the affirmative. You had prepared statements, and we will insert your complete statements in the record. What we would like to ask each of you to do is to try to limit the oral presentation to around 5 minutes. We won't bang you out of order after 5 minutes, but there is a clock that will be green for 4 minutes, orange for the last 1 minute, and then it will turn red. And when you see that it is red, we would like you to then consider wrapping up the presentation to us. Professor Ruder, there is a button on the base of the mic. I ask you to press it in and pull it close enough to you so that it will pick up everything you have to say. We are pleased to hear from you first.

STATEMENTS OF PROFESSOR DAVID RUDER, NORTHWESTERN UNIVERSITY SCHOOL OF LAW, FORMER CHAIRMAN U.S. SECURITIES AND EXCHANGE COMMISSION; PROFESSOR ANDREW LO, DIRECTOR, LABORATORY FOR FINANCIAL ENGINEERING, MASSACHUSETTS INSTITUTE OF TECHNOLOGY, SLOAN SCHOOL OF MANAGEMENT; PROFESSOR JOSEPH BANKMAN, STANFORD UNIVERSITY LAW SCHOOL; AND HOUMAN SHADAB, SENIOR RESEARCH FELLOW, MERCATUS CENTER, GEORGE MASON UNIVERSITY

STATEMENT OF DAVID RUDER

Mr. RUDER. Chairman Waxman, Congressman Davis and committee members, I am pleased to be here today. Hedge funds are risk takers. They seek greater than market returns by identifying pricing anomalies, by engaging in hedging strategies, by using leverage, and by investing in derivative instruments. Hedge fund investments and hedging activities make positive contributions to capital formation, market liquidity, price discovery, and market efficiency. Hedge funds, however, may pose risks to investors and to the financial markets. They pose risks to their investors because they may suffer substantial losses, may not be able to repay investors in times of stress, or may simply dissolve without returning any moneys to their investors.

Dishonest hedge funds may injure investors by making misrepresentations when they sell fund securities, falsifying operating and valuation results, or by stealing fund assets. Hedge funds can create negative results to the financial system when their losses cause them to liquidate market positions, resulting in downward pressures on the asset classes they are selling. Their defaults may cause losses to their counterparties.

This danger was dramatically illustrated in 1998 at the time of the collapse of Long Term Capital Management, when the implosion of one major hedge fund caused tremendous disruption in the financial markets. Although hedge funds have been active participants in the derivative and stock markets, they do not seem to have played a major causal role in the events precipitating the credit market crisis. Nevertheless, hedge funds that have suffered major losses have contributed to declines in stock and asset prices by liquidating assets in order to meet other obligations and in order to pay investors seeking to withdraw funds. Some hedge fund advisers are registered with the Securities and Exchange Commission under the Investment Advisers Act of 1940. Under that act, the Commission has power to inspect hedge fund advisers for compliance with Federal securities laws. In 2004, the SEC sought the power to inspect all hedge fund advisers, but lost a court case overturning the rule it adopted. Following that decision, the SEC adopted a rule giving it strong powers to bring enforcement actions against hedge fund advisers, whether registered or unregistered, who defraud investors. Nevertheless, the SEC still does not have the power to inspect unregistered hedge fund advisers.

A primary problem identified in the credit crisis has been the loss of confidence among market participants regarding the ability of counterparties to honor contractual obligations and to repay their debts. The main reason for this lack of confidence is lack of information. Despite the fact that hedge funds were not the primary actors in causing the credit crisis, I believe that the Securities and Exchange Commission should be given power to register and inspect all hedge funds. It should have power to require hedge fund advisers to disclose the size and nature of hedge fund risk positions and the identities of their counterparties. It should have the power to monitor and assess the effectiveness of hedge fund risk management systems.

Information the SEC receives should be shared on a confidential basis with the Federal Reserve Board as the Federal agency with primary responsibility for systemic risk regulation. Although these new regulatory powers are important, it is not desirable to impose regulation on hedge fund risk activities, including use of leverage and derivative instruments. Hedge funds should not be regulated in a manner that stifles their innovative financial market activities. The SEC is the proper entity to obtain hedge fund risk information and to monitor and assess the effectiveness of hedge fund risk management systems. The SEC understands the financial markets and the need to allow innovative risk taking.

If the SEC is charged with increased inspection, risk monitoring, and risk assessment responsibilities, it will need substantial additional funding. These new responsibilities would require increased numbers of SEC staff who can understand and evaluate the complicated hedge fund environment. Hedge funds are major users of non-exchange traded derivative instruments. A tremendous void exists regarding the specific characteristics of many of these instruments, the amounts at risks, and the identity of counterparties. The terms of these instruments are often unique and complicated. As a second method of addressing the opacity and impact of derivative instruments in our financial markets, I believe that the swaps exclusion included in the Commodity Futures Modernization Act of 2000 should be repealed so that trading in these non-exchange derivative instruments can be regulated. Some of the current uncertainties relating to derivative instruments can be overcome by standardizing terms and causing the instruments to be traded and settled on futures or options exchanges. I understand that efforts are currently underway to provide a platform for settling these instruments. Thank you for the opportunity to express my views on these important matters.

Mrs. MALONEY [presiding]. Thank you very much.

[The prepared statement of Mr. Ruder follows:]

Suggestions for Regulation of Hedge Funds
Following the Financial Crisis of 2008

Testimony of Professor David S. Ruder[1]
Before the House of Representatives Committee on
Oversight and Government Reform

November 13, 2008

Chairman Waxman, Congressman Davis, and Committee Members.

It is with great pleasure that I offer my views regarding the impact of hedge funds on the ongoing financial crisis. I will describe hedge funds, discuss the background of the current credit crisis, and address hedge fund impact on the crisis. The remainder of my testimony will be devoted to describing the efforts of the Securities and Exchange Commission to regulate hedge funds and to my recommendations for future regulation of hedge funds following the financial crisis of 2008.

Summary of Recommendations

The Securities and Exchange Commission should be given power to register hedge fund advisers, power to require hedge advisers to disclose hedge fund risks and other activities, and power to monitor and assess the effectiveness of hedge fund risk management systems. The SEC should be required to share risk information about hedge funds on a confidential basis with the Federal Reserve Board. The SEC's funding should be increased and it should remain an independent agency.

The swaps exclusion included in the Commodity Futures Modernization Act of 2000 should be repealed so that non exchange traded derivative instruments can be regulated in a manner that will protect investors and help to prevent de-stabilization of the financial markets.

Hedge Fund Distinguishing Characteristics

The definition of hedge fund is unclear. The SEC has acknowledged that the term has no "precise legal or universally accepted definition."[2] The President's Working Group on the Financial Markets has called a hedge fund "any pooled investment vehicle that is privately organized, administered by professional managers, and not widely available to the public."[3]

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[1] Professor of Law Emeritus, Northwestern University School of Law, Former Chairman of the U.S. Securities and Exchange Commission (1987 – 1989).

[2] Implications of the Growth of Hedge Funds, Staff Report to the United States Securities and Exchange Commission, September 2003 at p. 3. Hereinafter SEC Staff Report.

[3] Hedge Funds, Leverage, and the Lessons of Long-Term Capital Management, Report of the President's Working Group on Financial Markets (April 1999).

Although there is no universally accepted definition of hedge funds, some generally understood characteristics can help to identify hedge funds. Hedge funds seek to achieve absolute returns rather than measuring their performance against a securities index or other benchmark. They trade stocks, bonds, currencies, physical commodities, and other securities. They seek greater than market returns by identifying pricing anomalies, by engaging in hedging strategies, by making bets on the future, by using leverage, and by investing in derivative instruments. Hedge fund managers do not want their investment strategies to become known.

Hedge fund advisers receive compensation based upon a percentage of the fund's total assets under management, typically 2 %, and performance fees, typically 20% of realized and unrealized gains. If a fund loses money in a particular year, it usually must bring assets under management to the starting point of that year (the "high-water mark") before measuring gains for the next year. Some hedge fund contracts permit hedge fund managers to manage some assets off book in so called "side pockets," with the result that the returns from these investments are not counted in measuring performance. Hedge fund compensation features have the effect of encouraging hedge fund advisers to take substantial risks.

Most hedge fund investors are sophisticated high net worth individuals or institutions. Hedge fund investors are usually permitted to redeem their interests periodically, sometimes quarterly, semi-annually, or yearly,[4] or perhaps only after two years or longer, but there are often contractual restrictions requiring extensive advance notice of intended withdrawals. Hedge funds pose risks to their investors. Because of their high risk strategies hedge funds may suffer substantial losses, may not be able to repay investors in times of stress, or may simply dissolve without returning any monies to investors.

Hedge funds vary in the amount of information they provide to investors. Dishonest hedge fund advisers may injure investors through misrepresentations when selling their funds, may falsify operating results, or may steal from hedge fund investors. Hedge funds may be involved in insider trading or market manipulation. Hedge funds valuation practices are not uniform, especially with regard to non-marketable, illiquid securities.

Hedge fund investment and hedging activities make positive contributions to capital formation, market liquidity, price discovery, and market efficiency. Negative financial market effects of hedge fund activities occur when their losses cause them to liquidate market positions, resulting in downward pressures on the asset classes they are selling. Their defaults may cause losses to their counter parties.

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[4] Consultation Report, the Regulatory Environment for Hedge Funds, A Survey and Comparison, Technical Committee of the International Organisaton of Securities Commissions, March 2006, p.7.

The Credit Crisis[5]

The credit crisis arose from losses in mortgage loans in the home housing market. Many of these loans were "subprime" loans made to home buyers who had inadequate income or who made low or no down payments. Some of the loans had low initial fixed interest rates that subsequently converted to higher unaffordable adjustable rates. Many home buyers were eventually unable to meet their loan obligations.

Mortgage originators sold the home loan mortgages to others, including off balance sheet entities created by investment banks. These entities issued structured notes called collateralized debit obligation (CDOs), secured by groups of home mortgage loans. These CDOs were divided into levels (or tranches) that had varying degrees of risk. They were often then sold by the investment banks on behalf of the investment entities to sophisticated investors, including hedge funds.

In some cases, the CDOs received credit ratings from credit rating agencies, with the highest (AAA) ratings assigned to the safest debt levels. As part of the selling process many investment banks carried CDOs in all risk categories on their balance sheets. Additionally, many investment banks held some of the most highly rated CDOs on their balance sheets for investment.

When home buyers began to default on loans, the market value of the CDOs, including AAA rated CDOs, fell dramatically because market participants became aware of the risks of default and stopped purchasing the notes. As the market for CDOs dried up, credit became unavailable in the broader markets. Market participants became uneasy about the financial stability of other participants, including banks, investment banks, and hedge funds, both in the U.S. and in other countries, and eventually became unwilling to deal with each other because of the fear of counter party inability to meet obligations. The values of CDOs owned by investment companies and banks worldwide fell to extremely low levels, affecting the abilities of these institutions to meet their financial obligations and to engage in lending activities.

Another important aspect of the credit crisis collapse was the impact of "credit default swaps" (CDSs). Credit default swaps are derivative instruments in which a credit default risk seller insures the buyer against the risk of default on a debt instrument issued by a third party. These instruments originally were intended to provide protection for the owners of corporate bonds or mortgage backed securities against defaults by the issuers of these debt instruments. During recent years they have been used to provide protection to the CDOs issued by investment banks and others. Recently the buyers of these swaps have been market speculators as well as debt instrument owners. The credit default swap industry has had explosive growth during the last two years, doubling in size to a notional

[5] This description is taken in part from Testimony of David S. Ruder, Before the Senate Banking, Housing, and Urban Affairs Committee's Subcommittee on Securities, Insurance, and Investment, United States Senate, May 7, 2008, pp. 1-2.

value of $55 trillion.[6] The credit default market is unregulated and little information exists regarding the amount of payments that will be required by the sellers of this insurance. The possible inability of insurers to meet their obligations has further added to market uncertainty.

One key aspect of the credit crisis was the failure of both market participants and regulators to predict the collapse of the home loan mortgage market. None of the primary market participants predicted the collapse. The risk management systems of most banks, investment banks, rating agencies, and credit default swap insurers did not predict the collapse. Regulators, including the Federal Reserve Board, the Federal Deposit Insurance Corporation, the Department of the Treasury, the SEC, and the Commodity Futures Trading Commission did not predict the collapse.

Hedge Fund Involvement in the Credit Crisis

Although hedge funds have been active participants in the financial markets during the past years, they do not seem to have played a major role in the events precipitating the crisis. As noted above, the market participants central to the credit crisis were loan originators, investment banks, rating agencies, and sellers of credit default swaps.

Nevertheless, hedge funds were participants in several phases of the crisis. Although some hedge funds hedged CDO risk and made substantial profits, many hedge funds suffered major losses when the CDOs lost value. Hedge funds have contributed to declines in stock and asset prices by liquidating stocks and other assets in order to meet other obligations and in order to pay investors seeking to withdraw funds. They have been charged by some with contributing to the market decline by engaging in short selling activity, but there seems to be no showing at this time that they were engaged in illegal activity.

Regulation of Hedge Funds by the SEC

Hedge funds are subject to a broad range of SEC regulations applicable to all securities market participants. They may not engage in illegal fraudulent activities, including insider trading. They must comply with federal proxy rules and takeover laws. They may not violate SEC rules regulating naked or manipulative short selling. They must comply with recent SEC rules requiring disclosure of large short positions.

Hedge funds are usually organized as limited partnerships or similar entities. Sales of hedge fund securities must be registered with the SEC under the Securities Act of 1933, unless an exemption can be found.[7] Most hedge funds avoid registration under that Act by selling their securities only to institutional investors or high wealth individuals

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[6] Testimony of Eric Sirri, Director of the SEC Division of Trading and Markets before the House Committee on Agriculture (October 15, 2008).
[7] Securities Act of 1933, Section 5.

who are presumed to be sophisticated in financial matters.[8] Hedge funds avoid registration and disclosure under the Securities Exchange Act of 1934 by selling interests in each fund to fewer than 500 investors.[9]

Most hedge funds are not required to register as investment companies under the Investment Company Act of 1940 because of statutory exemptions from that Act. They may avoid registration under that Act by limiting the number of owners of each fund to fewer than 100 persons[10] or limiting the owners of their securities to qualified purchasers[11] who own at least $5 million in investments.[12]

Investment advisers to hedge funds meet the definition of investment adviser under the Investment Advisers Act of 1940 because they are persons who for compensation engage in the business of advising others regarding the advisability of investing in securities.[13] Many investment advisers obtain an exemption from registration under that Act by advising fewer than fifteen clients.[14] However, approximately 2,500 hedge fund advisers are registered with the SEC under the Investment Advisers Act of 1940.[15] As of January 2008, registered investment advisers included 49 of the largest hedge fund advisers, accounting for about one-third of U.S. hedge fund assets under management.[16]

In 2003, the Staff of the SEC issued a report on hedge funds[17] expressing concern about lack of information about hedge funds. The report noted: the inability to detect hedge fund fraud and misconduct at early stages; lack of accurate information about hedge fund assets, trading, and investment activities; and lack of information about valuation of portfolio securities, conflicts of interests, and other matters. The report expressed concern about lack of disclosure to hedge fund investors. The Staff recommended that the SEC seek to force hedge fund investment advisers to register with the SEC so that those deficiencies could be remedied.

In 2004, in reliance upon the Staff's recommendation and its own concerns about fraudulent activities by hedge funds, the SEC adopted a new rule that would have

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[8] The SEC's Regulation D provides a safe harbor under Section 4(2) of the Securities Act based on numerical financial standards. The SEC has proposed amendments to Regulation D strengthening the safe harbor numerical standards for hedge fund investors, but has not yet adopted the amendments. Rel. 33-8766 (Dec 27, 2006) and Rel. 33-8828 (Aug 3, 2007).

[9] Securities and Exchange Act of 1934, Section 12(g).

[10] Investment Company Act of 1940, Section 3(c)(1). Under the exemption, the hedge fund may not make a public offering of securities.

[11] *Id.* Section 3 (c)(7). Under the exemption, the hedge fund may not make a public offering of securities.

[12] *Id.* Section 2 (a)(51)(A).

[13] Investment Advisers Act of 1940, Section 202(a)(11).

[14] And do not hold themselves out to the public as an investment adviser or act as an investment adviser to a registered investment company. *Id.* Section 203-3(b)(3).

[15] Christopher Cox, Testimony Concerning Hedge Fund Regulation before the U.S. Committee on Banking, Housing and Urban Affairs, July 25, 2006, p.2.

[16] United States Government Accountability Office, Report on Hedge Funds (January 2008), p.5.

[17] Implications of the Growth of Hedge Funds, Staff Report the United States Securities and Exchange Commission (September 2003).

required most hedge fund advisers to register with it.[18] Under that rule, hedge fund advisers would have been subject to SEC disclosure, inspection, and conduct regulation regarding their hedge fund advisory activities.

The hedge fund industry strenuously objected to the new SEC regulation of hedge fund investment advisers. In Goldstein v. SEC,[19] the D.C. Circuit of Appeals invalidated the new SEC rule, holding that the SEC had exceeded its power when it promulgated the rule.

In requiring registration of hedge advisers, the SEC's new rule had mandated that for purposes of meeting the exemption from the Advisers Act based upon advising fewer than 15 clients, an investment adviser must count hedge fund investors as clients.[20] Since most hedge funds have 15 or more investors, almost all hedge fund investment advisers would have been required to register.

In its Goldstein decision, the Court held that the client of a hedge fund investment adviser was the hedge fund, not the investor in the hedge fund. The opinion raised questions whether the SEC's enforcement powers under Sections 206(1) and (2) of the Advisers Act would be limited.[21] In order to meet this problem, the SEC adopted a new rule under 206(4) of the Act. The new rule prohibited investment advisers from making false statements to investors or prospective investors in hedge funds or otherwise defrauding those investors.[22]

The new SEC rule expanded SEC's powers over hedge funds because it applies to all hedge fund investment advisers, whether or not registered with the SEC, and reaches negligent conduct in addition to knowing and deliberate conduct. The rule powerfully enables the Commission to discipline hedge fund advisers who make misrepresentations to hedge fund investors regarding the valuation of securities, earnings, conflicts of interest, or other matters.[23]

Adoption of the new rule gives the SEC important powers to regulate hedge fund relationships with their investors, but it does not permit the SEC to inspect hedge funds or to monitor and assess the effectiveness of hedging activities that might create systemic risk.

[18] Rel. IA-2333, Registration Under the Advisers Act of Certain Hedge Fund Advisers (Dec 2, 2004).
[19] Goldstein v. SEC, 451 F.3d 873 (D.C. Cir. 2006).
[20] Rule 203(b)(3)-2.
[21] The SEC became concerned about its ability to utilize Sections 206(1) and (2) of the Advisers Act to bring actions against hedge fund advisers that had defrauded investors.
[22] Rule 206(4)-8, Rel. IA-2628, Prohibition of Fraud by Advisers to Certain Pooled Investment Vehicles (August 3, 2007). The rule defines a pooled investment vehicle as any investment company that utilizes Section 3(c)(1) or 3(c)(7) of the Investment Company Act to avoid registration.
[23] The rule is not enforceable by investors in private actions.

Recommendations for Regulation of Hedge Funds

New regulations are needed in order to protect hedge fund investors and in order to monitor hedge fund contributions to systemic risk. These regulatory needs can be accomplished by giving the Securities and Exchange Commission power to register and inspect hedge fund advisers, including the power to require disclosure of activities that might injure investors, power to require hedge fund advisers to disclose hedge fund risk activities, and power to monitor and assess the effectiveness of hedge fund risk management systems.

Protection of Investors

Protection of investors should be a major goal in hedge fund regulation. The SEC already has power to discipline hedge fund investment advisers who defraud hedge fund investors. SEC powers over hedge fund investment advisers through registration and inspection will allow the SEC to learn about potential fraudulent activities at an earlier stage than is possible through after the fact enforcement activities.

Systemic Risk Regulation

Systemic risk regulation of hedge funds is necessary because hedge funds' size, strategies, and opacity pose risks to the financial markets. Highly leveraged hedge funds that borrow large sums and engage in complex transactions using exotic derivative instruments may severely disrupt the financial markets if they are unable to meet counter party obligations or must sell assets in order to repay investors.

Hedge funds are major users of non-exchange traded derivative instruments. Although general characteristics of derivative instruments are well known, a tremendous void exists regarding the specific characteristics of many of these instruments, the amounts at risk, and the identity of their counter parties. The terms of these instruments are often unique and complicated, and the instruments are frequently not easily settled or offset.

A primary problem identified in the credit crisis has been the loss of confidence among market participants regarding the ability of counter parties to honor contractual obligations and to repay their debts. The main reason for the lack of confidence is lack of information. Regulation should exist allowing information about hedge fund risk positions to be known by regulators.

Ten years ago, following the Long Term Capital Management crisis, I testified before the House Committee on Banking and Financial Services urging that steps be taken to determine the risk positions of those engaged in hedging and derivatives trading activities.[24] At that time I urged establishment of a system to learn what risks are being

[24] Testimony of Professor David S. Ruder Before the House Committee on Banking and Financial Services Concerning Public Policy Issues Raised by the Collapse and Interim Rescue of Long Term Capital Management LP, October 1, 1998.

taken by hedge funds and their counter parties. I noted the danger that failure of one large participant in a market may cause the failure of other parties. I warned that if in times of stress the amount or nature of risk is unknown, participants in the market may assume the worst and unnecessarily exit the market.

By way of recommendation I urged that "through legislation or the use of available powers efforts should be made to determine the risk positions being taken by the various participants in hedging and derivative trading activities."

Steps to prevent or correct systemic calamities in the financial market should be based on comprehensive risk information. I continue to believe that a system should be created requiring hedge funds to divulge to regulators information regarding the size and nature of their risk positions and the identities of their counter parties.

I believe the Securities and Exchange Commission is the proper entity to obtain hedge fund risk information. The SEC understands the markets and the need to allow innovative risk taking. By monitoring and assessing hedge fund risk management systems, the Commission will be able to determine whether those systems are effective in meeting their protective goals.

Congress should give the SEC power to register, inspect, and obtain systemic risk information from hedge fund advisers. It should also give the SEC power to monitor and assess the effectiveness of hedge fund risk management systems. The information collected by the SEC should be shared with other regulators in a cooperative effort designed to identify excessive risk positions that may endanger the financial markets. This information should be held in confidence by the regulatory authorities.

In any reorganization of the federal financial market system I believe the Federal Reserve Board should have primary responsibility for systemic risk regulation, focusing on its traditional role of implementing monetary policy and providing liquidity to the financial system. In that capacity I believe the Board should be the central repository of information regarding the risk positions in the financial markets. It is the logical regulator to receive risk information so that steps can be taken to reduce systemic risks.[25]

The SEC and the Federal Reserve Board have already agreed to share risk information necessary in order to facilitate corrective steps.[26] The SEC has agreed to provide the Board with information that it receives regarding the financial condition of securities brokers and dealers, clearing agencies, transfer agents, investment companies, and investment advisers. The SEC should also have power to regulate hedge funds

[25] See United States Treasury: Blueprint for a Modernized Financial Regulatory Structure (March 2008), p.144 (available at http://www.treas.gov/press/releases/reports/Blueprint.pdf).

[26] Memorandum of Understanding Between the U.S. Securities and Exchange Commission and the Board of Governors of the Federal Reserve System Regarding Coordination and Information Sharing in Areas of Common Regulatory and Supervisory Interest (July 7, 2008) (available at http://www.sec.gov/news/press/2008/2008-134_mou.pdf).

advisers, and therefore be able to share hedge fund risk information with the Federal Reserve Board.

Although new regulatory powers are important for the protection of investors and the stability of the financial system, imposing regulation of hedge fund risk activities, including use of leverage and derivative instruments, is not desirable. Hedge funds should not be regulated in a manner that stifles their innovative financial market activities. Government regulation of financial market systemic risk is a necessity, but government control over market activity should be avoided.

I recommend that the SEC be the risk management system assessor for the hedge fund industry. If my proposals are accepted, the SEC will have increased responsibility for monitoring and assessing hedge fund risk management systems as well as continuing to be charged with risk management assessment activities in other parts of the securities industry. In order to accomplish its increased inspection and risk assessment tasks, the Commission should receive additional funding. Additionally, it is extremely important that the SEC remain independent. Its independence has been essential to its regulatory success, allowing it to resist business and Congressional pressures.

Derivative Instrument Regulation

Congress made a serious mistake when it included in the Commodity Futures Modernization Act of 2000 a "swaps exclusion" that prevents regulation of a broad range of non-exchange traded derivative instruments by either the CFTC or the SEC. These over the counter derivative instruments, including credit default swaps, should be subject to federal regulation. The swaps exclusion should be repealed so that non-exchange trading of derivative instruments can be regulated in a manner that will help to protect investors and prevent de-stabilization of the financial system.

One approach to regulating the systemic risk involved in derivative instruments would be to standardize the terms of over the counter derivative instruments, such as credit default swaps, and to cause those instruments to be traded on futures or options exchanges. Standardization would have the great benefit of reducing the opaque nature of the derivative instruments. The nature of the obligations owed by each party and the amounts of those obligations would be better known.

Exchange trading of these standard contracts would place a well financed exchange clearing corporation as a responsible party on each of the contracts traded on the exchange, thereby eliminating the counter party risks that have been the crucial element in the current credit crisis. Additionally, the exchange and its clearing corporation would be able to monitor the risks being undertaken by each of the parties trading on the exchange, and to establish limits on their positions. These limits would be designed to limit the risk of the clearing corporation as to any single trading party, and would also have substantial systemic benefits. Exchange trading of derivatives now traded in the over the counter market would also create an effective clearing and payment system for participating trading parties.

Along similar lines, I understand efforts are already underway to create a voluntary platform for clearance and settlement of credit default swaps. The Federal Reserve Board, the SEC, other regulators, and industry participants are working to develop a central counterparty for credit default swaps, with four potential CDS central counterparties expressing interest in the project.[27] This is a positive step that should be pursued.

[27] Testimony of Eric Sirri, note 6 supra.

Mrs. MALONEY. Professor Lo.

STATEMENT OF ANDREW LO

Mr. LO. Chairman Waxman, Ranking Minority Member Davis, and other members of the House Oversight Committee, thank you for inviting me to testify today at this hearing on hedge funds. In the interests of full disclosure, I would like to inform the committee that in addition to my faculty position at MIT, I am also affiliated with an asset management company that manages several hedge funds and mutual funds. I realize that the committee has a number of questions for the panel, so I will keep my introductory remarks brief. Over the past 10 years, much of my research at MIT has been focused on hedge fund and hedge fund industry. Part of that research has been devoted specifically——

Mr. LYNCH. Madam Chair, could we have the witness either—I am not sure if your mic is on or you are not close enough to it.

Mr. LO. Sorry.

Mr. LYNCH. No problem. Thank you very much.

Mr. LO. Thank you. It used to be the case that systemic risk was the exclusive domain of central bankers, macroeconomists, regulators; and finance professors had little to do with the subject. But the events of August 1998, the collapse of LTCM and other hedge funds that year showed pretty clearly that the hedge fund industry does have an impact on what we think of as systemic risk. Since then, the hedge fund industry has grown even bigger, and it has become even more important to the growth and operations of the global economy. And that is no exaggeration. Hedge funds control approximately $1½ trillion of capital, but which is more like $3 trillion with leverage.

Now that has come down quite a bit from just a year ago, when it was $2 trillion of assets and $5.5 trillion with leverage. And this decline is likely to imply several thousand hedge funds going under between the years of 2007 to 2009. Hedge funds are now involved in virtually every aspect of economic activity, investing in every kind of market and asset, making loans for all purposes, including mortgages, engaging in market making activity, financing bridges, highways, tunnels and other infrastructure in many countries, and even providing insurance. It is the hedge funds' ubiquity, size, leverage, illiquidity and lack of transparency that creates systemic risk for the financial system.

Hedge funds now provide many of the same services as banks, but unlike banks, hedge funds are not regulated. They are outside the Federal Reserve system, which you may recall was originally set up to deal with systemic risk in the banking industry. Like banks, hedge funds provide liquidity. But unlike banks, they can withdraw that liquidity from the marketplace at a moment's notice. Like banks, hedge funds use leverage. But unlike banks, they face no limits, other than those imposed by their prime brokers and counterparties, nor do they face any capital adequacy requirements, which means that hedge funds can get wiped out completely. But of course, investors are prepared for that. And when hedge funds were a cottage industry consisting of small boutiques, that wasn't a problem.

In fact, that was very positive for the economy because there are some risks that only hedge funds are willing to bear. But when hedge funds become too big to fail, that poses a problem for the financial system. As the hedge fund industry has grown, so too has its contribution to systemic risk. And as early as 2004, my co-authors and I uncovered indirect evidence for increasing levels of systemic risk in the industry due to apparent increases in assets under management, leverage, illiquidity, and correlations among hedge funds in commercially available data bases.

And I realize that this hearing is about hedge funds, so that has been the focus of my comments and my written testimony, but in the interests of fairness I should point out that while hedge funds have taken on many of the same functions as banks over the last decade, thanks to the repeal of the Glass-Steagall Act in 1999, many banks have become more like hedge funds. And over the past decade, commercial banks, investment banks, and hedge funds have been locked in heated competition with each other, all fueled by investors, including pension funds, sovereign wealth funds, and government-sponsored enterprises, seeking that extra bit of yield in a frustratingly low yield environment. This economic free-for-all between banks, hedge funds, government-sponsored entities, and Wall Street is one of the main reasons for the magnitude of the current financial crisis.

In my written testimony I provide several concrete proposals for addressing these issues, but let me mention two that pertain specifically to hedge funds. While I have written about the possibility of systemic shocks emanating from the hedge fund industry, the fact is that we cannot come to any firm conclusions because we simply don't have the data. Hedge funds don't have to report their monthly returns to any regulatory authority, much less details about their risk exposures.

So my first proposal is to require all hedge funds or their prime brokers to provide certain risk measures to regulators periodically and on a confidential basis. And I give examples in my written testimony of the types of risk measures that would be most useful from the systemic perspective. My second proposal is to create an investigative office like the National Transportation Safety Board to examine every single financial blowup, not just the headline grabbers, and to produce publicly accessible reports on what happened, how it happened, why it happened, who caused it to happen, and how to keep it from happening again. With greater transparency into the hedge fund industry and a better understanding of blowups that contribute most to systemic risk, both the public and the private sectors will be much better prepared to handle any financial crisis now or in the future. Thank you.

[The prepared statement of Mr. Lo follows:]

Hedge Funds, Systemic Risk, and the Financial Crisis of 2007–2008

Written Testimony of Andrew W. Lo*

Prepared for the U.S. House of Representatives
Committee on Oversight and Government Reform
November 13, 2008 Hearing on Hedge Funds

1. Introduction

Chairman Waxman, Ranking Minority Member Davis, and other members of the House Oversight Committee, I would like to start by thanking you for giving me an opportunity to testify at this hearing on the role of hedge funds in our financial system and their regulatory and tax status. In the interest of full disclosure, I wish to inform the committee that I am a principal investigator in a project funded by the National Science Foundation, and in addition to my academic position at MIT, I am affiliated with an asset management company that manages several hedge funds and mutual funds.

Before turning to the substance of my testimony—hedge funds, systemic risk, and regulatory oversight—in this introductory section I would like to summarize the most important themes:

1. Financial crises may be an unavoidable aspect of modern capitalism, a consequence of the interactions between hardwired human behavior and the unfettered ability to innovate, compete, and evolve. But even if crises cannot be avoided, their disruptive effects can be reduced significantly by ensuring that the appropriate parties are bearing the appropriate risks, and this is best achieved through greater transparency, particularly in the so-called "shadow banking system". Government can play a central role in providing such transparency.

2. Before we can hope to manage the risks of financial crises effectively, we must be able to define and measure those risks explicitly. Therefore, the first order of business for designing new regulations is to develop a formal definition of systemic risk and to construct specific

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measures that are sufficiently practical and encompassing to be used by policymakers and the public. Such measures may require hedge funds and other parts of the shadow banking system to provide more transparency on a confidential basis to regulators, e.g., information regarding their assets under management, leverage, liquidity, counterparties, and holdings.

3. The most pressing regulatory change with respect to the financial system is to provide the public with information regarding those institutions that have "blown up", i.e., failed in one sense or another. This could be accomplished by establishing an independent investigatory agency or department patterned after the National Transportation Safety Board, e.g., a "Capital Markets Safety Board", in which a dedicated and experienced team of forensic accountants, lawyers, and financial engineers sift through the wreckage of every failed financial institution and produces a publicly available report documenting the details of each failure and providing recommendations for avoiding such fates in the future.

4. To the average American, the current financial crisis is a mystery, and concepts like subprime mortgages, CDO's, CDS's, and the "seizing up" of credit markets only creates more confusion and fear. A critical part of any crisis management protocol is to establish clear and regular lines of communication with the public, and a dedicated inter-agency team of public relations professionals should be formed for this express purpose, possibly within the Capital Markets Safety Board.

5. Current GAAP accounting methods are backward-looking by definition and not ideally suited for providing risk transparency, yet accounting measures are the primary inputs to corporate decisions and regulatory requirements. A new branch of accounting—"risk accounting"—must be developed and widely implemented before we can truly measure and manage systemic risk on a global scale.

6. All technology-focused industries run the risk of technological innovations temporarily exceeding our ability to use those technologies wisely. In the same way that government grants currently support the majority of Ph.D. programs in science and engineering, new funding should be allocated to major universities to greatly expand degree programs in financial technology.

7. The complexity of financial markets is straining the capacity of regulators to keep up with its innovations, many of which were not contemplated when the existing regulatory bodies were first formed. New regulations should be adaptive and focused on financial functions rather than institutions, making them more flexible and dynamic. An example of an adaptive regulation is a requirement to standardize an OTC contract and create an organized exchange for it whenever its size—as measured by open interest, trading volume, or notional exposure—exceeds a certain threshold.

I would like to add three caveats to the discussion that follows below. The first is that while the need for regulatory reform may seem clear in light of the current financial crisis, the underlying causes are complex, multi-faceted, and not yet completely understood. Therefore, I would urge the Committee and other parts of government to refrain from reacting too hastily to market events, but to deliberate thoughtfully and broadly to craft new regulations for the financial system of the 21st century. Financial markets do not need more regulation; they need more effective regulation.

Second, although much of the material in this testimony is based on and informed by my academic research, a significant portion of the inferences surrounding systemic risk and hedge funds is indirect and circumstantial because of the hedge-fund industry's lack of transparency. Without more comprehensive data on hedge-fund characteristics such as assets under management, leverage, counterparty relationships, and portfolio holdings, it is virtually impossible to draw conclusive inferences about the systemic risks posed by hedge funds. I will attempt to point out the most fragile of my claims below, but I ask the Committee members to please bear in mind the tentative and potentially controversial nature of some of my conclusions and recommendations.

Third, since my testimony will become part of the public record, I wish to emphasize that this document is not a formal academic research paper, but is intended for a broader audience of policymakers and regulators. In particular, academic readers may be alarmed by the lack of comprehensive citations and literature review, the imprecise and qualitative nature of certain arguments, and the abundance of illustrative examples, analogies, and metaphors. Accordingly, such readers are hereby forewarned—this paper is not research, but is instead a summary of the policy implications that I have drawn from my interpretation of that research.

I begin in Section 2 with a proposal to measure systemic risk, and argue that this is the natural starting point for regulatory reform since it is impossible to manage something that cannot be measured. In Section 3, I review the relation between systemic risk and hedge funds, and show that early warning signs of the current crisis did exist in the hedge-fund industry as far back as 2004. However, I argue in Section 4 that financial crises may be an unavoidable aspect of human behavior, and the best we can do is to acknowledge this tendency and be properly prepared. This behavioral pattern, as well as traditional economic motives for regulation—public goods, externalities, and incomplete markets—are relevant for systemic risk or its converse, "systemic safety", and in Section 5 I suggest applying these concepts to the functions of the financial system to yield a rational process for regulatory reform. In Section 6, I propose the formation of a new investigative office patterned after the National Transportation Safety Board to provide the kind of information aggregation and transparency that is called for in the previous sections, and in Section 7, I discuss fair-value accounting, which involves another critical aspect of transparency and systemic risk. The role of financial technology and education in the current crisis is considered in Section 8, where I argue that more finance training is needed, not less. I conclude in Section 9.

2. Measures of Systemic Risk

The well-known adage that "one cannot manage what one cannot measure" is particularly timely with respect to the notion of *systemic risk*, a term that has come into common usage but which has so far resisted formal definition and quantification. Like Justice Potter Stewart's definition of the obscene, systemic risk has historically been defined in a similar fashion, mainly by central bankers who know it when they see it. Systemic risk is usually taken to mean the risk of a broad-based breakdown in the financial system, often realized as a series of correlated defaults among financial institutions, typically banks, that occurs over a short period of time and typically caused by a single major event. The classic example is a banking panic in which large groups of depositors decide to withdraw their funds simultaneously, creating a "run" on bank assets that can ultimately lead to multiple bank failures. Banking panics were not uncommon in the United States during the nineteenth and early twentieth centuries, culminating in the 1930–1933 period with an average of 2,000 bank failures per year during these years (Mishkin, 1997), and which prompted the Glass-Steagall Act of 1933 and the establishment of the Federal Deposit Insurance Corporation (FDIC) in 1934.

Although today banking panics are virtually non-existent thanks to the FDIC and related central banking policies, systemic risk exposures have taken shape in other forms. In particular, many financial institutions now provide some of the same services that banks have traditionally provided, but are outside of the banking system. For example, securitization has opened up new sources of capital to finance various types of borrowing that used to be the exclusive province of banks, including credit-card debt, trade credit, auto and student loans, mortgages, small-business loans, and revolving credit agreements. This so-called "shadow banking system"—consisting of investment banks, hedge funds, mutual funds, insurance companies, pension funds, endowments and foundations, and various broker/dealers and related intermediaries—provided a significant fraction of the liquidity needs of the global economy over the past two decades, supporting the growth and prosperity that we have enjoyed until recently. And after the repeal of the Glass-Steagall Act in 1999, the shadow banking system grew even more rapidly in size and importance. However, as its moniker suggests, the shadow banking system is neither observable nor controlled by the regulatory bodies that were created to manage the risks of potential liquidity disruptions. Therefore, it is not surprising that we were unprepared for the current financial crisis, and that we lack the proper tools to manage it effectively.

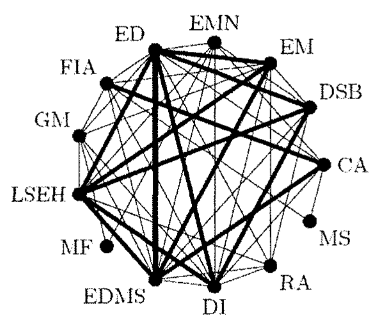
The starting point for regulatory reform is to develop a formal definition of systemic risk, one that captures the linkages and vulnerabilities of the entire financial system, not just those of the banking system. From such a definition, several quantitative measures of systemic risk should follow, with which we can monitor and manage the overall level of risk to the financial system. Even the most conservative central bank would agree that attempting to eliminate all systemic risk is neither feasible nor desirable—risk is an unavoidable by-product of financial innovation. But unless we are able to measure this type of risk objectively and quantitatively, it is impossible to determine the appropriate trade-off between such risk and its rewards.

Given the complexity of the global financial system, it is unrealistic to expect that a single measure of systemic risk will suffice. A more plausible alternative is a collection of measures, each designed to capture a specific risk exposure. For example, any comprehensive collection of risk measures should capture the following characteristics of the entire financial system:

- Leverage
- Liquidity
- Correlation
- Concentration
- Sensitivities
- Connectedness

Leverage refers to the aggregate amount of credit that has been extended in the financial system, and liquidity refers to the ease with which investments may be liquidated to raise cash. The precise mechanism by which these two characteristics combine to produce systemic risk is now well understood. Because many investors make use of leverage, their positions are often considerably larger than the amount of collateral posted to support those positions. Leverage has the effect of a magnifying glass, expanding small profit opportunities into larger ones, but also expanding small losses into larger losses. And when adverse changes in market prices reduce the market value of collateral, credit is withdrawn quickly and the subsequent forced liquidation of large positions over short periods of time can lead to widespread financial panic, as we have witnessed over the past several months. The more illiquid the portfolio, the larger the price impact of a forced liquidation, which erodes the investor's risk capital that much more quickly. Now if many investors face the same "death spiral" at the same time, i.e., if they become more highly correlated during times of distress, and if those investors are obligors of a small number of major financial institutions, then small market movements can cascade quickly into a global financial crisis. This is systemic risk. However, the likelihood of a major dislocation also depends on the degree of correlation among the holdings of financial institutions, how sensitive they are to changes in market prices and economic conditions, how concentrated the risks are among those financial institutions, and how closely connected those institutions are with each other and with the rest of the economy.

Although these six characteristics are simple to state, developing quantitative measures that can be applied to the global financial system may be more challenging. By looking at the financial system as a single portfolio, several useful measures of systemic risk can be derived by applying the standard tools of modern portfolio analysis. For example, Bodie, Gray, and Merton (2007) and Gray and Malone (2008) apply the well-known framework of contingent claims analysis to the macroeconomy, which yields several potentially valuable early warning indicators of systemic risk including aggregate asset-liability mismatches, nonlinearities in the risk/return profile of the financial sector, and default probabilities for sovereign debt. Getmansky, Lo, and Makarov (2004) propose simple measures of illiquidity risk exposures that can also be applied to the financial system. Chan et al. (2006, 2007) and Lo (2008) contain other risk analytics that are designed to measure sensitivities, correlations, and concentration in traditional and alternative investments, and these measures did provide early warning signs of potential dislocation in the hedge-fund industry in 2004 and 2005 (see, for example, Gimein, 2005).



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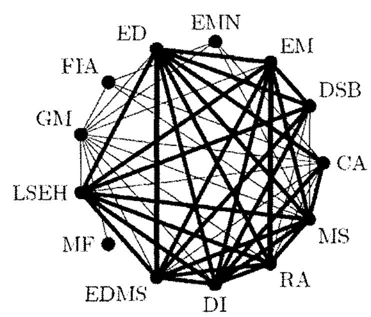


(b)

Figure 1. Network diagrams of correlations among 13 CS/Tremont hedge-fund indexes over two sub-periods: (a) April 1994 to December 2000 (excluding the month of August 1998), and (b) January 2001 to June 2007. Thicker lines represent absolute correlations greater than 50%, thinner lines represent absolute correlations between 25% and 50%, and no connecting lines correspond to correlations less than 25%. CA: Convertible Arbitrage, DSB: Dedicated Short Bias, EM: Emerging Markets, EMN: Equity Market Neutral, ED: Event Driven, FIA: Fixed Income Arbitrage, GM: Global Macro, LSEH: Long/Short Equity Hedge, MF: Managed Futures, EDMS: Event Driven Multi-Strategy, DI: Distressed Index, RA: Risk Arbitrage, and MS: Multi-Strategy. (source: Khandani and Lo, 2007)

Finally, a number of recent advances in the theory of networks (for example, Watts and Strogatz, 1998, and Watts, 1999), may be applicable to analyzing vulnerabilities in the financial network. A simple example of this new perspective is contained in Figure 1, which displays the absolute values of correlations among hedge-fund indexes over two periods, April 1994 to December 2000 and January 2001 to June 2007, where thick lines represent absolute correlations greater than 50%, thinner lines represent absolute correlations between 25% and 50%, and no lines represent absolute correlations below 25%. A comparison of the two sub-periods shows a significant increase in the absolute correlations in the more recent sample—the hedge-fund industry has clearly become more closely connected. More recently, Soramäki et al. (2007) have adopted this network perspective by mapping the topology of the Fedwire inter-bank payment system, which has generated a number of new insights about the risk exposures of this important network, including where the most significant vulnerabilities are (see Figure 2).

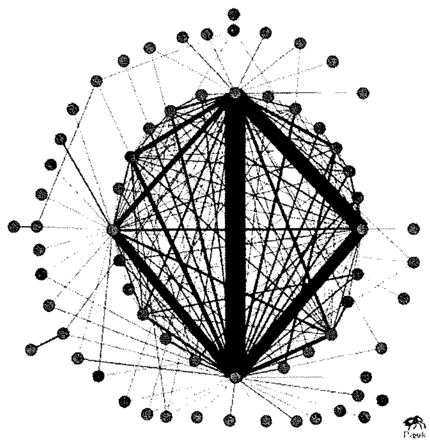


Figure 2. Core of the Fedwire Interbank Payment Network, from Soramäki et al. (2007, Figure 2).

Although a number of indirect measures of systemic risk can be computed from existing data, the biggest obstacle is the lack of sufficient transparency with which to implement these measures directly. While banks and other regulated financial institutions already provide such information, the shadow banking system does not. Without access to primary sources of data— data from hedge funds, their brokers, and other counterparties— it is simply not possible to derive truly actionable measures of systemic risk. Therefore, the need for additional data from all parts of the shadow banking system is a pre-requisite for regulatory reform in the hedge-fund industry. In particular, I propose that hedge funds with more than $1 billion in gross notional exposures be required to provide regulatory authorities such as the Federal Reserve or the SEC with the following information on a regular, timely, and confidential basis:

- Assets under management
- Leverage
- Portfolio holdings
- List of credit counterparties
- List of investors

Given the large number of hedge funds versus the much smaller number of prime brokers (these are brokers that have hedge funds as clients), it may be more efficient for regulatory authorities to obtain these data directly from the prime brokers, or even to ask prime brokers to compute certain risk analytics specified by regulators and provide them electronically on an automated basis to regulators so as to preserve confidentiality and streamline the reporting process.

However, it is important to balance the desire for transparency against the necessity of preserving the intellectual property that hedge funds possess. Unlike other technology-based industries, the vast majority of financial innovations are protected through trade secrecy, not patents.[1] Hedge funds are among the most secretive of financial institutions because their franchise value is almost entirely based on the performance of their investment strategies, and this type of intellectual property is perhaps the most difficult to patent. Therefore, hedge funds have an affirmative obligation to their investors to protect the confidentiality of their investment products and processes. If hedge funds are forced to reveal their strategies, the most intellectually innovative ones will simply cease to exist or move to other less intrusive regulatory jurisdictions. This would be a major loss to U.S. capital markets and the U.S. economy, hence it is imperative that regulators tread lightly with respect to this issue. One compromise is for regulators to obtain aggregated, redacted, and coded hedge-fund information—possibly pre-computed risk analytics described above—from the prime brokers that service hedge funds. This approach is operationally more efficient (there are only a few prime brokers, and they service the majority of hedge funds), and by assigning anonymous codes to every fund (so that the identities of the hedge funds are not divulged, but their information is stored in a consistent fashion across multiple prime brokers) or by transmitting pre-computed risk analytics, the proprietary aspects of the hedge funds' portfolios and strategies are protected.

3. Hedge Funds and Systemic Risk

One of the most vibrant parts of the financial sector over the last decade has been the hedge-fund industry. Relatively unconstrained by regulatory oversight, motivated by profit-sharing incentive fees, and drawn to far-flung corners of the investment universe, hedge funds have taken on a broad array of risks that would have otherwise been borne by less willing market participants. The increased risk-sharing capacity and liquidity provided by hedge funds over the last decade has contributed significantly to the growth and prosperity that the global economy has enjoyed. For example, hedge funds have raised tens of billions of dollars over the past three years for infrastructure investments, i.e., highways, bridges, power plants, and waste treatment and water purification facilities in India, Africa, and the Middle East. In their quest for greater profitability, hedge funds now provide liquidity in every major market, taking on the role of banks in fixed-income and money markets, and marketmakers and broker/dealers in equities and derivatives markets.

However, as part of the shadow banking system, hedge funds lie outside the purview of the Federal Reserve, the Office of the Comptroller of the Currency, the SEC, and CFTC, and the Treasury. Therefore, it is impossible to determine definitively what their contribution to systemic risk is. As early as 2004, Chan et al. (2004) presented indirect evidence that the level of systemic risk in the hedge-fund industry had increased; in particular, they conclude with the following summary:

1. The hedge-fund industry has grown tremendously over the last few years, fueled by the demand for higher returns in the face of stock-market declines and mounting pension-fund liabilities. These massive fund inflows have had a material impact on hedge-fund returns and risks in recent years, as evidenced by changes in correlations, reduced performance, increased illiquidity as

[1] See Lerner (2002) for a review of financial patents.

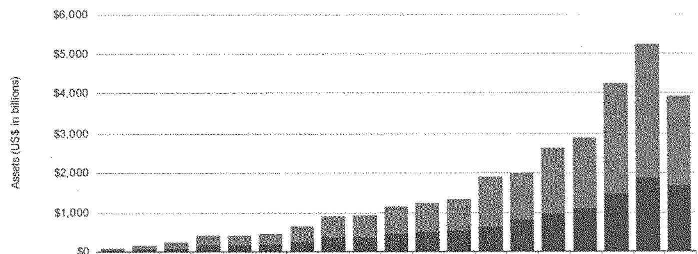
measured by the weighted autocorrelation ρ^*_t, and the large number of hedge funds launched and closed.

2. The banking sector is exposed to hedge-fund risks, especially smaller institutions, but the largest banks are also exposed through proprietary trading activities, credit arrangements and structured products, and prime brokerage services.

3. The risks facing hedge funds are nonlinear and more complex than those facing traditional asset classes. Because of the dynamic nature of hedge-fund investment strategies, and the impact of fund flows on leverage and performance, hedge-fund risk models require more sophisticated analytics, and more sophisticated users.

4. The sum of regime-switching models' high-volatility or low-mean state probabilities can measure the aggregate level of distress in the hedge-fund sector. Recent measurements suggest that we may be entering a challenging period. This, coupled with the recent uptrend in the weighted autocorrelation ρ^*_t, implies that systemic risk is increasing.

Although based on indirect technical research findings, these conclusions were not hard to justify from casual empirical observation of general economic conditions over the past decade. The low interest-rate and low credit-spread environment of the 1990's created greater competition for yield among investors, hence large sums of money from retail and institutional investors flowed into virtually every type of higher-yielding investment opportunity available, including hedge funds, mutual funds, residential real estate, mortgages, and, of course, CDO's, CDS's, and other "exotic" securities. This push for yield also manifested itself in significant legislative pressure to relax certain constraints, resulting in the repeal of the Glass-Steagall Act and the growth of government-sponsored enterprises such as Fannie Mae and Freddie Mac. The overall impact of these conditions was to create an over-extended financial system—part of which was invisible to regulators and outside their direct control—that could not be sustained indefinitely. Moreover, the financial system became so "crowded" in terms of the extraordinary amounts of capital deployed in every corner of every investable market, that the overall liquidity of those markets declined significantly. The implication of this crowdedness is simple: the first sign of trouble in one part of the financial system will cause nervous investors to rush for the exits, but—as the analogy suggests—it is impossible for everyone to get out at once, and this panic can quickly spread to other parts of the financial system. To develop a sense for the potential scale of such a panic, consider the growth of hedge-fund assets from 1990 to the present plotted in Figure 3, and note the sharp decline in assets and leverage in 2008 (with 2008Q4 estimated by Credit Suisse). The responsiveness of hedge-fund investors to underperformance is well-known, and these relatively rapid changes in risk capital can lead to wild market gyrations as we have experienced recently (see also Khandani and Lo's, 2007 and 2008, analysis of the August 2007 "quant meltdown").



	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Estimated assets	38	58	95	167	167	185	256	367	374	456	490	539	626	820	972	1,105	1,464	1,868	1,600
Market positions	95	145	238	418	418	463	640	918	935	1,140	1,225	1,887	1,877	1,968	2,620	2,674	4,247	5,231	3,680

Sources: through Q3 2008 – HFR industry report. Q42008 projections – based on CS analysis

Figure 3. Growth of assets and leverage in the hedge-fund industry from 1990 to 2008 (source: HFR industry report and Credit Suisse for 2008Q4 projections)

In 2005 and 2006, Chan et al. (2006, 2007) extended these tentative conclusions with additional data and analytics, and with each iteration, they uncovered more indirect evidence for increasing levels of systemic risk. The recurring themes from their analysis were increasing assets flowing into all parts of the hedge-fund industry, correspondingly lower returns presumably as a result of these increased asset levels, greater illiquidity risk and leverage as hedge funds undertook more exotic investments using greater leverage to boost their returns, and finally, greater correlation among different hedge-fund strategies, particularly with respect to losses. These themes built to a crescendo in the first half of 2007 with the demise of several prominent multi-billion-dollar hedge funds involved in mortgage-backed securities and credit-related strategies, and apparently caused significant dislocation in August 2007 in a completely unrelated part of the hedge-fund industry—long/short equity market-neutral funds—because of desperate attempts by investors to reduce risk and raise cash to meet margin calls (see Khandani and Lo, 2007, 2008).

But why should we be concerned about the fortunes of private partnerships or wealthy investors? The reason is that over the past decade, these investors and funds have become central to the global financial system, providing loans, liquidity, insurance, risk-sharing, and other importance services that used to be the exclusive domain of banks. But unlike banks—which are highly regulated entities (but less so, since the repeal of the Glass Steagall Act in 1999), with specific capital adequacy requirements and leverage and risk constraints—hedge funds and their investors are relatively unconstrained. This freedom is important. By giving managers a broad investment mandate, hedge-fund investors are able to garner higher returns on their investments in various economic environments, including market downturns and recessions. The dynamic and highly competitive nature of hedge funds also implies that such investors will shift their assets tactically and quickly, moving into markets when profit opportunities arise, and moving out when those opportunities have been depleted. Although such tactics benefit hedge-fund investors, they can also cause market dislocation in crowded markets with participants that are not fully aware of or prepared for the crowdedness of their investments.

Beyond the proposal of Section 2 requiring hedge funds to provide additional data to regulators, it may be necessary to expand the scope of the Federal Reserve system to include direct oversight for the very largest hedge funds, their prime brokers, and other related financial institutions such as certain insurance companies engaged in bank-like activities, e.g., highly leveraged loans, credit guarantees, and retail liquidity provision. If the Fed is expected to serve as lender of last resort to non-bank financial institutions during times of distress, such institutions should be part of the Fed's permanent regulatory mandate during times of calm, which includes capital adequacy requirements, leverage restrictions, and periodic bank examinations.

4. Behavioral Foundations of Systemic Risk

Apart from the obvious and indisputable need to develop measures of systemic risk and to require financial institutions to provide additional data to regulators, proposing more specific regulatory reforms requires a deeper understanding of the underlying causes of the current crisis. There is, of course, no shortage of culprits on which the crisis can be pinned; the following is a partial list of participants who were complicit in the rise and fall of the real-estate market and the financial side-bets that went along with the bubble:

- Homeowners
- Commercial banks and savings and loan associations
- Investment banks and other issuers of MBSs, CDO's, and CDS's
- Mortgage lenders, brokers, servicers, trustees
- Credit rating agencies
- Insurance companies
- Investors (hedge funds, pension funds, sovereign wealth funds, mutual funds, endowments, and other investment institutions)
- Regulators (SEC, OCC, CFTC, Fed, etc.)
- Government sponsored enterprises
- Politicians and their constituents

Not surprisingly, with a crisis of this magnitude, all of us have played a part in its care and feeding and there is plenty of blame to go around. But while the finger-pointing may continue over the coming months and years, a more productive line of inquiry is to identify causal factors that can *only* be addressed through regulatory oversight. To that end, there are two observations that may be useful in identifying such factors.

The first observation is that the current crisis is not unique. Despite the number of seemingly unprecedented events that have transpired in 2007 and 2008, from a longer and global historical perspective, credit crises occur with some regularity. Consider, for example, the following set of concerns regarding the strength of the banking system expressed by a U.S. central banker:

> ...first, the attenuation of the banking systems' base of equity capital; second, greater reliance on funds of a potentially volatile character; third, heavy loan commitments in relation to resources; fourth, some deterioration in the quality of assets; and, fifth, increased exposure to the larger banks to risks entailed in foreign exchange transactions and other foreign operations.

This seems as relevant today as it was in 1974 when Fed chairman Arthur Burns spoke before the American Bankers Association about the soundness of the banking system (see Minsky, 2008, p. 57). In his conclusion, Burns observed that "our regulatory system failed to keep pace with the need," and "a substantial reorganization [of the regulatory machinery] will be required to overcome the problems inherent in the existing structural arrangement".

Reinhart and Rogoff (2008a) provide a more systematic analysis of the uniqueness of the subprime mortgage meltdown of 2007–2008 by identifying eighteen bank-centered financial crises that have occurred around the world since 1974,[2] and coming to the following conclusion after comparing them to the current crisis:

> Our examination of the longer historical record, which is part of a larger effort on currency and debt crises, finds stunning qualitative and quantitative parallels across a number of standard financial crisis indicators. To name a few, the run-up in U.S. equity and housing prices that Graciela L. Kaminsky and Carmen M. Reinhart (1999) find to be the best leading indicators of crisis in countries experiencing large capital inflows closely tracks the average of the previous eighteen post World War II banking crises in industrial countries. So, too, does the inverted v-shape of real growth in the years prior to the crisis. Despite widespread concern about the effects on national debt of the early 2000s tax cuts, the run-up in U.S. public debt is actually somewhat below the average of other crisis episodes.

Figure 4 displays four graphs from Reinhart and Rogoff (2008a) that highlight the remarkable parallels in real housing prices, real equity prices, real GDP growth per capita, and public debt as a fraction of GDP between the current crisis and the eighteen others that have occurred in various countries since 1974.

The second observation is that the common theme in the majority of these crises is a period of great financial liberalization and prosperity that preceded the crisis (see Kaminsky and Reinhart, 1999, and Reinhart and Rogoff, 2008b). While this boom/bust pattern is familiar to macroeconomists, who have developed complex models for generating business cycles, there may be a simpler explanation based on human behavior. During extended periods of prosperity, market participants become complacent about the risk of loss—either through systematic underestimation of those risks because of recent history, or a decline in their risk aversion due to increasing wealth, or both. In fact, there is mounting evidence from cognitive neuroscientists that financial gain affects the same "pleasure centers" of the brain that are activated by certain narcotics.[3] This suggests that prolonged periods of economic growth and prosperity can induce a collective sense of euphoria and complacency among investors that is not unlike the drug-induced stupor of a cocaine addict. Moreover, the financial liberalization that typically

[2] In particular, Reinhart and Rogoff (2008) identify five "Big" crises (with the year in which the crisis started in parentheses)—Spain (1977), Norway (1987), Finland (1991), Sweden (1991), and Japan (1992)—and thirteen other banking and financial crises—Australia (1989), Canada (1983), Denmark (1987), France (1994), Germany (1977), Greece (1991), Iceland (1985), Italy (1990), New Zealand (1987), United Kingdom (1974, 1991, 1995), and United States (1984).

[3] In particular, the same neural circuitry that responds to cocaine, food, and sex—the mesolimbic dopamine reward system that releases dopamine in the nucleus accumbens—has been shown to be activated by monetary gain as well. See, for example, Delgado et al. (2000), Breiter et al. (2001), Montague and Berns (2002), Schultz (2002), and Knutson and Peterson (2005).

accompanies this prosperity implies greater availability of risk capital, greater competition for new sources of excess expected returns, more highly correlated risk-taking behavior because of the "crowded trade" phenomenon, and a false sense of security derived from peers who engage in the same behavior and with apparent success.

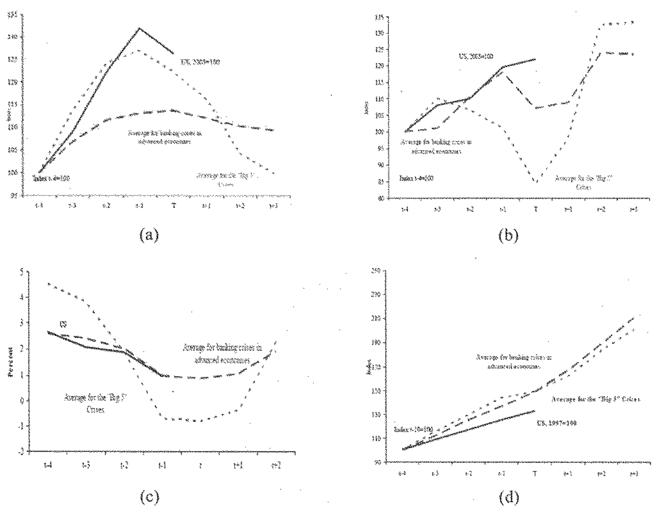


Figure 4. Reinhart and Rogoff's (2008a) comparison of current (a) real housing prices, (b) real equity prices; (c) real GDP growth per capita; and (d) public debt as a fraction of GDP to those of other countries before, during, and after eighteen financial crises since 1974.

Consider, for example, the case of a Chief Risk Officer (CRO) of a major investment bank XYZ, a firm actively engaged in issuing and trading collateralized debt obligations (CDO's) in 2004. Suppose this CRO was convinced that U.S. residential real estate was a bubble that was about to burst, and based on a simple scenario analysis, realized there would be devastating consequences for his firm. What possible actions could he have taken to protect his shareholders? He might ask the firm to exit the CDO business, to which his superiors would respond that the CDO business was one of the most profitable over the past decade with considerable growth potential, other competitors are getting into the business, not leaving, and the historical data suggest that real-estate values are unlikely to fall by more than 1 or 2 percent per year, so why should XYZ consider exiting and giving up its precious market share? Unable to convince senior management of the likelihood of a real-estate downturn, the CRO suggests a compromise—reduce the firm's CDO exposure by half. Senior management's likely response would be that such a reduction in XYZ's CDO business will decrease the group's profits by half, causing the most talented members of the group to leave the firm, either to join XYZ's competitors or to start their own hedge fund. Given the cost of assembling and training these professionals, and the fact that they have generated sizable profits over the recent past, scaling down their business is also difficult to justify. Finally, suppose the CRO takes matters into his own hands and implements a hedging strategy using OTC derivatives to bet against the CDO market.[4] From 2004 to 2006, such a hedging strategy would likely have yielded significant losses, and the reduction in XYZ's earnings due to this hedge, coupled with the strong performance of the CDO business for XYZ and its competitors, would be sufficient grounds for dismissing the CRO.

In this simple thought experiment, all parties are acting in good faith and, from their individual perspectives, acting in the best interests of the shareholders. Yet the most likely outcome is the current financial crisis. This suggests that the ultimate origin of the crisis may be human behavior—the profit motive, the intoxicating and anesthetic effects of success, and the panic sell-off that inevitably brings that success to an end.

Economists do not naturally gravitate toward behavioral explanations of economic phenomena, preferring, instead, the framework of rational deliberation by optimizing agents in a free-market context. And the ineluctable logic of neoclassical economics is difficult to challenge. However, recent research in the cognitive neurosciences has provided equally compelling experimental evidence that human decisionmaking consists of a complex blend of logical calculation and emotional response (see, for example, Damaso, 1994, Lo and Repin, 2002, and Lo, Repin, and Steenbarger, 2005). Under normal circumstances, that blend typically leads to decisions that work well in free markets. However, under extreme conditions, the balance between logic and emotion can shift, leading to extreme behavior such as the recent gyrations in stock markets around the world in September and October 2008.

This new perspective implies that preferences may not be stable through time or over circumstances, but are likely to be shaped by a number of factors, both internal and external to the individual, i.e., factors related to the individual's personality, and factors related to specific environmental conditions in which the individual is currently situated. When environmental conditions shift, we should expect behavior to change in response, both through learning and, over time, through changes in preferences via the forces of natural selection. These evolutionary underpinnings are more than simple speculation in the context of financial market participants. The extraordinary degree of competitiveness of global financial markets and the outsize rewards that accrue to the "fittest" traders suggest that Darwinian selection is at work in determining the typical profile of the successful investor. After all, unsuccessful market participants are eventually eliminated from the population after suffering a certain level of losses. For this reason, the hedge-fund industry is the Galapagos Islands of the financial system in that the forces of competition, innovation, natural selection are so clearly discernible in that industry.

This new perspective also yields a broader interpretation of free-market economics (see, for example, Lo, 2004, 2005), and presents a new rationale for regulatory oversight. Left to their own devices, market forces generally yield economically efficient outcomes under normal

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[4] In fact, most CRO's do not have unilateral authority to engage in such hedging strategies, but let us endow him with such powers just to illustrate how difficult it would be for any single individual to reign in the risk budgets of firms profiting from subprime-related activities in the most recent years leading up to the current crisis.

market conditions, and regulatory intervention is not only unnecessary but often counter-productive. However, under atypical market conditions—prolonged periods of prosperity, or episodes of great uncertainty—market forces cannot be trusted to yield the most desirable outcomes, which motivates the need for regulation. Of course, the traditional motivation for regulation—market failures due to externalities, natural monopolies, and public-goods characteristics—is no less compelling, and the desire to prevent sub-optimal behavior under these conditions provides yet another role for government intervention.

A simple example of this dynamic is the existence of fire codes enacted by federal, state, and local governments requiring all public buildings to have a minimum number of exits, well-lit exit signs, a maximum occupancy, and certain types of sprinklers, smoke detectors, and fire alarms. Why are fire codes necessary? In particular, given the costs associated with compliance, why not let markets determine the appropriate level of fire protection demanded by the public? Those seeking safer buildings should be willing to pay more to occupy them, and those willing to take the risk need not pay for what they deem to be unnecessary fire protection. A perfectly satisfactory outcome of this free-market approach should be a world with two types of buildings, one with fire protection and another without, leaving the public free to choose between the two according to their risk preferences.

But this is not the outcome that society has chosen. Instead, we require all new buildings to have extensive fire protection, and the simplest explanation for this state of affairs is the recognition—after years of experience and many lost lives—that we systematically under-estimate the likelihood of a fire.[5] In fact, assuming that improbable events are impossible is a universal human trait (see, for example, Plous, 1993, and Slovic, 2000), hence the typical builder will not voluntarily spend significant sums to prepare for an event that most individuals will not value because they judge the likelihood of such an event to be nil. Of course, experience has shown that fires do occur, and when they do, it is too late to add fire protection. What free-market economists interpret as interference with Adam Smith's invisible hand may, instead, be a mechanism for protecting ourselves from our own behavioral blind spots. Just as Odysseus asked his shipmates to tie him to the mast and plug his ears with wax as they sailed past the three Sirens of Circe's islands, we use regulation as a tool to protect ourselves from our most self-destructive tendencies.

Finally, beyond the natural predilection of human behavior to excess, there is another reason to suspect that financial crises are inevitable. In studying accidents across many industries and professions—including nuclear meltdowns, chemical plant explosions, power grid failures, and airplane crashes—Perrow (1984) identifies two common elements that routinely lead to disaster: complexity and tight coupling. The former concept is clear. The latter is defined by Perrow (1984: 89–90) as "a mechanical term meaning there is no slack or buffer or give between two items [in a system]. What happens to one directly affects what happens in the other...". Perrow concludes that accidents are normal and to be expected in complex systems that are tightly coupled. The current financial system certainly satisfies the complexity criterion (see Figures 6 and 7, and the discussion in Section 8), and the credit relationships between various

[5] This phenomenon is a special case of the more general behavioral bias of under-estimating the likelihood of negative outcomes, and the heuristic of assigning zero probability to low-probability events (see, for example, Plous, 1993, Chapter 12, and Slovic, 2000).

counterparties—and the legal, accounting, and regulatory constraints on collateral and liquidity—have created tight coupling among many parts of the financial system. Financial crises are normal accidents.

5. A Process for Regulatory Design and Reform

With respect to regulatory reform, I acknowledge that an academic may not be in the best position to make recommendations—legislation is perhaps best left to professional legislators. However, I do think that academic research can inform the process of regulatory reform, and provide useful input in considering priorities, structure, and even implementation. This is the spirit in which I propose a somewhat different perspective to financial regulation in this section.

The behavioral and traditional rationales for regulation lead naturally to a broader approach for formulating policy and regulatory reform, an approach first advocated by Merton and Bodie (1993) for deposit insurance reform which focuses on financial functions, not financial institutions (see, also, Crane et al., 1995, and Hogan and Sharpe, 1997). The functional approach to studying financial institutions and regulation begins with the observation that there are six functions of the financial system—a payments system, a pooling mechanism for undertaking large-scale investments, resource transfer across time and space, risk management, information provision for coordinating decisions, and a means of contracting and managing agency problems. Because functions tend to be more stable than institutions, regulations designed around functional specifications are less likely to generate unintended consequences.

From a functional perspective, the standard economic approach to determining the need for regulatory oversight—identifying "market failures"—may be applied to various functions of the financial system. Among the possible sources of market failures are:

1. Public Goods (commodities like national defense that benefit everyone, but where no one has an incentive to pay for it because it is not possible to exclude anyone from its benefits once it is produced)

2. Externalities (unintended costs or benefits of an activity that are not incorporated into the market price of that activity, e.g., pollution from a factory, live music from a neighborhood bar)

3. Incomplete Markets (the absence of certain markets because there are insufficient suppliers or demanders of that product or service, e.g., unemployment insurance)

4. Behavioral Biases (certain patterns of human behavior that are recognized as undesirable and counterproductive but which are likely to occur under particular circumstances, e.g., over-eating, driving while intoxicated, panic selling of investments)

Systemic risk is a public good (or, more accurately, a public "bad"), hence government can play a positive role in addressing this market failure. To see this more clearly, consider the converse of systemic risk, i.e., systemic safety. Everyone in the global economy benefits from systemic safety—the assurance that financial markets are stable, liquid, and reliable—but no single individual is willing to pay for this public good (in fact, it is unclear whether most individuals were even aware of the importance of this public good in their own lives until recently). The public goods aspect of liquidity in the banking system was clearly recognized by the public and private sectors at the turn of the 20^{th} century in the United States, which led to the development of the Federal Reserve System. However, the recent growth in importance of shadow banking system has significantly reduced the ability of the Federal Reserve to maintain the same level of systemic safety as before. Several new regulations for addressing this issue are proposed in Sections 6 and 7 below.

Once a particular market failure is identified, the appropriate regulatory tools needed to address the failure will follow naturally, e.g., subsidies or taxes, proper disclosure of private information, government provision, or new securities regulation. In the case of systemic risk in the financial system, all four characteristics apply to some degree. The government is the natural provider of systemic safety because of the public goods nature of liquidity, stability and reliability, the positive externalities of a well-functioning financial system, the inability of the private sector to credibly provide systemic safety, and because individual behavior is not reliably rational during just those times when systemic safety is in jeopardy.

The functional perspective can also be applied to the organization of regulatory agencies. In the aftermath of the terrorist attacks of September 11, 2001, the need for better coordination among the FBI, CIA, NSA, and other government agencies became painfully obvious. A similar case can be made for financial regulation, which is currently distributed among several agencies and offices including the SEC, CFTC, OCC, OTS, Treasury, and the Federal Reserve. Rather than creating a new super-agency to coordinate among existing regulators, it may be more cost-effective to re-organize regulatory responsibilities according to functional lines. For example, the SEC has traditionally focused on protecting investors and ensuring fair and orderly markets, whereas the focus of the Federal Reserve has been to provide liquidity to the banking system as lender of last resort. This suggests a natural division of new regulatory responsibilities in which the management of systemic risk falls within the Federal Reserve's mandate and the creation of new exchanges continues to be part of the SEC's mandate. By focusing on functions rather than institutions, a more efficient regulatory infrastructure may be achieved.

The multi-faceted nature of systemic risk implies that several approaches to regulatory reform will be necessary. Moreover, because of the competitive and adaptive nature of financial markets, the most effective regulations are those that can adapt to changing market conditions. From an archaeological perspective, the body of securities laws may be viewed as the fossil record of the unbounded creativity of unscrupulous financiers in devising new ways to separate individuals from their money, and the multitude of strata of securities regulations trace out the co-evolution of financial misdeeds and the corresponding static regulatory responses. The most durable regulations are those that recognize the adaptive nature of markets and their participants, and are allowed to adapt accordingly.

To illustrate how adaptive regulations may be formulated, consider the credit default swaps (CDS) market. The magnitude and importance of this OTC market have led to the very sensible proposal to establish a CDS exchange with standardized contracts, daily mark-to-market and settlement, and a clearing corporation. An adaptive version of this proposal would be to require the establishment of a similar organized exchange and clearing corporation for any set of OTC contracts that exceeds certain thresholds in volume, open interest, and notional exposure, where such thresholds should be defined in terms of percentages of those quantities in existing markets, e.g., 5% of the combined dollar volume of all organized futures markets. Such an adaptive regulation would promote the orderly and organic creation of new exchanges as the need arises, and reduce the likelihood of systemic shocks emanating from the failure of a small number of too-big-to-fail institutions. Of course, exemptive relief can always be provided under certain conditions, but the benefit of an adaptive regulation is that an orderly transition from small heterogeneous OTC trading to a market that has become vital to global financial system is permanently institutionalized.

6. The Capital Markets Safety Board

With any form of technological innovation, there is always the risk that the technology outpaces our ability to use it properly, bringing unintended consequences. The current threat of global warming is perhaps the most dramatic example of this common pattern of human progress. But in the face of space shuttle explosions, nuclear meltdowns, bridge collapses, and airplane crashes, we rarely blame the technology itself, but, instead, seek to understand how our possibly inappropriate use of the technology may have caused the accident. The outcome of that evaluation process may yield improvements in both the technology and how it is used, and this is how progress is made. Technological innovation of any form entails risk, but as long as we learn from our mistakes, we reduce the risk of future disasters.

In this respect, the financial industry can take a lesson from other technology-based professions. In the medical, chemical engineering, and semiconductor industries, for example, failures are routinely documented, catalogued, analyzed, internalized, and used to develop new and improved processes and controls. Each failure is viewed as a valuable lesson, to be studied and reviewed until all the wisdom has been gleaned from it, which is understandable given the typical cost of each lesson.

One successful model for conducting such reviews is the National Transportation Safety Board (NTSB), an independent government agency whose primary mission is to investigate accidents, provide careful and conclusive forensic analysis, and make recommendations for avoiding such accidents in the future. In the event of an airplane crash, the NTSB assembles a team of engineers and flight-safety experts who are immediately dispatched to the crash site to conduct a thorough investigation, including interviewing witnesses, poring over historical flight logs and maintenance records, and sifting through the wreckage to recover the flight recorder or "black box" and, if necessary, reassembling the aircraft from its parts so as to determine the ultimate cause of the crash. Once its work is completed, the NTSB publishes a report summarizing the team's investigation, concluding with specific recommendations for avoiding future occurrences of this type of accident. The report is entered into a searchable database that is available to the general public (see http://www.ntsb.gov/ntsb/query.asp) and this has been one of the major factors underlying the remarkable safety record of commercial air travel.

For example, it is now current practice to spray airplanes with de-icing fluid just prior to take-off when the temperature is near freezing and it is raining or snowing. This procedure was instituted in the aftermath of USAir Flight 405's crash on March 22, 1992. Flight 405 stalled just after becoming airborne because of ice on its wings, despite the fact that de-icing fluid was applied before it left its gate. Apparently, Flight 405's take-off was delayed because of air traffic, and ice re-accumulated on its wings while it waited for a departure slot on the runway in the freezing rain. The NTSB Aircraft Accident Report AAR-93/02—published February 17, 1993 and available through several internet sites—contains a sobering summary of the NTSB's findings (Report AAR–93/02, page *vi*):

> The National Transportation Safety Board determines that the probable cause of this accident were the failure of the airline industry and the Federal Aviation Administration to provide flightcrews with procedures, requirements, and criteria compatible with departure delays in conditions conducive to airframe icing and the decision by the flightcrew to take off without positive assurance that the airplane's wings were free of ice accumulation after 35 minutes of exposure to precipitation following de-icing. The ice contamination on the wings resulted in an aerodynamic stall and loss of control after liftoff. Contributing to the cause of the accident were the inappropriate procedures used by, and inadequate coordination between, the flightcrew that led to a takeoff rotation at a lower than prescribed air speed.

Rather than placing blame on the technology, or on human error, the NTSB conducted a thorough forensic examination and concluded that an incorrect application of the technology—waiting too long after de-icing, and not checking for ice build-up just before take-off—caused the crash. Current de-icing procedures have no doubt saved many lives thanks to NTSB Report AAR–93/02, but this particular innovation did not come cheaply; it was paid for by the lives of the 27 individuals who did not survive the crash of Flight 405. Imagine the waste if the NTSB did not investigate this tragedy and produce concrete recommendations to prevent this from happening again.

Financial crashes are, of course, considerably less dire, generally involving no loss of life. However, the current financial crisis, and the eventual cost of the Paulson Plan, should be sufficient motivation to create a "Capital Markets Safety Board" (CMSB) dedicated to investigating, reporting, and archiving the "accidents" of the financial industry. By maintaining teams of experienced professionals—forensic accountants, financial engineers from industry and academia, and securities and tax attorneys—that work together on a regular basis over the course of many cases to investigate every single financial disaster, a number of new insights, common threads, and key issues would emerge from their analysis. The publicly available reports from the CMSB would yield invaluable insights to investors seeking to protect their future investments from similar fates, and in the hands of investors, this information would eventually drive financial institutions to improving their "safety records".

In addition to collecting, analyzing, and archiving data from financial blow-ups, the CMSB should also be tasked with the responsibility of obtaining and maintaining information from the shadow banking system—hedge funds, private partnerships, sovereign wealth funds, etc.—and integrating this information with that of other regulatory agencies (see Section 2 for further discussion). By having one single agency responsible for managing data related to systemic risk, and creating high-level risk analytics such as a network map of the financial system, estimates of illiquidity exposure, leverage, and asset flows, the repository of data will be far easier to access and analyze.

The NTSB provides an additional valuable service that the CMSB should also take on: at the very start of its investigative process, the NTSB establishes itself as the clearinghouse for all information related to the accident, and communicates frequently and regularly with the press to provide as much transparency as possible to an undoubtedly anxious public. Specifically, the following is an excerpt from the NTSB's standard operating procedure for major accident investigations (see http://www.ntsb.gov):

> At a major accident, the NTSB will send several public affairs officers (PAOs) to accompany the Go-Team and facilitate information dissemination. Often, one of the five Presidentially-appointed Board Members will accompany the team and serve as principal spokesperson. The Go-Team is led by a senior career investigator designated as Investigator-in-Charge (IIC).
>
> While the Board's investigative team includes representatives from other agencies and organizations, only the Safety Board may release factual information on the investigation. Representatives of other organizations participating in our investigation risk removal and exclusion from the process if they release investigative information without NTSB permission.
>
> The NTSB will establish a command post near the crash site, usually in a hotel. On-site public affairs operations will be organized from the Command Post. Local phone numbers for public affairs will be announced when they have been established.
>
> Although not possible in every circumstance, the Safety Board strives to conduct two press conferences a day when on scene, one at mid- to late-afternoon and the other in the evening following the progress meeting held by the investigative team. The Board's spokespersons discuss factual, documented information. They do not analyze that information, nor speculate as to the significance of any particular piece of information.
>
> If conditions permit, Safety Board PAOs will attempt to gain admittance for the news media, either in total or in a pool arrangement, to the accident scene itself, keeping in mind limitations posed by physical and biomedical hazards.
>
> The Board will maintain a public affairs presence on scene for as long as circumstances warrant, usually 3 to 7 days. After that, information will be released from the Public Affairs Office in Washington, D.C., (202) 314–6100.

By taking such an active role in providing information to the public immediately and continuously throughout its investigations, the NTSB reduces the likelihood of panic and overreaction, and over the years, this policy has earned the NTSB the public's trust and confidence. Compare this approach to the sporadic and inconsistent messages that were communicated to the public regarding the current financial crisis, which may well have magnified the dislocation that ensued in the stock market and money market funds during September and October 2008. Of course, the Treasury and Federal Reserve can hardly be faulted for not providing polished presentations of every aspect of their deliberations—public relations has never been a significant component of their mandate. But in times of crisis, when emotions run high, it is particularly important to communicate directly, truthfully, and continuously with all stakeholders no matter how bad the news, as any experienced emergency-room doctor will acknowledge.

Of course, formal government investigations of major financial events do occur from time to time, as in the April 1999 *Report of the President's Working Group in Financial Markets on Hedge Funds, Leverage, and the Lessons of Long-Term Capital Management*. However, this inter-agency report was put together on an *ad hoc* basis with committee members that had not worked together previously and regularly on forensic investigations of this kind. With multiple agencies involved, and none in charge of the investigation, the administrative overhead becomes more significant. Although any thorough investigation of the financial services sector is likely to involve the SEC, the OCC, the CFTC, the US Treasury, and the Federal Reserve—and inter-agency cooperation should be promoted—there are important operational advantages in tasking a single office with the responsibility for coordinating all such investigations and serving as a repository for the expertise in conducting forensic examinations of financial incidents.

The establishment of a CMSB will not be inexpensive. The lure of the private sector poses a formidable challenge to government agencies to attract and retain individuals with expertise in these highly employable fields. Individuals trained in forensic accounting, financial engineering, and securities law now command substantial premiums on Wall Street over government pay scales. Although the typical government employee is likely to be motivated more by civic duty than financial gain, it would be unrealistic to build an organization on altruism alone. However, the cost of a CMSB is trivial in comparison to the losses that it may prevent. For example, if regulators had fully appreciated the impact of the demise of Lehman Brothers—which a fully operational CMSB with the proper network map would have been able to forecast—the savings from this one incident would be sufficient to fund the CMSB for half a century. Moreover, the benefits provided by the CMSB would accrue not only to the wealthy, but would also flow to pension funds, mutual funds, and retail investors in the form of more stable financial markets, greater liquidity, reduced borrowing and lending costs as a result of decreased systemic risk exposures, and a wider variety of investment choices available to a larger segment of the population because of increased transparency, oversight, and ultimately, financial security.

It is unrealistic to expect that market crashes, manias, panics, collapses, and fraud will ever be completely eliminated from our capital markets, but we should avoid compounding our mistakes by failing to learn from them.

7. Transparency and Fair-Value Accounting

A common theme among the issues and proposals throughout my testimony has been the importance of transparency for managing systemic risk. Financial markets are highly competitive and adaptive, and—apart from occasional dislocations due to overwhelming behavioral reactions—are extremely effective in aggregating, parsing, internalizing, and disseminating information, the quintessential illustration of the "wisdom of crowds". As a general principle, the more transparency is provided to the market, the more efficient are the prices it produces, and the more effective will the market allocate capital and other limited resources. When the market is denied critical information, its participants will infer what they can from existing information, in which case rumors, fears, and wishful thinking will play a much bigger role in how the market determines prices and quantities. Therefore, from a systemic risk perspective, as well as a social welfare perspective, it is difficult to justify any regulatory change that interferes with or otherwise reduces transparency.

One example of such a change is the recent proposal to suspend "Fair-Value Accounting" (FASB Statement No. 157). Fair-value or mark-to-market accounting requires firms to value their assets and liabilities at fair market prices, not on a historical-cost basis, and this practice has been blamed for the current financial crisis because it has forced many firms to write down their assets, thereby triggering defaults and insolvencies. At first blush, this proposal seems ill-conceived because it calls for less transparency. After all, in the current credit crisis, banks are refusing to lend to each other because they have no idea what the other banks' assets are worth, and suspending fair-value accounting will not improve this state of affairs. Imagine a doctor advising the parents of a feverish child to discontinue hourly temperature readings because the frequent readings only serve to alarm them. Instead, the doctor suggests that the parents either wait until the child is feeling better before taking the next reading, or that they construct an estimate of the child's temperature based on readings taken last week when the child was feeling better.

Nevertheless, the proposal is worth more serious consideration because it involves several subtle issues surrounding the economic nature of markets, prices, and the importance of transparency. There is no doubt that a suspension of fair-value accounting will reduce current pressures on a number of potential insolvent financial institutions. However, this reduction in current pressures comes at a cost, which depends on whether the suspension of fair-value accounting is temporary or permanent. If it is permanent, market participants lose a significant degree of transparency regarding corporate assets and liabilities, and will price securities accordingly. Borrowing costs will likely increase across the board, and because firms with higher-quality assets may not have any mechanism to convince the market of this fact, such firms may refrain from participating in capital markets, thereby reducing market liquidity and also creating adverse selection (where only firms with lower-quality assets remain in the market), which raises borrowing costs even more. Moreover, on an ongoing basis, firms will have to maintain larger reserves to achieve the same credit quality because of the increased risk of their less-transparent portfolios, further reducing liquidity and increasing borrowing costs.

If the suspension of fair-value accounting is temporary, then there must be a day of reckoning when firms will have to mark their assets and liabilities to market, and the suspension is merely a postponement of that eventuality. A postponement is reasonable under two conditions: (1) the existence of extraordinary circumstances that cause market prices of the firm's assets and liabilities to deviate significantly from economic value; and (2) the extraordinary circumstances are temporary and unrelated to the economic value of the firm's assets and liabilities. For example, suppose a terrorist attack on U.S. soil creates a massive but temporary flight-to-quality, during which time the value of an insurance company's assets, which are largely invested in AAA-rated corporate debt, falls precipitously. In this scenario, the flight-to-quality is temporary, and the decline in the insurance company's assets is largely (although not completely) unrelated to its economic value, hence a temporary suspension of fair-value accounting may be defensible since the insurance company is likely to be solvent once the flight-to-quality passes.

However, this argument implicitly assumes that the flight-to-quality is a form of temporary insanity that should be dismissed or, at the very least, discounted. But if, for example, the flight-to-quality is not a temporary phenomenon, but rather a change in regime that is likely to last for years, e.g., because the terrorist event portends ongoing threats that cannot easily be eliminated, then the suspension of fair-value accounting is delaying the inevitable and interfering with the appropriate re-pricing of business enterprises under a new economic regime.

Also, the temporariness of impairments to economic value is insufficient justification for suspending fair-value accounting—the condition that the impairment be unrelated to the economic value of the impaired asset is also critical. The reason is simple: even if an asset's market value is only temporarily impaired, if the impairment is directly related to the nature of that asset then it should be taken into account and marked to market. For example, suppose a bank holds part of its assets in a hurricane insurance company. During an unusually active hurricane season, the value of these holdings may be temporarily impaired, but this impairment is directly related to the economic value of the insurance company, and suspension of fair-value accounting only interferes with the price discovery process.

A more subtle argument for suspending fair-value accounting has been put forward by Plantin, Sapra, and Shin (2008), who observe that during periods where liquidity is very low, a forced liquidation of an asset by firm A can depress the market price of that asset, which affects the value of firm B if it also holds that same asset and is required to mark that asset to market. In such situations, fair-value accounting inadvertently creates correlation among the assets of many firms, even those that are not attempting liquidations, and this increased correlation can lead to the kind of "death spiral" discussed above, where liquidations cause deterioration of collateral that leads to more liquidations, further deterioration of collateral, and so on. They consider this spillover effect a negative externality—a negative consequence of the liquidation that is not part of the economic value of the asset being liquidated—and argue that in some cases (long-lived and illiquid assets), it is socially optimal to use historical-cost accounting instead of fair-value accounting.

However, their conclusion rests heavily on the interpretation of the spillover effect as negative externality. Another interpretation is that such spillover effects are, in fact, part of the economic value of an asset. In particular, if the asset in question were short-term U.S. Treasury Bills, then presumably the spillover effects of a liquidation would be minimal. But then the price of T-Bills should reflect this property, and the price of less liquid assets should reflect the potential spillover effects as well. Therefore, the potential for spillover effects is a characteristic that can be known in advance and priced accordingly, in which case the welfare implications of switching from fair-value to historical-cost accounting is unclear. In any case, Plantin, Sapra, and Shin (2008) do not consider the case where fair-value accounting is temporarily suspended, and the impact of moving from one regime to another in their framework is an open question. The answer will likely depend on whether the two conditions described above hold for the fair-value postponement.

Other recent studies have argued that during liquidity crises, market prices are not as meaningful as they are during normal times, hence marking securities to market may not always yield the same information content (see, for example, Allen and Carletti, 2008, Easley and O'Hara, 2008, and Sapra, 2008). While no consensus has yet emerged regarding which alternative to mark-to-market pricing is best, the fact that the distinction between "liquidity pricing" and "normal pricing" is being drawn more frequently by accountants and economists suggests that neither historical-cost accounting nor fair-value accounting can be appropriate for all circumstances. This implies that neither approach is the correct one, but that a more flexible mechanism for pricing assets and liabilities is needed—one that can accommodate both normal and distressed market conditions.

A more general observation about accounting methods is that they are designed to yield information about value, not about risk, a point made by Merton and Bodie (1995) as part of their call for a separate branch of accounting focusing exclusively on risk. They use the example of a simple fixed/floating interest-rate swap contract which has zero value at the start, hence is considered neither an asset nor a liability, but is an "off-balance-sheet" item. We have learned from experience that off-balance-sheet items can have enormous impact on a firm's bottom line, hence it is remarkable that our accounting practices have yet to incorporate them more directly in valuation. In fairness to the accounting profession, accounting methods are designed to be *backward-looking*, involving the allocation of revenues and costs that have already occurred to various categories. Accountants tell us what *has* happened, leaving the future to corporate strategists and fortunetellers. But this exclusive focus on realized results implies that risk is not part of the accountant's lexicon, i.e., there is no natural way to capture risk from the current GAAP accounting perspective. Yet accounting concepts like capital ratios and asset/liability gaps are used to formulate and implement regulatory requirements and constraints.

A modest beginning for developing risk accounting methods is to define the concept of a "risk balance sheet", which is simply the risk decomposition of a firm's mark-to-market balance sheet where both assets and liabilities are considered to be random variables, i.e., unknown quantities with certain statistical properties. Since assets must always equal liabilities, the variance of assets must always equal the variance of liabilities, hence the risk balance sheet is just the variance decomposition of both sides (see Figure 5). Note that the variance of both total assets and total liabilities is given by the sum of the variances of the individual assets and liabilities, plus their pairwise covariances. These are the terms that have created so much controversy with respect to subprime mortgage-backed securities—they swelled to unprecedented levels in 2007 as subprime mortgage defaults became highly correlated throughout the country. Risk accounting standards—which have yet to be developed—must address both the proper methods for estimating the variances and covariances of assets and liabilities, and the potential instabilities in these estimates across different economic environments.

This challenge is not just a regulatory one, but requires regulators to collaborate with accountants and financial experts to develop a completely new set of accounting principles focused exclusively on risk budgeting. This new branch of risk accounting may be one of the most critical pieces of the financial and regulatory infrastructures of the 21st century.

Assets	Liabilities
A_1	L_1
A_2	L_2
...	...
A_N	L_M
V	V

$\Rightarrow$

Assets	Liabilities
$\mathrm{Var}[A_1]$	$\mathrm{Var}[L_1]$
$\mathrm{Var}[A_2]$	$\mathrm{Var}[L_2]$
...	...
$\mathrm{Var}[A_N]$	$\mathrm{Var}[L_M]$
$\mathrm{Cov}[A_i,A_j]$, $i \neq j$	$\mathrm{Cov}[L_i,L_j]$, $i \neq j$
$\mathrm{Var}[V]$	$\mathrm{Var}[V]$

Figure 5. The "risk balance sheet", defined as the risk decomposition of a firm's market-value balance sheet.

8. The Role of Technology and Education

Given the complexity of the financial structures involved in the current crisis—mortgage-backed securities, collateralized debt obligations, credit default swaps, SPV's, SIV's, and other exotic entities and securities—a natural question is whether the crisis was due to financial technology, e.g., derivative securities, structured products, and the mathematical methods involved in pricing and hedging them? If, as Warren Buffett claims, derivatives are financial weapons of mass destruction, should we consider outlawing derivatives altogether?

There is no doubt that financial technology has had an indelible impact on the financial system over the past two decades. However, that technology has been used as often to reduce risk as it has to augment it. For example, as of July 2008, the notional amount outstanding of interest-rate derivatives—one of the most popular instruments among non-financial corporations for *hedging* interest-rate risk—was $465 trillion according to the International Swaps and Derivatives Association (see http://www.isda.org). In contrast to that market, the comparable notional amount for credit default swaps over the same period was $55 trillion, and only $12 trillion for equity derivatives. These figures suggest that the most common use of derivatives today is not as financial weapons of mass destruction, but as hedging vehicles for transferring risk from part of the global economy to other parts that are better equipped to bear that risk. Therefore, limiting the use of such important risk management tools would be counterproductive and highly disruptive.

However, Mr. Buffett may be half-right in that financial technology has become more complex over the last two decades, and because the derivatives and structured finance businesses have grown so rapidly, the expertise required to fully grasp the risk and return profiles of many new financial instruments and vehicles has increased just as rapidly. In some cases, even large financial institutions may not have had sufficient time to develop such expertise among their senior management and board members, and hiring the necessary expertise in booming business lines is always difficult by definition. To fully appreciate the intellectual challenges of recent financial innovation, consider the case of the "hybrid" CDO first issued by HVB Asset Management in 2003, which is described by Bluhm (2003) in the following passage:

> HVB Asset Management Asia (HVBAM) has brought to market the first ever hybrid collateralized debt obligation (CDO) managed by an Asian collateral manager. The deal, on which HVB Asia (formerly known as HypoVereinsbank Asia) acted as lead manager and underwriter, is backed by 120 million of asset-backed securitization bonds and 880 million of credit default swaps... Under the structure of the transaction, Artemus Strategic Asian Credit Fund Limited—a special purpose vehicle registered in the Cayman Islands—issued 200 million of bonds to purchase the 120 million of cash bonds and deposit 80 million into the guaranteed investment contract, provided by AIG Financial Products. In addition, the issuer enters into credit default swap agreements with three counterparties (BNP Paribas, Deutsche Bank and JPMorgan) with a notional value of 880 million. On each interest payment date, the issuer, after payments of certain senior fees and expenses and the super senior swap premium, will use the remaining interest collections from the GIC accounts, the cash ABS bonds, the hedge agreements, and the CDS premiums from the CDS to pay investors in the CDO transaction... The transaction was split into five tranches, including an unrated 20 million junior piece to be retained by HVBAM. The 127 million of A-class notes have triple-A ratings from Fitch, Moody's and S&P, the 20 million B-notes were rated AA/Aa2/AA, the 20 million C bonds were rated A/A2/A, while the 13 million of D notes have ratings of BBB/Baa2 and BBB.

This new financial security is a claim on the ARTEMUS Strategic Asian Credit Fund, a Cayman Islands special purpose vehicle structured according to Figure 6. Note that this diagram is just an outline of the legal structure of the instrument! How many boards of directors of institutions managing these types of funds—of which there are many—truly understood the complexities of these investments?

Pricing such instruments is even more complex, involving a blend of mathematical, statistical, and financial models and computations, all of which are typically done under simplistic assumptions that rarely hold in practice, such as constant means, variances, and correlations that are measured without error. To develop an appreciation for the mathematical complexity of some of these pricing models, Figure 7 contains a technical appendix from Bluhm and Overbeck (2007) in which they describe one aspect of their proposed model for default probabilities, which is a critical element in evaluating the price of credit-sensitive instruments like credit default swaps. Models such as these are central to the current financial crisis, and their mis-calibration is one possible explanation for how so many firms under-estimated the risks of subprime-related securities so significantly. Unless senior management has the technical expertise to evaluate and challenge the calibrations of these models, they cannot manage their risks effectively.

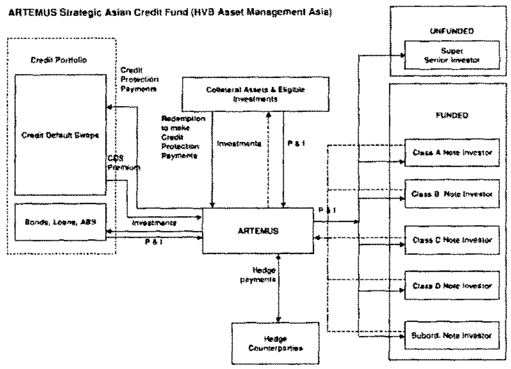

Figure 6. Structure of the ARTEMUS Strategic Asian Credit Fund, a Cayman Islands special purpose vehicle. Source: Bluhm (2003).

Now, we often take it for granted that large financial institutions capable of hiring dozens of "quants" each year must have the technical expertise to advise senior management, and senior management has the necessary business and markets expertise to guide the quantitative research process. However, in fast-growing businesses the realities of day-to-day market pressures make this idealized relationship between senior management and research a fantasy. Senior management typically has little time to review the research, much less guide it, and in recent years, many quants have been hired from technically sophisticated disciplines such as mathematics, physics, and computer science but without any formal training in finance or economics. While some on-the-job training is inevitable, the broad-based failure of the financial industry to fully appreciate the magnitude of the risk exposures in the CDO and CDS markets suggests that the problem was not too much knowledge of financial technology, but rather too little knowledge.

A case in point is the credit-rating agencies, who have been roundly criticized for their apparently overly optimistic ratings of the mortgage-backed securities and related instruments that lie at the epicenter of the current financial crisis. Some have argued that the inherent conflict of interest in the ratings business led to upward-biased ratings, others claim that the mathematical models on which ratings were based were too simplistic and static, and yet another set of critics blame the limited history that the rating agencies used to calibrate their models. Although it may be too early to draw any final conclusions about the ultimate origins of the breakdown in these credit ratings, one fact has emerged which seems uncontroversial: the clients of the rating agencies—hedge funds, commercial banks, investment banks, and mortgage companies—routinely hired away the raters' most talented analysts. And given the business model of rating agencies, this was not hard to do, nor did the rating agencies object because it was both a compliment to the quality of their staff, and also a means for developing closer ties to their clients. But it did result in a continuous "brain drain" from the rating agencies to their clients, and even then, the demand for such talent continued to grow until the financial crisis hit.

Appendix I: Stochastic rationale of the NHCTMC approach

In this appendix, we briefly comment on the stochastic rationale of our approach. For the sake of convenient notation, let us denote by $\Psi(t)$ the diagonal matrix with diagonal elements:

$$\psi_{ii}(t) = t\varphi_{\alpha_i,\beta_i}(t) \qquad (i = 1, \ldots, 8;\ t \geq 0)$$

The transition matrix M_t in (5) for the time period $[0, t]$ can then be written as:

$$M_t = \exp\left(\Psi(t) \times Q\right) \qquad (t \geq 0) \qquad (6)$$

Writing the exponential matrix as a power series and using the typical Markov kernel notation $P_{0,t} = M_t$ term-by-term differentiation yields

$$\frac{\partial}{\partial t} P_{0,t} = \sum_{k=0}^{\infty} \frac{\partial}{\partial t} \frac{\left(\Psi(t) \times Q\right)^k}{k!} = \sum_{k=1}^{\infty} \left(\frac{\partial}{\partial t}\Psi(t) \times Q\right) \times \frac{\left(\Psi(t) \times Q\right)^{(k-1)}}{(k-1)!} = \left(\frac{\partial}{\partial t}\Psi(t) \times Q\right) \times P_{0,t} \qquad (7)$$

Because $\Psi(t)$ is a diagonal matrix

$$\frac{\partial \Psi(t)}{\partial t}$$

is the diagonal matrix with entries $\psi'_{ii}(t)$. Therefore, the matrix

$$\frac{\partial \Psi(t)}{\partial t} \times Q$$

is a Q-matrix, arguing in the same way as above where we said that $\Psi(t) \times Q$ is a Q-matrix and taking into account that $\psi'_{ii}(t) \geq 0$ at all times[a] t. As a consequence of general Markov theory (see Ethier & Kurtz, 2005, theorem 7.3 in chapter 4; Lando & Skodeberg, 2002, and Schoenbucher, 2005), equation (7) is part of the forward equation of a non-homogeneous Markov chain $(X_t)_{t \geq 0}$ with state space $\{1, 2, \ldots, 8\}$ corresponding to a semigroup $\{P_{s,t} : 0 \leq s \leq t\}$ satisfying the Kolmogorov backward and forward equations associated with the family

$$\left\{ \frac{\partial \Psi(t)}{\partial t} \times Q \,\middle|\, t \geq 0 \right\}$$

defining the infinitesimal generator of the Markov process. Equation (7) shows that the non-homogeneous continuous-time Markov chain $(X_t)_{t \geq 0}$ induces the PD term structures illustrated in figure 2 via the default column of kernel-based transition matrices $P_{0,t} = M_t = \exp(\Psi(t) \times Q)$.

[a] [illegible]

Figure 7. Appendix I from Bluhm and Overbeck (2007) providing details of their Markov default probability model. Source: Bluhm and Overbeck (2007).

Indirect evidence for an excess demand of finance expertise may also be found in Philippon and Reshef's (2007) comparison of the annual incomes of U.S. engineers and finance-trained graduates from 1967 to 2005. The comparison between finance and engineering students is a useful one because both are technical disciplines, and over the past 20 years, engineers have been making significant inroads into the finance labor market. Figure 8 shows that until the mid-1980's, college graduates in engineering enjoyed higher incomes than college graduates in finance, and post-graduates in engineering had about the same compensation as post-graduates in finance. However, since the 1980's, finance-trained college graduates have caught up to their engineering counterparts, and surpassed them in 2000 and every year thereafter. But the more impressive comparison is for post-graduates—since 1982, the annual income of finance post-graduates has exceeded that of engineers every year, and the gap has widened steadily over these two decades. This pattern suggests that the demand for financial expertise has grown considerably during this time.[6]

[6] The increase in income can also be explained by a decline in the supply of finance graduates, but Philippon and Reshef (2007) show that the number of employees in this sector increased significantly since the 1980's, which suggests that a supply shock is not the source of the growth in income.

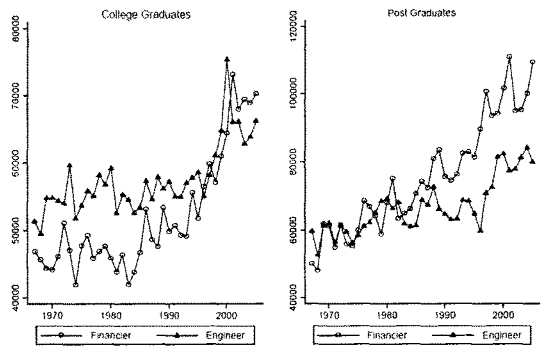

Figure 8. Comparison of finance and engineering graduates from 1967 to 2005, in 2001 U.S. dollars. Source: Philippon and Reshef (2007).

Table 1, which reports the number of MIT engineering and finance degrees awarded from 1999 to 2007, provides another perspective on the dearth of financial expertise. In 2007, MIT's School of Engineering graduated 337 Ph.D.'s in engineering; in contrast, the MIT Sloan School of Management produced only 4 finance Ph.D.s. These figures are not unique to MIT, but are, in fact, typical among the top engineering and business schools. Now, it can be argued that the main focus of the Sloan School is its M.B.A. program, which graduates approximately 300 students each year, but most M.B.A. students at Sloan and other top business schools do not have the technical background to implement models such as the one described in Figure 7, nor does the standard M.B.A. curriculum include courses that cover such models in any depth. Such material—which requires advanced training in arcane subjects such as stochastic processes, stochastic calculus, and partial differential equations—is usually geared towards Ph.D. students. However, due to the growth of the derivatives business over the past decade, a number of universities have begun to offer specialized Master's-level degree programs in financial engineering and mathematical finance to meet the growing demand for more technically advanced students trained in finance. Whether or not such students are sufficiently prepared to fill the current knowledge gap in financial technology remains to be seen.

The disparity between the number of Ph.D.s awarded in engineering and finance in Table 1 raises the question of why such a difference exists. One possible explanation may be the sources of funding. MIT engineering Ph.D. students are funded largely through government grants (DARPA, DOE, NIH, and NSF), whereas MIT Sloan Ph.D. students are funded exclusively through internal MIT funds. Given the importance of finance expertise, one proposal for regulatory reform is to provide comparable levels of government funding to support finance Ph.D. students, perhaps in conjunction with the research activities of the Capital Markets Safety Board (see Section 6). Alternatively, funding for finance Ph.D. students might be raised by imposing a small surcharge on certain types of derivatives contracts, e.g., those that are particularly complex or illiquid and, therefore, contribute to systemic risk. This surcharge may be viewed as a means of correcting some the externalities associated with the impact of derivatives on systemic risk. A minuscule surcharge on, say, credit default swaps, could support enough finance Ph.D. students at every major university to have a noticeable and permanent impact on the level of financial expertise in both industry and government.

	MIT School of Engineering			MIT Sloan
Year	Bachelor's	Master's and MEng	PhD and ScD	Finance PhD
2007	578	710	337	4
2006	578	735	298	2
2005	593	798	286	1
2004	645	876	217	5
2003	679	817	210	7
2002	667	803	239	3
2001	660	860	248	1
2000	715	739	237	2
1999	684	811	208	4

Table 1. Number of MIT degrees awarded in engineering and in finance from 1999 to 2007. Source: MIT Annual Report of the President, 1999 to 2007.

In addition to providing support for finance Ph.D. students, another potential new role for government oversight is to mandate minimum levels of disclosure, "truth-in-labeling" laws, and financial expertise for those market participants involved in creating and selling complex financial securities to the public, much like the requirements imposed by the Food and Drug Administration on accurate and complete labeling of pharmaceuticals, and the educational and licensing requirements for pharmacists dispensing those products. Currently, a licensed pharmacist must earn a Pharm.D. degree from an accredited college or school of pharmacy, and then pass a series of examinations including the North American Pharmacist Licensure Exam (which tests for pharmacy skills and knowledge) and, in most states, the Multistate Pharmacy Jurisprudence Exam (which tests for knowledge of pharmacy law). The SEC already performs this function to some degree, but its focus is limited to a much narrower and simpler set of financial products than those at the center of the current crisis.[7] Rather than setting up the infrastructure for administering such educational and licensing requirements, the government can partner with existing industry organizations such as the CFA Institute, the International Association of Financial Engineers, or the Global Association of Risk Professionals.

[7] However, Macey, O'Hara, and Rosenberg (2008) make the following two bold claims: "First, we argue that the current subprime mortgage and credit crisis would have been avoided, or at least greatly mitigated, if existing securities laws had been properly applied to subprime mortgage brokers and originators. Second, we argue that under either of what we regard as two extremely reasonable interpretations of the securities laws, many of the problematic mortgages are actually under the SEC's jurisdiction."

9. Conclusion

While the current financial crisis is the most significant challenge in our lifetime, it is not unprecedented from a global historical perspective, nor is the magnitude unexpected given the excesses, growth, and financial liberalization of the past decade. While there are many factors that have contributed to the crisis, ultimately, we may conclude that the boom/bust pattern of economies is a natural consequence of human evolution and adaptation to a complex and dynamic economy. Recent research in the cognitive neurosciences confirms that fear and greed are hardwired into our decisionmaking processes, and the cyclical nature of economic growth is merely one manifestation of that hardwiring. Financial crises are an unfortunate but normal consequence of modern capitalism.

Although financial crises may be difficult to avoid, their devastating impact can be dramatically reduced with proper preparation. Financial losses are inevitable—in fact, they are a necessary consequence of innovation—but disruptions and dislocations are greatly magnified when risks have been incorrectly assessed and incorrectly assigned. For example, a money market fund investing in AAA-rated securities is not prepared for situations in which those securities exhibit one-year default rates of 5%, but a hedge fund investing in B-rated securities is prepared for considerably higher default rates. The most effective means for reducing the impact of any financial crisis is providing the public with greater transparency into the underlying risks of their investments.

The next several years will no doubt be extremely challenging for the U.S. economy. However, the likely contraction, rise in unemployment, and regulatory reforms can be viewed as the necessary restructuring costs for transitioning the existing economy to an even more robust one, a globally integrated economy in which labor and capital are more mobile, production is more efficient, and information is central to profitability and survival. And by implementing adaptive and functional regulatory changes, we will be creating the new infrastructure to support that growth and prosperity.

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Mrs. MALONEY. Thank you very, very much. Professor Bankman.

STATEMENT OF JOSEPH BANKMAN

Mr. BANKMAN. Chair Waxman, Ranking Member Davis, members of the committee, thank you very much for asking me to come here to testify. The views I express are my own, and are not necessarily shared by Stanford University. I have been asked to provide an overview of hedge fund taxation, focusing on some of the benefits of hedge fund managers. My testimony, however, will also include private equity fund compensation agreements and tax benefits, since they are quite similar. Managers in both these fields receive a management fee, typically set at 2 percent of the amount under management. They also receive a profits interest, typically set at 20 percent of the fund's profits. The profits interest is sometimes called the carried interest, or simply a carry. The management fee is taxed as ordinary income. The profits interest is taxed as capital gain if and to the extent the fund itself is recognizing capital gains. If it is long-term capital gain, that is at a tax rate of 15 percent, as opposed to the 35 percent maximum tax rate on ordinary income.

In addition, carry is exempt from payroll tax. The benefits of this treatment have been estimated at over $30 billion over the next 10 years. However, as I note in my written testimony, most of the benefits treatment probably accrue to the private equity side of the ledger rather than the hedge fund side of the ledger. That said, the hedge fund and private equity industries to some extent overlap. Hedge fund managers do benefit from this preference, and change in trading strategies might make this preference even more important in the future. In my written testimony, I express my belief, and I believe the belief of an overwhelming majority of my colleagues and tax scholars, that this preference is misguided. The way to think about it is to think of the choice our sons and daughters face when they decide upon a career. If they are smart and ambitious, they might become doctors or scientists or lawyers. These occupations and countless other occupations are going to produce income that is taxed at ordinary income rates. Alternatively, they could go into the fund industry and recognize some, and in some cases most of their income at capital gain rates. That is simply unfair. It violates a common sense maxim that if you have two people earning the same amount, you ought to tax them at the same rate. It is also inefficient. It reduces the size of our economic pie by distorting the career choice our sons and daughters are going to make.

It is sometimes argued that hedge fund managers ought to be—and private equity managers—ought to be compared to entrepreneurs. As I mention in my written testimony, I don't think that comparison is apt. Hedge fund managers are more similar, I think, to investment bankers or to executives at public companies, all of whom recognize income at ordinary income rates. There are other arguments made in defense of the current tax treatment. It is said, for example, that this is recompense for the risk fund managers take, that it is a good way to favor certain industries, or to subsidize investment in general.

As I note in my written testimony, I believe all those arguments are incorrect. And I would be happy to discuss that with the Members in question period. The capital gain preference isn't the only tax preference hedge fund managers receive. They have been able to defer recognition of gain, defer tax on their management fees simply by leaving those fees in the fund. And they have also been able to defer tax on the income those fees have generated. Tax applies only when the managers have decided, at their election, to withdraw the money from the fund. The value of this benefit has been estimated at about $20 billion over 10 years. This last benefit, the deferral of fees, might be of interest for the committee in discussing the relevant benefits and burdens of government regulations and tax on the industry. It is not, however, something of current interest in terms of legislation, since under the Economic Stabilization Act it is scheduled to end at the end of this year. However, the tax benefits of carry still remain. The House has voted in June to tax all carry at ordinary income rates. That was a measure I supported. Unfortunately, it died in the Senate. I am hopeful that the Members here and the House in general will again reenact that measure.

In my written testimony, I suggest that the drafters look at the remarks of the New York State Bar Association as to how to draft that provision. And hopefully this time it will make it through the Senate and become law. Thank you.

Mrs. MALONEY. Thank you very much for your testimony.

[The prepared statement of Mr. Bankman follows:]

House of Representatives Committee on Oversight and Government Reform

November 13, 2008

Testimony of Joseph Bankman
Ralph M. Parsons Professor of Law and Business, Stanford Law School

Mr. Chairman, Ranking Member Davis and Members of the Committee, thank you for inviting me here today to testify on the tax treatment of hedge fund managers. The views expressed here are my own and do not necessarily reflect the views of Stanford University.

1. Overview of Hedge Fund Organization and the Taxation of "Carry"

Briefly stated, hedge funds are investment partnerships. The investors -- institutions and affluent individuals – are limited partners. The fund managers are general partners. Virtually all institutional investors are organized and located in the United States. Similarly most individual investors and managers are United States citizens who live and work in the United States. The hedge fund partnership, however, is often organized offshore, in tax havens as the Cayman Islands.[1] In recent years, hedge funds have held over a trillion dollars of stock and other assets. Many individual hedge funds have over a billion dollars of assets under management.

Hedge fund managers are compensated in two ways. First, they receive a management fee. This is typically 2% of the fund's assets. Second, they receive a profits percentage. This is typically set equal to 20% of the fund's profits. The profits interest is sometimes referred to as a carried interest, or carry. [2]

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[1] There are often one or more partnerships or other legal entities interposed between the offshore operating partnership and the investors. These entities are used to accomplish other tax, regulatory or business-related objectives but do not significantly affect my analysis. The organizational structure is described in greater detail in Joint Committee on Taxation, "Present Law and Analysis Relating to Tax Treatment of Partnership Carried Interests and Related Issues, Part II," (JCX-53-07), September 4, 2007, available at www.house.gov/jct.

[2] A summary description of the hedge fund and private equity industry, together with a description of the tax treatment of manager compensation, can be found in Joint Committee on Taxation, "Present Law and Analysis Relating to Tax Treatment of Partnership Carried Interests and Related Issues, Part I," (JCX-53-07), September 4, 2007, available at www.house.gov/jct.

The portion of compensation received as a management fee is taxed as ordinary income. The tax characterization of compensation attributable to a profits interest is more complex. That characterization is made at the fund level. If the fund's profits are from the sale of capital assets held for over a year, the income will "flow through" to the limited partner investors as long-term capital gain. The amounts paid to the general partners as carry will also be taxed as long-term capital gain.

The amount of compensation received pursuant to a profits interest obviously depends on the profitability of the fund. Over time, however, the vast majority of income realized by a fund manager at a successful fund will come from his or her profits interest, and that income will be substantial. As an average over time, carry in excess of $10 million a year is common. Top hedge fund managers have earned carry well in excess of $100 million a year. One study found hedge fund managers earn far more than CEOs of publicly traded companies, and that hedge fund management is the most highly compensated of any profession. [3]

Private equity managers, such as venture capitalists or buy-out specialists, operate under similar compensation arrangements.

Capital gain is taxed at a maximum federal income tax rate of 15%. In contrast, the maximum rate on ordinary income is 35%. To the extent fund managers benefit from the capital gain preference they pay tax at less than half the rate as other highly paid professionals. That portion of manager compensation is taxed at a lower rate than compensation received by many, if not most, working individuals. A single individual, for example, pays tax at a 25% rate on any income in excess of $32,500 a year. That is ten percentage points, or 40% (10%/25%) higher than the rate paid by the fund manager.

Carry is not only subject to a lower income tax rate than other income, it is exempt from payroll taxes. As a result, carry is exempt from the 2.9% Medicare tax that must be paid on compensation received by other high-income individuals.

The amounts paid as management fees generate a deduction that flows through to the fund investors and can be deducted from ordinary income. Amounts paid as carry reduce the investment income that fund investors recognize. To the extent the fund profits are capital gains, carry paid to managers reduces the capital gain recognized by investors.

In theory, structuring compensation as carry rather than management fees or other salary costs the investors a deduction that can be used to reduce taxes on ordinary income. In practice, however, the loss of this deduction is not important. Many hedge fund investors are tax-exempt and the individual investors often cannot deduct their portion of management fees due to Section 67 of the Internal Revenue Code (which

[3] Steven N. Kaplan and Joshua Rauh, Wall Street and Main Street: What Contributes to the Rise in the Highest Incomes? (July 2007) CRSP Working Paper No. 615, available at SSRN: http://ssrn.com/abstract=931280.

allows deduction for this and other miscellaneous items only to the extent such items exceed 2% of adjusted gross income).

The tax-favored treatment of carry has been estimated to save fund managers $31 billion over the next 10 years.[4] That figure encompasses both hedge fund and private equity managers. There are no official statistics as to the breakdown between those two (somewhat overlapping) groups, but the widespread perception is that private equity managers have realized a disproportionate share of this tax benefit. The reason for this is that many hedge funds currently have trading strategies that make long-term capital gain and loss unlikely and many hedge funds have elected to mark to market, precluding long-term capital gain treatment of gains. However, hedge funds that have not elected to mark to market are eligible for this benefit and it is possible that trading strategies in the future may change, making this benefit more valuable to hedge funds.

The low rate of tax on carry would be relevant in assessing the overall tax and regulatory burden faced by the hedge fund and private equity industry, even if that low rate reflected good tax policy. In my opinion, it does not. It is neither fair nor efficient.

2. Fairness and Efficiency of Capital Gain Treatment of Carry.

Tax scholars and policymakers generally divide fairness into two related concepts – vertical and horizontal equity. Vertical equity refers to the proper distribution of the tax burden among high-income and low-income individuals. The current (and past) tax law is progressive: high-income individuals pay a higher rate of tax than low-income individuals. For married individuals filing jointly, the first $16,005 dollars earned are taxed at a 10% rate; additional income is taxed at progressively higher rates until income hits $357,000. At that point, all additional income is taxed at a 35% rate. Some scholars, policymakers and legislators support a "flat tax." Under a flat tax, income above a certain threshold amount (of around $20,000) is taxed at a flat rate. Income below that amount is not taxed. The 0% tax rate on income below the threshold amount makes the flat tax progressive, though less progressive than the current tax structure.

No one, to my knowledge, has ever seriously proposed a regressive tax, under which the rate drops as income rises. Yet, as described above, that is exactly the effect of taxing the carry at capital gain rates. The fund manager who performs services is taxed at a rate of 15% on his carry, while the factory worker might be taxed at a rate of 25% on

[4] Committee on Taxation, "Estimated Revenue Effects Of H.R. 6275, The "Alternative Minimum Tax Relief Act Of 2008," Scheduled For Markup By The Committee On Ways And Means On June 18, 2008" (JCX-51-08), June 17, 2008 available at www.house .gov/jct. The tax benefits are a function of the amount of carry, which in turn is a function of the amount of profits. The recent economic crisis will undoubtedly reduce the tax benefits realized in 2008 and most likely, in 2009.

his overtime. A fund manager who in 2007 earned $80 million paid tax at a lower average rate than a high school principal who earned $80 thousand.

The favorable tax treatment of carry is sometimes defended on grounds of horizontal equity. Horizontal equity is concerned with treating like taxpayers in the same manner. Supporters of the present treatment compare the fund manager to the entrepreneur, who is taxed at capital gain rates on the sale of her business. One problem with this argument is that fund managers do not perform the same functions or face the same risks as entrepreneurs. An entrepreneur may work for years with little or not pay, betting her entire economic future on the success of her idea, invention or efforts. If she is successful, she will have started a company that will itself recognize ordinary income on its profits. In contrast, fund managers perform intermediation and advisory services. They receive generous management fees and benefit from the performance of a portfolio of companies, the success of each of which is dependent on the inspiration and efforts of the entrepreneur.

One measure of how closely connected carry is to the provision of services is that some amounts taxed as carry are actually management fees that fund managers have simply elected to convert into carry. It is also worth noting that in statements to investors and to the Securities and Exchange Commission, some publicly traded fund management firms have described their business as the active provision of services.

A more fundamental problem with this argument is that entrepreneurs with whom the fund managers wish to be compared comprise a minute slice of American workers and a small slice even of those who go into business-related careers. Only a handful of students at Stanford Law and Business Schools, for example, fall into the category of serial entrepreneurs, starting and selling one company after another. For fairness (and efficiency purposes) it seems more sensible to compare fund managers to the far greater portion of their cohort who are taxed on their professional income at ordinary income rates.

The above analysis suggests that if the tax break on carry is justified at all, it would have to be justified on efficiency, rather than fairness, grounds. But the tax break on carry is inefficient. It reduces the size of our economic pie by distorting individuals' career choice. Presently, our best and brightest young people can become doctors, nurses, educators or scientists. Those with an interest in business might become executives, farmers, stockbrokers, lawyers, consultants or investment bankers. Income from all of those occupations, and countless other occupations as well, is taxed at a maximum rate of 35% (and bears an additional payroll tax). Alternatively, they can become fund managers, and face a maximum tax rate of 15% on much of their income.

A basic and common-sense rule of tax policy is that we ought to have the same rate of tax apply across different occupations or investments. The relative profitability of different professions, or investments, ought to be dictated by the market, not the tax law. The subsidy given to fund managers distorts their career choices, and in so doing reduces economic welfare.

It is sometimes argued that the risk inherent in the profits interest justifies capital gains treatment. As noted above, the fundamental problem with this argument is that it is generally efficient to have the same rate of tax on all forms of investment or compensation. There is no particular reason why the tax law should encourage (or discourage) risky investments, or risky forms of compensation. In this connection, it is relevant to note (as a matter of fairness, as well as efficiency) that other forms of risky compensation are not tax-favored. The electrician who starts his own business is taking a risk, as is the lawyer who takes a case on a contingency-fee basis. Yet the income of the electrician and lawyer is taxed as ordinary income, and subject to a maximum rate of 35%.

Industry spokespersons have made a number of other efficiency-based arguments in support of the preferential treatment of carry. They have argued that the low tax rate is justified by the importance of the work fund managers perform, or as a way to reduce the tax rate on key industries, or as a way to reduce the tax rate on investment in general. In my written statement accompanying testimony before the Senate Finance Committee in 2007, I explain why I believe these arguments are incorrect.[5] In the interests of space, I will not repeat that explanation here. However, I would be happy to discuss these or any other arguments in my testimony today.

3. Tax deferral enjoyed by hedge fund managers.

In addition to benefiting from the low rate of tax on carry, hedge fund managers benefit from deferral of managements fees or carry-like contractual arrangements. Hedge funds have traditionally allowed managers to defer payment of these amounts. The deferred payment earns interest or investment return that is credited to the manager. No current income is recognized on the deferred fees or interest and investment return attributable to the deferred fees. Instead, the manager recognizes income only when, at his or her election, he or she receives cash in the amount of the deferred fees and investment return.

Through the arrangement, the fund manager can therefore limit his income to the amount he or she needs to spend or invest outside the hedge fund. The remainder can be saved on a tax-deferred basis

The tax law provides that where employees defer income on compensation, the deduction for the employer is similarly deferred. This matching principle usually limits the advantage of this sort of deferred compensation arrangement. As noted above, investors in hedge fund generally cannot use the deduction for fees paid to managers. They are thus indifferent to whether that deduction is deferred. The matching principle therefore does not limit the advantage of deferral of hedge fund compensation.

[5] Testimony of Joseph Bankman before Senate Finance Committee, July 31, 2007, available at http://finance.senate.gov/sitepages/hearing073107.htm.

The benefit of deferral to fund managers is widely thought to be about as great as the benefit of the capital gain rate of tax on carry. Consistent with this assumption, the Joint Committee estimated the cost to the fisc (and benefit to taxpayers) of this form of deferral for the years 2009-2018 at over $24 billion.[6]

4. Recommendations.

The tax advantage of deferral of management fees was eliminated by new Internal Revenue Code Section 457, enacted as part of the Emergency Economic Stabilization Act of 2008. That provision is effective beginning in calendar year 2009. Thus, 2008 will be the last year in which fund managers will benefit from deferral. The Alternative Minimum Tax Relief Act of 2008 contained a provision that would have taxed carry at ordinary income rates. That Act passed the House of Representatives in June, 2008, but died in the Senate. Thus, carry remains tax-favored. I recommend that Congress eliminate the tax advantage given to carry by again passing a measure similar to that contained in the Alternative Minimum Tax Relief Act of 2008. I recommend, though, that such a measure be amended to address the concerns expressed in the New York State Bar Association Report on Proposed Carried Interest and Deferred Fee Legislation.[7]

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[6] Committee on Taxation, "Estimated Budget Effects Of H.R. 7060, The "Renewable Energy And Job Creation Tax Act Of 2008," Scheduled For Consideration By The House Of Representatives On September 25, 2008" (JCX-76-08), September 25, 2008 available at www.house.gov/jct.

[7] New York State Bar Association, Report on Proposed Carried Interest and Deferred Fee Legislation, September 28, 2008., available at http://www.nysba.org/AM/Template.cfm?Section=Tax_Section_Reports_2008&TEMPLATE=/CM/ContentDisplay.cfm&CONTENTID=20706

Mrs. MALONEY. Mr. Shadab.

STATEMENT OF HOUMAN SHADAB

Mr. SHADAB. Chairman, Ranking Member Davis, and distinguished members of the committee, it is an honor to testify in this forum today about the relationship between hedge funds and the financial crisis. I am privileged to join such a distinguished panel. My name is Houman Shadab, and I am a senior research fellow at the Mercatus Center, and a participating scholar in the center's financial markets working group. The Mercatus Center is a university-based education outreach and research organization affiliated with George Mason University. My own research focus is on financial regulation. I was asked to testify today on certain aspects of the role of hedge funds in the financial crisis. I also have submitted written testimony which provides more detail and background. There are three important findings that I would like to share with the committee. First, hedge funds did not cause the financial crisis. And they are, in fact, helping to reduce its damage and save taxpayers money. This may seem surprising, but in fact, hedge funds have historically made markets more stable, and have helped their investors conserve wealth in times of economic stress. In other words, hedge funds are often less risky than mutual funds. A typical hedge fund strategy seeks to achieve higher risk-adjusted returns, but not necessarily higher returns in other investment vehicles. And in fact, throughout this crisis hedge funds have conserved wealth much better than mutual funds have.

Second, short selling by hedge funds has helped draw attention to the poor investment choices made by financial companies in recent years, but did not cause them to collapse. When hedge funds short-sell stocks of unhealthy companies, they help to divert capital from companies that are fundamentally unstable. This not only prevents stock market bubbles from becoming worse, but it helps to ensure that companies that are making good decisions are rewarded and are better able to provide stable, long-terms jobs for their employees. Third, existing laws and regulations should be strictly enforced against hedge funds and their managers. And these include laws prohibiting fraud, insider trading, abusive short selling, and other types of market manipulation. But changing how hedge funds are regulated could actually undermine the interests of investors and heighten economic instability. While it may be easy to lump hedge funds together with the financial institutions that were directly involved with this crisis, we must be very careful to make the appropriate distinctions to ensure that policy responses to the crisis do not undermine the ability of the economy to recover.

So what is a hedge fund? A hedge fund is a private investment company that makes frequent trades in stocks and other financial instruments, and compensates its manager in part with an annual performance-based fee, typically 20 percent of profits. Hedge fund managers also typically invest in the funds they manage. This compensation agreement leads hedge fund managers to strike a relatively healthy balance between risk taking and risk management, and as empirical research has found, to make the survival of the hedge fund a greater priority than earning performance fees. Now, it may come as a surprise to some, but hedge funds are not even actually a part of corporate America. Hedge funds often take aggressive action against company executives they think are paid too much or are not properly running their companies.

Importantly, when hedge funds get other companies to more properly manage their businesses, hedge funds help those other companies provide more stable jobs for their employees. Now, the financial crisis is the result of distortions in the mortgage and banking sectors, and would have happened even if hedge funds had never existed. Indeed, hedge funds were never the major purchasers of mortgage-related securities. The major purchasers were banks, insurance companies, pensions, and mutual funds. The most meaningful role hedge funds have played during the financial crisis has actually been to dampen its cost to the economy. Large numbers of hedge funds, worth a total of approximately $100 billion, have increasingly been purchasing poorly performing assets, such as mortgage-backed securities, and are helping to reduce the need for economic bailouts funded by taxpayers.

Indeed, just yesterday the Treasury Department announced that it may start requiring companies that receive government funds to first raise private capital. Many hedge funds may be poised to provide such capital, as a recent estimate found that hedge funds are currently holding about $400 billion in cash. Given the massive losses that have resulted from the financial crisis, our system of financial regulation certainly needs rethinking. Yet based upon the empirical evidence, changing the already substantial body of law applicable to hedge funds will not stop this crisis or prevent another one from happening. Instead, lawmakers and regulators should focus on two things.

First, economic recovery may take place more quickly if lawmakers make it easier for hedge funds and other private investment funds to invest in banks. Second, lawmakers and regulators may want to take a look at making it easier for ordinary investors to have access to the investment strategies offered by hedge funds. For example, reducing the restrictions on mutual funds' investment activities may be a way for all investors to benefit from the protection that hedge funds provide, and not just the rich ones. Thank you very much for the opportunity to share my research with the committee.

[The prepared statement of Mr. Shadab follows:]

MERCATUS CENTER
GEORGE MASON UNIVERSITY

Hedge Funds and the Financial Market

TESTIMONY

Before the House Committee on Oversight and Government Reform

Houman B. Shadab
Senior Research Fellow, Regulatory Studies Program
The Mercatus Center at George Mason University[1]

Thursday, November 13, 2008, 10:00 AM
2154 Rayburn House Office Building

Chairman Waxman, Ranking Member Davis, and Distinguished Members of the Committee:

It is a privilege to be asked to testify in this forum today regarding the impact of hedge funds on the ongoing financial crisis. My name is Houman Shadab, and I am a senior research fellow at the Mercatus Center and a participating scholar in the Center's Financial Markets Working Group. The Mercatus Center is a university-based research, education, and outreach organization affiliated with George Mason University and located on the Arlington, Virginia campus. A core mission of the Mercatus Center is to provide a public service by conducting research in law, economics, and other social sciences that is directly relevant to the issues being deliberated by policy makers. My own research focuses on the regulation of securities, derivatives, and investment companies.

Based upon my research on the activities of hedge funds, there are three important findings I would like to share with the Committee. First, hedge funds did not cause the financial crisis and are in fact helping to mitigate its damage and save taxpayers money. This may seem surprising, but in fact hedge funds have historically made markets more stable and helped their investors conserve wealth in times of economic stress. Second, hedge funds' short-selling activities have helped draw attention to the poor management and investment decisions of financial companies in recent years. Indeed, when hedge funds short-sell the stocks of unhealthy companies, they help to divert capital from companies that are fundamentally unstable. This not only prevents stock market bubbles from becoming much worse, but it helps to ensure that companies that make sound decisions are rewarded and are able to provide stable jobs for their employees. Finally, existing laws and regulations should be strictly enforced against hedge funds and their managers, but changing how hedge funds are regulated could actually undermine the interests of investors and increase economic instability. If hedge funds are significantly restricted their ability to develop innovative investment strategies, or are required to reveal their strategies to competitors, we all stand to lose from the unique benefits that the funds bring to the economy.

Given the complexity of the issues involved in this inquiry, it is helpful to make the following distinctions to clarify the difference between financial institutions, instruments and activities.

> Financial *institutions* include banks, investment funds, insurance companies, and broker-dealers.
>
> Financial *instruments* include securities such as bonds and collateralized debt obligations derivatives such as options and credit default swaps.
>
> Financial *activities* like using leverage and short-selling.

These distinctions are crucial, because what may at first glance seem like a problem relating to a particular type of *institution* may in fact be a problem having nothing to do with the institution per se but rather a problem relating to a financial *instrument* or *activity*. For example, a small but significant and growing portion of the mutual fund industry engages in short-selling. If a policy issue relating to abusive or manipulative short-selling arises and particular mutual funds are implicated, additional regulation and enforcement is best aimed at the abusive short-selling practices in question, regardless of what type of institution engages in them, and not at mutual funds as a whole, most of which engage in no short-selling whatsoever.

To ignore the distinctions between financial institutions, instruments, and practices can mistakenly lead to holding an entire industry accountable for the conduct of a minor portion of its membership, while also failing to address the real underlying problem.

What is a Hedge Fund?

Although there is no specific definition of "hedge fund" under U.S. securities law, best understood a hedge fund is a private investment fund that compensates its manager in part with an annual performance-based fee. An investment fund is a collection of money, often referred to as a "pool," that gathers capital from investors for the purpose of having that pool of money invested by a manager or investment adviser. Hedge funds thus consist of two separate companies: the management company that controls the fund's activities, and the underlying fund itself. A hedge fund is "private" in two senses. First, hedge funds are not open to all those who seek to invest in them; they are open only to high net worth individuals and highly capitalized institutions. Hedge funds are also private in the sense that they do not advertise or solicit capital from the public, nor do they make disclosures of their investment activities or investment returns directly to the public. In general, hedge funds make very frequent trades in securities and financial derivatives. However, a significant portion of hedge funds make relatively long-term investments and may do so in assets other than financial instruments, such as real estate and film production rights.

Hedge funds are often erroneously lumped together with other types of companies and financial institutions. First, hedge funds are not a part of what is commonly understood to be "corporate America." To the contrary, hedge funds often engage in aggressive shareholder activism against public company executives they think are paid too much or are otherwise not properly running their companies for shareholders. Unlike mutual funds, pensions, and other passive investors, hedge funds are uniquely aggressive and watchful monitors of public companies. A recent study of hedge funds from 2001 to 2006 found that when hedge funds target a company, average CEO compensation declines by approximately $1 million dollars, and the chances of the CEO being replaced also increases.[2] Hedge fund activism as corporate shareholders also creates long-term value, not just for other companies' shareholders, but also for their creditors.[3] Importantly, when hedge funds help other companies more effectively run their businesses, the funds help employers to create more stable jobs for their employees.

Unlike investment banks, hedge funds do not take part in the process of underwriting new securities, and do not serve as brokers or dealers of securities and derivatives. Investment banks are best understood as financial services conglomerates that, in recent years, used high leverage at levels of 20 or 30 to 1 to profit from their investment operations. This means that for every dollar actually owned by the investment bank, they had borrowed 20 to 30 dollars.

Hedge funds, by contrast, have a single line of business—asset management—and they typically use relatively small amounts of leverage to finance and profit from their investment activities. From 1998 to 2004, researchers at the Bank for International Settlements estimated that average hedge fund leverage dropped from about 8 times assets to 3 times assets.[4] A 2007 study of hedge fund leverage by a Deputy Director of the Organisation for Economic Co-operation and Development (OECD), which included leverage from borrowed funds and implicit leverage from derivatives, estimated that average hedge fund leverage was 3.9 to 1, with the bulk of leverage coming from derivatives.[5] As of October 2008, the IMF estimated that average global hedge fund leverage from borrowed funds had a ratio of 1.4 to 1.[6]

Hedge Funds and Mutual Funds

Of all the other types of financial institutions in the marketplace, hedge funds most closely resemble mutual funds. A mutual fund is a publicly registered pooled investment vehicle that seeks to profit by purchasing stocks, bonds, or other debt securities, earning dividend or interest income, and ultimately selling the securities at a higher price than which they were purchased. Mutual funds are distinct from hedge funds in three important ways.

First, the mutual fund industry is far larger. As of the end of June 2008, the global mutual fund industry consisted of over 68,000 mutual funds, with a total of $24 trillion assets under management.[7] As of the same date, there were approximately 10,000 hedge funds globally with just over $1.9 trillion in assets.[8] Besides being much smaller than mutual funds, the size of the hedge fund industry is dwarfed by other institutional investors such as pension funds and insurance companies which, in 2006, controlled about $22.7 trillion and $17.4 in assets, respectively.[9] As of January 2007, the total hedge fund industry was less than about one-third the size of the $5.8 trillion market for mortgage-backed securities.[10]

Second, unlike mutual funds, hedge funds are not subject to the Investment Company Act's restrictions on investment activities. Accordingly, hedge funds employ a far wider range of strategies than mutual funds. Hedge funds often utilize leverage, which can come in the form of borrowing funds or using certain trading strategies to increase the potential gains from any single investment position, or to offset the risks involved with others. Leverage is sometimes necessary for hedge funds to create value, because some investment ideas require amplifications to be successfully implemented. Just as some scientific discoveries require the use of a microscope to be utilized, some hedge funds strategies likewise require the magnifying effect of leverage to be economically meaningful.

Hedge funds also often engage in short-selling when analysis indicates that certain stocks or other financial instruments are overpriced. Besides stocks and bonds, hedge funds also invest in a wide variety of financial instruments. Hedge funds invest in futures, options and derivatives based upon the prices of commodities, foreign currencies, interest rates, and credit obligations. The combination of diverse hedge fund investment practices and their employment of many financial instruments and other assets gives rise to the broad universe of actual hedge fund trading strategies. Indeed, as recently noted on the widely-read hedge fund website AllAboutAlpha.com, it is an open question whether hedge funds could even be defined as a single "asset class."

At root, the basic business model of a hedge fund rests upon a type of entrepreneurship: a hedge fund manager believes that she has an underappreciated idea about some aspect of the economic system and, by employing financial instruments, seeks to earn gains for herself and her investors on that basis.

Finally, a third crucial difference between mutual funds and hedge funds are the incentives their respective managers face. Like mutual funds, hedge funds compensate their managers with management fees based upon how large the fund is—how many assets it has under management. Yet unlike mutual funds, hedge funds also compensate their managers with a performance-based fee; typically 20 percent of the profits of the fund. Hedge funds are able to charge this type of performance fee based solely upon profits because hedge funds are not subject to the prohibition on such fees under the Investment Advisers Act of 1940.

Importantly, hedge fund performance fees are typically subject to contractual limitations known as "hurdle rates" and "high-water marks." A hurdle rate limits the performance fee allocation to only those situations where the hedge fund manager has actually made a profit above a predefined amount for their investors in a given time period, which is typically a year. Unlike public corporations, including investment banks such as Bear Stearns and Lehman Brothers, where managers may earn a large payout despite the fact that their company was performing poorly and their investors suffered massive losses, a hedge fund manager can *never* earn a performance fee unless a genuine profit is made for investors and any prior losses are first recouped. To ensure the manager receives no performance fee until prior losses are recouped, most funds are also subject to a "high water mark" provision that prevents performance fees from being charged until the fund has surpassed its previous all time high. While managers of billion dollar plus hedge funds could earn a substantial income based upon management fee alone, most hedge fund managers rely on this income to cover business costs and rely on the performance fee to incentivize its employees. Since most hedge funds are owner-operated, golden parachutes and other types of guaranteed-compensation agreements are unheard of in the hedge fund world.

Unlike mutual fund managers, a hedge fund manager or advisory firm typically invests in the very funds they manage, thus helping them to strike a healthy balance between taking risks to earn performance fees while still preserving wealth for their investors. Although few empirical studies assess the impact of managerial co-ownership on investor returns, a study of a representative sample of 7,535 hedge funds from 1995 to 2004 found a positive and statistically significant relationship between co-investment and performance.[11] Research also shows that hedge fund managers are constrained from excessive risk-taking by career concerns.[12] Overall, hedge fund manager compensation does not seem to create incentives for excessive risk-taking. Empirical evidence finds that managers care more about preventing a fund from collapsing than earning high performance fees, as evidenced by the tendency of managers to cut back on risk-taking to avoid collapse of the fund even though doing so may jeopardize surpassing the high-water mark required to earn a performance fee.[13]

The ability to engage in a wide variety of investment strategies, and the incentives to share in a portion of the profits of a successfully implemented strategy, likely has played a large role in hedge funds living up to their names as "hedges," or fund that protect their investors against overall downturns in the stock market and the general economy. For instance, during the recession and stock market downturn from 2000 to 2002 following the bursting of the dot-com bubble, hedge funds as a whole earned low single digit yet nonetheless positive returns for their investors while the economy went into a recession and the stock market produced three straight years of losses for investors.[14]

Even throughout 2008, while hedge funds have experienced the worst losses in their entire history as an industry, they have still managed to shield their investors' wealth from the massive losses experienced by mutual funds and the stock market more generally. From January through October 2008, the U.S. stock market lost 32 percent of its value while the average hedge fund lost approximately 15.48 percent.[15] This hedge fund performance figure is net of fees and includes the nearly month-long ban on short-selling financial companies, which undoubtedly had a negative impact on hedge fund performance.

The conclusion to be drawn from hedge fund performance is straightforward: when viewed from the perspective of helping to diversify an investment portfolio, hedge funds are *less* risky than investing in stocks or mutual funds.

How Are Hedge Funds Regulated?

Although hedge funds are often described as "unregulated," a substantial body of federal and state law restricts the activities of the funds and their managers and requires certain mandatory disclosures. First, hedge funds are fully subject to the prohibitions against fraud under the Securities Act of 1933, the Securities and Exchange Act of 1934 (Exchange Act), and the Investment Advisers Act of 1940 (Advisers Act). Under the latter two statutes, mere negligence is sufficient for being found liable for fraud. And because fraud includes making misleading statements or omissions, hedge funds typically make comprehensive disclosures to avoid later being found liable for omitting any important fact to investors.[16] For instance, under the Advisers Act, a hedge fund can be found liable for lying to investors about investment strategies, experience and credentials, risks associated with the fund, and valuation of the fund's assets.

Second, under the Exchange Act and its regulations, hedge funds are prohibited from trading upon material inside information, from engaging in abusive short-selling, and from manipulating the prices of securities and other financial instruments used by any other type of practice.

Third, hedge funds are also subject to the Exchange Act's disclosure requirements that require any investor to make public disclosures upon making a significant stake in public companies. Accordingly, a hedge fund must make a public disclosure as a large shareholder within 10 days of becoming an owner of more than 5 percent of a public company's voting securities, must make a public disclosure as a company insider upon owning 10 percent or more of a company's securities, and must quarterly disclose all of their stockholdings as a large institutional investor whenever holding more than $100 million in public company stock or exchange-traded options.

Public Information About Hedge Funds

It is often claimed that hedge funds are secretive and that little is known by the public and regulators about their characteristics, investment activities, and risks they pose to the economy. While it is true that hedge fund operate outside the full regime of disclosure applicable to public investment funds, to comply with the law, hedge funds must and generally do make true, accurate, and comprehensive disclosures to investors.[17] In addition, there is an abundance of information available to the public about hedge funds, much of which is available for free on the Internet.

Hedge funds typically furnish directly to potential investors a private placement memorandum ("PPM").[18] A PPM is widely-utilized standard form disclosure which contains the type of information that would be provided by a registration statement publicly filed under section 5 of the Securities Act, along with the unique facts and circumstances about the fund.[19] Accordingly, hedge funds typically disclose the following information in connection with a private placement: a basic description of the fund including its investment objectives, strategies, and the types of securities the fund purchases; risks pertaining to its investment strategy and regulatory and tax issues; a description of how fees are calculated and conflicts of interest by the managers or other principals; a summary of the terms of the fund, how it is managed and organized, and how investors can redeem shares; and financial statements including net asset value and how it is calculated.[20] Third parties such as Morningstar are also increasingly compiling and making public information relevant to evaluating and investing in different hedge funds.[21]

Furthermore, as competition for investor capital increases and investors become more sophisticated and comfortable with the funds, investors are increasingly demanding that hedge funds disclose information about the types of investments they make, their risk management policies, and other practices.[22] Indeed, hedge funds, their investors, and third parties such as trade groups are increasingly recommending substantial transparency as a best practice.[23] As the industry becomes more prominent and institutionalized, and as competition for investors grows, hedge funds are likely to further expand and standardize disclosures to avoid liability and meet investor demand.[24]

Many hedge funds either choose to or are legally required to make significant additional disclosures. For instance, it is estimated that 50 percent of hedge fund managers voluntarily register under the Advisers Act and submit to its disclosure requirements, and some portion of those do so to signal quality and accountability to investors.[25] As of July 2007, about 1,977 hedge fund managers were registered with the SEC,[26] and a 2007 fund manager survey found that 87 percent of all managers registered either with the SEC, Commodities Future Trading Commission ("CFTC"), National Association of Securities Dealers, or a state regulatory authority.[27]

A substantial body of information about hedge funds is in the public domain and much of is accessible to a general audience. This information includes book-length treatments;[28] academic, industry, and government studies;[29] and massive coverage in the popular press.[30] News services, blogs, and other sources of information provide, in near real-time, news and analysis of the industry, including monthly performance figures, asset flows, and employee turnover.

Hedge Funds and the Subprime Mortgage-Initiated Credit Crisis

Because hedge funds are often erroneously lumped together with the institutions and persons that together comprise "Wall Street," hedge funds are likewise erroneously blamed for a crisis that derived in large part from the actions of banking professionals. However, despite being greatly impacted by the financial crisis, hedge funds did not initiate the financial crisis. The financial crisis would have happened even if hedge funds had never existed.

Hedge funds did not make mortgage loans and did not repackage the loans into securities. Hedge funds did not give risky mortgage securities investment grade ratings, and did not cause banks to be unwilling to lend each other money. Unlike investment banks, hedge funds did not routinely make bad investments in long-term mortgage securities and then run out of short-term, commercial paper funding. Through September of 2008, total global write-downs of structured securities by financial institutions was $760 billion, of which $580 billion, or 75 percent, were incurred by banks, and $60 billion or 7.8 percent, were incurred by hedge funds and all other nonbank institutions.[31] As a result, hedge funds have never needed a penny of taxpayer money throughout this crisis.

The closest point of contact that hedge funds made with one of the root causes of the credit crisis was as purchasers of collateralized debt obligations (CDO). A CDO is a debt security, like a bond, whose payments are backed by other bond-like securities, such as mortgage-backed securities. A mortgage-backed security is a bond that entitles its owner to a stream of payments from an underlying group of bundled mortgages.

CDOs were first developed in 1987, but the annual sales of new CDOs did not surpass $100 billion until 1998. By 2005, the CDO market consisted of $1.1 trillion in assets,[32] and after the turn of the century was increasingly being comprised of assets backed by mortgages. By 2007, anywhere from one-half to three quarters of CDO collateral was backed by subprime mortgage-backed securities.[33] Large commercial banks such as Wachovia and large investment banks such as Lehman Brothers were the major sponsors and managers of CDOs. Investment bank underwriters issued CDOs in part because they earned millions of dollars in fees by structuring CDOs for investors. For example, in the first eight months of 2005, Merrill Lynch and Citigroup each earned over $100 million in fees from selling CDOs to investors.[34]

Some commentators have claimed that hedge funds, by investing in CDOs, helped to fuel the credit bubble.[35] The underlying theory would be that hedge funds helped to create an excessive demand for mortgages and other forms of credit by being ready buyers of securities ultimately backed by such loans.[36] This view of hedge funds' role in the credit crisis is misleading and is not supported by evidence of their actual activities in the structured credit markets.

First, hedge funds were never the primary drivers of the CDO market. The purchasers of CDOs overwhelming consisted of banks, including those that retained the CDOs they did not sell, insurance companies, pension funds, other special purchase vehicles, and mutual funds.[37] These investors often sought to invest in CDOs because federal law or their own policies limited them to investing only in investment grade debt securities. When CDOs are sold, the transaction is structured so that the overwhelming majority of the CDO securities receive an investment grade rating by credit ratings agencies (regardless of whether they actually deserved it).

According to data provided by Credit Suisse and reported by the International Monetary Fund (IMF), as of July 2007, the total size of the U.S. CDO market was $900 billion.[38] Although data on hedge funds' total purchases is difficult to obtain, most sources confirm that it was relatively minor. According to my own estimates based upon data provided to me by HedgeFund.Net, the total size of hedge funds that focused their strategies in CDOs was somewhere around 7 billion as of July 2007.[39] According to a survey of hedge fund prime brokers by Fitch Ratings, the typical hedge fund leverage for hedge funds engaged in trading CDOs was anywhere from six to 10 times their equity in the 2005 to 2007 period.[40] Thus, even assuming hedge funds that specialized CDOs used the maximum leverage and bought $70 billion worth of CDO securities, they still would have only accounted for 7.7 percent of the approximately $900 billion mid-2007 CDO market.

Even based upon even more generous assumptions, hedge funds would not turn out to be the major investors in CDOs. According to Hedge Fund Research, by year-end 2007 the total asset size of hedge funds that invested in CDOs and other asset-backed securities as part of a trading strategy involving the relative value of such securities was $26.27 billion.[41] Because hedge funds focused in the fixed income debt markets have been estimated to have leverage of up to 10 times their equity,[42] even assuming that such funds used the maximum leverage and used all of their funds purchase CDOs, they still would have only accounted for 29 percent of the CDO market.

The relatively low participation of hedge funds in the CDO market is also reflected in data reported by the IMF. As of 2007, it is estimated that hedge funds accounted for approximately 10 percent of the investor base of equity CDO securities, the riskiest type of CDO security; where as the primary investors were banks, other structured finance assets managers, insurance companies, and pension funds.[43] According to the same IMF data source, an estimated half of all hedge funds' CDO investments were in CDO equity.[44] Because CDO equity securities typically accounted for 5 or less percent of the value of all of the CDOs issued in a single CDO deal, the fact that hedge funds concentrated their CDO purchases into CDO equity means that hedge funds never even came close to being the primary purchasers of investment grade rated CDO securities.

Looking at the issue from the perspective of the hedge fund industry reveals that only a small portion of hedge funds had anything to do with CDOs. When compared to the size of the hedge fund industry as a whole, even at its peak of $70 billion in the middle of 2007,[45] the assets of hedge funds devoted to the structured credit markets was less than four percent of the nearly $2 trillion industry at the time.

The fact that hedge funds focused their CDO investments in the riskiest type of CDO also suggests that the funds' purchases were not driving CDO deals. This is because the very purpose of a CDO deal is to take lower grade bonds, repackage the priority of payments, and issue investment grade securities. In addition, CDO equity shares are relatively easy to sell, and therefore the CDO manager could have found other purchasers for them besides hedge funds. Indeed, the riskiest types of CDOs are routinely not even sold, and are actually held by the bank issuing the deal.[46] CDO equity is uniquely attractive to investors for a number of reasons, including because it is a type of nonrecourse loan—meaning that its holders are not liable for any losses of the CDO—and because its value is not as sensitive to collateral losses as are the other types of CDOs.[47] Hedge funds' interest in CDO equity also undermines the notion that hedge funds were deeply involved with the type of securities that ultimately led to the financial crisis. It was the investment grade rated CDOs that were retained by the banks and that were ultimately downgraded that instigated billions of dollars of write-downs and the general suspiciousness of credit quality—not the unrated CDO equity securities which were not considered by anyone to be a safe long-term investment.

One reason why hedge funds were relatively small players in both the market for mortgage-backed securities and the CDO market are the incentives faced by hedge fund managers. Because hedge managers share in the profits of the fund and often invest their own money in the fund, they have especially strong incentives to do the research necessary to determine the true worth of any securities they invest in. Furthermore, hedge fund managers were able to approach the market without any preconceived notion about value. Investment banks, on the other hand, had sold CDOs to their clients and retained highly rated CDO securities and therefore had both economic and reputational reasons to believe that CDOs were good investments. For example, in part because investment banks recommended and sold CDOs to clients, the traders at Goldman Sachs had "heated debates" about how much capital to devote to trading against subprime loans, and Deutsche Bank's head trader responsible for profiting from the subprime collapse had to endure significant criticism from his colleagues for taking investment positions against the housing market.[48] Investment banker incentives were also not as narrowly tailored to creating value for investors (unlike hedge funds). Investment bank professionals engaging in underwriting activities earned performance-based compensation based in large part on the amount of fees they generated for the bank in the previous year, and not on whether the securities they issued produced long-term gains for clients or increased the price of the investment bank's stock.[49]

Accordingly, hedge fund managers routinely ignored evaluations of mortgage-backed securities issued by credit rating agencies and instead did their own proprietary research. One hedge fund manager stated that he could not "rely on ratings agencies or underwriters to" determine whether a credit product is "high-grade" and that mortgage "[d]efaults and delinquency likelihoods and prepayment drop-offs . . . are all, to some extent, knowable if you put the time in" to research.[50] And because of hedge funds' abilities to short sell and to trade derivatives at low cost, they were able to actually employ innovative investment strategies to hedge risk and profit from erroneous valuations of subprime-backed securities. A typical hedge fund strategy in this respect in part involved taking a short position in investment grade CDO securities.[51] To the extent this activity impacted markets more broadly, it told investors that too many mortgages were being made to homeowners. To the extent hedge funds' shorting of CDO slices increased the interest rates that had to be paid out to CDO investors, hedge funds could have actually prevented homeowners from taking out mortgages they ultimately could not afford.

Not only did hedge funds *not* initiate the credit crisis or meaningfully exacerbate it by purchasing securities ultimately backed by mortgages, but they are also helping to solve the crisis. In recent years hedge funds have become significant players in the credit markets. The assets of hedge funds dealing in credit or debt instruments grew to reach over $300 billion in 2005.[52] According to one survey, by 2005, hedge funds accounted for one-half of the trading volume in structured credit markets.[53] As widely recognized by academics, market commentators, and intergovernmental organizations such as the IMF, an important effect of hedge funds' involvement in credit markets is to increase liquidity and price discovery.[54] This means that credit market hedge funds helped to make the overall financial market more stable. Greater liquidity means that someone can sell mortgage-backed securities without suffering even worse losses—often because a hedge fund is willing to make that purchase. Increased price discovery means that the interest rates paid out by credit instruments more accurately reflect the risks involved, thereby helping to prevent unpleasant surprises. Hedge funds and traditional distressed debt investment funds raised significant amounts of capital in 2007 that helped other companies to offload their poorly performing securities, including mortgage-related securities.[55] The total assets of hedge funds focused on purchasing poorly performing securities from other companies grew to approximately $108 billion by the third quarter of 2008.[56] By purchasing poorly performing mortgage-backed securities, hedge funds are helping the market to find a bottom, keeping prices from declining further, and are protecting taxpayers from having to fund the purchase of mortgage debt. Hedge funds are estimated to currently be holding about $400 billion in cash, some of which may be invested in the parts of our economy which could most use infusions of capital.[57]

In sum, hedge funds did not artificially drive up the prices of securities relating to mortgage-backed loans, and did not thereby create excess demand for mortgage loans which eventually hurt homeowners and the economy. Hedge funds' largest impact on the credit markets was to provide much needed liquidity and money to purchase the bad investments made by banks and other entities.

Hedge Funds and Credit Default Swaps

Another issue regarding hedge funds' involvement with the financial crisis and mortgage-backed securities is the extent to which the funds fueled the supply of credit, not by purchasing CDOs and other types of debt securities, but rather by selling protection on debt securities in the form of credit default swaps. A credit default swap (CDS) is a contract between two parties. In its simplest form, one party, the protection buyer, agrees to pay another party, the protection seller, a specified amount per month in exchange for the protection seller covering some credit risk to which the buyer is exposed. So, if the protection seller made a loan to a third party, the protection seller must cover the loan to the protection buyer in case the original borrower defaults.

The total value of the CDS market is estimated by the Depository Trust Clearing Corporation to be $34.8 trillion dollars.[58] Hedge funds are major participants in the CDS market. According to data provided by Greenwich Associates and compiled by Fitch Ratings, in 2004 hedge funds accounted for approximately 29 percent of the outstanding trading volume of CDSs, and by 2006 that number increased to approximately 58 percent.[59] In 2006, hedge funds were net sellers of CDS protection, estimated to account for 32 percent of the seller's market and 28 percent of the buyer's market.[60] Hedge funds were not the largest participants, however; in 2006, banks accounted for 59 percent of all protection purchases and 43 percent of all sales.[61]

One issue relevant to hedge funds' involvement in the CDS market is the extent to which selling CDS protection made it easier for CDOs and other mortgage-related securities to be issued. Certainly, without the ability to hedge against perceived losses on CDO products, many issuers and investors would likely not have issued them in the first place, and thereby avoided the losses associated with the securities. On the other hand, because hedge funds were willing and able to protect banks and other parties against losses, hedge funds absorbed some of their losses, thereby mitigating what would have been a more disastrous level of write-downs and investment losses to banks, insurers, and other parties.

Furthermore, because hedge funds are both buyers and sellers of CDS protection, hedge funds brought "much-needed liquidity" to the CDS market.[62] By trading CDS contracts, hedge funds helped the entire market to better discover the true risks associated not only with CDOs and other mortgage related securities, but also with the very health of financial institutions. Accordingly, while hedge funds and other parties to CDS contracts may have increased the issuance of mortgage-related securities, they also helped to stabilize the system once their losses manifested. In this sense, hedge funds provided seat belts to CDO drivers. While CDOs may not have driven so fast without the CDS protection being offered, once the crash came about the seat belts certainly helped to mitigate the damage once the crash came. It seems more appropriate to blame CDO issuers and investors for taking on such risks in the first place, not those who offered and delivered the protection.

The second issue regarding hedge funds' sales of CDS protection is the extent to which the funds agreed to deliver too much protection, and may have suffered massive losses as a result of eventually having to pay up. According to a survey of hedge fund prime brokers by Fitch Ratings, the typical leverage for hedge funds trading CDSs in the 2005 to 2007 period was 20 to 1.[63] While many regulators and commentators have expressed concern that losses associated with having to pay out to CDS protection buyers could cause hedge funds to collapse and take other companies down with them, this risk has yet to manifest itself. As demonstrated by the auction on CDS contracts written on bonds issued by Lehman Brothers, hedge funds appropriately managed the risks associated with writing CDS protection, in part by offsetting their exposures by buying CDS protection and increasing their collateral to provide a cushion against Lehman's ultimate bankruptcy. Selling CDS protection has not caused widespread losses among hedge funds. This means that hedge funds have absorbed losses that would likely be borne by banks and, ultimately, American taxpayers.

To the extent there are remaining questions regarding the lack of centralized information regarding outstanding CDS risk exposures, those issues have to do with the nature of CDSs as financial instruments and not with the institutions, hedge funds or otherwise, that utilize the contracts. Indeed, the CDS market is already moving toward centralizing the clearing and settlement function for the vast majority of CDS trades.

Hedge Funds and Short-Selling

Hedge funds' role in the credit crisis has also centered on the extent to which the funds' engagement in short-selling may have caused the collapse of financial institutions such as Bear Sterns and Lehman Brothers. A short-sale is an attempt to profit from the price in the drop of a stock, and it entails a short-seller borrowing a stock, selling it, repurchasing the stock, and then giving it back to the lender. At the outset, it should be noted that only about one-third of the hedge fund industry engages in short-selling stocks as the primary part of their overall investment strategy of also purchasing stocks the hedge fund manager believes to be undervalued. Other short-sellers include dealers in securities and exchange specialists, institutional investors, private investors, and members of the relatively new category of long/short mutual funds.

Federal regulation applies to the activity of short-selling, regardless of who engages in it, in three basic ways. First, it is illegal to short sell a stock without first locating a stock lender and without having the intention to do so by the time the sale settles. Second, institutional investors, such as hedge funds and mutual funds, owning more than $100 million in stock must through August 2009 disclose their short sales to the Securities and Exchange Commission (SEC) on a weekly basis, in accordance with new rules passed by the Commission. Finally, any attempt to manipulate markets in conjunction with short selling, such as by spreading false rumors about a company that one has engaged a short-sale in, is strictly prohibited, just as spreading false rumors about a company whose stock one has purchased is prohibited.

Although failed executives such as Enron's Ken Lay and Lehman Brothers' Richard Fuld routinely blame short-sellers for causing bankruptcies, academic studies almost universally find that short-selling makes markets more efficient by bringing the price of a stock closer to its true, fundamental value.[64] In addition, academic studies have never found that short-sellers are able to cause the bankruptcy of otherwise healthy companies merely by engaging in repeated short-sales of their stock. Hedge fund short sellers were the first to draw public attention to the dangers associated with investment banks' involvement with mortgage-backed securities. Short-sellers generally act like watch dogs over public companies, and conduct in-depth research to make sure that financial statements are not being used as a form of subtle company propaganda. Had investors sold their shares in Lehman Brothers when attention was brought to the poor quality of its balance sheet by hedge fund short-seller David Einhorn in March of 2008, they may have been able to avoid the eventual losses for which Mr. Einhorn served as an early warning.

During the recent SEC ban on short-selling (which lasted from September 19, 2008 through October 8, 2008), the shares of nearly a thousand financial companies an exchange traded fund that tracks the stock performance of the financial sector dropped by 38.82 percent—more than it had dropped the entire year up through the ban. Once the short-sale ban was lifted, the stocks of the affected companies did not fall in response to short-sellers being once again permitted to sell their stocks; to the contrary, financial companies stocks actually slightly increased through the month subsequent to the ban being lifted.

On July 13, 2008, the SEC announced that it was conducting investigations into allegations of manipulative short-selling along with the spreading of false rumors regarding the health of financial company stocks. To date, the SEC has yet to bring any enforcement actions relating to short sales of financial companies.

It should be noted that there is nothing about how hedge funds are regulated that makes engaging in illegal or manipulative short-selling any easier for hedge funds than other institutions. While the lack of restrictions under the Investment Company Act makes it *economically* more feasible for hedge funds to engage in short-selling relative to mutual funds, not being required to disclose their stockholdings on a quarterly basis as mutual funds must does not facilitate illegal short sales. For example, in what seems to be the SEC's only 2008 enforcement action for illegally spreading false rumors in connection with short sales, the Commission on April 28 brought an action against a trader at a broker-dealer who disseminated false rumors via an instant messaging system about a data management company[65]—hardly an activity arising from anything having to do with hedge funds.

Evidence demonstrates that hedge funds' involvement with short-selling is overwhelming beneficial for all investors and the integrity of market prices. Given that the SEC already requires hedge funds and other large institutional investors to disclose short positions on a weekly basis, there is no case for bringing additional oversight or regulation to hedge funds on the basis of short-selling without serious consideration of the unintended consequences that would likely result.

Hedge Fund and Systemic Risk to the Economy

A final issue about hedge funds relevant to their role in the financial crisis and public policy is the extent to which hedge funds pose a systemic risk to the entire, or at least large portions of, the financial system.

Systemic risk arises because of the interconnectedness of financial institutions. The theory is that if one large or several large hedge funds experience losses, such losses may spread to other hedge funds or financial institutions and in turn severely undermine the stability of the financial system. Based upon how hedge funds operate and the dangers involved in increasing restrictions on the industry to monitor systemic risk, anything more than the type of ad hoc inspections that the Federal Reserve is already engaged in does not seem warranted.

First, hedge fund losses do not seem to threaten the economy. Although the memory of the failed $4 billion hedge fund Long Term Capital Management (LTCM) often drives concerns about the risks that hedge funds pose to the economy, the industry has come a long way since LTCM which, in retrospect, did not actually pose a threat to the financial system. In September 2006, for example, the hedge fund Amaranth, which was approximately $2 billion larger than LTCM, collapsed in about one week without any market disruptions whatsoever.

Although hedge fund losses may spread within the industry, including among funds that employ different trading strategies, financial economists have found that hedge fund losses do not spread to the general economy.[66] The recent economic turmoil is a case in point. Widespread and sustained losses in the hedge fund industry did not begin until June of 2008, several months *after* the stock market began to experience persistent monthly losses in November of 2007. In August of 2008, when several large quantitative hedge funds experienced losses and the hedge fund industry globally declined by over 2 percent, the U.S. stock market, as measured by the S&P 500 stock Index, actually increased by about 1.3 percent. While some hedge funds have suffered substantial losses throughout this crisis, none of those losses have threatened the broader economy. And while hedge fund investor redemptions have certainly caused stock markets to decline, these losses are second order effects of the credit crisis and are no different than the redemptions and price declines that resulted from mutual fund investors redeeming their shares.

Second, although highly leveraged financial institutions may threaten the stability of the financial system if forced to unwind bad investments, hedge funds should not generally be considered among the class of highly leveraged financial institutions. Average hedge fund leverage is estimated to be anywhere from 1.7 to 3.9 to 1, with the latter figure including leverage not just from borrowings, but also leverage through using derivatives. While some hedge funds may be leveraged up to 10 to 20 times by making investments from short-term borrowings from their prime brokers or other parties, high leverage by itself is not necessarily an indicator of risk, either to hedge fund investors of the economy. Academic studies do not have a clear conclusion regarding whether funds that use more leverage have a higher chance of collapsing.[67] This is because increasing leverage can be used to offset the risks to which a fund is exposed. Indeed, a 2006 study found that hedge funds that employed leverage through using derivatives were actually safer than hedge funds that did not.[68] This finding is important, because hedge funds primarily obtain their leverage through derivatives, not borrowing.

In addition, most hedge funds leverage their positions with prime brokers far below the maximum allowed, somewhere between the range of 40 to 60 percent,[69] which suggests that the funds and their brokers routinely exercise strong risk management by purposely adding a liquidity cushion for times of market stress. Importantly, empirical studies on the issue find that hedge funds become less prone to collapsing as their size grows,[70] which generally decreases concern about the risk of large fund collapses.

Third, the recently proposed idea of creating a permanent regulatory agency tasked with measuring economy-wide systemic risk ought to be considered with caution as it is unlikely to achieve its purpose and may even increase overall systemic risk. As Federal Reserve Chairman Ben Bernanke noted in May 2006 testimony regarding a proposal for federal regulators to monitor hedge fund liquidity risk, to be successfully implemented, regulators would need to: gather sensitive information from *all* major financial market participants, process the massive and fluctuating data accurately and at least daily, and respond to a high risk exposure without causing a financial crisis, for example, by forcing funds to simultaneously exit the same risky position.

Chairman Bernanke rejected the idea that regulators should create a database of hedge fund positions. For the very same reasons, any attempt at universal oversight of hedge fund leverage would not only carry the burden of compliance costs, but could also reduce performance of well-performing but leveraged hedge funds, overwhelm regulators in trying to make complex calculations regarding hedge fund risk exposures, and create a false sense of security among prime brokers, investors, and other hedge fund monitors. As an alternative to direct oversight of hedge funds, federal regulators may find it more useful to focus on the risk exposures that banks, broker-dealers, and other regulated entities have to hedge funds.[71]

Conclusion

The financial crisis has brought untold dislocations to our financial systems and is bleeding into the non-financial economy. Hedge funds, like other market participants, have not remained immune from its effects. There are still many questions left unanswered about the nature of the crisis and how best to proceed, and the Committee would be right in seeking further answers. One major issue is whether the credit ratings agencies should be allowed to rate structured products for the purposes of permitting pensions and other investors to purchase structured securities.

Another issue is to the extent to which the restrictions placed upon mutual funds in engaging in hedge fund-like trading strategies should be revisited, as the SEC once suggested. More broadly, the extent to which more investors should be able to participate in the hedge fund market and benefit from the protection they provide against losses deserves inquiry. Other nations, such as Australia, Hong Kong, and Ireland, allow ordinary investors far greater access to hedge funds than allowed in the United States. The impact on investors in those nations is worthy of study.

However, based upon the empirical evidence, it does not seem that changing the already substantial body of law applicable to hedge funds will help to ameliorate this crisis or prevent another one from happening. Restricting the ability of hedge funds to utilize leverage may interfere with their ability to provide value to investors in cases where investment ideas need to be magnified for the trading strategy to be meaningful. Interfering with hedge fund manager compensation agreements could reduce their incentives to engage in in-depth research and costly investment strategies, including those that involve restraining the excesses of public company managers. Furthermore, even sophisticated hedge fund investors do not demand that hedge funds disclose their precise investment positions. It is unclear whether such information could provide meaningful information about the risks that hedge funds pose without, at the same time, inhibiting the incentives for hedge funds to reduce risk in the economy and creating a sense of complacency in the markets.

The financial crisis has deeply impacted the lives of Americans, and we all have a stake in ensuring that the crisis is prudently resolved. While it may be tempting to lump hedge funds in with other financial institutions that were directly involved with the crisis, and hedge fund managers with other highly compensated financial professionals, we must be very careful to make the appropriate distinctions to ensure that the policy responses to the crisis do not end up adding to the damage already done and prevent the economy from ultimately recovering.

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[1] Much of the background research on hedge funds contained in this testimony is taken from my academic-length treatment of the subject in *The Law and Economics of Hedge Funds: Financial Innovation and Investor Protection*, 6 Berkeley Bus. L. J. (forthcoming 2009), *available at* http://ssrn.com/abstract=1066808. I would like to thank Katelyn E. Christ and Stefanie Haeffele for their invaluable research assistance with preparation of this testimony.

[2] *See* Alon Brav, Wei Jiang, Frank Partnoy & Randall Thomas, *Hedge Fund Activism, Corporate Governance, and Firm Performance*, ECGI Working Paper Series in Finance, November 2008.

[3] *Id.*

[4] Patrick McGuire et al., Time-varying Exposures and Leverage in Hedge Funds, BIS Quarterly Review 69 March 2005.

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Second Quarter 2008, http://www.ici.org/stats/mf/ww_06_08.html#TopOfPage.

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[9] Alexander Ineichen & Kurt Silberstein, AIMA's Roadmap to Hedge Funds 17 November 2008.

[10] IMF Global Stability Report 4 April 2007, Figure 1; HFR Global Hedge Fund Industry Report Q3 2008 11 (Oct. 17, 2008).

[11] Agarwal et a. found a positive and significant correlation between managerial ownership and performance such that a one standard deviation increase in ownership increases returns by about 1.5%. Vikas Agarwal, et al., *Role of Managerial Incentives and Discretion in Hedge Fund Performance* 5, 12-13, 36. (Centre for Financial Research Working Paper No. 04-04, April 28, 2006), *available at* http://ssrn.com/abstract=889008.

[12] Stephen J. Brown et al., *Careers and Survival: Competition and Risk in the Hedge Fund and CTA Industry*, 56 J. Fin. 1869, 1884–85 (2001).

[13] Indraneel Chakraborty & Sugata Ray, *Effort, Risk and Walkaway Under High Water Mark Style Contracts*, 2-3 (University of Pennsylvania Working Paper, Jan. 16, 2008).. *See also* Stavros Panageas & Mark M. Westerfield, *High-Water Marks: High Risk Appetites? Convex Compensation, Long Horizons, and Portfolio Choice* 4, 14 (Working Paper August 2007), *available at* http://ssrn.com/abstract=616962 (modeling the value of fund continuation as being a disciplining force on risk-taking).

[14] *See* Houman B. Shadab, *Fending for Themselves: Creating a U.S. Hedge Fund Market for Retail Investors*, 11 N.Y.U. J. Leg. Pub. Pol'y. 251, 269 (2008).

[15] EconStats, S&P 500 (large cap) Index US Monthly Data,
http://www.econstats.com/eqty/eqem_mi_1.htm; HedgeFundResearch, HFRI Monthly Performance Indices.

[16] SCOTT J. LEDERMAN, HEDGE FUND REGULATION at § 4:2.2, 4-12 (2007) (noting that "in light of various federal and state anti-fraud provisions, a well advised hedge fund prepares a

comprehensive offering memorandum, even if the offering is directed solely to accredited investors, to ensure that all material information is conveyed.");

[17] *Id.* at § 4:2.2, 4-12 (noting that "in light of various federal and state anti-fraud provisions, a well advised hedge fund prepares a comprehensive offering memorandum, even if the offering is directed solely to accredited investors, to ensure that all material information is conveyed.").

[18] SEC, IMPLICATIONS OF THE GROWTH OF HEDGE FUNDS, STAFF REPORT TO THE UNITED STATES SECURITIES AND EXCHANGE COMMISSION 46 (Sept. 29, 2003) ("Most hedge funds provide written information to their investors in the form of a private offering memorandum or private placement memorandum . . . .").

[19] *Id.* at 47-49 (noting the information typically disclosed in a PPM);

[20] *Id.*

[21] Jeff Benjamin, *Hedge Funds Go Prime Time*, INVESTMENTNEWS, Feb. 28, 2008.

[22] Indeed, some hedge fund advisers voluntarily register and submit to the disclosure obligations of the Advisers Act to attract investors. SEC, *supra* note 18, at 22 n.76; Registration Under the Advisers Act of Certain Hedge Fund Advisers, Investment Adviser Act Release No. 2266, 69 Fed. Reg. 45181 (proposed July 28, 2004) (estimating that 30% to 50% of hedge fund managers voluntarily register).

[23] Notably, investors do not typically demand and best practices do not recommend position-level transparency. Nor would such information be generally useful to investors. *See, e.g.*, The Bank of New York, Casey, Quirk, and Associates, Institutional Demand for Hedge Funds 2: A Global Perspective 10 (2006); RICHARD BOOKSTABER, DEMONS OF OUR OWN DESIGN: MARKETS, HEDGE FUNDS, AND THE PERILS OF FINANCIAL INNOVATION 220-21, 225-26.

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[35] *See, e.g.*, Janet Tavakoli, STRUCTURED FINANCE & COLLATERALIZED DEBT OBLIGATIONS: NEW DEVELOPMENTS IN CASH & SYNTHETIC SECURITIZATION 397-99 (2008).
[36] Roger Merritt & Eileen Fahey, FitchRatings, Credit Policy, Hedge Funds: The Credit Market's New Paradigm, June 5, 2007 (arguing that since 2005 "CDO issuance continued to expand, in part due to demand from hedge funds for CDO equity exposures.").
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[52] IMF, World Economic and Financial Surveys Global Financial Stability Report Market Developments and Issues, 56 Figure 2.3 (April 2006) http://www.imf.org/External/Pubs/FT/GFSR/2006/01/index.htm.
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[54] *See, e.g.*, Adrian Blundell-Wignall, *An Overview of Hedge Funds and Structured Products: Issues in Leverage and Risk*, Financial Markets and Trends 43-44 (2007); Roger W. Merrit et al., FitchRating, Hedge Funds: An Emerging Force in the Global Credit Markets 3 (July 18, 2005); BIS, *supra* note 37, at 7.

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[60] David Mengle, *Credit Derivatives: An Overview*, Federal Reserve Bank of Atlanta, Economic Review 8 Fourth Quarter 2007, http://www.frbatlanta.org/filelegacydocs/ erq407_mengle.pdf.

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[62] Merritt et al., *supra* note 54.

[63] Roger Merritt & Eileen Fahey, FitchRatings, Credit Policy, Hedge Funds: The Credit Market's New Paradigm 4 (June 5, 2007).

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[66] *See* Monica Billio et al., *Crisis and Hedge Fun Risk*, Working Paper, Department of Economics, Ca' Foscari, University of Venice, 2008; Nicole Boyson et al., Hedge Fund Contagion and Liquidity, Charles A. Dice Center for Research in Financial Economics, May 15, 2008.

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[71] *See* Michael R. King & Phillip Maier, Hedge Funds and Financial Stability: Regulating Prime Brokers Will Mitigate Systemic Risks, Oct. 30, 2008.

Mrs. MALONEY. Thank all the panelists for your testimony. The Chair recognizes herself for 5 minutes. The current financial crisis started over a year ago, with the collapse of the subprime market. Through our hearings, we have learned about the roles of lenders, bankers, brokers, and credit rating agencies. One question that I have is how hedge funds may have affected and contributed to this crisis. Since September, hedge funds have faced a massive increase in withdrawals from their investors. According to one report, they have faced redemptions of over $50 billion.

As a result, many have been forced to sell assets to raise cash. The hedge funds are selling into a down market, and this further drives down stock prices. Bloomberg News described the cycle recently as, "downdraft of market declines, client redemptions, demands from lenders for more collateral, and forced asset sales."

Professor Ruder, in your testimony you stated that hedge funds have contributed to the decline in stock and asset prices by liquidating stocks and other assets in order to meet other obligations and in order to pay investors seeking to withdraw funds. Is it your view that these hedge fund withdrawals are affecting the broader market?

Mr. RUDER. Indeed, they are. The hedge funds, at least by all reports, are selling massive amounts into the stock markets, causing the stock markets to—assisting in the stock market decline. We don't know how much they have contributed to declines in other assets. But surely they are engaged in sales of those assets as well. I know it is happening. I regard that aspect of it to be a rather natural effect coming from the credit crisis itself.

Mrs. MALONEY. And Professor Lo, what is your view?

Mr. LO. I agree with Professor Ruder that there is certainly an effect of hedge funds unwinding their positions on the marketplace. However, those effects are the unavoidable aspects of a free capital market, and something that while we need to be aware of and we need to prepare for, it may not require any direct oversight.

Mrs. MALONEY. OK. Market analyst Jeff Bagley has estimated that hedge funds might be forced to sell half a trillion dollars worth of assets as a result of this financial crisis. And Professor Lo or Professor Ruder, what would be the impact of forced sales like this?

Mr. RUDER. Well, it is clear that forced sales will affect the markets. What we need to know in advance is what are these positions so that the financial regulators can have some way of attacking the problem of the massive amounts of moneys that are held by hedge funds.

Mrs. MALONEY. So there is a definite need for more transparency?

Mr. RUDER. I certainly agree with that.

Mrs. MALONEY. And Professor Lo, a recent report by the Organization for Economic Cooperation and Development found that hedge funds had purchased over 70 percent of the riskiest tranches of collateralized debt obligations, the financial instruments used to sell the subprime mortgages to investors that are at the root of this crisis before us. What impacts did these investments have on the financial crisis? And did hedge funds facilitate the growth of the market for the sale of these toxic CDOs?

Mr. LO. Certainly I think they did facilitate the growth of these markets by taking on the capacity for holding these so-called toxic waste tranches. However, that again has both a positive and a negative. The positive is that there are few other investors in the economy that are willing to take such risks, and so hedge funds provide a valuable service. However, on the down side, when these particular risky assets end up losing great sums of money, hedge funds are put under great stress. And the unwinding of these portfolios can create significant market dislocation.

Mrs. MALONEY. Long Term Capital Management hedge fund failed in 1998, and the Federal Reserve was so concerned about market turmoil that they organized investment bankers to come in and to really be supportive and to put them back on a sound financial footing. What concerns me now is there are no investment banks left to buy up hedge funds if they fail and are causing systemic risk in our financial markets. And would anyone like to comment on that? Yes, Professor Lo?

Mr. LO. Yes, I agree that this is a significant issue, which is one of the reasons that in my written testimony, I call for further transparency into the so-called shadow banking system. It is not at all clear that we need more regulation. I think it is clear that we need more effective regulation. But it is difficult for us to propose what that effective regulation looks like unless we have more transparency into the hedge fund industry. With that additional transparency we can develop a sense of what exactly is needed.

Mrs. MALONEY. Thank you very much. And I recognize Ranking Member Davis for 5 minutes.

Mr. DAVIS OF VIRGINIA. Well, thank you very much, Ms. Maloney. Do all of you believe that hedge funds are adequately regulated? And could you also comment on the adequacy of the disclosure requirements for these entities? I know you touched on it in your statements, but I just——

Mr. RUDER. I would be pleased to expand on that, Congressman Davis. There ought to be some way in which the aggregate risk positions of the hedge funds and the risk positions of their counterparties are revealed to a central regulator. I don't really know what the central regulator will do, but it is impossible for that central regulator to take adequate steps to forestall calamities without having that information. So the first step has to be an inspection system, an assessment system. And as my prepared testimony says, I think that the SEC should—or someone like the SEC should have an opportunity to look at the risk management systems of the hedge funds in order to see that they are not engaged in steps which are going to create the kinds of calamities we have had.

Mr. DAVIS OF VIRGINIA. Professor Lo.

Mr. LO. Well, Congressman Davis, I think that the possibility of legislating losses away is obviously impossible and unwise. Dislocation comes not from losing money, but from the wrong investors losing money. And if we provide greater transparency to the marketplace, I believe that a great deal of the problems that we have been facing will take care of themselves to a large degree. However, there is no mechanism currently for that information to be provided to the public or to regulators. So I agree with Professor

Ruder that we do need to have a mechanism for providing that level of transparency. Beyond that, I think it is very premature to be able to say what kind of regulations should be imposed.

Mr. DAVIS OF VIRGINIA. Thank you. Professor Bankman.

Mr. BANKMAN. Yes.

Mr. DAVIS OF VIRGINIA. You want to answer?

Mr. BANKMAN. No, I am just a tax expert. You don't want my opinion on that.

Mr. DAVIS OF VIRGINIA. OK. Mr. Shadab.

Mr. SHADAB. I think one of the underlying assumptions is that somehow all of these risks are out there in the economy and are known by some parties, and the only issue is simply gathering them in a centralized source and then making decisions on that basis. The problem with that perspective is that the risks that hedge funds and their counterparties pose to the economy are A, very highly complex, and B, constantly changing.

And in fact, in 2006, Federal Reserve Chairman Ben Bernanke rejected a proposal to create a centralized data base of hedge fund positions for a couple reasons, one of which being that type of information, in order to be gathered, would be required to be gathered from all financial participants in the economy, not just hedge funds, but also banks, their lenders, their counterparties, and even investors and creditors to some extent, too. Second of all, when that type of information is created by regulators, it creates a false sense of security among market participants that these risks are adequately being monitored and managed.

And in fact, to a large extent the reason the investment banks took on so much leverage and collapsed was because market participants were under the false assumption that the Securities and Exchange Commission, through their Consolidated Supervised Entities Program, was monitoring the risks of investment banks to their investors and to the economy, but it was not doing so. By contrast, hedge funds, it is widely known by market participants, have no oversight by any central authority, and we can rely upon the market discipline of their counterparties. And it is for that reason that losses from hedge funds typically do not spread to the entire economy. This idea of systemic risk is an idea, but it is really just a hypothetical. It has not come to fruition and practice.

A much more instructive example of large hedge funds collapsing is not Long Term Capital Management in 1998, but actually Amaranth Advisors, which happened in 2006. That hedge fund was much larger by at least $2 billion than Long Term Capital Management. It disappeared almost virtually overnight, or at least within 1 week, and the markets didn't even notice. Why? Because Amaranth and its counterparties were engaging in proper risk management, and it is true that investment banks are no longer there to provide capital to purchase failed hedge funds, but other hedge funds are there to purchase each other's. And in fact, as we speak right now, new hedge funds are being launched, which really displays and reflects the vitality of that industry compared to, for example, the banking sector. And I haven't heard many banks being created in recent times. Thank you.

Mr. DAVIS OF VIRGINIA. Thanks. Let me continue. Mr. Shadab, the briefing memorandum that was produced by the majority implies that hedge funds were major drivers of the subprime housing market through the large investments in collateralized debt obligations backed by subprime mortgages. They cite figures from the OECD estimating that hedge funds purchased 46 percent of all CDOs and over 70 percent of the most risky portions of these investment vehicles. But in your testimony you estimate that the hedge funds never had more than 29 percent of the CDO market, and probably less. I guess my question isn't debating what the facts are, but were hedge funds significant contributors to the growth of the subprime mortgage market or weren't they?

Mr. SHADAB. No, they were not. And this is not just based upon the numbers. We take a step back and think what is the purpose of a structured investment vehicle, a special purpose vehicle that is going to put together a collateralized debt obligation? The purpose of that vehicle is to provide higher interest rates paid out by investment grade securities for institutional investors such as pension funds and insurance companies to be able to invest under a certain class of security that has a certain safety rating, but nonetheless gives them a higher grade.

Hedge funds have no genuine interest in purchasing CDOs, because the CDO is to some extent another private investment fund. If hedge funds want exposures to those types of risks they can buy the underlying bonds or what have you. And in fact, the reason hedge funds concentrated their investments in the riskiest tranche was because first of all, it is an equity tranche, which pays out a much higher interest rate because it is more risky, and it is important to know that those equity CDO tranches were five to less percent of a typical equity CDO deal, which is primarily based upon, again, to get those investment grade ratings.

Mrs. MALONEY. Thank you. The Chair recognizes Congressman Cummings for 5 minutes.

Mr. CUMMINGS. Thank you all for your testimony. Let me make sure I got this right, Professor Bankman. I would like to ask you about your testimony that some hedge fund managers may currently pay taxes at a lower rate than Americans who make less money. If I understand your testimony correctly, the earnings of hedge fund managers are called carried interest. Is that correct?

Mr. BANKMAN. That is right.

Mr. CUMMINGS. And to the extent that these earnings can be tied to long-term gains, the tax rate is just 15 percent. Is that right?

Mr. BANKMAN. That is right.

Mr. CUMMINGS. I just want to make sure, because I thought I was hearing something different. And I want to compare that 15 percent tax rate to the tax rates of some other working Americans, very hardworking Americans. The Bureau of Labor Statistics has calculated the median earnings for various occupations in the American work force. The median earnings for American school teachers were $43,000, Professor Bankman, to $49,000 per year. What is the tax rate for a school teacher with that income?

Mr. BANKMAN. Well, it depends on their marital status. But if they are single, the 25 percent rate would start at about $32,000, I believe. So they would be paying tax at 25 percent on that income, and there would be payroll tax they would be paying, too. So it would be a 40 percent higher rate, that is 25 as compared to 15.

Mr. CUMMINGS. Jesus Christ. The median earnings for a firefighter was 41,190. His or her tax rate would also I think be around that 25 percent range that you just talked about. Is that right?

Mr. BANKMAN. That is right.

Mr. CUMMINGS. Now, the median hourly earnings for a plumber, we have been talking about plumbers here a lot lately, were $20.65 per hour. And that is about $41,000 per year. That is also taxed about at the 25 percent rate. Is that right?

Mr. BANKMAN. That would be right. Of course, there may be deductions from that, too. So we may be slightly overstating the rate on some of those cases.

Mr. CUMMINGS. Let me get this, let me ask it this way. So Joe the plumber is being taxed at a higher rate than Joe the investment banker. Is that right? Is that a fair statement?

Mr. BANKMAN. That would be true if it were Joe the fund manager. The investment bankers actually don't get that break.

Mr. CUMMINGS. OK. So the fund manager.

Mr. BANKMAN. Yes.

Mr. CUMMINGS. All right. Now Professor Bankman, does this seem fair to you?

Mr. BANKMAN. No.

Mr. CUMMINGS. On the average, the witnesses on the next panel made over $1 billion, $1 billion in 2007, yet at least some portion of their earnings is being taxed at just a 15 percent rate. Is that fair?

Mr. BANKMAN. No, I don't believe that is either fair or efficient.

Mr. CUMMINGS. And why do you say that? Let's concentrate on the word efficient. Why do you say it is not efficient?

Mr. BANKMAN. Well, a fundamental goal of tax policy is to try to tax everything at the same rate. Otherwise the tax system interferes with the flow of labor, the flow of resources. So it is inefficient to give a tax break to one occupation as opposed to another. We ought to start them off at the same rate. And we can all debate what that appropriate rate is, but nobody has ever offered a reason why this one slice of highly paid professionals should be taxed at a lower rate than other slices of either highly paid or less highly paid professionals.

Mr. CUMMINGS. Is there something that makes these guys so special that they get this 15 percent rate? I mean because I am sure people like Joe the plumber and others would like to try get into that category. I mean is there something special about these guys and ladies?

Mr. BANKMAN. Well, the rate has a long historical explanation to it, which doesn't make hedge fund managers that benefit from the rate special, but does give a little bit of an explanation how we to some extent slipped into a situation where so many of our most highly paid members are getting preferential tax treatment.

Mr. CUMMINGS. Let me just say this: This Congress, the House twice voted to close this loophole, and it would have generated more than $30 billion in tax savings according to the Congressional Budget Office. Unfortunately, this provision has not been passed by the Senate, and it was opposed, opposed by the Bush administration. I hope we can correct this injustice once and for all next year. Would you agree?

Mr. BANKMAN. Yes.

Mr. CUMMINGS. All right. I see my time is about up. I yield back.

Mrs. MALONEY. Thank you very much. Congressman Issa.

Mr. ISSA. Thank you, Madam Chair. Welcome all of you to the Ways and Means Committee. It is very clear we have moved onto tax policy. And I am actually glad we are, because I think it reveals what we are in for in this Congress and the next Congress. I am a Member of Congress who has my capital gains treatment under the old tax law when I sold my business and came to Congress. So I didn't get the 15 percent, and I did pay 10 percent or so to the State of California in addition. But let me go through a couple of assumptions here since we are playing tax policy. Professor Bankman, you lump together the LBO firms, like the one that bought out my company, and the hedge funds. Now, isn't it true that a leveraged buyout firm in fact is a classic—I mean, these types of firms buy a company. They put skin in it.

And over a long period of time, or sometimes short, they hope to get a capital gains. Isn't capital gains over a hold of more than 1 year by definition, yes or no, the existing tax law?

Mr. BANKMAN. Yes.

Mr. ISSA. OK. So we will just assume that you didn't really mean to say people who buy whole companies should be somehow not entitled to this. That is not the loophole that I think Mr. Cummings was going to close.

Let me go through another question. You talk about a doctor. Isn't it true that if a doctor forms a medical practice and builds it up and then sells it, he gets capital gains treatment on that?

Mr. BANKMAN. That's right.

Mr. ISSA. OK. So the doctor really does have the same opportunity, he just has to avail himself of it. If he works for a hospital, and he doesn't own a piece of the clinic or hospital, then he doesn't avail himself. If he does invest in some sort of partnership, he gets that ability when it is sold; isn't that true?

Mr. BANKMAN. That's right. But I think there is a distinction when the doctor's regular income, which is taxed at ordinary income rates, and the very occasional capital gain he recognizes.

Mr. ISSA. And I appreciate your feeling on that. And, look, I am one of those people that thinks we should look at hedge fund income, including profit sharing, and ask whether or not that should be long term or short. I have no problem at looking at it, but of course I am not on the Ways and Means Committee normally, so I don't get that opportunity.

Let's go through a couple of other things—and by the way, Professor Bankman, thank you for supporting the flat tax. I appreciate that we should all be taxed at the same rate and we shouldn't use tax policy to manipulate the economy. Unfortunately, the Congress historically has not agreed with that and they have micro-managed it in the other Ways and Means Committee.

Professor Ruder, you sort of alluded to the problems of lack of regulation, the SEC not getting authority. I just have a brief question.

Would you agree that a size for SEC filing and regulating of hedge funds so as to take the small firm—let's say you have two clients, and no matter how much money, it is just two clients that you are investing on behalf of—that those wouldn't be sensible for a hedge fund or any fund to have to report to the SEC, but if you had 2,000 you probably would fit. Would you say that there are numbers, let's say a dozen or more clients and more than $100 million under management, that would trigger a SEC requirement?

Mr. RUDER. It is possible to arrange regulation in that way. The Investment Advisers Act today, the legislation——

Mr. ISSA. I believe it S. 17.

Mr. RUDER. Well, I am not talking about numbers of people, but there is an inspection split between the States and the SEC at $25 million. If there is less than $25 million under management, it is not regulated by the SEC. And I would support that kind of distinction. It is just a matter of deciding what the number is. Is it $25 million? Is it $100 million? One has to come to some conclusion about that.

Mr. ISSA. I appreciate that. And I think you are right, if we regulate we do have to recognize that we can't regulate every entity.

Mr. Shadab, I have a couple of questions that you are probably very equipped to answer. First of all, this whole question of hedge funds, isn't it true that hedge funds normally hedge both, if you will, long and short, and as a result when they unwind they tend to unwind more neutral than other long-only investments?

Mr. SHADAB. That is fair to say, that is correct.

Mr. ISSA. And isn't it true that some of the biggest investors in hedge funds are union pension plans and even State plans, that they will have a percentage, usually 5 percent or less, but a percentage they are putting in hedge funds?

Mr. SHADAB. Increasingly so, yes.

Mr. ISSA. And isn't it true that the inefficiency in the market is partially because we have built up a strategy of most mutual funds not being able to go to all cash, not being able to essentially leave a certain paradigm that they are in and, to a great extent, if you want to limit risk and you are in a fund that is 100 percent invested in small caps, or whatever, that a hedge fund is often the way, if you are a big investor like a union pension plan, that you hedge against your other investments which are 100 percent long?

Mr. SHADAB. Correct. Hedge funds are more flexible.

Mr. ISSA. Thank you. Thank you, Madam Chair.

Mrs. MALONEY. Congressman Tierney.

Mr. TIERNEY. I want to thank the witnesses here today. But Professor Lo, I want to ask you something about what you said in your testimony. You talked about the fact that we had not yet seen the full impact of the unraveling and the deleveraging of the hedge fund industry. And I think you predicted that we could see thousands more of additional entities go under. So I guess about 9,000 different hedge funds out there, estimates, and you are talking about a good healthy percentage of them are going under. What would be the potential impacts of the collapse of that many hedge funds?

Mr. LO. Well, it is hard to say because, as I mention in my testimony, we don't have a lot of information about their holdings, their leverage, the counterparties, or other aspects of their exposures. I suspect that a large number of them will be taken over by larger financial institutions, so the impact for those may be relatively minimal. But there may be a small number of very large hedge funds that have a variety of different counterparty relationships that could cause some market dislocation. And that is really the purpose of transparency is to be able to tell whether or not we are looking at a significant event or not.

Mr. TIERNEY. I think the general perception of the public with respect to these hedge funds is that, if they go under, so what? They are super rich people who understand the risk, are somewhat sophisticated, what do we care? But I have heard discussed here through some of your testimony that increasingly State and local and private pension funds are invested in them. So we really have a concern here about ordinary people involved in this, whether they know it or not, retirees, students, it could be millions of other citizens that are getting affected by that. So tell me what the impact is, if they go under, how does it affect Main Street?

Mr. LO. Well, clearly there are going to be losses faced by individual investors because one of the largest amount of assets that have come into the hedge fund industry over the last 5 years is pension funds. So there will be an impact there. The question though is really whether or not that impact is anticipated or not.

I mentioned earlier that dislocation happens not when losses occur, but when losses by individuals that are not prepared for those losses occur. The hedge funds that invest in the worst risk tranches, they are prepared for losses; but when money market funds, pension funds, mutual funds invest in AAA securities that then lose substantial value, that is really the cause for dislocation.

Mr. TIERNEY. And that is where the transparency aspect comes in, I suspect. But the transparency you are talking about is disclosure to the SEC in sort of a confidential way.

Mr. LO. That's right.

Mr. TIERNEY. What transparency is there to investors from these hedge funds? My understanding is that you could invest in this hedge fund and have no particular rights to be able to get information as to just what the investments are and what the circumstances are; is that correct?

Mr. LO. That's right. Let the buyer or let the investor beware.

Mr. TIERNEY. So here you have a pension fund investing in a hedge fund. Not only is whoever is managing the pension fund unaware, but certainly the investors—the pensioners, or whatever—are totally unaware. Do you think if that continues to hold is a good policy, or do you think that there ought to be more transparency to the investors from the manager of these hedge funds?

Mr. LO. Well, for the most part, investors would probably not be able to make use of the kind of transparency that I am proposing to the regulators. Most investors delegate their decisions, particularly involving sophisticated and highly risky investments like hedge funds, to professional managers. So the managers and the ultimate institutional investors I think would have the responsibility to monitor those kinds of risks, and of course the regulators would be focused on a different issue, which is the risk to the entire financial system.

Mr. TIERNEY. Is it too late for transparency to help individuals who belong to a retirement fund that is invested in hedge funds that may go under at this stage?

Mr. LO. I don't think it is ever too late. I think that additional transparency even now will provide some sense of what we are likely to expect to see over the next year or two, and that could help investors with their own planning for financial market dislocations yet to come.

Mr. TIERNEY. Does anybody on the panel recommend any stronger intervention on behalf of these pensioners or the State, local or private pension funds that are being invested in hedge funds and that may stand the prospect of losing significant amounts of money if as large a portion of the hedge funds go under as some have predicted?

Mr. SHADAB. I would just like to say that it is very atypical, in fact unheard of, for hedge funds not to make substantial disclosures to their investors, especially when they are institutions like pension funds. Hedge fund investors typically demand quite a bit of information from the fund and funds in order to compete for investor wealth will make substantial disclosures, and in fact more disclosures and in fact higher quality and more easily understandable disclosures than mutual funds make to their investors. It is actually much easier to be able to contact and have a discussion with a hedge fund manager about your investments in the hedge fund as opposed to a mutual fund manager.

Mr. TIERNEY. That is interesting, Mr. Shadab, because some of the information we looked at from the second panel on their funds disclosed very little information. Professor Lo, would you agree with that? I mean, it is not like they give out very specific detailed information to their investors.

Mr. LO. Well, that is right. I think it depends on the hedge fund. But by and large, hedge funds are not obligated to provide transparency to investors, and in many cases that is one of the reasons managers decide to launch hedge funds as opposed to mutual funds, to protect their proprietary information that they are using to make money for their investors.

I wanted to add one more comment to Congressman Tierney's question about pension funds, which is that one issue that we haven't talked about today is the impact of potential hedge fund failures on the PBGC's ability to make good on pension fund claims. The PBGC recently has faced significant losses because of their internal investment policies. That might actually hamper their abilities to make good on these guarantees, and that is an issue that I think we need to consider.

Mrs. MALONEY. Congressman Souder.

Mr. SOUDER. I would like to continue to followup a little bit with Professor Lo, because you have in your written statement an extended discussion on risk, and it seems to me that is one of the fundamental questions here.

In a general way, other than temporary aberrations, do you know of any where the yield was disconnected from the risk? In other words, has the market accurately reflected that wherever you got a higher yield, you took more risk?

Mr. LO. That has typically been the case, yes.

Mr. SOUDER. And wouldn't it also be true that the more you invested in economies that were kind of away from established economies, you would assume there would be higher risk?

Mr. LO. That's right.

Mr. SOUDER. And wouldn't you assume that the less transparency there was there would be higher risk?

Mr. LO. That's right.

Mr. SOUDER. In other words, if you are a doctor or a lawyer and you are investing in a fund that isn't very transparent, I would think that you would assume in any logical way that you were taking more risk.

Mr. LO. You should, that's correct.

Mr. SOUDER. Now, what becomes fundamental here, and what a lot of people—and understand that I voted for both versions of the rescue package, but there is a lot of bitterness in my district of Indiana, which is relatively conservative, and as we see other parts of the country struggling, where they got great rewards and now are getting penalized and expect the rest of us to pick up some of their risk because they don't want to assume the risk. Now, in your written comments, you more or less compare that. You say people have a propensity to irresponsible behavior, more or less comparing drunks, people who drink too much and go out and drive, to some of the people here who weren't paying attention to the risk part. But then those of us who don't get drunk and go out and drive are now expected to bail them out. And this is why there is so much anger at the grass roots level because there seems to be a disconnection from reward and risk because in fact not everybody took those kinds of risks, not everybody invests in the higher risk parts.

In this risk, as we look at the debate over hedge funds and other things, how much do you believe this risk was a question of the mortgage market than being the core of all the other questions?

Mr. LO. Well, I think that certainly the mortgage market was the epicenter for this series of losses, and there is a fundamental issue about how those markets grew so quickly over time without the proper infrastructure to be able to support that. And the idea behind regulation is to try to correct those kinds of market failures.

Mr. SOUDER. Do you believe that the securitization of the credit card market is starting to look like what happened in the mortgage market?

Mr. LO. It does have the same elements, yes.

Mr. SOUDER. And part of the question here is because, in your discussion of risk and what you just said in response to Mr. Tierney, is that part of the problem here is people who really weren't thinking they were getting risk in their ability to absorb risk suddenly found risk. The question there is is, where were the pension managers? In other words, part of the debate here is how much does government provide the regulation? And I have a business degree and a management degree, and the more we have these hearings, the more I am thinking is did people pay any attention in class? Did any of them really know what being a manager means? That maybe an individual goes out and gets drunk and drives, maybe somebody does irresponsible behavior, but that is why you hire pension managers. Where were they?

Mr. LO. Well, part of the problem that I mentioned in my written testimony is that we didn't have enough expertise in financial markets to properly assess these risks.

Mr. SOUDER. Let me interrupt a minute. You said—this is basic stuff—that risk was correlated with return, that where you put your money was related, that the housing market, anybody could see it was going bananas out of doubling in growth, that anybody in elementary could see that as you extend it to six paths and different tranches, you are getting farther and farther out, which normal basic management would say, go check your base, the farther out you go, go check your base; normal management would say that as you are doing more overseas risky investment, you should do that. The pension fund managers, while I understand that it wasn't perfect information, that in a sense was a warning too, the less information you have.

I am trying to come back here. Some of this has to be blamed on incompetence of management, and yet nobody will take the blame, no individual manager will take blame, no government agency will take blame, and I would argue that in fact many people got out of these markets, some funds didn't get into these markets because in fact they saw it.

Mr. LO. Well, as Warren Buffett said, "a rising tide lifts all boats." And during periods of great prosperity there is a complacency that is induced by this kind of success that blinds people to risks. And that is one of the purposes for better transparency and, frankly, for regulation.

Mrs. MALONEY. Thank you very much.

Congressman Lynch.

Mr. LYNCH. Thank you, Madam Chair, for holding this hearing, and I want to thank the panelists as well for their thoughtful advice for the committee.

Just a quick comment. I know we are trying to make comparisons to the Amaranth situation, the Amaranth collapse, as well as Long Term Capital Management, and it is difficult to make a broad projection from just a couple of examples. But I do want to note that the Amaranth collapse was simplified in some degree by the fact that it was largely an effort to corner the market on one commodity, natural gas. And fortunately it was a good time in the market. And you are right, Mr. Shadab, that they were able to dump other higher quality corporate equities into the market. And it was a good time to sell, so they were able to cushion some of their losses.

However, if you look at the Long Term Capital Management example, there was less than $3 billion in the fund, but they had by leverage built that up to about $100 billion and actually, by the use of complex derivatives, had a notional value of over a trillion dollars; a trillion dollars notional value, they had $3 billion in the fund. So that really spells the possibility for systemic risk, at least to me.

Let me just go back. You all have said, to some degree, with the exception of Mr. Bankman, I think, that hedge funds didn't cause this collapse, they didn't cause it. And I agree with that statement. However, I want to ask you, do you think that the structure and the opacity—and let's remember now, hedge funds have purchased the vast majority of these complex derivatives and CDOs, they are the major purchasers here. Have they amplified the negative impact of this economic downturn? If they have not caused it, has their structure and the lack of transparency and the concentration in those complex derivatives and CDOs, has that amplified the impact of the crisis? I would like you all to comment.

Mr. RUDER. I would like to take the first crack at that if you don't mind. I think that is the case. I think that the participation in the complex derivative markets by hedge funds in large quantities have contributed to the complexity of the market and to the risks that are there in the markets. And that is why I think we should have some system for having the hedge fund positions be known to a central regulator so that regulator could look at all risk positions across the markets and see where the systemic risk problems are. It might also be able to identify the Long Term Capital Management twin in which there is a single hedge fund participant who may itself bring down the market.

Mr. LYNCH. Professor Lo.

Mr. LO. The short answer to Congressman Lynch's question is, I don't know. I don't think anybody knows because we don't have that kind of transparency to be able to say for sure whether hedge funds have exacerbated or possibly ameliorated the kind of market gyrations that have gone on in this particular area. That is one of the reasons we need transparency. However, it is the case that hedge funds, because they take on these extraordinary risks, provide a valuable service, but when those risks end up causing great losses, the opposite side of that same coin is that they can provide great dislocation.

Mr. LYNCH. Mr. Shadab.

Mr. SHADAB. A couple of things. The real core of this crisis is that banking institutions, commercial banks and investment banks, had these CDOs and other mortgage-related securities on their assets. So to the extent that hedge funds had purchased them from the banking institutions and other investors, that purchase has been taken away from banks, they have ameliorated the crisis to that extent. If these banks had gotten all the bad assets off of their books, we wouldn't have that core epicenter of a crisis happening from a banking sector, which is so important for the entire economy happening in the way we did right now.

In addition, it is important to distinguish between credit default swaps, which are derivatives, and collateralized debt obligations, which are actually securities. Now, hedge funds were very large traders, but not the largest, it was banks, of CDSs, credit default swaps. And their trading of those instruments, along with banks' trading of those instruments, have really brought liquidity and some price discovery and transparency into the risks that are associated with their underlying credit obligations. And, in fact, the fall of any institution in relation to their——

Mr. LYNCH. I am sorry, Mr. Shadab, you are burning my time. Do you think it has amplified the impact, or no? And I appreciate it, and I don't mean to cut you short, it is just that with this structure we have very little opportunity.

Mr. SHADAB. It is hard to be sure. I don't think so though.

Mr. LYNCH. That is fair enough.

Professor Lo, just with the last few seconds I have, you did mention the idea about this NTSB type organization to be able to come in. The only problem I have with that is that the NTSB usually comes and does accident reconstruction. They are not very good proactively, but they are excellent in forensically telling us what actually happened. I am out of time, but at some point I would like to hear your thoughts on how that would actually operate because I think that is actually what we need.

And I thank all of the witnesses for your testimony today.

Mrs. MALONEY. Thank you, Congressman Lynch. And if Professor Lo would like to respond to your question.

Mr. LO. Thank you, Congressman Lynch. I believe that the National Transportation Safety Board is an incredibly valuable tool for developing deeper understanding into a variety of different failures and blowups. And while you are right that the NTSB does not have any oversight responsibilities, the FAA obviously controls issues regarding airline safety, the fact is that by publishing a publicly available report that describes the details of various accidents, the public learns an enormous amount of what happened and how to prevent it from happening in the future. And I think this is the most sensible starting point for thinking about new regulations in this industry.

Mrs. MALONEY. Thank you very much.

Mr. LYNCH. Thank you. Thank you, Madam Chair.

Mrs. MALONEY. Congressman Yarmuth.

Mr. YARMUTH. Mr. Shadab, I am going to start with you. We are going to have on the next panel several people who are very wealthy and who have been involved in these types of activities. From a practical perspective, is there any difference between what any one of these next panel of witnesses can do and what a hedge fund can do; they can do as individuals what a hedge fund can do?

Mr. SHADAB. Do you mean a distinction between their own personal——

Mr. YARMUTH. Yes. I mean, you have George Soros, with a net worth of billions of dollars, you have a Warren Buffett—not on the panel—but you have a Warren Buffett with billions of dollars, you have a Michael Bloomberg with billions of dollars. Is there anything that prevents them from doing what a hedge fund does?

Mr. SHADAB. With their own personal wealth, I don't think there is anything that prevents them from doing the same thing.

Mr. YARMUTH. So in your testimony, when you say that there is a danger in regulating hedge funds because they would lose their unique benefits, why does it present a unique benefit when any individual with a lot of money can do the same thing?

Mr. SHADAB. Because it allows an investment manager not to use their own personal wealth, but to pool it from others. Sure, there are exceptions when you have hedge fund managers who over time accumulate their own large personal wealth and can basically run their own hedge funds without having to go to investors. But typically a hedge fund manager, in order to implement their trading, will need wealth from other investors.

Mr. YARMUTH. So the hedge fund manager who is putting these deals together, when you mentioned the societal benefits of hedge fund managers, that is really not what the hedge fund manager is interested in, he or she is not interested in necessarily highlighting the deficient management style of a corporation?

Mr. SHADAB. They don't need to be to create those benefits.

Mr. YARMUTH. But that is not their motivation?

Mr. SHADAB. I would say unlikely that is the case, correct.

Mr. YARMUTH. So if we are worried about the impact, whether or not, as Professor Ruder described, we can definitively describe what the systemic risk is, we similarly cannot describe the systemic benefit of hedge funds, it seems to me either, can we, Professor Ruder?

Mr. RUDER. We could, by aggregating information, know where the hedge funds as a group are headed and be able to find out where they are hedging and what they are doing. I don't think that would be the purpose of the aggregation of risk information, but a regulator gathering information from all sources would be able to reach some conclusions and take some action, and may also even be able to issue some public statements which would help the public to know what is going on.

Mr. YARMUTH. I mean, I have a little hard time grasping this philosophically because, again, if all we are talking about is a group of individuals, let's say the members of our next panel all got together and they say we are just going to do our own hedge fund, we are going to sit together in a living room and embark upon these strategies, there would clearly be no governmental interest that I could define except maybe some kind of a conspiracy to disrupt the market. So is that really what we are talking about, is a distinction without a difference?

Mr. RUDER. I think you are talking about the aggregation of assets by the hedge funds in ways that will far surpass the billions of dollars that these individual investors have. And that is the reason that we are concerned about it.

Mr. YARMUTH. So this is a question of size. This is the whole argument about being too big to fail that we have dealt with with AIG and some of the other entities that we are talking about.

Mr. RUDER. Well, I am not talking about too big to fail in the sense that when we find a hedge fund that is going to fail that we run to bail it out. I think we need to know what the effects of that failure will be on our system and, if necessary, take some preventative steps.

Mr. YARMUTH. I tend to agree with you, that is why I am trying to ask this series of questions. Because when I read that in some cases that all the trades on the New York Stock Exchange, 5 percent of all the trades were controlled by one trader in a particular session, that is very disturbing because that is an unbelievable amount of market power.

I want to ask one question of Professor Bankman, also. I have a friend who is a person I call upon to discuss these things. He is a master of the universe, he will remain nameless. And when I talked about carried interest with him several months ago, he said the problem with doing anything with carried interest is that all the hedge funds will do is restructure their organizations so that they will convert everything into pure capital gains. They will take equity interest in the entity and then take capital gains, in which case the revenue to the Federal Government will actually be delayed—it will not increase it, it will be delayed because they will just hold the investments longer. Do you have a response to that argument?

Mr. BANKMAN. Yeah. I don't think that is going to happen. Whenever you pass a tax measure, it is always imperfect and there is always ways to get around it. And so you are always trying to come up with a compromise that is going to get revenue and hopefully not make the law too complicated and improve efficiency and equity, and there will always be ways around it. I have read the arguments that the industry is going to reorganize. And you know, the two and twenty and present form of industry organization have been around for a long time even when, by the way, capital gain was not a factor as it is not with respect to certain hedge funds. And I think experience shows that reorganizing industries and changing the way people do business is very costly and it doesn't happen very easily.

So while I think that is something to watch, I amnot convinced that is the concern that some people think.

Mrs. MALONEY. Thank you very much.

Chairwoman Norton.

Ms. NORTON. Thank you, Madam Chair.

I am interested in a subject that is raised time and time again during this crisis, and that is the notion of regulation. It appears that we may have moved out of the mode we have been in in a kind of to be or not to be—to regulate or not to regulate, that is—to something we don't hear a lot of discussion about, if you want to regulate, who is going to do it, who is going to do it? Not a lot of meat on those bones. Indeed, there may be a contest among various agencies. So I looked at your testimony.

Let's start with you, Professor Lo. You raised the idea, and it is interesting, you say that one would have to expand the scope—of course one would, one doesn't think of the Federal Reserve as such a regulatory agency—but you raise the notion of the Federal Reserve as the direct oversight agency for these largest of these funds. Why do you think the Federal Reserve is the best of the agencies to do such regulation?

Mr. LO. Well, primarily because the main issue regarding hedge funds and systemic risk is their impact on the liquidity of markets. And as we know, the Federal Reserve is the lender of last resort, they are the manager of market liquidity. So if it is a liquidity issue that threatens the global financial system through the hedge fund industry, the Federal Reserve would be the natural regulatory agency to focus on that.

Ms. NORTON. Chairman Ruder, in your testimony you suggest the agency you chaired, the SEC, to essentially have hedge funds register with the SEC. How do you think a rule to register with the SEC would improve its ability to monitor and—think this crisis now—would help to reduce the systemic risks we have seen?

Mr. RUDER. Well, first of all, I think that the registration provisions ought to extend to hedge funds, as they do not under the current law. Second, the registration would allow the SEC to engage in inspection activities. But currently they do not have the power, even in the inspection of investment advisers, to seek risk management information. And I would expand that inspection power so that they would be able to go into a hedge fund adviser and find out what are the risk management systems that are being used; what are the nature and extents of the risks, and who are the counterparties. And that would help the SEC, first of all, to make some judgments about whether the risk management systems are good and, second, to pass information on to a central regulator, such as the Federal Reserve Board, to aggregate that information and come to some decisions about how to manage the liquidity risk on the economy.

Ms. NORTON. I wish you would tell me the difference between what you are proposing now and the rule apparently in 2004 that the SEC actually passed. The hedge fund sector, however, heavily lobbied against the rule, and it was ultimately overturned by the courts. Chairman Cox from the SEC did not seek to appeal it and did not come to Congress for new authority. So the SEC, I take it, has no authority now, not even the authority under that rule. What is the difference between that rule and the rule, if any, that you have in mind?

Mr. RUDER. Well, the Goldstein case overruled the SEC's attempt to have inspection rights over hedge fund advisers, and the Commission did not appeal that ruling.

Ms. NORTON. Did you support that rule?

Mr. RUDER. Yes. I support the fact that they should have inspection right over all hedge fund advisers. And as I said, I think that is going to take congressional action. And I think the inspection power ought to be increased so that they are able to get the kind of risk management information that is needed to protect society.

Ms. NORTON. Well, Professor Lo, do you see this kind of marriage between the SEC and the Federal Reserve that could come out of, listening to both of you, that the information would be passed on to the Federal Reserve and then you would have a regulatory setup that we could have confidence in?

Mr. LO. Well, no, I don't, Congressman Norton. I feel that there is a different—there is a different purpose for registration under the 1940 act, which is investor protection. Investor protection is a separate issue from systemic risk. And I believe that even now, if you ask all hedge funds to register under the Investment Advisers Act, they will not provide the kind of information that we need in order to get transparency.

Ms. NORTON. So transparency is not enough, you need somebody to be a regulator; and you think that should be the Federal Reserve?

Mr. LO. That's right.

Mr. RUDER. Could I just comment? What I am saying is you need to have an expansion of the inspection power. The Federal Reserve already can receive information from the banking sector. And the Federal Reserve's administration of the banking sector has different objectives than the SEC's regulation of the securities sector. Banking regulators are concerned about safety and soundness of banks; the SEC is concerned about the capital markets and the matter of risk-based activities. I think we need two regulators sharing information rather than a single regulator.

Ms. NORTON. Professor Lo, would you like to respond to that?

Mr. LO. It is always dangerous to disagree with a former chairman of the SEC, but let me say that I think the information regarding systemic risk is different from the information under the Investment Advisers Act. And with regard to garnering information about systemic risk, it is possible to obtain that, not necessarily directly from hedge funds, but from the prime brokers that have all of the positions, all the leverage and all of the counterparties among the hedge funds. So it is now possible to obtain that information very efficiently from a very small number of prime brokers.

Ms. NORTON. Thank you very much, Madam Chair.

Mrs. MALONEY. Mr. Cooper is recognized for 5 minutes.

Mr. COOPER. Investors need to know how to swim, but we have also got to keep the sharks out of the pool. When you have large pension funds investing in hedge funds, shouldn't there be truth in advertising so that they know whether it is a true hedge fund or whether it is not hedging at all, but in fact speculating heavily? And shouldn't, perhaps, the speculative funds be called speculative funds? But the current situation with trade secrets, a black box surrounding the true investment strategy, pension managers don't really know whether they are getting hedging or speculation.

Professor Lo.

Mr. LO. What I would argue is that it is always a good idea to have truth in advertising, and certainly that applies to the hedge fund industry as well as any other. Another example of truth in advertising is money market funds that have the one dollar NAV, but in fact don't have that kind of guarantee for that one dollar and they break the buck. That is another example of less than truth in advertising.

Mr. COOPER. What about volatility-only strategies? The roller coasters we see in the market, 500 point swings in a day, that is neither long or short. Is that productive behavior? When Joseph Schumpeter said capitalism is the process of creative destruction, he really didn't endorse the roller coaster at the same time, did he?

Mr. LO. Well, in a way I think Schumpeter did because his argument is that free flowing capitalism is going to require occasional blowups just like what we are going through now, and out of the ashes a much stronger capitalistic system should arise.

Mr. COOPER. Well, why not 1,000 point swings in a day, or 2,000 point swings; wouldn't that be even more productive?

Mr. LO. Not necessarily. It depends upon whether the underlying economics justifies it. But as I said, if you have the proper disclosure for investors, if they are prepared for those kinds of swings, then that would be fine.

Mr. COOPER. "If" can be the longest word in the English language. What about want-to-be hedge fund managers, not just rogue traders for folks inside perhaps large commercial banks who get enough leeway to pretend they are hedge fund managers, how significant a sector would this be and how dangerous are they?

Mr. LO. Well, clearly that does pose a danger, but hopefully over time those managers ultimately get weeded out. And the process of hedge funds closing and new hedge funds rising I think really underscores that kind of birth and death process.

Mr. COOPER. Well, these wouldn't necessarily be authorized, the push for yield is so great. Sometimes you can look the other way and these operations are so vast you don't necessarily know what in fact is being done.

Mr. LO. I agree.

Mr. COOPER. Is there a way to measure the size or significance of a want-to-be hedge fund?

Mr. LO. Currently, no, there is no way because we don't have that level of transparency. That is one of the reasons that I think all of us are calling for that.

Mr. COOPER. I think the key area is going to be the interaction between hedge funds and derivatives. As I understand derivatives, it is possible to buy derivative products with embedded leverage. So when you, in your excellent testimony, cited relatively low leverage ratios, especially recently, you have to really look at the combined measure of leverage, don't you? And still the committee is without information on that, the true leverage that is in fact involved.

Mr. LO. That's right. That is another area where I think greater transparency is necessary. Leverage by itself is not necessarily a bad thing, but undisclosed it can be.

Mr. COOPER. Should there be capital requirements for derivatives?

Mr. LO. I agree with Mr. Ruder that we need to have organized exchanges, standardized contracts, and a clearing corporation for certain OTC derivatives like credit default swaps.

Mr. COOPER. How are these hedge funds going to operate without investment banks now that all the major investment banks have converted into bank holding companies? And I guess the real question is, how are they going to operate without the deep capital markets that they were accustomed to?

Mr. LO. Well, hedge funds are nothing if not adaptive. And my sense is that they will certainly adapt to this new economic reality very quickly; in fact, I believe that they already have. And new hedge funds are being started to take advantage of the kind of opportunities that are presented by current market conditions.

Mr. COOPER. I see that my time is expiring.

Chairman WAXMAN. Mr. Sarbanes.

Mr. SARBANES. Thank you, Madam Chair. I thank you all for your testimony.

I wanted to get to this concept of the sophisticated investor a little bit more because it is sort of the underpinning of the original exemptions from the statutes that are quite old now, and must have been based on premises and a rationale that is obsolete in many ways. And as I listen to this discussion, the exemptions are designed for people who are sophisticated, for institutional investors and so forth. But it seems like the standard for exemption ought not to be so much the sophistication, although I would like you to tell me if you think, Professor Bankman, for example, whether anyone can be sophisticated enough these days to warrant an exemption? But the standard maybe ought to be not how "sophisticated" you are, but what kind of investments you are holding, who is giving you their money to invest and how much damage can you do with it.

So speak to that, because I think that is going to—reassessing this concept of the sophisticated investor may be the foundation for the overall redesign of the regulatory framework in this particular arena. So maybe you can talk to that.

Mr. BANKMAN. Well, you probably don't want the tax guy on the panel. So I think I should throw that to my colleagues here probably.

Mr. RUDER. Well, the Securities and Exchange Commission has recognized the need for higher dollar limits to create a threshold for accredited investors. And it has a proposal it has made but not adopted saying that you have to have $5 million in investable assets in order to become a sophisticated investor and be able to invest in a pool of vehicles. That is a very good step in the right direction. The problem is, as we begin to say who is sophisticated and who is not sophisticated, it is not always that dollar levels are going to be the determining amount.

We have already been wondering how some of the pension funds got involved in the hedge fund area, and there all I can say is that we have to draw a line someplace and say we are going to put the responsibilities on the stewards of other people's money to make proper investigations. We can't proceed by bright line dollar numbers in every case to make distinctions because at some point by putting bright dollar levels at the high, high levels we are going to prevent the kind of investment we have had.

So I think the Commission is on the right track going toward a $5 million assets under investment as a bright line.

Mr. SARBANES. Professor Lo, do you want to talk about this sophistication concept?

Mr. LO. Sure. You know, in financial markets there is a common risk of confusing your W–2 with your IQ. Just because you are wealthy does not necessarily make you sophisticated. So I have always thought that the sophisticated investor threshold was really more about the ability to withstand losses. But I think when it comes to institutional investors where there is a fiduciary responsibility, for example, pension plan sponsors, it may make sense to actually impose some kind of an educational minimum so that we can be assured that a pension plan sponsor that has fiduciary responsibilities to pension plan participants would be investing wisely.

Mr. SARBANES. I guess what I am struggling with is you are looking at this in terms of what the burden is on the investor to demonstrate their sophistication and I am thinking about it in terms of the arena into which that investor goes and whether that arena is regulated. The concept seems to be that once a group of people are determined to be sophisticated then you are going to let them into a ring that is completely unregulated because they are sophisticated. But you may be letting them into a ring where they can do a lot of damage, where they can run over a lot of innocent bystanders and so forth. So that standard ought to be operating more than it has in terms of deciding whether to regulate that area.

Mr. LO. Well, I would agree with that wholeheartedly, but I would also add that, in defense of pension plan sponsors that have put money in hedge funds, first of all, by and large their amount of investments that they have put into hedge funds is fairly low, probably less than 5 percent of pension assets in the aggregate.

Second, if you look at the performance of hedge funds as a category, as a broad group for 2008, hedge funds are probably down on average 10 percent to 15 percent for the year, where as the S&P is down about 30 to 35 percent for the year. And so the idea behind hedge funds being able to take short positions and benefit from down markets, that is something that pension plans have benefited from. However, there are blowups that occur, and that is one of the reasons I have argued that we need to examine those blowups to make sure that other investors, including pension plan sponsors, are fully aware and fully prepared for those eventualities.

Mr. SARBANES. And of course, as we discussed with Chairman Greenspan, when blowups occur the people that get hurt are not just the ones that are driving the train or driving the car, or whatever, it is this group of bystanders that gets pulled in as well.

Thank you.

Chairman WAXMAN [presiding]. Thank you, Mr. Sarbanes.

Mr. Van Hollen.

Mr. VAN HOLLEN. Thank you, Mr. Chairman. And I thank all of you gentlemen for your testimony.

Professor Ruder and Professor Lo, I have some questions related to your proposal to require greater transparency. I think we have talked a little bit about the history of efforts to provide greater transparency and reporting requirements, for example, putting hedge funds under some of the reporting requirements and jurisdiction of the SEC, both to protect investors, including, as we have heard, lots of pension funds, as well as to address the potential for systemic risk and have an early warning system to detect that.

Let me just take that one step further. Assuming we change the law and provide for greater transparency and allow the SEC to get this information—I understand you are suggesting on a confidential basis—what powers would you suggest the SEC have when it looks at that information and says that either the investors are at risk or you face a systemic risk? Would you be proposing the SEC also have additional powers, for example, changing leverage requirements with respect to a particular hedge fund if, based on the information they collect, they say hey, we have a real problem here? What additional powers would you give to the SEC if they reveal, through their investigation, a serious threat either to the investors or a systemic risk?

Mr. RUDER. I am not suggesting that the SEC be given that kind of power. I think the SEC should learn what the management systems are, inspect those management systems, risk management systems, and criticize the way they are operating.

With regard to the broad information about leverage, about risk positions, I think that should go to a regulator such as the Federal Reserve Board, which would then be able to aggregate that information and take some steps regarding the entire economy. I think it would be wrong for the result of this regulatory reform that we are going through to have some government agency try to tell investors what their leverage should be. The exception of that, of course, is in the banking area, where the banking credential regulators do impose leverage requirements. But I think for the high-risk individuals, including the hedge funds, we should not be doing that.

Mr. LO. Well, at this point, I think it would be premature for me to propose any kind of additional powers to be granted to the SEC or any agency since there is so little that we know about the sector. But as a hypothetical, if the kind of information that Professor Ruder and I propose to be disclosed shows a very large and isolated risk for one or two too-big-to-fail organizations, at that point it may be the case that the Federal Reserve would be called in to impose either capital adequacy requirements or maximum leverage constraints on that too-big-to-fail institution. But that is still very much a hypothetical.

Mr. VAN HOLLEN. Let me just followup a little bit on that point. I mean, the Federal Reserve today would have the power to go and do that now, so let me make sure I understand both your testimony. You, Professor Ruder, wouldn't give that to the SEC. And I understand, Professor Lo, you would say that if the SEC found something that would be a big problem for the economy, they would then go to the Federal Reserve. But let me just make sure I understand. Would that require that Congress provide the Federal Reserve with additional authorities with respect to hedge funds in this area to take action?

Mr. LO. I believe so.

Mr. RUDER. I believe so, too. It probably should be the Federal Reserve, but you have the Treasury blueprint talking about a market stability regulator, somebody that might play that function. I happen to think that the Federal Reserve is the right agency to do that.

Mr. VAN HOLLEN. If I could just ask you a quick question on the short positions. There is a lot of discussion about the role of hedge funds and naked short selling. Of course the SEC took action. Do you think that hedge funds should be required to disclose their short positions on an ongoing basis?

Mr. LO. Well, I believe that under certain conditions it may be advisable for hedge funds to disclose, but not necessarily publicly. Hedge funds spend a lot of time and effort developing models and information about over-valued companies. That information is extraordinarily important to get into the capital markets. If we eliminate the incentives for them to do so, we will hurt the informational efficiency of markets. But there are certain situations that may call for kind of a 13-F filing for short positions, but not necessarily to be made public, but to be given to regulators.

Mr. VAN HOLLEN. But let me just ask you; would you, on a confidential basis to the regulator, would you have that on an ongoing basis, the short selling disclosed?

Mr. LO. Yes.

Mr. VAN HOLLEN. Professor Ruder.

Mr. RUDER. I agree with that. He refers to 13-F. That is the kind of filing that is required when the numbers get fairly high. So that we wouldn't be just asking for all short sale positions to be revealed, but only the very large ones.

Mr. VAN HOLLEN. Thank you, Mr. Chairman.

Chairman WAXMAN. Mr. Shays.

Mr. SHAYS. Let me ask you this basic question: What is the greatest value—I realize you can't repeal the law of gravity, so I am not looking to get rid of hedge funds. But tell me the greatest advantage or value to society of hedge funds and the greatest disadvantage of hedge funds. I would like to go down the line.

Mr. RUDER. Well, the hedge funds provide liquidity to the system because they invest and they sell short. They provide price discovery by choosing the way they invest. They provide the additional benefits of being large participants in the system.

Mr. SHAYS. Would anyone add any additional advantage to a hedge fund? Yes, sir.

Mr. SHADAB. One additional social benefit that hedge funds have created is disciplining corporate managers with whom they invest. Not a large percentage of hedge funds are devoted to being corporate activists, but the ones that are corporate activists actually do very well at disciplining management. For example, a recent study has shown that if a hedge fund takes a corporate activist position in a company, CEO compensation would typically decrease by, let's say, a million dollars, and an overall long-term value is created for the other company shareholders.

Mr. SHAYS. Any other advantage?

Tell me the greatest disadvantage or greatest risk of hedge funds.

Mr. RUDER. Well, the hedge funds do take positions, particularly in the derivatives market and particularly at using leverage, which create tremendous risks. And it may be that one hedge fund would be in a position to create calamity in the market, or it may be the aggregation of a number of hedge fund positions might cause problems.

Mr. SHAYS. Anybody want to add something to that?

Mr. RUDER. I would add one more. When they begin to sell in times of stress, they do cause dislocations in the market in terms of asset sales and stock sales.

Mr. SHAYS. I represent—at least until the end of next month—the largest concentration of hedge funds I think in the world in the Fairfield County/New York area. In other words, they either sleep in the district and work in New York or they actually work in the district as well. And their argument to me constantly was, you know, these folks know what they are doing, they have the money to risk and they know what they are doing, they are wise investors and they would suggest large, you know, universities and so on who know the risks. And never then was it discussed that, in a sense, Wall Street could bring down Main Street.

Was it obvious to all of you in the last 5 or 6 years that we were going to encounter what we are encountering now? I would like to ask each of you. And let me start backward.

Mr. Shadab.

Mr. SHADAB. Yes, because housing prices could not keep going up forever.

Mr. SHAYS. But this was obvious to you, that we would be dealing with the kind of mess we are in right now?

Mr. SHADAB. Not necessarily the extent of it, no.

Mr. BANKMAN. Well, I am just a tax guy. So I am going to pass to Professor Lo.

Mr. SHAYS. You are just a coward.

Mr. LO. Well, I may not use the word "obvious," but starting in 2004 I published a series of papers highlighting the fact that there was growing indirect evidence that a dislocation in the hedge fund industry was building, and so certainly the indirect evidence seemed to show that was the case.

Mr. RUDER. In 1998, I testified before the House Banking Committee suggesting that there be the kind of information disclosure I suggested today, so that 10 years ago I was concerned about this problem of opacity in this market.

Mr. SHAYS. Well, part of my question for asking is—good for you. And, you know, sometimes we don't notice the people who were out in front years ago attempting to make this point heard.

The head of Lehman Brothers, Dick Fuld, in a hearing before this committee, laid a large deal of blame for Lehman's collapse on hedge funds shorting the stock. Would any of you care to comment on that?

Mr. SHADAB. I think that is sort of reversing the cause and effect. A prominent hedge fund manager, David Einhorn, back in March of this year, he called out Lehman Brothers' financial statements and saying, wait a second, you are not fully disclosing all of your risks with investors. He sold the stock short. So the problem was Lehman Brothers, not the short sellers. They attracted the short sellers because of their financial mismanagement.

Mr. SHAYS. So the bottom line is you don't agree?

Mr. SHADAB. Correct.

Mr. LO. I would say don't kill the messenger.

Mr. RUDER. And I don't, no.

Mr. SHAYS. Don't kill the messenger. Who is the messenger?

Mr. LO. The messenger in the sense are the short sellers that are trying to get the message across that a company is overvalued.

Mr. SHAYS. Is it necessary to increase regulation on hedge funds, or would creating an exchange for derivatives trading be sufficient?

Mr. RUDER. I think the creation of standardized derivative contracts and this clearing and settlement and exchange trading would be a very fine step in the right direction. We are having today steps toward creating a clearance and settlement platform for derivative contracts. I think that is a very good step in the right direction to overcome the opacity and counterparty risk problems we have.

Mr. LO. I agree, but I don't think that we know whether or not it would be sufficient.

Mr. SHADAB. I think that goes too far to push all derivatives onto a centralized exchange. I think the only problems that we have had with the credit default swaps is with either involvement with insurance companies and model line insurers, not a typical derivatives trader.

Mr. SHAYS. Thank you, Mr. Chairman.

Chairman WAXMAN. All Members having asked questions, I want to thank this panel for your testimony. It has been very helpful to us, and we appreciate you being here.

We are going to take a 5-minute recess while we seat the next panel. So we will reconvene in 5 minutes.

[Recess.]

Chairman WAXMAN. The committee will please come back to order.

Our second panel consists of five of the most successful hedge fund managers of 2007. George Soros is the chairman of Soros Fund Management. James Simons is the president of Renaissance Technologies. John Paulson is the president of Paulson & Co. Philip Falcone is the senior managing partner of Harbinger Capital Partners. And Kenneth Griffin is the president and chief executive officer of Citadel Investment Group.

And we are pleased to welcome all of you to our hearing today.

I appreciate your being here and cooperating with our committee. I understand Mr. Falcone had to reschedule an overseas business trip to join us today, and I particularly appreciate the fact that he is here.

It is the practice of this committee that all witnesses that testify before us do so under oath. So I would like to ask each of you before you even begin giving your testimony that you stand and raise your right hands.

[Witnesses sworn.]

Chairman WAXMAN. Thank you.

The record will indicate that each of the witnesses answered in the affirmative.

Your prepared statements will be in the record in full. What we'd like to ask each of you to do is to make a presentation to us, mindful of the fact that we will have a clock that will be green for 4 minutes, orange for 1 minute and then red at the end of 5 minutes. And at that point, if you see that it is red, we would like to ask you to conclude your oral presentation to us. We are going to want to leave enough time for questions by the Members of the panel.

Mr. Soros, we'd like to start with you. There is a button on the base of the mic, be sure it is pressed in. Proceed as you see fit.

STATEMENTS OF GEORGE SOROS, CHAIRMAN, SOROS FUND MANAGEMENT, LLC; JOHN ALFRED PAULSON, PRESIDENT, PAULSON & CO., INC.; JAMES SIMONS, PRESIDENT, RENAISSANCE TECHNOLOGIES, LLC; PHILIP A. FALCONE, SENIOR MANAGING PARTNER, HARBINGER CAPITAL PARTNERS; AND KENNETH C. GRIFFIN, CHIEF EXECUTIVE OFFICER AND PRESIDENT, CITADEL INVESTMENT GROUP, LLC.

STATEMENT OF GEORGE SOROS

Mr. SOROS. Thank you, Mr. Chairman.

We are in the midst of the worst financial crisis since the 1930's. The salient feature of the crisis is that it was not caused by some external shock, like OPEC raising the price of oil. It was generated by the financial system itself.

This fact, that the defect was inherent in the system, contradicts the generally accepted theory about financial markets. The prevailing paradigm is that markets tend toward equilibrium. Deviations from the equilibrium either occur in a random fashion or are caused by some sudden external event to which markets have difficulty in adjusting.

The current approach to market regulation has been based on this theory. But the severity and amplitude of the crisis proves convincingly that there is something fundamentally wrong with it.

I have developed an alternative paradigm that differs from the current one in two important respects: First, financial markets don't reflect the underlying conditions accurately. They provide a picture that is always biased or distorted in some way or another.

Second, the distorted views held by market participants and expressed in market prices can under certain circumstances affect the so-called fundamentals that market prices are supposed to reflect. I call this two-way circle of connection between market prices and the underlying reality "reflexivity." I contend that financial markets are always reflexive, and on occasion, they can be quite far away from the so-called equilibrium. In other words, it is an inherent characteristic of financial markets that they are prone to produce bubbles.

I originally proposed this theory in 1987, and I brought it up to date in my latest book, "The New Paradigm for Financial Markets: The Credit Crisis of 2008 and What It Means." I have summarized my argument in the written testimony I have submitted. Let me recall briefly the main implications of the new paradigm for the regulation of financial markets.

The first and foremost point is that the regulators must accept responsibility for controlling asset bubbles. Until now, they have explicitly rejected that responsibility.

Second, to control asset bubbles it is not enough to control the money supply. It is also necessary to control credit because the two don't go in lock step.

Third, controlling credit requires reactivating policy instruments which have fallen into disuse, notably margin requirements and minimum capital requirements for banks. When I say reactivate them, I mean that the ratios need to be changed from time to time to counteract the prevailing mood of the markets because markets do have moods.

Fourth, new regulations are needed to ensure that margin requirements and the capital ratios of banks can be accurately measured. The alphabet soup of synthetic financial instruments, CDOs, CDSs EDSs and the like, have made risk less apparent and harder to measure. These new products will have to be registered and approved before they can be used and their clearing mechanism has to be regulated in order to minimize counterpart risk.

Fifth, since financial marketings are global, regulations must also be international in scope.

Sixth, since the quantitative risk management models currently in use ignore the uncertainties inherent in reflexivity, limits on credit and leverage will have to be set substantially lower than those that have been incorporated in the Basel Accords on bank regulation. Basel 2, which delegated authority for calculating risk to the financial institutions themselves, was an aberration and has to be abandoned. It needs to be replaced by a Basel 3 which will be based on the new paradigm.

How do these principles apply to hedge funds? Clearly hedge funds use leverage and they contribute to market instability in times like the present when we're experiencing wholesale and disorderly de-leveraging. Therefore, the systemic risks need to be recognized and more closely monitored than they have been until now. The entire regulatory framework needs to be reconsidered, and hedge funds need to be regulated within that framework. But we must be aware of going overboard with regulation.

Excessive deregulation is at the root of the current crisis, and there is a real danger that the pendulum will swing too far the other way. That would be unfortunate because regulations are liable to be even more deficient than the market mechanism itself. That's because regulators are not only human but also bureaucratic and susceptible to political influences.

It has to be recognized that hedge funds were an integral part of the bubble which has now burst, but the bubble has now burst, and hedge funds will be decimated. I will guess that the amount of money that they manage will shrink between 50 and 75 percent. It would be a grave mistake to add to the forced liquidation currently depressing markets by ill-considered or punitive regulations. I'd be happy to expand on these points in greater detail in answering your questions.

[The prepared statement of Mr. Soros follows:]

STATEMENT OF GEORGE SOROS

BEFORE THE U.S. HOUSE OF REPRESENTATIVES COMMITTEE ON OVERSIGHT AND GOVERNMENT REFORM

NOVEMBER 13, 2008

Thank you Mr. Chairman and members of the Committee.

The salient feature of the current financial crisis is that it was not caused by some external shock like OPEC raising the price of oil or a particular country or financial institution defaulting. The crisis was generated by the financial system itself. This fact—that the defect was inherent in the system—contradicts the prevailing theory, which holds that financial markets tend toward equilibrium and that deviations from the equilibrium either occur in a random manner or are caused by some sudden external event to which markets have difficulty adjusting. The severity and amplitude of the crisis provides convincing evidence that there is something fundamentally wrong with this prevailing theory and with the approach to market regulation that has gone with it. To understand what has happened, and what should be done to avoid such a catastrophic crisis in the future, will require a new way of thinking about how markets work.

Consider how the crisis has unfolded over the past eighteen months. The proximate cause is to be found in the housing bubble or more exactly in the excesses of the subprime mortgage market. The longer a double-digit rise in house prices lasted, the more lax the lending practices became. In the end, people could borrow 100 percent of inflated house prices with no money down. Insiders referred to subprime loans as ninja loans—no income, no job, no questions asked.

The excesses became evident after house prices peaked in 2006 and subprime mortgage lenders began declaring bankruptcy around March 2007. The problems reached crisis proportions in August 2007. The Federal Reserve and other financial authorities had believed that the subprime crisis was an isolated phenomenon that might cause losses of around $100 billion. Instead, the crisis spread with amazing rapidity to other markets. Some highly leveraged hedge funds collapsed and some lightly regulated financial institutions declared bankruptcy.

Confidence in the creditworthiness of many financial institutions was shaken and interbank lending was disrupted. In quick succession, a variety of esoteric credit markets—ranging from collateralized debt obligations [CDOs] to auction-rated municipal bonds—broke down one after another. After periods of relative calm and partial recovery, crisis episodes recurred in January 2008, precipitated by a rogue trader at Société Générale; in April, associated with the demise of Bear Stearns; and then in July, when IndyMac Bank, the largest savings bank in the Los Angeles area, went into receivership, becoming the fourth-largest bank failure in US history. The deepest fall of all came in September, caused by the disorderly bankruptcy of Lehman Brothers in which holders of commercial paper—for example, short-term, unsecured promissory notes—issued by Lehman lost their money.

Then the inconceivable occurred: the financial system actually melted down. A large money market fund that had invested in commercial paper issued by Lehman Brothers "broke the buck," i.e., its asset value fell below the dollar amount deposited, breaking an implicit promise that deposits in such funds are totally safe and liquid. This started a run on money market funds and the funds stopped buying commercial paper. Since they were the largest buyers, the commercial paper market ceased to function. The issuers of commercial paper were forced to draw down their credit lines, bringing interbank lending to a standstill. Credit spreads—i.e., the risk premium over and above the riskless rate of interest—widened to unprecedented levels and eventually the stock market was also overwhelmed by panic. All this happened in the space of a week.

With the financial system in cardiac arrest, resuscitating it took precedence over considerations of moral hazard—i.e., the danger that coming to the rescue of a financial institution in difficulties would reward and encourage reckless behavior in the future—and the authorities injected ever larger quantities of money. The balance sheet of the Federal Reserve ballooned from $800 billion to $1,800 billion in a couple of weeks. When that was not enough, the American and European financial authorities committed themselves not to allow any other major financial institution to fail.

These unprecedented measures have begun to have an effect: interbank lending has resumed and the London Interbank Offered Rate (LIBOR) has improved. The financial crisis has showed signs of abating. But guaranteeing that the banks at the center of the global financial system will not fail has precipitated a new crisis that caught the authorities unawares: countries at the periphery, whether in Eastern Europe, Asia, or Latin America, could not offer similarly credible guarantees, and financial capital started fleeing from the periphery to the center. All currencies fell against the dollar and the yen, some of them precipitously. Commodity prices dropped like a stone and interest rates in emerging markets soared. So did premiums on insurance against credit default. Hedge funds and other leveraged investors suffered enormous losses, precipitating margin calls and forced selling that have also spread to markets at the center.

Unfortunately the authorities are always lagging behind events. The International Monetary Fund is establishing a new credit facility that allows financially sound periphery countries to borrow without any conditions up to five times their annual quota, but that is too little too late. A much larger pool of money is needed to reassure markets. And if the top tier of periphery countries is saved, what happens to the lower-tier countries? The race to save the international financial system is still ongoing. Even if it is successful, consumers, investors, and businesses are undergoing a traumatic experience whose full impact on global economic activity is yet to be felt. A deep recession is now inevitable and the possibility of a depression cannot be ruled out. When I predicted earlier this year that we were facing the worst financial crisis since the 1930s, I did not anticipate that conditions would deteriorate so badly.

This remarkable sequence of events can be understood only if we abandon the prevailing theory of market behavior. As a way of explaining financial markets, I propose an alternative paradigm that differs from the current one in two respects. First, financial markets do not reflect prevailing conditions accurately; they provide a picture that is always biased or distorted in one way or another. Second, the distorted views held by market participants and expressed in market prices can, under certain circumstances, affect the so-called fundamentals that market prices are supposed to reflect. This two-way circular connection between market prices and the underlying reality I call reflexivity.

While the two-way connection is present at all times, it is only occasionally, and in special circumstances, that it gives rise to financial crises. Usually markets correct their own mistakes, but occasionally there is a misconception or misinterpretation that finds a way to reinforce a trend that is already present in reality and by doing so it also reinforces itself. Such self-reinforcing processes may carry markets into far-from-equilibrium territory. Unless something happens to abort the reflexive interaction sooner, it may persist until the misconception becomes so glaring that it has to be recognized as such. When that happens the trend becomes unsustainable and when it is reversed the self-reinforcing process starts working in the opposite direction, causing a sharp downward movement.

The typical sequence of boom and bust has an asymmetric shape. The boom develops slowly and accelerates gradually. The bust, when it occurs, tends to be short and sharp. The asymmetry is due to the role that credit plays. As prices rise, the same collateral can support a greater amount of credit. Rising prices also tend to generate optimism and encourage a greater use of leverage—borrowing for investment purposes. At the peak of the boom both the value of the collateral and the degree of leverage reach a peak. When the price trend is reversed participants are vulnerable to margin calls and, as we've seen in 2008, the forced liquidation of collateral leads to a catastrophic acceleration on the downside.

Bubbles thus have two components: a trend that prevails in reality and a misconception relating to that trend. The simplest and most common example is to be found in real estate. The trend consists of an increased willingness to lend and a rise in prices. The misconception is that the value of the real estate is independent of the willingness to lend. That misconception encourages bankers to become more lax in their lending practices as prices rise and defaults on mortgage payments diminish. That is how real estate bubbles, including the recent housing bubble, are born. It is remarkable how the misconception continues to recur in various guises in spite of a long history of real estate bubbles bursting.

Bubbles are not the only manifestations of reflexivity in financial markets, but they are the most spectacular. Bubbles always involve the expansion and contraction of credit and they tend to have catastrophic consequences. Since financial markets are prone to produce bubbles and bubbles cause trouble, financial markets have become regulated by the financial authorities. In the United States they include the Federal Reserve, the Treasury, the Securities and Exchange Commission, and many other agencies.

It is important to recognize that regulators base their decisions on a distorted view of reality just as much as market participants—perhaps even more so because regulators are not only human but also bureaucratic and subject to political influences. So the interplay between regulators and market participants is also reflexive in character. In contrast to bubbles, which occur only infrequently, the cat-and-mouse game between regulators and markets goes on continuously. As a consequence reflexivity is at work at all times and it is a mistake to ignore its influence. Yet that is exactly what the prevailing theory of financial markets has done and that mistake is ultimately responsible for the severity of the current crisis.

In my book *The New Paradigm for Financial Markets*,* I argue that the current crisis differs from the various financial crises that preceded it. I base that assertion on the hypothesis that the explosion of the US housing bubble acted as the detonator for a much larger "super-bubble" that has been developing since the 1980s. The underlying trend in the super-bubble has been the ever-increasing use of credit and leverage. Credit—whether extended to consumers or speculators or banks—has been growing at a much faster rate than the GDP ever since the end of World War II. But the rate of growth accelerated and took on the characteristics of a bubble when it was reinforced by a misconception that became dominant in 1980 when Ronald Reagan became president and Margaret Thatcher was prime minister in the United Kingdom.

The misconception is derived from the prevailing theory of financial markets, which, as mentioned earlier, holds that financial markets tend toward equilibrium and that deviations are random and can be attributed to external causes. This theory has been used to justify the belief that the pursuit of self-interest should be given free rein and markets should be deregulated. I call that belief market fundamentalism and claim that it employs false logic. Just because regulations and all other forms of governmental interventions have proven to be faulty, it does not follow that markets are perfect.

Although market fundamentalism is based on false premises, it has served well the interests of the owners and managers of financial capital. The globalization of financial markets allowed financial capital to move around freely and made it difficult for individual states to tax it or regulate it. Deregulation of financial transactions also served the interests of the managers of financial capital; and the freedom to innovate enhanced the profitability of financial enterprises. The financial industry grew to a point where it represented 25 percent of the stock market capitalization in the United States and an even higher percentage in some other countries.

Since market fundamentalism is built on false assumptions, its adoption in the 1980s as the guiding principle of economic policy was bound to have negative consequences. Indeed, we have experienced a series of financial crises since then, but the adverse consequences were suffered principally by the countries that lie on the periphery of the global financial system, not by those at the center. The system is under the control of the developed countries, especially the United States, which enjoys veto rights in the International Monetary Fund.

Whenever a crisis endangered the prosperity of the United States—as for example the savings and loan crisis in the late 1980s, or the collapse of the hedge fund Long Term Capital Management in 1998—the authorities intervened, finding ways for the failing institutions to merge with others and providing monetary and fiscal stimulus when the pace of economic activity was endangered. Thus the periodic crises served, in effect, as successful tests that reinforced both the underlying trend of ever-greater credit expansion and the prevailing misconception that financial markets should be left to their own devices.

It was of course the intervention of the financial authorities that made the tests successful, not the ability of financial markets to correct their own excesses. But it was convenient for investors and governments to deceive themselves. The relative safety and stability of the United States, compared to the countries at the periphery, allowed the United States to suck up the savings of the rest of the world and run a current account deficit that reached nearly 7 percent of GNP at its peak in the first quarter of 2006. Eventually even the Federal Reserve and other regulators succumbed to the market fundamentalist ideology and abdicated their responsibility to regulate. They ought to have known better since it was their actions that kept the United States economy on an even keel. Alan Greenspan, in particular, believed that giving users of financial innovations such as derivatives free rein brought such great benefits that having to clean up behind the occasional financial mishap was a small price to pay. And his analysis of the costs and benefits of his permissive policies was not totally wrong while the super-bubble lasted. Only now has he been forced to acknowledge that there was a flaw in his argument.

Financial engineering involved the creation of increasingly sophisticated instruments, or derivatives, for leveraging credit and "managing" risk in order to increase potential profit. An alphabet soup of synthetic financial instruments was concocted: CDOs, CDO2s, CDSs, ABXs, CMBXs, etc. This engineering reached such heights of complexity that the regulators could no longer calculate the risks and came to rely on the risk management models of the financial institutions themselves. The rating companies followed a similar path in rating synthetic financial instruments, deriving considerable additional revenues from their proliferation. The esoteric financial instruments and risk management techniques were based on the false premise that, in the behavior of the market, deviations from the mean occur in a random fashion. But the increased use of financial engineering set in motion a process of boom and bust. So eventually there was hell to pay. At first the occasional financial crises served as successful tests. But the subprime crisis came to play a different role: it served as the culmination or reversal point of the super-bubble.

It should be emphasized that this interpretation of the current situation does not necessarily follow from my model of boom and bust. Had the financial authorities succeeded in containing the subprime crisis—as they thought at the time they would be able to do—this would have been seen as just another successful test instead of the reversal point. I have cried wolf three times: first with *The Alchemy of Finance* in 1987, then with *The Crisis of Global Capitalism* in 1998, and now. Only now did the wolf arrive.

My interpretation of financial markets based on reflexivity can explain events better than it can predict them. It is less ambitious than the previous theory. It does not claim to determine the outcome as equilibrium theory does. It can assert that a boom must eventually lead to a bust, but it cannot determine either the extent or the duration of a boom. Indeed, those of us who recognized that there was a housing bubble expected it to burst much sooner. Had it done so, the damage would have been much smaller and the super-bubble may have remained intact. Most of the damage was caused by mortgage-related securities issued in the last two years of the housing boom.

The fact that the new paradigm does not claim to predict the future explains why it did not make any headway until now, but in the light of recent experience it can no longer be ignored. We must come to terms with the fact that reflexivity introduces an element of uncertainty into financial markets that the previous theory didn't take into account. That theory was used to establish mathematical models for calculating risk and converting bundles of mortgages into tradable securities, as well as other forms of debt. Uncertainty by definition cannot be quantified. Excessive reliance on those mathematical models did untold harm.

The new paradigm has far-reaching implications for the regulation of financial markets. Since they are prone to create asset bubbles, regulators such as the Fed, the Treasury, and the SEC must accept responsibility for preventing bubbles from growing too big. Until now financial authorities have explicitly rejected that responsibility.

It is impossible to prevent bubbles from forming, but it should be possible to keep them within tolerable bounds. It cannot be done by controlling only the money supply. Regulators must also take into account credit conditions because money and credit do not move in lockstep. Markets have moods and biases and it falls to regulators to counterbalance them. That requires the use of judgment and since regulators are also human, they are bound to make mistakes. They have the advantage, however, of getting feedback from the market and that should enable them to correct their mistakes. If a tightening of margin and minimum capital requirements does not deflate a bubble, they can tighten them some more. But the process is not foolproof because markets can also be wrong. The search for the optimum equilibrium has to be a never-ending process of trial and error.

The cat-and-mouse game between regulators and market participants is already ongoing, but its true nature has not yet been acknowledged. Alan Greenspan was a past master of manipulation with his Delphic utterances, but instead of acknowledging what he was doing he pretended that he was merely a passive observer of the facts. Reflexivity remained a state secret. That is why the super-bubble could develop so far during his tenure.

Since money and credit do not move in lockstep and asset bubbles cannot be controlled purely by monetary means, additional tools must be employed, or more accurately reactivated, since they were in active use in the 1950s and 1960s. I refer to variable margin requirements and minimal capital requirements, which are meant to control the amount of leverage market participants can employ. Central banks even used to issue guidance to banks about how they should allocate loans to specific sectors of the economy. Such directives may be preferable to the blunt instruments of monetary policy in combating "irrational exuberance" in particular sectors, such as information technology or real estate.

Sophisticated financial engineering of the kind I have mentioned can render the calculation of margin and capital requirements extremely difficult if not impossible. In order to activate such requirements, financial engineering must also be regulated and new products must be registered and approved by the appropriate authorities before they can be used. Such regulation should be a high priority of the new Obama administration. It is all the more necessary because financial engineering often aims at circumventing regulations.

Take for example credit default swaps (CDSs), instruments intended to insure against the possibility of bonds and other forms of debt going into default, and whose price captures the perceived risk of such a possibility occurring. These instruments grew like Topsy because they required much less capital than owning or shorting the underlying bonds. Eventually they grew to more than $50 trillion in nominal size, which is a many-fold multiple of the underlying bonds and five times the entire US national debt. Yet the market in credit default swaps has remained entirely unregulated. AIG, the insurance company, lost a fortune selling credit default swaps as a form of insurance and had to be bailed out, costing the Treasury $126 billion so far. Although the CDS market may be eventually saved from the meltdown that has occurred in many other markets, the sheer existence of an unregulated market of this size has been a major factor in increasing risk throughout the entire financial system.

Since the risk management models used until now ignored the uncertainties inherent in reflexivity, limits on credit and leverage will have to be set substantially lower than those that were tolerated in the recent past. This means that financial institutions in the aggregate will be less profitable than they have been during the super-bubble and some business models that depended on excessive leverage will become uneconomical. The financial industry has already dropped from 25 percent of total market capitalization to 16 percent. This ratio is unlikely to recover to anywhere near its previous high; indeed, it is likely to end lower. This may be considered a healthy adjustment, but not by those who are losing their jobs.

Regarding hedge funds, it has to be recognized that hedge funds were also an integral part of the bubble which now has burst. Hedge funds grew to approximately $2 trillion of capital which at times controlled as much as $10 trillion or more in assets. But the bubble has now burst and hedge funds will be decimated. I would guess that the amount of money they manage will shrink by between 50 and 75 percent. During the current financial crisis, many hedge fund managers forgot the cardinal rule of hedge fund investing which is to protect investor capital during down markets. It is unfortunate that much of the money raised by hedge funds in recent years has come from the typically staid pension funds and endowment funds in their pursuit of "alpha."

In view of the tremendous losses suffered by the general public, there is a real danger that excessive deregulation will be succeeded by punitive reregulation. That would be unfortunate because regulations are liable to be even more deficient than the market mechanism. As I have suggested, regulators are not only human but also bureaucratic and susceptible to lobbying and corruption. It is to be hoped that the reforms outlined here will preempt a regulatory overkill.

I hope that my testimony has aided the Committee in understanding these issues, and I will do my best to answer any questions you may have.

* *The New Paradigm for Financial Markets: The Credit Crisis of 2008 and What It Means* (PublicAffairs, 2008).

Chairman WAXMAN. Thank you very much, Mr. Soros.
Mr. Simons.

STATEMENT OF JAMES SIMONS

Mr. SIMONS. OK. Well, good morning.

Chairman WAXMAN. There is a button at the base of the mic you have to press——

Mr. SIMONS. I think it's on.

Chairman WAXMAN. OK. Good.

Mr. SIMONS. Good morning, again Chairman Waxman and Ranking Member Davis. Members of the committee, I'm James Simons. I'm chairman of Renaissance Technologies, and in my opinion, this series of hearings is quite important. And I appreciate your interest in trying to understand what this is all about.

Now, in my view, this crisis has a number of causes: The regulators who took a hands-off position on investment bank leverage and credit default swaps; everybody along the mortgage-backed securities chain who should have blown a whistle rather than passing the problem on; and in my opinion the most culpable, the rating agencies, which in effect allowed sows' ears to be sold as silk purses.

Before addressing the committee's questions, I would like to say a little bit about myself and my company because Renaissance is a somewhat atypical investment management firm. Our approach is driven by my background as a mathematician. We manage funds whose trading is determined by mathematical formulas. We operate only in highly liquid publicly traded securities, meaning we don't trade in credit default swaps or collateralized debt obligations or some of those alphabet soup things that George was referring to. Our trading models actually tend to be contrarian buying stocks recently out of favor and selling those recently in favor.

We manage three funds. Our flagship fund, Medallion, accounts for nearly all of our income and is almost entirely owned by Renaissance employees. We charge ourselves fees, which has the effect of shifting income away from the largest owners of the firm, like me, to the rest of the employees. Our two new funds designed for institutional investors are both lightly leveraged and charge fees roughly half of those charged by most hedge funds.

I will now turn briefly to the questions that the committee asked. Do hedge funds cause systemic risk? In my view, hedge funds were not a major contributor to the recent crisis, and generally, hedge funds have increased liquidity and reduced volatility in the markets. Moreover, because of their remarkably diverse strategies, hedge funds as a class are unlikely to create systemic risk, although it is not out of the question that they could.

Hedge funds do use leverage, and—but here is an important point—each hedge fund's leverage is controlled by its lenders which is far more than one could say for investment banks.

Will hedge funds require further regulation? I do think additional regulation focused on market integrity and stability will be useful, and I will get back to that.

Should hedge funds be registered with the SEC? Well, we have always been registered, at least for 10 years, and we are certainly not opposed to an appropriate registration requirement.

Should hedge funds be more transparent? Well, transparency to appropriate regulators can be helpful. And as Professor Ruder said very well—described a procedure which was also in my written testimony—you may wish to consider requiring all market participants to report their positions to an appropriate regulator and then allowing the New York Fed to have access to aggregate position information and to recommend action if necessary.

This is pretty much what Ruder said. I'll say it again. I stress, however, that the fund-specific information should not be released publicly, which could do more harm than good.

Does the compensation structure of hedge funds lead to excessive risk taking? This question doesn't really apply to us as almost all of our income is based on profits on our own capital, but generally speaking, I think not. The statistics bear this out to some extent. Compare the 7 percent annual volatility of the hedge fund index to the 15 percent annual volatility of the S&P over the last 10 years. Thus hedge funds appear to be at least on the cautious side. Moreover—obviously there are exceptions. Moreover, typically a manager's largest investment is in his own fund.

Is special tax treatment for hedge fund managers warranted? Well, I would only say that, if Congress decides that it is good policy to alter the tax treatment of carried interest, that change should apply to all partnerships, private equity, oil and gas, real estate, etc., all of which are based on that same principle, not just hedge funds. And I personally would have no objection whatsoever to such a change.

Before concluding I would like to reflect on how we could help get out of this hole and make proposal to prevent us getting back in.

So I think that in the near term the most important thing we can do is keep people in their homes, even if their mortgages are in default. This would help millions of families already coping with a tough economy and would maintain higher home values than would foreclosure. This would also mitigate losses on the securities collateralized by these mortgages. Now, there have been a number of proposals on how to do this, and I won't opine on which is best.

Now, Mr. Chairman, you mentioned you had a hearing on the failure of the credit rating agencies. And I particularly appreciate your attention to that issue. I propose a new rating agency. Historically the bond rating agencies were paid by the bond buyers, which was natural because it was they whom they were supposed to be serving. But in the 70's, the agencies began to be paid by the bonds issuers. Now, despite the obvious conflict of interest, the new model worked OK with conventional type bonds, but until the advent of financially engineered products.

Now even though I don't trade these products, I believe in their value. I think they are good. But the organizations rating them must owe their allegiance to buyers, not to issuers.

I, therefore, encourage the major holders of these bonds such as CalPERS, TIAA, PIMCO, etc., to sponsor a new nonprofit rating agency focused on derivative securities. Congress might consider chartering such an organization, having board representation from appropriate regulators. Revenues could come from buyer-paid fees on each transaction, which I think would be minuscule. These complex instruments would then be subject to proper analysis and rating. The interests of buyers and raters would be aligned, and the likelihood of again seeing a problem like this one would be dramatically reduced.

Thank you, and I look forward to your questions.

[The prepared statement of Mr. Simons follows:]

Testimony of James H. Simons

Before the House Committee on Oversight and Government Reform

November 13, 2008

Good morning Chairman Waxman, Ranking Member Davis, and members of the Committee. My name is James Simons, and I am the Chairman and CEO of Renaissance Technologies LLC. Thank you for the invitation to appear before you today.

I appreciate and welcome your interest in understanding the underlying causes of the recent financial crisis. This is indeed a serious and disturbing time for the markets, the broader economy, and our nation as a whole. Individual Americans are hurting and are fearful for their financial futures, and businesses of all sizes are facing problems. Hedge funds are having trouble along with everybody else. Some smaller funds have failed, and some others, both big and small, are struggling to stay afloat. Federal agencies are trying to do their best, but this is a very difficult situation. I am pleased to be here to answer your questions about these issues, and I stand ready to work with you and your staffs as the situation unfolds in the months ahead.

Before turning to the specific questions raised by your letter inviting me to testify, I would like to provide you with my perspective on how the crisis came about.

The Roots of the Crisis. The crisis has many inter-related causes, and blame can be laid at the feet of many different parties. Encouraged by the willingness of institutions in the secondary market to buy their wares, banks and mortgage companies were all too happy to originate mortgages of lesser quality than previously had been thought appropriate. Having been sold to the secondary buyers, these mortgages were bundled up into packages, then sliced and diced in a variety of imaginative ways by investment banks, which created and issued securities based on these bundles. The rating agencies, paid by the issuers, rated these securities, which were then sold to final buyers or, in some cases, held on the balance sheets of the banks and brokerages. As time went on, the quality of the newly created mortgages deteriorated to remarkably low levels, and the rating agencies became increasingly fanciful in their ratings. All this took place at a time when the investment banks and brokerages had moved to a regime of "self-regulation," a consequence of which was exceptionally leveraged balance sheets. It also took place at a time when the (unregulated) market for credit default swaps (CDS) expanded rapidly, enabling holders of the improperly rated securities (and of the debt of others holding them) to purchase further comfort. At the same time, a huge global pool of investment money, coupled with great demand for more and more fixed income investment opportunities, pushed everybody in the chain to create more and more mortgage-backed securities to sell, even if the underlying mortgages were of questionable quality. All of this worked splendidly as long as home prices continued to rise rapidly, but when they began to stall and reverse, the party was over. We have all seen the result.

There is much blame to be shared: the SEC and perhaps the Federal Reserve for taking such a hands-off position on the leverage posture of the investment banks and the uncontrolled nature of the CDS market; the players all along the chain of creation and distribution of the paper, each of whom should have blown a whistle rather than passing the problem on to the next guy; and finally, and in my opinion the most culpable, the rating agencies, which failed in their duty and allowed sows' ears to be sold as silk purses.

Your letter asked me to address several issues specifically relating to the hedge fund industry, and I will do that in a moment. First, let me tell you a little about myself and my company, a somewhat atypical investment management firm, Renaissance Technologies LLC ("Renaissance").

Background on Myself and my Company. Renaissance's investment approach is driven by my background in mathematics. Before I ever entered the business world, I was a mathematician. I have a PhD from Berkeley, won the 1975 Veblen Prize of the American Mathematics Society (given every four years for work in geometry and topology), and taught mathematics at the Massachusetts Institute of Technology and Harvard University before becoming the chairman of the Mathematics Department at the State University of New York at Stony Brook. Along the way, I spent four years as a code cracker for the National Security Agency.

Renaissance, an SEC-registered Investment Adviser since 1998, manages what are termed quantitative funds – funds whose trading is determined by mathematical formulas designed to predict market behavior. Individual trades are generated by computers, based on work continually developed by our researchers. Naturally, human beings carefully monitor the trade execution process, making sure that all parts of the system are behaving properly. We operate in only highly liquid, publicly listed securities, such as stocks, bonds, currencies, and commodities, and do this on exchanges throughout the world. This means, for example, that we do not trade in credit default swaps or collateralized debt obligations, neither of which satisfies the above criteria. In the stock trading of our Medallion Fund, we hold balanced portfolios in each country, *i.e.*, portfolios very close to being equally long and short. Our trading models tend to buy stocks that are recently out of favor and sell those recently in favor. Thus, to some extent, our actions have the effect of dampening extreme moves in either direction, and, as a result, reducing volatility in those stocks. An example of this contrarian tendency is the fact that during the six-week period ending this September, Medallion held long positions in many of the most troubled of the financial stocks, including Lehman Brothers and Washington Mutual. We of course lost money on those trades!

Renaissance manages three fund families: Medallion, RIEF and RIFF. The first is our flagship fund, which we have operated for twenty years with great success. In the early part of this decade, we determined that the fund had grown too large, and we began to return capital to investors who were not employees of the firm. That process was completed in 2005, and since then the fund has been almost entirely owned by the people who operate it – Renaissance employees. We charge ourselves fees because fund investment is not allocated in the same proportion as is employee compensation. For example, my share of Medallion is far greater than is my share of employee compensation. Thus, the fee mechanism moves income away from the largest owners of the firm to the rest of the employees. Nearly all of the income of the firm and its employees is based on the performance of Medallion, a fund whose investors are almost exclusively its managers.

In recent years, Renaissance started two new funds aimed at outside investors: the Renaissance Institutional Equities Fund (RIEF) and the Renaissance Institutional Futures Fund (RIFF). The first is net long one dollar of U.S.-traded stocks for each dollar of equity in the fund and is designed to be a lower-volatility and higher-return substitute for an index fund. The second is a slow trading fund, investing in commodities, currencies, bonds, and stock indices, and is designed to deliver an attractive return at relatively low volatility. RIEF has done a fine job during its three years plus of existence. RIFF, started 13 months ago, did well during its first nine months but has been challenged by the turbulence of this fall, during which its returns were disappointing. Both of these funds, designed for institutional investors, are lightly leveraged and charge fees less than half of those charged by mainstream hedge funds. These institutional funds are a new business for Renaissance, and while their financial contribution to the firm has been exceptionally modest, we have high hopes for the long term.

I will now turn to the questions the Committee raised.

Do Hedge Funds Cause Systemic Risk? As I have already mentioned, the behavior of institutions in several financial sectors contributed to the recent crisis, but, in my view, the hedge fund sector was not among them. While there are exceptions to any rule, I believe that hedge funds by and large have made an important contribution to the financial industry, and, as indicated in what follows, are unlikely as a single class to be a substantial contributor to systemic risk. Generally speaking, hedge funds have provided to the markets an increased level of liquidity, reduced volatility, improved price discovery, and enhanced the returns of many large endowments and pension funds. Moreover, by pursuing a rather diverse set of strategies such as long/short equities trading, convertible bond arbitrage, merger arbitrage, statistical arbitrage, global macro, distressed debt and workout activities, and old-fashioned deep value investing, hedge funds are sufficiently spread out that, as a class by itself, they do not seem to present a source of systemic risk. I say this with the knowledge that hedge funds indeed employ leverage, and there are doubtless individual examples where this is overdone. Nonetheless, the leverage posture of each participant in the industry is monitored carefully by its lenders and is controlled far more stringently than is the leverage posture of many participants in the investment banking industry. The latter is subject to no such monitoring and in many cases achieved leverage levels far in excess of those of hedge funds. The results of such excess are now well known.

Do Hedge Funds Require Further Regulation? Let me first note that hedge funds are presently regulated in a variety of ways. For example, the Investment Advisers Act of 1940 imposes anti-fraud requirements on all hedge fund managers. Moreover, they are subject to a variety of securities position reporting requirements under the Exchange Act. Unlike other financial institutions that handle investments by the general public, hedge funds (by law) are accessible only to large and sophisticated investors. Therefore, new regulations focusing on customer protection, such as apply to mutual funds and brokerage firms, are probably not necessary or even desirable. On the other hand, I do think that regulation focused on ensuring market integrity and market stability would be useful and welcome. I will briefly address this subject below in the section on transparency.

Should Hedge Funds be Registered with the SEC? There has been a great deal of discussion over the last few years about whether hedge fund managers should be required to register with the SEC as investment advisers. This debate has been a moot point for us, because we voluntarily registered in 1998. Our business model is relatively simple, and we have not considered SEC registration to be an undue burden, but other, more typical, hedge fund managers likely have been deterred from such registration because the regulatory authorities have not always administered the Investment Advisers Act in a way that takes account of many hedge fund managers' business models. If the Committee pursues a registration requirement for hedge fund managers, I would encourage you to see to it that the design and implementation of the requirement fit the way our particular industry works.

Should Hedge Funds be more Transparent? Proposals for greater transparency into hedge funds' investments also have received a great deal of attention lately. We agree that transparency to appropriate regulators of all market participants can be helpful in monitoring systemic risk and manipulative practices. In spite of my belief that hedge funds by themselves are unlikely to be a source of systemic risk, it could be the case that aggregate positions of hedge funds, together with those of other industry participants, could sometimes present that possibility. A proposal the Committee may wish to consider is to require hedge funds' positions to be reported to an appropriate regulator and then to allow the Federal Reserve Bank of New York, or some similar such authority, to have access to aggregate position information and to recommend appropriate action should the situation warrant it. I stress, however, that information so provided by individual funds or institutions should never be released to the general public in disaggregated form. Such disclosure can serve no useful purpose and indeed can cause harm to small investors, who, unfamiliar with the strategies leading to certain individual positions, may act upon an erroneous understanding of the data.

Does the Compensation Structure of Hedge Funds Lead to Excessive Risk Taking? While this question does not really apply to us, as almost all of our income is based on profits on our own capital, generally speaking I would say the answer is no. In the first place, contrary to what one might think, hedge funds are not a particularly volatile asset class. For example, over the past ten years the annual volatility of the capital-weighted HFI, the standard hedge fund index, was 7.2%, whereas that of the S&P index was 15.4%. From these statistics, one can see that, on the whole, hedge fund managers turn out to be relatively cautious. Yes, they receive a performance allocation of 20% or 25% of profits each year, but if the year is a loser, those losses have to be earned back before there are any such allocations in future years. Since most managers wish to remain in business for a long time, they are unlikely to run the risk of a large loss (which would lead to massive redemptions and the end of the fund) in the hopes of having one great year. Moreover, it is typically the case that a manager's largest investment is in his own fund. That is certainly the situation at Renaissance and at most other funds with which I am familiar.

Is Special Tax Treatment for Hedge Fund Managers Warranted? With the exception of offshore deferred compensation, a practice recently prohibited and one in which we never participated, I know of no special tax treatment for hedge fund managers. It is true that much of their compensation is via profit allocation from their funds, and this is taxed in the same manner as profits earned by the fund's investors, but that arrangement is standard in all partnerships, including, for example, partnerships engaged in manufacturing, services, real estate, and natural resources businesses. As to whether such income to managers ought to be treated in that manner, I have no opinion except to observe that partnership taxation has always worked that way. Of course, if it is good public policy to alter that treatment, it should apply across the board to all types of partnerships, not simply to hedge funds.

Before concluding, I would like to take this opportunity to reflect on how we may best get out of this hole, and to make a specific proposal, the implementation of which may prevent us from ever getting back in.

I believe the most important thing we can do in the near term is to keep as many people as possible living in the homes they now occupy, even if their mortgages are in default and they have negative equity in their property. There have been a number of plans put forward to achieve this end, and I will not opine on which is best, but I will opine on the great importance of that result. Not only would it provide an important measure of stability to millions of families who already will be coping with an economy marked by growing unemployment and other destabilizing factors, but it will maintain the values of their homes at a far better level than would be the case in foreclosure, thus mitigating the impairment to the trillions of dollars of securities collateralized by mortgages on these homes. As for the longer term, I propose the following.

A New Rating Organization. Historically, the bond rating agencies worked for the bond buyers, being paid through subscriptions to the agencies' publications. This model changed in the 1970s to one in which the agencies were paid by the bonds' issuers. In spite of the obvious conflict of interest, the new model worked reasonably well for conventional bonds subject to conventional financial analysis. The situation changed considerably, however, with the advent of financially engineered products.

I very much believe in the value of these products, but it is crucial that organizations rating them are appropriately staffed with personnel well trained in quantitative methods, and, even more importantly, that the organizations owe their allegiance to the buyers, not the issuers.

I therefore would encourage the major organizations who are the traditional holders of these bonds, such as CalPERS, TIAA-CREF and PIMCO, to band together to sponsor a new, not-for-profit rating organization, focusing on derivative securities. Representatives of these organizations could serve on the board of the new organization. Another option might be for Congress to charter such an organization, in which case representatives of the private entities might be joined on the board by specified officials from the Federal Reserve or other appropriate government agencies. Revenues for the new organization could come from fees, paid by the buyer, whenever a transaction took place in a bond rated by the new organization. I believe that these fees would be miniscule relative to the value of the bond, and every buyer very likely would insist that merchandise being purchased bear a rating from the new organization.

As a result, these complex instruments would be subject to proper analysis and rating, the interests of buyers and raters once again would be aligned, and the probability of reoccurrence of a problem anywhere near the extent of that which we are now facing would be dramatically reduced.

Again, I appreciate the opportunity to testify before the Committee, and I hope my testimony has been helpful.

Chairman WAXMAN. Thank you very much, Mr. Simons.
Mr. Paulson.

STATEMENT OF JOHN ALFRED PAULSON

Mr. PAULSON. Chairman Waxman, Ranking Member Davis, and members of the committee, thank you for inviting me to appear today.

Paulson & Co. is an investment advisory firm that was founded in 1994. We currently manage assets of approximately $36 billion using event driven strategies. We are based in New York and also have offices in London and Hong Kong. We have approximately 70 employees.

Chairman WAXMAN. There is a question whether your mic is on. Is the button pressed?

Mr. PAULSON. All of the investment funds we manage are open only to qualified purchasers, those with a minimum $5 million in investable assets if they are individuals and $25 million in investable assets if they are institutions. Our investors include pension funds, endowments and foundations.

These investors look to us to protect their capital and to show positive returns in both good and bad markets. We do this by going long securities that we think will rise in value and by going short securities that we think will decline in value.

We have been able to operate profitably in 14 out of the last 15 years, including this year when the S&P is down over 40 percent.

We believe that our ability to protect our investors' capital and generate positive returns over the long term is the reason we have grown to be one of the largest hedge funds in the world.

Regarding compensation, we share profits with our investors on an 80/20 basis, where 80 percent of the profits go to the investors and 20 percent remains with us. We only earn performance allocations if our investors are profitable. All of our funds have a high water mark, which means that if we lose money for our investors, we have to earn it back before we share in future profits. Some of our funds also have a claw-back provision which requires us to return profits earned in prior periods if we lose money in subsequent periods. In addition, we invest or own money alongside that of our clients, so we share investment loss along with gains.

We are a private company and have no public shareholders. We receive no taxpayer subsidies. All of our investors invest with us on a voluntary basis. We also use very little leverage. Over the past 5 years, for over half the time, our base portfolios were not funded with any borrowed money, and our maximum borrowing over the last 5 years as a percentage of equity capital was only 33 percent.

In February 2004, we voluntarily registered with the SEC as an investment advisor. As a Registered Investment Advisor we are subject to periodic inspections, focused reviews, and ad hoc requests for information. We are also subject to stringent recordkeeping requirements and have to file information regularly with the SEC.

We comply with all rules and regulations, not only in the United States but in each of the over 15 countries where we invest.

As Americans, we are proud of the leadership position the United States occupies in this industry, the jobs our industry has created, the export earnings we have produced our country, and the taxes that we generate for the Treasury. For example, over the last 5 years, our firm has increased our employee count by 10 times, creating numerous high-paying jobs for Americans.

In addition, 80 percent of our assets under management come from foreign investors. The revenues we receive from foreign investors allow us to contribute to the U.S. economy like an exporter of goods bringing in money from abroad.

In 2005, our firm became very concerned about weak credit underwriting standards, excessive leverage amongst financial institutions, and a fundamental mis-pricing of credit risk. To protect our investors against the risk in the financial markets, we purchased protection through credit default swaps on debt securities we thought would decline in value. As credit spreads widened and the value of these securities fell, we realized substantial gains for our investors.

We have offered suggestions on the causes of the credit crisis and what the U.S. Government can do to help the situation. I also have some recommendations on how future purchases of preferred stock under the TARP can be structured both to protect taxpayers better and to provide greater stability to financial institutions, and I would be pleased to share those thoughts with you.

Again, thank you for the opportunity to address this committee.

[The prepared statement of Mr. Paulson follows:]

PAULSON & CO. INC.

Founded 1994

Statement of John Paulson

President and Founder
of Paulson & Co. Inc.

U.S. House of Representatives Committee
on Oversight and Government Reform

Hearing – November 13, 2008
Washington D.C.

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Statement of John Paulson,
President and Founder of Paulson & Co. Inc.

U.S. House of Representatives
Committee on Oversight and Government Reform
Hearing – November 13, 2008

Chairman Waxman, Ranking Member Davis and Members of the Committee, thank you for inviting me to appear and for holding important hearings on the origins of the present financial market challenges in the United States.

Paulson & Co. Inc. is an investment advisory firm that was founded in 1994 and has been registered with the Securities and Exchange Commission since 2004. We currently manage assets of approximately $36 billion using event-driven strategies. We are based in New York and also have offices in London and Hong Kong. We have approximately seventy employees. Prior to founding the firm, I was a Managing Director in Mergers & Acquisitions at Bear Stearns. I am a summa cum laude graduate from New York University and graduated with high distinction, as a Baker Scholar, from Harvard Business School in 1980.

Our investors include pension funds, endowments, banks, insurance companies, family offices and high-net-worth individuals in the U.S. and around the world. All of the investment funds we manage are open only to "qualified purchasers", which are highly sophisticated investors with $5 million in investable assets if they are individuals, and $25 million in investable assets if they are institutions.

Our investors look to us to protect their capital, and to show positive returns in both good and bad markets. We do this by going long securities that we think will rise in value and going short securities that we think will decline in value. By constructing a diverse portfolio of both long and short positions, we have been able to operate profitably in 14 out of the last 15 years, including this year and the 2000-2002 periods when the NASDAQ index lost 78% of its value. We believe that our ability to protect our investors' capital and generate positive absolute returns with low volatility over the long term is the reason we have grown to be one of the largest hedge funds in the world.

In our business, one of the most fundamental principles is alignment of our interests with those of our clients. We share profits with our investors on an 80/20 basis where 80% of the profits go to the investors and 20% remains with us. We only earn performance fees if our investors are profitable. All of our funds have a "high water mark", which means that if we lose money for our investors, we have to earn it back before we share in future profits. Some of our funds also have a "claw back" provision, requiring us to return profits earned in prior periods if we lose money in subsequent periods. In addition,

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we invest our own money alongside that of our clients, so we share investment losses along with gains. We are a private company and have no public shareholders. We receive no taxpayer subsidies. All of our investors invest with us on a voluntary basis. We use very little leverage. Over the past five years, our base portfolios' maximum borrowing as a percentage of equity capital was 33% and on an average basis they were not funded with any borrowed money.

In February 2004, we voluntarily registered with the SEC as an investment advisor. As a registered investment advisor, we are subject to periodic inspections, focused reviews and ad hoc requests for information. We are also subject to stringent recordkeeping requirements and have to file information regularly on the SEC's website. We comply with all rules and regulations not only in the U.S. but in each of the over 15 countries where we invest.

Hedge funds, together with real estate, private equity and venture capital, are frequently categorized as "alternative investments", in contrast to traditional stock and bond investing. Hedge funds are an important investment category for investors as returns are generally non-correlated with the traditional market. The hedge fund market has grown rapidly over the past five years, from approximately $800 million to $2 trillion in assets under management. The US has remained a leader in this area, accounting for approximately 70% of the market, although we have lost share in recent years to London, Asia, and Switzerland – many of which offer various incentives to attract the hedge fund industry.

As Americans, we are proud of the leadership position the United States occupies in this industry, the jobs our industry has created, the export earnings we have produced for our country and the taxes we generate for the Treasury. For example, over the last five years, our firm has increased our employee count by 10x, helping the U.S. maintain its global leadership as a financial center over London and Hong Kong. Eighty percent of our assets under management come from foreign investors. The revenues we receive from these foreign investors allow us to contribute to the U.S. economy like an exporter of goods, bringing in money from abroad. I estimate that the employees of our small firm paid $190 million in federal, state and local taxes for 2007.

In 2005, our firm became very concerned about weak credit underwriting standards, excessive leverage among financial institutions and a fundamental mis-pricing of credit risk. To protect our investors against the risk in the financial markets, we purchased protection through credit default swaps on debt securities we thought would decline in value due to weak credit underwriting. (See Exhibits 1-4 to this statement.) As credit spreads widened and the value of these securities fell, we realized substantial gains for our investors.

As we saw the difficulty homeowners were having in making mortgage payments, in July 2007, prior to the initiation of any government support programs, Paulson & Co. made a $15 million charitable

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contribution to the Center for Responsible Lending to form the Institute for Foreclosure Legal Assistance (IFLA). The institute supports local groups across the country providing legal representation to families facing foreclosure. (See Exhibit 5 to this statement.)

We have also offered some public suggestions on the causes of the credit crisis and what the U.S. government can do to help the situation, specifically purchase senior preferred stock in selected financial institutions, the failure of which would pose systemic risk to the financial system. A few weeks ago, the Wall Street Journal ran an op-ed piece which I wrote on this proposal, which provides for maximum taxpayer protection. (See Exhibit 6 to this statement.)

Again, thank you for the opportunity to address this Committee and share our views. I would be pleased to take your questions.

SUBPRIME RESIDENTIAL MORTGAGE-BACKED SECURITIZATION EXAMPLE

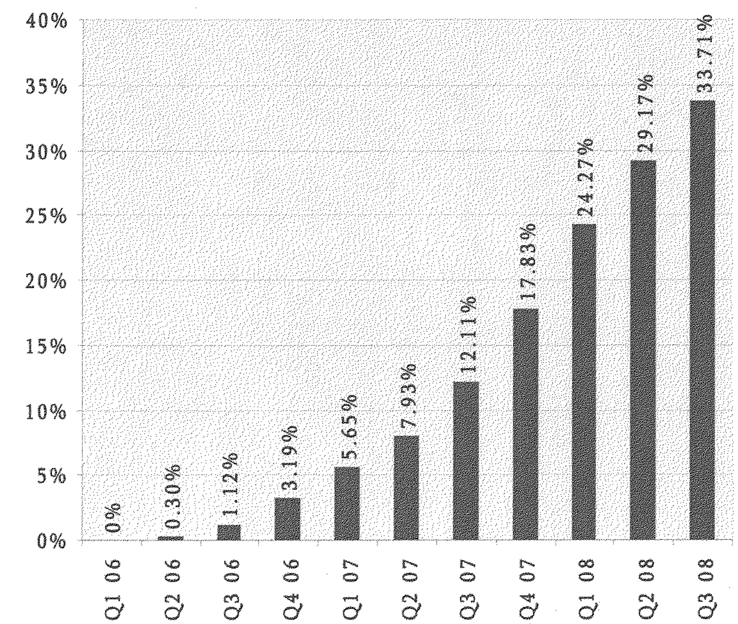
ACE Securities Corp - ACE 2006-HE1

Class	Ratings	Class Amount Outstanding	Subordination	Spread to One- Month LIBOR
A1A	Aaa (AAA)	$ 757,819,000		0.14
A1B1	Aaa (AAA)	417,082,000		0.15
A1B2	Aaa (AAA)	104,270,000		0.15
A2A	Aaa (AAA)	356,980,000		0.04
A2B	Aaa (AAA)	127,685,000		0.09
A2C	Aaa (AAA)	88,606,000		0.15
A2D	Aaa (AAA)	78,490,000	23.9%	0.25
M1	Aa1 (AA+)	101,428,000	19.9%	0.27
M2	Aa2 (AA)	92,553,000	16.2%	0.29
M3	Aa3 (AA-)	57,053,000	14.0%	0.30
M4	A1 (A+)	48,178,000	12.1%	0.45
M5	A2 (A)	45,643,000	10.3%	0.48
M6	A3 (A-)	41,839,000	8.6%	0.58
M7	Baa1 (BBB+)	40,571,000	7.0%	0.95
M8	Baa2 (BBB)	36,768,000	5.6%	1.35
M9	Baa3 (BBB-)	26,625,000	4.5%	2.45
M10	Ba1 (BB+)	31,696,000	3.3%	5.50
Over Collateralization		82,415,903		
		$ 2,535,701,903		

(a) Equivalent S&P rating in parentheses.

SUBPRIME DELINQUENCIES

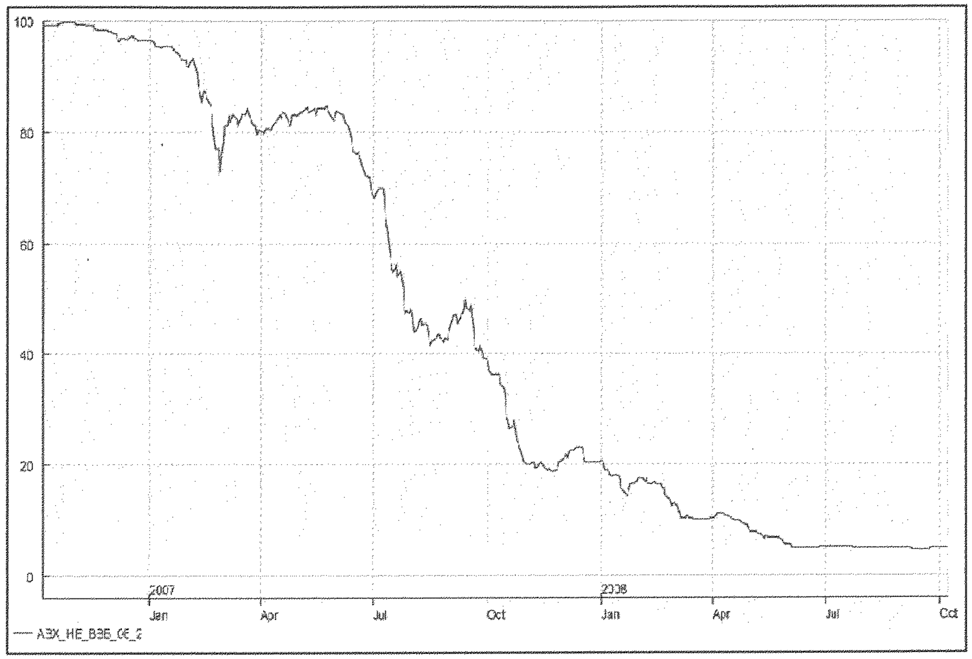
Subprime 60 Days+ Delinquency Rate (including FCL & REO)



Source: Loan Performance

PAULSON & CO. INC.

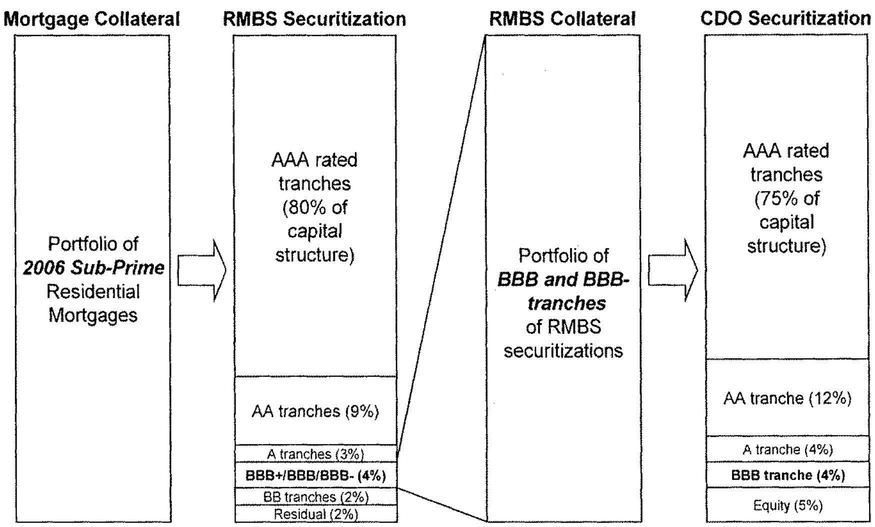
ABX BBB: Historical Prices



Source: Goldman Sachs

PAULSON & CO. INC.

MORTGAGE/RMBS/CDO SECURITIZATION CHAIN



CENTER FOR RESPONSIBLE LENDING

NACA

FOR IMMEDIATE RELEASE
October 12, 2007

Helping Americans Keep Their Homes: Center for Responsible Lending Establishes New Institute to Help Homeowners Threatened by Subprime Lending Crisis

Institute to Provide Legal Assistance to Families Facing Surge in Foreclosures

WASHINGTON, D.C. (October 12, 2007)—As the nation's foreclosure epidemic continues to worsen, the Center for Responsible Lending (CRL) has formed the Institute for Foreclosure Legal Assistance (IFLA) to support groups giving legal representation to families facing foreclosure and financial ruin because of abusive subprime mortgages. The National Association of Consumer Advocates (NACA) will manage the project, which recognizes that one of the biggest barriers families face to avoid losing their homes is the lack of access to quality legal services.

The Institute, launched with a $15 million grant from investment management firm Paulson & Co. Inc., will provide funding and training to organizations that help homeowners negotiate alternatives to foreclosure. The majority of the funds will be grants to support direct legal assistance to borrowers in 10 or more states to fight foreclosure, predatory lenders and abusive loan servicers. It will do this primarily by providing money to top non-profit legal-aid groups and law school clinics.

Formation of the Institute comes as the rate of subprime foreclosures, already alarmingly high, is set to accelerate. Analysts have predicted that as many as 1.7 million foreclosures will occur in the next two to three years. Within the next eighteen months, up to four million subprime borrowers will see their monthly mortgage payments jump approximately 40% as initial "teaser" interest rates expire. Servicers and lenders have largely refused to modify these abusive subprime loans. According to a recent study by Moody's, only 1% of loans that reset to a higher interest rate were modified by servicers. Lenders and servicers are simply not modifying these mortgages in sufficient numbers to help homeowners.

"Legal resources available to help struggling families fall far short of that needed to address the millions of abusive loans that have been made in recent years," said Martin Eakes, Chief Executive Officer of CRL. "By providing funding and other support for attorneys who can review loan documents and negotiate with loan servicers, we believe that many more homeowners will be able to stay in their homes."

NACA executive director Ira Rheingold will manage the new Institute. "The only meaningful way to help families save their homes is to help them get access to quality legal assistance," he said. "In many cases, families need legal help to keep their homes.

-more-

We hope to be able to help provide legal representation to at least 5,000 families with these funds so that families can keep their homes."

John Paulson, founder and head of Paulson & Co. Inc., said he hopes that his firm's donation is just the beginning: "CRL and NACA both have long histories of working to ensure that homeowners get fair treatment from mortgage lenders. We are pleased to help them provide legal services to distressed homeowners, many of whom have been victimized by predatory lenders. We hope that our grant will spur additional funds for these types of efforts from public and private sources to help more homeowners avoid foreclosure."

Willard Ogburn, Executive Director of the National Consumer Law Center, said, "We see every day the desperate need for quality legal help for families in financial crisis facing the loss of their home. Additional resources will mean more essential assistance for families in need. The Center will do all that it can to help address the current crisis in homeownership."

Wade Henderson, President and CEO of the Leadership Conference on Civil Rights, said, "Every day we hear about industry bail-outs from the foreclosure crisis they created, but homeowners trying to save the roofs over their heads have very limited options for getting help and industry does not seem interested in taking meaningful steps that would make a real difference. The Institute was created to help borrowers today who can't wait for tomorrow to try to save their homes. This initiative is an important step in the right direction to help provide effective legal assistance to those who desperately need it."

Shanna Smith, President and CEO of the National Fair Housing Alliance, said of the announcement, "It's high time that Americans facing foreclosure got some helpful news. This Institute for Foreclosure Legal Assistance is critical because without it families will lose their homes. We can no longer wait on industry to fix the problem."

The Institute should be up and running within a few months. It will be headquartered in Washington, DC at the offices of CRL and NACA.

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The Center for Responsible Lending is a nonprofit, nonpartisan research and policy organization dedicated to protecting homeownership and family wealth by working to eliminate abusive financial practices. CRL is affiliated with Self-Help, one of the nation's largest community development financial institutions. For more information visit www.responsiblelending.org

The National Association of Consumer Advocates (NACA) is a nationwide organization of more than 1000 attorneys who represent and have represented hundreds of thousands of consumers victimized by fraudulent, abusive and predatory business practices. As an organization fully committed to promoting justice for consumers, NACA's members and their clients are actively engaged in promoting a fair and open marketplace that forcefully protects the rights of consumers, particularly those of modest means. For more information visit www.naca.net

Paulson & Co. Inc. is a New York-based investment management firm, with $23.5 billion in assets across merger, event-driven, distressed and credit-focused strategies.

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WSJ.com

OPINION | SEPTEMBER 26, 2008

The Public Deserves a Better Deal

By JOHN PAULSON

The Treasury plan to buy illiquid financial assets has been widely criticized as being unfair to taxpayers, who will have to bear losses ahead of shareholders of the institutions that will be bailed out.

There is a better alternative to stabilize the markets: Invest the $700 billion of taxpayer money in senior preferred stock of the troubled financial institutions that pose systemic risks. Let's call this the "Preferred plan." In fact, it is the Fannie Mae and Freddie Mac model -- which the Treasury Department has already endorsed and used in practice. It is also the approach Warren Buffett used for his investment in Goldman Sachs.

There are major problems with the Treasury plan. First, by buying banks' worst assets at above-market prices, taxpayers take an immediate economic loss -- while transferring wealth to shareholders and executives of the very institutions that brought on the financial crisis.

Second, this plan puts too much discretionary power in the hands of Treasury officials. Who determines what financial assets are purchased and at what prices? Who determines which bank gets to benefit from these taxpayer subsidies? Will bank shareholders continue to receive dividends, and executives continue to get paid huge bonuses?

When financial institutions borrow massive amounts of money to invest in assets that are now found to be illiquid and poorly performing, it is not the responsibility of taxpayers to bear the resulting losses. These losses should be borne by the shareholders.

If taxpayers have to step in and provide capital to keep operating enterprises that the government decides are key to the functioning of the economy as a whole, taxpayers must receive protection.

Treasury Secretary Henry Paulson said at the Senate Banking Committee hearing this week, "[the] Fannie Mae and Freddie Mac [interventions] worked the way they were supposed to." These enterprises continued to function, maintaining homeowner access to and lowering the cost of mortgage financing. However, managements of these companies had to leave and forfeit the compensation packages they had negotiated.

Shareholders had their dividends blocked and remain first in line to bear losses, as they should have been. Taxpayers came both first and last -- first to get paid back, as the new preferred stock is senior to all shareholders; and last in realizing losses, as common and other preferred equity would be extinguished before the taxpayers would be at risk.

This mechanism -- purchases of senior preferred stock with warrants in troubled institutions -- addresses the problems with the Treasury plan. The financial market is stabilized, companies get recapitalized, failures are avoided, debt securities are supported, and time is gained for illiquid assets to mature.

The institutions continue to function, their cost of funding will decline as equity capital increases, and innocent third parties like bank depositors, broker/dealer clients and insurance-policy holders are all protected. The only difference is that potential losses are kept with the shareholders where they belong.

The Treasury plan would also entail larger outlays than the Preferred plan. By allowing all banks to sell their worst assets to Treasury at inflated prices, taxpayers would be subsidizing healthy banks which have access to private capital (Goldman Sachs, J.P. Morgan, Wells Fargo, and Bank of America, for example) as well as banks that don't have a private alternative. But under a Preferred plan, only banks that don't have a private alternative will be given federal assistance. This would reduce the outlay otherwise required to solve the crisis.

Few people familiar with the issues deny that Treasury action is needed to stabilize the financial markets. However, the question is who should bear the cost?

Under the Treasury plan the taxpayer pays the price. Under a Preferred plan, the shareholders of the firms who created the problems bear the first loss. Who do you think should pay?

Before committing $700 billion of our money, we should encourage Congress to take a few extra days to get this legislation right.

Mr. Paulson is president and portfolio manager of Paulson & Co. Inc., a New York-based investment management firm.

Please add your comments to the Opinion Journal forum.

Chairman WAXMAN. Thank you very much, Mr. Paulson.
Mr. Falcone.

STATEMENT OF PHILIP A. FALCONE

Mr. FALCONE. Thank you, Chairman Waxman, Ranking Member Davis, and other members of the committee.

My name is Philip Falcone. I am the senior managing director and cofounder of the Harbinger Capital Partnership fund. I'm extremely proud of the work that we have done at Harbinger. Year in, year out, we have generated substantial returns for our investors, which include pension funds endowments and charitable foundations. We have achieved our success for our investors by doing things the right way. Through our investments we have also provided much-needed Capitol to American companies, supporting them as they pursue their business plans and giving them a second chance to reach their potential.

I appreciate the committee holding today's hearing in order to learn more about hedge funds and their positive role in the financial markets. I am hopeful that this committee can take four points away from today's testimony.

No. 1, compensation in the hedge fund industry is performance based. I think that is the right way to do business because it creates incentive for hard work and innovation.

No. 2, hedge funds use a variety of investment strategies, including traditional approaches. Investors, especially large institutions, want a broad array of strategies and disciplines so they can diversify their portfolios.

No. 3, short selling is a valuable longstanding feature of our markets. It isn't short selling that puts companies out of business but rather over-leveraged balance sheets, poor management decisions, and flawed business plans.

No. 4, I support greater transparency and better reporting in the hedge fund sector.

I would like to take a moment to tell you a little bit about myself. I currently reside in New York City with my wife of 11 years and two children. By way of background, I was born in Chisholm, MN, population 5,000 on the Iron Range of northern Minnesota. I was the youngest of nine kids who grew up in a three-bedroom home in a working class neighborhood. My father was a utility superintendent and never made more than $15,000 per year, while my mother worked in the local shirt factory.

The point of all this is I take great pride in my upbringing, and it is important for the committee and the public to know that not everyone who runs a hedge fund was born on Fifth Avenue. That is the beauty of America and the beauty of the potential in our industry.

Through hard work and perhaps a little bit of luck, Harbinger Capital Partners has been able to generate substantial returns for our investors since 2001. Our investment philosophy is very simple: We study, often for months, the fundamentals of companies to identify those that are undervalued or overvalued, and we act decisively when opportunities present themselves. We are not momentum traders nor are we day traders. We are investors. It is not magic. My analysts perform thorough due diligence rather than relying on rating agencies or other research reports, like many of the reports that improperly valued securitized mortgage products over the past few years.

My compensation is based upon the returns that we generate for our investors, which have far exceeded the performance of the overall market. There is no doubt that as result of the success of Harbinger Funds, I have done extremely well financially. But this is not the case where management takes huge bonuses or stock options while the company is failing. My success is tied to that of my investors, and I have reinvested a substantial portion of my compensation over the years back into the funds alongside my investors who are fully aware of the compensation formula when deciding whether to place their money with us.

Because of the events of the past few months, the American public, including my investors, have justifiable concerns about our financial markets and the economy. The important thing to remember, however, is that we must keep things in perspective and not overreact, misperceive or misrepresent what has happened. We are a resilient society. We must focus on the positives and continue taking the positive steps forward, rather than backward.

Hedge funds play an important role in the economy by providing needed capital and encouraging creativity and outside-the-box thinking. Many viable companies struggling under a huge debt load or poor cash-flow have not only survived but flourished through an infusion of hedge fund capital, saving thousands of jobs. I am proud of Harbinger's track record of helping these types of companies emerge from bankruptcy and helping others avoid filing in the first place.

Finally, I would like to offer a thought or two on how Congress and the hedge fund industry can work together to increase public confidence not only in our industry but in the financial markets as a whole.

I support some additional government regulation requiring more public disclosure and transparency for hedge funds as well as for public companies. All investors, whether individual or sophisticated institutions, have a right to know what assets companies have an interest in, whether on or off their balance sheets, and what those assets are really worth.

I also support the creation of a public exchange or clearing house for derivatives trading, especially credit default swaps. An open and transparent market for these transactions would reduce confusion and improve understanding as well as help with valuation issues.

In summary, while I was growing up, my family may have lacked money, but one thing we didn't lack was integrity and pride in what we did and how we did it. It was a cornerstone then, and it remains the cornerstone of my family and my business today. In 1990, one of my investors once told me something that continues to resonate with me today. He said, I can't guarantee that if you work hard, you will be successful; but I can guarantee that if you don't work hard, you won't be successful. We should never lose sight of that.

Needless to say, I love this country, and I am grateful for the opportunity that I have been provided. That being said, we are living in difficult times now. Consequently, I hope that this committee and indeed the entire Nation will look the at hedge fund industry as part of the solution to our economic turmoil.

Given the tightening of credit markets, access to capital is more important than ever, and I believe that hedge funds can and should be a source for this capital. Thank you for permitting me the opportunity to make this statement, and I would be happy to answer any questions that you may have.

[The prepared statement of Mr. Falcone follows:]

Opening Statement of Philip A. Falcone

Hearing of the Committee on Oversight and Government Reform "Hedge Funds and the Financial Market"

November 13, 2008

Thank you, Chairman Waxman, Ranking Member Davis, and other Members of the Committee. My name is Philip Falcone. I am the Senior Managing Director and co-founder of Harbinger Capital Partners® Funds.

I am extremely proud of the work that we have done at Harbinger: year-in, year-out, we have generated substantial returns for our investors, which include pension funds, endowments, and charitable foundations. We have achieved success for our investors by doing things "the right way." Through our investments, we have also provided much-needed capital to American companies, supporting them as they pursue their business plans and giving them a second chance to reach their potential.

I appreciate the Committee holding today's hearing in order to learn more about hedge funds and their positive role in the financial markets. I am hopeful that this Committee can take four points away from the testimony:

Number 1: Compensation in the hedge fund industry is performance-based. I think that is the right way to do business, because it creates incentives for hard work and innovation.

Number 2: Hedge funds use a variety of investment strategies, including traditional approaches. Investors, especially large institutions, want a broad array of strategies and disciplines so they can diversify their portfolios.

Number 3: Short selling is a valuable, longstanding feature of our markets. It isn't short selling that puts companies out of business, but rather over-leveraged balance sheets, poor management decisions, and flawed business plans.

Number 4: I support greater transparency and better reporting in the hedge fund sector.

I would like to take just a moment to tell you a bit about myself. I currently reside in New York City with my wife of 11 years and two children. By way of background, I was born in Chisholm, Minnesota, population 5,000, on the Iron Range in Northern Minnesota. I was the youngest of nine kids who grew up in a three-bedroom home in a working class neighborhood. My father was a utility superintendent and never made more than $14,000 per year, while my mother worked in the local shirt factory. I take great pride in my upbringing, and it is important for the Committee and the public to know that not everyone who runs a hedge fund was born on 5th Avenue – that is the beauty of America.

I attended Chisholm Senior High and went on to Harvard University, where I received an A.B. in Economics in 1984. After college, I pursued my first love, hockey, although an injury cut short a professional hockey career abroad. I then moved to New York and began working as a high-yield bond trader at Kidder, Peabody. A few years later, at the age of 28, I teamed up with a friend to complete a leveraged buyout of a small company based in Newark, New Jersey. Unfortunately, the recession in the early 1990's made that venture quite difficult. As a result, by 1994, I was so 'financially challenged' that the power in my apartment was shut off because I could not afford to pay the electric bill. That experience, as painful as it was, stayed with me over the years and taught me several valuable lessons that have had a profound impact upon my success as a hedge fund manager.

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Finally, I would like to offer a thought or two on how Congress and the hedge fund industry can work together to increase public confidence not only in our industry, but in the financial markets as a whole:

- I support some additional government regulation requiring more public disclosure and transparency for hedge funds, as well as for public companies. All investors, whether individuals or sophisticated institutions, have a right to know what assets companies have an interest in -- whether on or off their balance sheets -- and what those assets are really worth.

- I also support the creation of a public exchange or clearinghouse for derivatives trading, especially credit default swaps. An open and transparent market for these transactions would reduce confusion and improve understanding, as well as help with valuation issues.

In summary, while I was growing up, my family may have lacked money, but one thing we didn't lack was integrity and pride in what we did and how we did it. It was the cornerstone then, and it remains the cornerstone of my family and my business today. In 1990, one of my investors told me something that continues to resonate with me today -- he said, "I can't guarantee that if you work hard you will be successful, but I can guarantee that if you don't work hard, you won't be successful." We should never lose sight of that.

Needless to say, I love this country and am grateful for the opportunity that I have been provided. That being said, we are living in difficult times now. Consequently, I hope that this Committee, and indeed the entire nation, will look at the hedge fund industry as part of the solution to our economic turmoil. Given the tightening of credit markets, access to capital is more important than ever, and I believe that hedge funds can and should be a source for this capital.

Thank you for permitting me the opportunity to make this statement and I would be happy to answer questions that you may have.

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Chairman WAXMAN. Thank you, Mr. Falcone.
Mr. Griffin.

STATEMENT OF KENNETH C. GRIFFIN

Mr. GRIFFIN. Mr. Chairman, Congressman Davis, and distinguished members of the committee, my name is Kenneth Griffin, and I am the founder and CEO of Citadel Investment Group. Thank you for the opportunity to address this committee.

Today, our Nation is working through the worst financial crisis since the 1930's. It is imperative that we as a Nation continue to take actions to mitigate the impact of the credit crisis on our broader economy in the hopes of keeping Americans employed and productive. I appreciate your leadership on this important undertaking.

I am proud that in the 18 years since I founded Citadel, it has grown into a financial institution of great strength and capability. With a team of over 1,400 talented individuals, Citadel manages approximately $15 billion of investment capital for a broad array of institutional investors, high net-worth individuals, and Citadel's employees.

Citadel's Capital Markets Division plays an important role in our Nation's market. Our broker dealer is the largest market maker in options in the United States, executing approximately 30 percent of all equity option trades daily. In addition, Citadel accounts for nearly 10 percent of the daily trading volume of U.S. equities.

All businesses take risks. In some industries we refer to risk-taking as research and development. At financial institutions, we often take risks by investing in securities. Failure to understand and manage risk can be severe, as we have seen far too often in recent weeks. Although the financial crisis has affected virtually every participant in the financial markets, including Citadel, I believe that Citadel's constant and consistent focus on risk management has been a key asset in successfully navigating this financial crisis and will continue to serve us well in the years to come.

In this crisis, the concept of "too interconnected to fail" has replaced the concept of "too big to fail." The rapid growth in the use of derivatives has created an opaque market whose outstanding notional value is measured in the hundreds of trillions of dollars. As a result, there is great concern about the systemic effects of the failure of any one financial institution.

In the area of credit default swaps, for example, there is an estimated $55 trillion of outstanding notional contracts between market participants. This number is almost four times the GDP of our Nation.

The creation of central clearinghouses to act as intermediaries and guarantors of financial derivatives such as credit default swaps represents a straight-forward solution to the issues inherent in today's opaque over-the-counter market. Of greatest importance, such a clearinghouse will dramatically reduce systemic risk, allowing us to step away from the "too interconnected to fail" paradigm. Numerous other benefits will accrue to our economy. Regulators, for example, will have far greater transparency into this vast and important market.

In recent months, Citadel and the CME Group have partnered in building such a clearinghouse for credit default swaps. Our solution is an example of how industry in cooperation with regulators can solve complex market problems.

I believe and have said before that our financial markets work best when they are competitive, fair, and transparent. Proper regulation is critical, but the best regulation is created with an eye toward unleashing opportunities, not limiting possibilities. To achieve this, Congress, regulators and industry must all work together. Our markets are complex, and they must be well understood if they are to be well regulated.

We must solve the serious issues we face but not in a way that stifles the best innovative qualities of our great capital markets.

I thank the committee for holding this hearing today, and I look forward to answering your questions, thank you.

[The prepared statement of Mr. Griffin follows:]

Testimony of Kenneth Griffin
to the House Committee on Oversight and Government Reform
November 13, 2008

Mr. Chairman and Distinguished Members of the Committee, my name is Kenneth Griffin, and I am the Founder and CEO of Citadel Investment Group.

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All businesses take risk. In some industries, we refer to risk taking as "research and development." At financial institutions, we often take risk by investing in securities. However, we have all seen the consequences of taking *imprudent* risk. Failures to understand and manage risk can be severe, as we have seen far too often in recent weeks.

Although the financial crisis has affected virtually every participant in the financial markets, including Citadel, I believe that Citadel's consistent and constant focus on risk management has been a critical asset in successfully navigating this financial crisis and will continue to serve us well in the years to come.

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I thank the Committee for holding this hearing today and I look forward to answering your questions.

Chairman WAXMAN. Thank you very much, Mr. Griffin.

We are now going to proceed to questions by Members of the panel, who will each have 5 minutes each.

I want to remind the Members that the hearing today is about hedge funds and the financial markets, and questions about other topics are not relevant to the hearing. The Chair won't bar any Member from asking any particular question or a witness from answering a particular question, but witnesses will not be required to answer questions unrelated to the topic of today's hearing. So I urge Members and witnesses to keep their questions and answers focused on the topic of today's hearing.

I'm going to start with myself. Let me start off by asking about systemic risk. In 1998, Long Term Capital Management was one of the Nation's largest hedge funds. It had about $5 billion in capital and was leveraged at a ratio of 30 to 1. It had made investments worth about $150 billion, and when those investments went bad, its capital was quickly wiped out.

The Federal Reserve became so concerned about the broader impacts of this collapse that it organized a multibillion dollar bailout. That was in 1998 when only about 3,000 hedge funds managed approximately $2 billion in assets. Current estimates suggest that there may be 9,000 hedge funds managing assets worth more than $2 trillion. Some say hedge funds have become a shadow banking system.

So I'd like to ask each of you two questions: Do you believe that the collapse of large hedge funds could pose systemic risks to the economy? And if so, do you believe this justifies greater Federal regulation?

Mr. Soros, why don't we start with you and go straight down the line?

Mr. SOROS. Yes, I think that some hedge funds do pose systemic risk. And I think particularly leveraged capital was built on a false conception—I talked about the false paradigm on which our financial system has been built. And that was actually embodied in leveraged capital, which was very—which basically assumed that deviations from—are random.

Chairman WAXMAN. Do you believe this justifies greater Federal regulation?

Mr. SOROS. Pardon?

Chairman WAXMAN. Do you believe this justifies greater Federal regulation?

Mr. SOROS. Yes, it does.

Chairman WAXMAN. Thank you.

Mr. Simons.

Mr. SIMONS. Yeah, well, certainly——

Chairman WAXMAN. Is your mic on?

Mr. SIMONS. Certainly the possibility exists that an individual hedge fund or hedge funds in aggregate could be a cause of systemic risk. And I think that regulation in the form of reporting up to the SEC, for example, in a more detailed manner than is presently done with those things aggregated—that information aggregated, passed on to the Federal Reserve or some such would be a good approach. So, yes.

Chairman WAXMAN. Thank you.

Mr. Paulson.

Mr. PAULSON. I think the risk—I think the systemic risk in the financial system, and that includes hedge funds as well as banks and other financial institutions, is due to too much leverage; that when banks or hedge funds use too much leverage, you only need a small decline in the value of the assets before the equity is wiped out and the debt is impaired. I do think there is a need for more stringent leverage requirements on banks, financial institutions and, where, necessary on hedge funds.

The amount of common equity that institutions are operating with is simply too thin to support their balance sheets. The primary reasons why financial firms have run into trouble, whether Lehman Brothers, Bear Stearns or AIG, is they have way too much leverage. Lehman Brothers, as an example, had over 40 times the assets compared to their tangible common equity. They just didn't have enough equity. Every hedge fund that has had a problem, whether it was the Carlisle funds, the Bear Stearns funds or Long Term Capital before, was because of the use of too much leverage.

Chairman WAXMAN. Do you think, therefore, that there ought to be more government regulation of the hedge funds and particularly on leverage?

Mr. PAULSON. Yes, I think the equity requirements of financial institutions need to be raised, and the margin requirements, the amount capital institutions or investors have to hold to support individual securities, should also be raised. And by doing that, that would reduce the risk in the system.

I may add just one point is that in all the trillions of government support globally to try and stem this financial disaster, not $1 yet has been used to support a hedge fund. So the problems have been with our investment banks with other financial institutions. And although Long Term Capital was large, a $4 billion hedge fund, that problem was also solved privately without any government intervention. And the problems of Long Term Capital, which today was the largest hedge fund to experience a problem, are minuscule compared to the $150 billion that was required to bail out AIG, the $700 billion billion in the TARP program, or the $139 billion that was just advanced to GE in the form of guarantees.

Chairman WAXMAN. Good point. Thank you.

Mr. Falcone.

Mr. FALCONE. Yes, I think that any institution that has a pool of capital at its availability and uses reckless leverages indeed poses a systemic, potential systemic risk to the marketplace. I think that when you look the at hedge fund industry with the trillion or trillion and a half dollars outstanding, that the leverage aspect of it is a bit isolated. And there are certain institutions that may pose risks, but I would suspect that for the most part the industry in general is not nearly as leveraged as some of the banking institutions that we were dealing with over the past 4 or 5 months.

And I do support additional regulation as it relates to that, because I don't think it's in anybody's best interest to see these institutions unravel and create a domino effect.

Chairman WAXMAN. Thank you.

Mr. Griffin.

Mr. GRIFFIN. Mr. Chairman, as you referred to Long Term Capital's consortium bailout in 1998, it is important to remember, it was a private market solution to a very challenging problem. Just a few years ago, Citadel and JP Morgan created a private market solution to the challenges faced by Amaranth and its shareholders when they incurred even greater losses in the natural gas market. Private market solutions can address crises. And we should keep in the center of our mind that we want to foster private market solutions as the way to handle crises first and foremost.

Of second point, hedge funds are already regulated indirectly by the fact that the banking system is regulated and the banking system is the primary extender of credit to hedge funds. And last but not least, I think it's important that we keep in mind, it's very convenient to say we should simply have more equity in the system, but equity is very expensive, and if we wish to reduce the cost of loans to consumers and loans to homeowners, we need to think of capital structures that have the right mix of equity to debt.

Thank you.

Chairman WAXMAN. Well, the private market solution was organized by the Fed. So it wasn't without some public intervention. Is it your conclusion that we do need some greater Federal regulation because of the systemic risks?

Mr. GRIFFIN. No, it is not my belief that we need greater government regulation of hedge funds with respect to the systemic risks they create. And to be very direct, we have gone through a financial tsunami in the last few weeks, and if we look at where the failure stress points have been in the system, they have been in the regulated institutions; whether it is AIG, an insurance company, Fannie or Freddie, the banking system. We have not seen hedge funds as a focal point of carnage in this recent financial tsunami.

Chairman WAXMAN. Well, our expert witness in the first panel testified they believe hedge funds do pose systemic risk.

Former SEC Chairman David Ruder said this: Highly leveraged hedge funds that borrow large sums and engage in complex transactions using exotic derivative instruments may severely disrupt the financial markets if they are unable to meet counterparty obligations or must sell assets in order to repay investors.

And Professor Andrew Lo gave similar testimony.

My concern is that our regulatory system has not recognized these potential risks. The hedge fund industry is getting bigger. The systemic risks are growing larger, and yet Federal regulators have virtually no oversight of your industry, and that is a potentially dangerous situation. So I appreciated hearing each of your views on that subject.

Mr. Davis.

Mr. DAVIS OF VIRGINIA. Thank you, Mr. Chairman.

I would ask, let me just amplify your question, and they can answer the question you just posed. Because our first panel of witnesses did propose requiring hedge funds to divulge comprehensive risk to regulators. But I have heard some concern here and elsewhere that you need to keep such data in an aggregated and confidential format. And so I would ask, along with Mr. Waxman's question, is there a danger of too much transparency in the hedge fund industry, and what is that?

Mr. Griffin, I will start with you. I think you have some limits on regulation and ask you to address that, and then I will move right down.

Mr. GRIFFIN. On the issue of disclosure of positions or aggregate risk factors, we at Citadel would not be adverse to that so long as the information was maintained confidential and in the hands of the regulators. To ask us to disclose our positions to the open market would parallel asking Coca-Cola to disclose their secret formula to the world.

Mr. FALCONE. I agree. I think that it is important to disclose the information to the appropriate regulatory agencies. We work long and hard in developing our ideas, and to make them public I don't think is the right thing to do. And the public would not necessarily use them in the same way, shape, or form that we would use our ideas.

Mr. DAVIS OF VIRGINIA. Mr. Paulson.

Mr. PAULSON. Yes, as you know, we voluntarily registered with the SEC in 2004. We believe, to the extent, having a regulatory oversight over the policies of hedge funds, to the extent it provides greater comfort to the public sector and to private investors is a beneficial thing.

Mr. SIMONS. I don't have much to add. I have already said that reporting up to the regulators is a good idea, more so than is now reported. I agree with the others that it should stay with the regulators or with the Federal Reserve. It should not be reported in the New York Times.

Mr. SOROS. As I have said, I think the regulators need to monitor positions more closely than they have done until now. But disclosing it to the public can be very harmful in many ways. And I think that the publication of short positions, for instance, practically endangers the business model of long-short equity investors—it is not our business, it is the other hedge funds that do that—because of the reaction of the companies whose shares they were selling short.

Mr. DAVIS OF VIRGINIA. Let me ask this. I asked Mr. Waxman, and he is comfortable with me asking this. Do you have any opinions on what the Treasury Department is doing now with the Troubled Asset Recovery Plan? How they can deploy that maybe better than they are doing? In light of the fact that the $700 billion is not actually being used to buy up troubled assets but to purchase equity stakes in financial firms, Secretary Paulson has indicated that Treasury may start purchasing stakes in nonbank financial firms. And do you think any hedge funds might take advantage of such an offer? Anybody want to opine an opinion on that?

Mr. Griffin, I will start with you.

Mr. GRIFFIN. Congressman Davis, I believe that the decision to focus on injecting equity or preferred equity into the banking system versus buying assets will create a larger effect for all of us and is a good decision on a relative basis. So, in other words, I applaud the Secretary of Treasury for making the decision to increase the equity capital base of the banking system at this moment in time.

Of course, we have a difficult decision to make ahead of us: Do we expand TARP to include the nonbanking sector? And if we do so, where do we draw the line? I think that is a very difficult decision that we have to make in the weeks and months ahead. Obviously, the economy as a whole is slowing down, and we need to keep Americans employed. And I believe that we are going to need more stimulus packages to keep our economy as close to full potential as possible.

Mr. FALCONE. I have been in favor of TARP to a certain extent considering that it could be a safety net for isolated incidents. I don't believe, however, that the money should be used for random purchases of assets because of the lack of clarity as it relates to what the institutions will do with that capital and what benefits it will do for the individual consumer. And I furthermore do not think that it should go above and beyond the financial institutions.

Mr. PAULSON. Congressman Davis, I do think it was a tremendous improvement shifting the focus of TARP from buying assets, which has very little impact on recapitalizing banks, to directly buying equity. I think the problem in the financial sector is one of solvency. Financial firms don't have enough equity. And injecting equity is the solution to the problem.

I also think the list of recipients needs to be expanded to include other types of financial firms whose failure could pose systemic risk. That may include auto finance companies other finance companies, and insurance companies.

However, I do think the structure of TARP investments can be improved. I think the current terms are overly generous to the recipients, and I will give you some examples. When Berkshire Hathaway bought preferred stock in one of the investment banks, they received a 10 percent dividend and warrants equal to 100 percent of the value of the investment. Under the TARP program, the yield was only 5 percent and warrants equal to only 15 percent.

In the U.K. And Switzerland, when they invested preferred knock their financial companies, they got a 12 percent yield, also substantial equity stakes.

By investing proceeds at less than market rates and less than other governments are doing, it's in effect an indirect transfer of wealth from the taxpayers to these financial institutions.

In addition, in the U.K., Switzerland and all other governments, when government money was required to help out financial institutions, there were restrictions on common dividends and on executive compensation. In the U.K. And in Switzerland, as long as government money is inside these companies, there are prohibitions on the payment of common dividends and caps on executive compensation. And this is essential in order to increase the retained earnings and common equities of the banks. It doesn't seem to make sense to me that the banks are short of capital, the government puts in capital, and then that capital comes out the other door in the forms of dividends and compensation.

I would make two suggestions that I think should be required of any financial firms that receive preferred stock investments or any form of guarantee from the Federal Government on their debt or other securities. One would be, while that guarantee is outstanding or while the preferred investment is made, that cash common dividends be eliminated and any dividends be restricted to dividends in additional shares of common stock.

Second, as other governments have required, there should be restrictions on cash compensation, and any bonuses or payments above that amount should be paid in common stock. By making those three adjustments, first increasing the terms of the preferred in terms of yield and equity to benefit the taxpayer; second, eliminating cash dividends; and third capping executive compensation, that would both protect taxpayers and restore the badly needed equity capital to these institutions.

Mr. SIMONS. OK. Well, it was generally agreed that the original goal of TARP to buy some of this paper was perhaps not the best idea and more leverage would be created by capitalizing the banks and so on. On the other hand—and I more or less agree with that—but nonetheless, something has to be done about this paper. No one knows what much of it is worth, and it's in weak hands. People don't know how to, you know, appraise the balance sheets of the companies that are holding it and so on. So it is a problem, and it is a big problem.

I had suggested to Bob Steel when he was Under Secretary of the Treasury that rather than buy this stuff, they organize an auction, a two-sided auction dividing the paper up into various categories and so on and conducting auctions that people could buy and sell. And hopefully buyers would come in, and sellers would put up, and the market would kind of get cleared.

It is a pretty good idea, but it is a dangerous one because the prices might not make some folks very happy, people who maybe aren't selling but all of a sudden their balance sheets get whacked way down. But sooner or later we have to face the question what is this stuff worth and how do we get it out of weak hands, where much of it is, and into strong hands? And because only with the paper being in strong hands can the issues, some of these issues be dealt with. If a mortgage is chopped up into a million pieces and owned, fractions of its cash-flow is owned by all kinds of people, it is very hard to deal with that homeowner and renegotiate the terms. But if you have bought this mortgage at, OK, a discount, then you can go to the fellow, and I am of course projecting this on a much wider scale, and say, OK, you can't make your monthly payments, but could you make it half? And can we make a deal here? And because he or she bought this paper at a substantial discount, everyone can make out OK in a reduced way. Somehow or other that paper has to be dealt with. And that is all I have to say.

Mr. DAVIS OF VIRGINIA. Mr. Soros.

Mr. SOROS. I am on record being very critical of the original TARP proposal. And I would like to go on record saying that while it is a great improvement that it is not used for removing toxic securities, but for equity injection, the way it is done is not an adequate or acceptable way, that if it were properly done then $700 billion would be more than sufficient to replenish the gaping hole in the banking system and to encourage the banks to start lending again. And the way that this should be done would be to ask the examiners to determine how much capital each bank needs to bring it up to the required 8 percent. Then the banks would be free to raise that capital or go to TARP and get an offer. But TARP should only underwrite the issue, and not actually take it on. But underwrite it on terms that the shareholders would be likely to take it on. And only if the shareholders don't take it would TARP take it on. Then you would have replenished the banking system, you would then reduce the minimum lending requirements from 8 percent, let's say, to 6 percent—the minimum capital requirements—and the banks would be very anxious to put that very expensive capital, because equity capital is expensive, to good use to get a good return on it by actually lending.

So that would solve that problem. And as far as the toxic securities are concerned, I think the first thing is to renegotiate the mortgages so that people would actually stay in their houses, and you remove the pressure of foreclosures, which are liable to push down the value of mortgage securities way below that. That is an undone business that has to be urgently attended to.

Mr. DAVIS OF VIRGINIA. Thank you all.

Mr. TOWNS [presiding]. Let me tell my colleague he has no time to yield back. Let me just ask the question and just go right down the line and get an answer from each of you.

All of you have successfully navigated the recent problems in the economy which appears to have blind-sided the people on Wall Street, and of course the people here in Washington. I don't think we can pass up this opportunity to explore what it is that you knew that allowed you to get so far ahead of everyone else when it came to predicting what would happen in the markets.

I would like to go right down the line. Right down the line. We will start with you, Mr. Griffin, go right down the line.

Mr. GRIFFIN. Sir, the last 8 weeks have been a challenging 8 weeks for Citadel. We have had a very successful 18 years holistically, but we have had a tough time in the last 8 weeks as the banking system around the world came close to the verge of collapsing. I think what is very important to note is what has happened in the last 8 weeks looks like nothing that any of the traditional risk management metrics would have shown as a realistic possibility.

I think it is very important for everyone to keep in mind in terms of policy decisions on a going forward basis we had a panic in the money market system, we had a panic in the banking system, and we have had very negative consequences as a result of that in the entire Western world's financial system.

I think if we look at the firms that have done well over the last 8 weeks, they came into this position with portfolios of both credit risk and equity market risk that could tolerate extreme moves, which we have witnessed. And they have come into this crisis with very solid financing lines, which have been important in terms of weathering the storm that we have just gone through.

Mr. TOWNS. Mr. Falcone.

Mr. FALCONE. I think in looking at what has happened over the past 8 weeks versus what has happened over the previous history in the financial markets is a very unique point in time. The markets are very irrational right now. And I have always said you could be right fundamentally and wrong technically. And the technical situation in the marketplace is putting a lot of pressure on a lot of institutions.

How we have weathered the storm and how we have done over the past has really been a function of our diligence. And I think in looking at where we have been successful, we have taken our time and been methodical and really thought things through. And we were very involved in the mortgage market over the past couple years. And it has been to a point—it was to a point where it took me about 8 to 12 months of some pretty substantial analysis before we put that trade on, or trades like that on.

So I would say that over the past couple of months it again has been very irrational, and been very difficult to avoid, no matter what type of institution you are, to avoid the pitfalls of what has been taking place. And I think in order to succeed going forward, the proper liquidity and the proper lines with the right institutions are a very critical and very important thing.

Mr. TOWNS. All right. Mr. Paulson.

Mr. PAULSON. Mr. Chairman, we conduct a lot of detailed analysis independent of the rating agencies.

Mr. SHAYS. Lower your mic just a bit.

Mr. PAULSON. Yes. Our firm conducts a lot of detailed independent research that is independent of what the rating agencies do. And we determined late in 2005 and early in 2006 there was a complete mispricing of risk of mortgage securities. We found Moody's and S&P rating various securities investment grade, including as high as triple A, that we thought would become worthless. The reason we had this opinion was we looked at the underlying collateral of these securities. The subprime securities were comprised of mortgages that were made with 100 percent financing and no down payment. They were made to borrowers that had a history of poor credit. There was no income verification. And the mortgage value was based on an appraisal that was typically inflated. We felt this was very poor underwriting quality, that the default rates in these mortgages would be very high, and that securities backed by these mortgages would also—would likely also have very high defaults. And it was that analysis that allowed us to buy protection on these securities, which resulted in large gains for our funds.

Mr. TOWNS. Thank you. Mr. Simons.

Mr. SIMONS. OK. Well, I didn't have that kind of wisdom. Happily, the funds that we operate didn't require that kind of wisdom. So our principal fund, called Medallion, is long and short equal amounts of equity, and is not necessarily affected by the rises and falls in the stock market, and in fact has done fine through this period.

A second fund which is designed to be a dollar long, that is for outsiders, not employees, obviously has—it is long more than it is short, so it is net long a dollar if you invest a dollar. That has obviously had some declines with the stock market down 40 percent, but considerably less than the declines of the market. And our investors in that fund are quite happy, because that is what they—that is what we advertised would happen, and so that is fine.

An outside futures fund we have was hurt by the explosion of volatility in October. I couldn't have predicted that. Maybe I should have. I didn't. It was on the wrong side of a few things and suffered some losses in October. But by and large, our business is not highly correlated with the stock market. And so that is how we have skated along here.

Mr. TOWNS. Mr. Soros.

Mr. SOROS. What was your question? I didn't fully understand your question. Was it how it affected our——

Mr. TOWNS. Yes. How you seemed to have been able to anticipate when others were not able to anticipate, especially Wall Street and Washington.

Mr. SOROS. I fully anticipated the worst financial crisis since the 1930's. But frankly, what has happened in the last 8 weeks exceeded my expectations. The fact that Lehman Brothers was allowed to go declare bankruptcy in a disorderly way really caused a meltdown, a genuine meltdown of the financial system, a cardiac arrest. And the authorities have been involved since then in resuscitating the system. But it has been a tremendous shock, the impact of which has not yet been fully felt.

Now, as far as my own fund is concerned, I came out of retirement to preserve my capital, and I have succeeded in doing that. So we are flat for the year, because by taking the necessary steps I was able to counterbalance the losses that we would be suffering otherwise, which would be quite substantial.

Mr. TOWNS. Thank you very much. Thank all of you for your answers.

The gentleman from Indiana.

Mr. SOUDER. Thank you, Mr. Chairman. And I understand this is a financial hearing, and I am not going to get into other questions, but I just want to say, Mr. Soros, we have had deep disagreements over the years on the heroin needles promotions and your promotion of different what I believe are back-door legalization of marijuana. And I believe while you have done humanitarian efforts around the world, your intervention in the drug area has been appalling. And I haven't had the chance to talk to you directly, and I wanted to say that because I believe it has damaged many Americans. And I hope you will reevaluate where you put your money.

But I do have a question directly to you on your question on equilibrium, that don't hedge funds provide some of that equilibrium by buying long and selling short and going after companies that haven't been responsible? And why do you think there wasn't more of that in this case?

Mr. SOROS. Well, to some extent hedge funds do. And of course we shouldn't put all the hedge funds in one category. There are different strategies and they have different effects. And definitely selling short is a stabilizing factor, generally speaking, in the market. In other words, the markets that allow and facilitate short selling tend to be more stable than those that prohibit them.

At the same time, hedge funds do use leverage. And leverage by its very nature has the potential of being destabilizing, because as the market goes up the value of the collateral increases, you can borrow more, and also maybe since you are making profits your appetite for borrowing more is increasing. So there is greater willingness to lend by the banks.

So this is the—generally speaking, bubbles always involve credit. And since hedge funds use credit, they are contributors to the bubbles. It is nothing specific to hedge funds, it relates to everyone who uses credit.

Mr. SOUDER. Mr. Paulson, you said a little bit ago that you felt that the government needed to get more involved in the fact that some use too much leverage, and that it is kind of a slippery slope because, as Mr. Soros just suggested, that in fact hedge funds use some leverage as well, and in fact while you serve a function for equilibrium, you often exaggerate the extremes of that through selling short or buying long.

Could you respond some to what Mr. Soros said? How do you feel? Do you still feel you shouldn't have additional regulation with that? And how do you respond to the fact that you do in fact exaggerate some of these trends?

Mr. PAULSON. Well, I think what leverage does is it exacerbates any move——

Mr. SHAYS. Is your mic on, sir?

Mr. PAULSON. Yeah. The danger of leverage is that exacerbates any type of market move. So almost every financial firm that has run into problems, not only hedge funds like Long Term Capital, but Lehman Brothers, AIG, has because they used too much leverage. And a small decline in the value of their assets wiped out their equity. So I think that there is a need to raise the margin requirements on particular asset classes and to require stronger equity positions in banks so that—and that would reduce the risk of failure.

Mr. SOUDER. Mr. Griffin, you have been the most aggressive in saying that there shouldn't be regulation. How would you respond to the comments there?

Mr. GRIFFIN. Let me be very direct on the point of regulation. Good regulation is good for every market participant. I mean, for example, in the middle of the financial crisis we worked hand in hand with the SEC to create the necessary exemptions to allow Citadel to continue to make markets every day in options to millions of retail investors. And every day during this crisis we have provided liquidity in the equities markets to millions of retail investors, whether they are at Schwab or Fidelity or Ameritrade or E-Trade. I am very proud of my firm's commitment to providing liquidity to retail investors in America. We have also worked hand in hand with the Federal Reserve Bank of New York for creating a clearinghouse for credit default swaps.

I think that as a Nation we need an intelligent dialog about the right regulatory frameworks to encourage markets that are transparent, that have the appropriate amount of leverage in the system, and that create value for society. The point of our capital markets is to allocate capital efficiently, to allow corporate America to raise equity, to grow, and to allow America to be more competitive in the world markets. And any regulation that furthers those key goals of our capital markets is regulation I would support.

Mr. SOUDER. May I ask a brief—if regulation goes too far would your funds, because I assume you all have foreign investment, would we see this move offshore either to Europe or Asia or other places?

Mr. GRIFFIN. It breaks my heart when I go to Canary Wharf and I look at the thousands and thousands of highly paid jobs in London in the derivatives markets that belong in America. We went through a period of regulatory uncertainty with respect to derivatives that pushed thousands of high-paying jobs abroad, jobs that belonged in our country.

Mr. SOUDER. Thank you.

Mr. TOWNS. Thank you very much. The gentlewoman from New York.

Mrs. MALONEY. Thank you. Thank you very much. And I would like to ask a question about a specific regulatory proposal, which is to require hedge funds to disclose information to regulators. This is an idea that was proposed in the prior panel by both Mr. Ruder and Professor Lo.

Right now the SEC, the Fed, and other entities have virtually no information about hedge funds. As a result, they have very limited ability to assess systemic risk. As Professor Lo testified, one cannot manage what one cannot measure. He said that it is, "an obvious and indisputable need to require financial institutions to provide additional data to regulators." Chairman Ruder made the same point when he said, "I continue to believe that a system should be created requiring hedge funds to divulge to regulators information regarding the size, nature of their risk positions, and the identities of their counterparties." And I see you have your book with you, Mr. Soros, and in your book you said, "there are systemic risks that need to be managed by the regulatory authorities. To be able to do so, they must have adequate information. The participants, including hedge funds and sovereign wealth funds and other unregulated industries, must provide that information even if it is costly and cumbersome. The costs pale into insignificance when compared to the costs of a breakdown. And we are now experiencing a major breakdown."

And so Mr. Soros, would you support a requirement for hedge funds to report financial information to regulators?

Mr. SOROS. Yes.

Mrs. MALONEY. And Mr. Simons, you also in your testimony made a similar statement about transparency and appropriate regulation. So would you agree also that it is correct to have more——

Mr. SIMONS. Yep.

Mrs. MALONEY. And also Mr. Paulson, Mr. Falcone, and Mr. Griffin, would you support additional information and transparency to regulators?

Mr. PAULSON. Congressman Maloney, you make a very good argument. I think given the size of the industry and the potential for systemic risk——

Mr. TOWNS. We are having trouble hearing you.

Mr. PAULSON. Congressman Maloney, I think you make a very good argument that given the size of the industry and the potential for systemic risk, greater disclosure and transparency would be warranted.

Mrs. MALONEY. Mr. Falcone.

Mr. FALCONE. I agree. I think providing information to the regulatory agencies is very important. I think, however, it is very critical what they do with that information, and that we have to make sure that it is properly analyzed. And I think that can go a long way, as opposed to providing the information and just seeing it filed away.

Mrs. MALONEY. Mr. Griffin.

Mr. GRIFFIN. I think one of the challenges that we need to address before we can get to the goals that you want to get to is to have a common language to describe derivatives.

Mrs. MALONEY. That is important.

Mr. GRIFFIN. Every firm uses a different set of terminologies, a different set of representations to describe their derivatives portfolios. Until we create central clearinghouses for over-the-counter derivatives, any reporting that we are likely to create will be inscrutable to regulators.

Mrs. MALONEY. We are moving toward that direction. As you have read and know, the Fed is moving in that direction.

Mr. Paulson, I would like to ask you to comment on an article that you wrote for the Wall Street Journal on the TARP when it first came out. Along with many of us in Congress, you argued that we should not be investing in these—in a toxic asset purchase, but to move into an equity injection. And some people, including yourself and others, have argued that why are we being treated differently as taxpayers in America as opposed to Great Britain. We have a 5 percent return, they have a 12 percent. Switzerland a 12½ percent. Mr. Buffett got a 10 percent.

Would you comment further on this and how the TARP possibly should be structured in a way that is more beneficial to the economy and to the American taxpayer?

Mr. PAULSON. Well, certainly. In terms of——

Mrs. MALONEY. And could you speak up?

Mr. PAULSON. Certainly. In terms of using the TARP money for equity instead of buying assets is much more beneficial. And the benefit can be described very simply. If you put a dollar of equity in a bank and a bank uses 15 to 1 leverage, then that dollar would support $15 of new lending. If you merely use that dollar to buy a toxic asset from a bank for a dollar, it doesn't increase the equity and doesn't provide for any new lending besides the dollar of equity provided.

So the leverage to support the system and provide for liquidity and new lending is far more efficient by putting it in equity rather than buying assets. So I think the——

Mrs. MALONEY. And could you comment on the difference between the equity return to the taxpayer, 5 percent versus Great Britain, Switzerland——

Mr. PAULSON. Yes.

Mrs. MALONEY [continuing]. And even Mr. Buffett?

Mr. PAULSON. Yes. So the change in TARP to buy equity instead of assets is very beneficial. But second, the terms that the Treasury has been providing equity, it seems to be very generous to the recipients, that it is way below what market terms are, what the firms would have to pay if they raised this money privately, and is also considerably below the returns that other governments get when they are forced involuntarily to support the financial institutions with equity.

So I think the three——

Mrs. MALONEY. Thank you. Go ahead.

Mr. PAULSON. The three changes I would recommend is that for future equity injections the government should get a higher dividend, perhaps around 10 percent, and warrants that equal a greater percentage of the investment than they are currently getting.

Second, in order to restore the equity in the financial firms, I think it is imperative that while that preferred stock is outstanding that common—cash dividends on common be prohibited. And as an additional means of creating more equity that ultimately will allow the company to pay back the preferred, that cash compensation be capped and bonuses above that amount be paid in additional shares of common stock. That will go a long way to restoring the equity in these financial firms.

Mrs. MALONEY. My time has expired. I wish I could ask many more questions. Thank all of you for your very insightful and important testimony. I yield back.

Mr. TOWNS. Thank you very much. And the gentleman from Connecticut.

Mr. SHAYS. Thank you, Mr. Chairman. I only have 5 minutes, so I would love some short answers, and then I am going to just focus on one individual, just so I can pursue a little more in detail. I would like to ask each of you, and I will just preface it when I meet with hedge fund partners and they are in a room and I ask them about treating capital gains—income as capital gains or as regular income, when they are with their colleagues they say we should have capital gains treated the way it is. And when they meet with me privately, they put their arm around me and say Chris, this is crazy, they should be treated as ordinary income. So, you know, the people that I respect look me in the eye and say it should be treated as regular income. I would like each of you to tell me capital gains or regular income? Mr. Soros.

Mr. SOROS. I think earned income should be taxed as earned income. If you have a partnership arrangement and you—and that allows you to take capital gains and you want to change that, I think that would be appropriate. It would be inappropriate to——

Mr. SHAYS. Let me just cut you off, Mr. Soros, because you have all answered the question. Do you all agree with or disagree with——

Mr. SOROS. I am in agreement with it being taxed as earned income. But I would take exception if this was only applied to hedge funds, and not other forms of partnership.

Mr. SHAYS. I am sorry. I thank you for finishing the answer. Do any of you disagree with that answer?

Mr. FALCONE. I disagree to a certain extent. I think that hedge funds shouldn't be looked at differently. And it is really a function of the underlying asset. If you have an asset and you hold it for longer than 12 months, then you should be subject to capital gains tax like any other individual or real estate partnership or any investor.

Mr. SHAYS. OK. You have answered the question. I just have so little time. I don't mean any disrespect.

Mr. FALCONE. OK.

Mr. SHAYS. Mr. Griffin, I am just going to focus in on you because I just have to isolate one, and you are the furthest away from my district, so if I offend you it won't bother. I am told you can only have 99 members as part of a particular hedge fund. It is 99 or less. Is that correct?

Mr. GRIFFIN. The rules have changed over the years. That is not necessarily applicable any more.

Mr. SHAYS. But it is limited?

Mr. GRIFFIN. Yes.

Mr. SHAYS. What concerns me is that some funds say 20 percent profit, 1 percent management fee. I am told that you don't do 1 percent management fee, you do costs. And that can be closer to 8 percent. Is that accurate or not?

Mr. GRIFFIN. We do pass through costs. Costs as we define will include, for example, commissions paid to other firms.

Mr. SHAYS. So does it amount to more than 1 percent?

Mr. GRIFFIN. Yes, it does.

Mr. SHAYS. OK. I am also told that some of your funds have done well and some haven't. And the accusation was that the funds that have done better are the ones you have your own money in, your own personal money, and the funds that haven't have not. And I want to know if that is accurate.

Mr. GRIFFIN. That is completely inaccurate. I am the single largest investor in our largest funds by a significant margin. I am also the largest investor in some of our funds that have been very profitable this year.

Mr. SHAYS. So would your statement for the record be, and under oath, that you have investment in every fund that you have or just some of the funds?

Mr. GRIFFIN. I have a material, several billion dollar investment in Wellington and Kensington.

Mr. SHAYS. Right.

Mr. GRIFFIN. And I have an investment in the several hundred millions of dollars in our other funds.

Mr. SHAYS. And the one that you have the most investment in, has that done the best or the worst or somewhere in between?

Mr. GRIFFIN. Regretfully, it has done the worst.

Mr. SHAYS. OK. Let me ask all of you then, do you think that you should be required to have your funds, your own personal funds in every fund that you have? The implication is that since you make 20 percent of the profit, that you might tend to be more risky with the funds you may not have your own money in because you still make 20 percent. And if you lose, if the funds lose, you don't lose anything.

So let me ask you about that. Mr. Soros.

Mr. SOROS. Exactly in order to avoid this kind of conflict of interest, I only have one fund and all my assets are in that fund.

Mr. SHAYS. I see. Has that fund done better or worse than your other funds?

Mr. SOROS. There is no comparison. It is the only one.

Mr. SHAYS. I am sorry, you just have one fund. I am sorry. Thank you.

Mr. SIMONS. OK. Well, no, I have——

Mr. SHAYS. I can't hear you. You are mumbling.

Mr. SIMONS. Well, all right. Is that better?

Mr. SHAYS. Yeah.

Mr. SIMONS. All right. I have substantial amounts of money in the three different funds that we manage. I think that question is generally asked in due diligence by people considering investing in hedge funds. We always do. We invest—the family invests in many, many hedge funds. And that is the first due diligence question, does the fellow have skin in the game or whatever? Does he have—

so to a large extent I think that issue is taken care of by the market.

Mr. SHAYS. You have answered the question. Thank you. Mr. Paulson.

Mr. PAULSON. Yes, all my assets are invested in the funds that we manage. I don't have any outside investments.

Mr. FALCONE. I think it is very important that the manager aligns himselves with the investors, and in my situation I am the largest investor in both of my funds.

Mr. SHAYS. Thank you all. Thank you.

Mr. TOWNS. Thank you very much. The gentleman from Maryland.

Mr. CUMMINGS. Thank you very much, Mr. Chairman. Mr. Soros, Mr. Souder had some comments about you a little bit earlier, and I just want to let you know that I thank you for what you all have done for the citizens of Baltimore in my district. It has been simply phenomenal, and I thank you and the Open Society Institute.

Let me go to all of you and just to kind of piggyback on some of the things that Mr. Shays was just talking about. Each of you appearing here, my neighbor on his way to work this morning said to me, he said how does it feel to be going before five folks who have more money than God? And I am sure you will disagree with him. But you are private citizens, and your income is not required to be publicly disclosed, so I am going to respect your privacy and not disclose your specific compensation. But you have provided information about your income to the committee, and it shows that although there are individual variations, on the average each of you made more than $1 billion in 2007. I've got to tell you that is a staggering amount of money. And I am not knocking you for it. But even though you made enormous sums, you are not taxed like ordinary citizens, like the guy that said what I told you. Your earnings are not taxed as ordinary income. Instead, the fees you receive are called carried interest, which means that they are taxed at capital gains rates. There are two capital gains rates, a low 15 percent rate for long-term gains, and a higher rate for short-term gains. What this means is that to the extent your earnings are based on long-term gains, the tax rate is just 15 percent.

My question for you is whether this is fair. A school teacher or a plumber or policeman makes on the average of $40,000 to $50,000 a year, yet they have to pay 25 percent tax. You make $1 billion, yet your rate can be, can be as low as 15 percent. Is that fair, Mr. Paulson? I want to start with you, because I understand that a significant part of your earnings can be short-term gain, but not all of it is. And Mr. Paulson, press accounts say that you earned over $3 billion in 2007. If just 20 percent of your income is long-term gain, that is over $600 million in income that is being taxed at a low rate. And so I will start with you, and we will just——

Mr. PAULSON. Well, we certainly appreciate——

Mr. CUMMINGS. I want you to keep your voice up for my questions.

Mr. PAULSON. Yeah. We certainly appreciate your concern for fairness in the Tax Code. But what I will say, I believe our tax situation is fair. If your constituents, whether they are a plumber or a teacher bought a stock and they owned that stock for more than a year, they would pay a long-term capital gains rate. So for our investments, to the extent I own investments for more than a year, I also pay a long-term capital gains tax. If we own an investment for less than a year, we pay short-term capital gains, which is taxed as ordinary income. And any fee income we receive, such as management fees, for that it is strictly ordinary income.

Mr. CUMMINGS. But this is about money that you are managing for other people. It is not your money, right? In other words, you said if I hold certain things for someone. But you are actually getting paid for what you do, the work that you perform. Isn't that right?

Mr. PAULSON. The way partnership accounting works, if the partnership owns an asset for more than a year, that asset is taxed at long-term capital gains. And that tax is passed along to all the partners in the same way. If the asset in the fund, in the partnership is a short-term capital gain, then all the partners, including the general partner, pay short-term capital gain.

Mr. CUMMINGS. Do you have an opinion, Mr. Falcone?

Mr. FALCONE. Yes, I do. I think that the important thing to realize is that hedge funds, quite frankly, are not and probably should not be treated any differently than any other investor. And as the case may be with my particular situation, last year approximately 98 percent of my taxable income was taxed under ordinary income. But I think it is important not to differentiate between hedge funds and the rest of the investment community, whether a private equity or real estate, or even individuals or the doctor that may own his hospital and decide to sell it.

Mr. CUMMINGS. So would any of you support repealing this tax loophole and taxing your income at regular income rates? Mr. Soros.

Mr. SOROS. I do.

Mr. CUMMINGS. I can't hear you.

Mr. SOROS. I agree to it. I have no problem with it.

Mr. CUMMINGS. Mr. Simons.

Mr. SIMONS. Yeah, I said the carried interest portion represented by other people's money, if that were raised to higher levels that would be OK with me.

Mr. CUMMINGS. Mr. Falcone. You just stated your position, I think, right?

Mr. FALCONE. Yes, I did.

Mr. CUMMINGS. Mr. Paulson.

Mr. PAULSON. Yeah, I would—I don't think it is a loophole. The carried interest merely passes through the nature of the income to the partners. If it is short-term capital gain, we are taxed at short-term capital gain. If it is long-term capital gain, it is taxed at long-term capital gain.

Mr. CUMMINGS. Mr. Griffin.

Mr. GRIFFIN. I think tax equity is incredibly important. And most of the income, if not all of the income that I generate is subject to either ordinary or short-term tax rates, the highest marginal rate. But if you and I were to start a restaurant together, and I was to be the chef and operator and you were to put up the capital, even though my labor goes into making that restaurant work every day, if we sell that business 2 or 3 years down the road I will get long-term capital gains. Our society preferences long-term capital gains from a tax perspective. And I think what we should seek to have is consistency in how we treat long-term capital gains, whether it is the hedge fund manager, the private equity manager, or the entrepreneur who starts a restaurant together.

Mr. CUMMINGS. I see my time is up. Thank you.

Mr. TOWNS. Thank you very much. Mr. Tierney.

Mr. TIERNEY. Thank you. Just to followup on that, Mr. Griffin, when you use your analogy about the restaurant, when you are the chef the money you earn from being the chef gets taxed at a regular income rate.

Mr. GRIFFIN. That is correct, sir.

Mr. TIERNEY. When you are managing other people's money, you are in effect the chef of that process, you get taxed for those earnings at the regular income tax rate.

Mr. GRIFFIN. And management fees are taxed as ordinary income, sir.

Mr. TIERNEY. Well, which way do you determine the management fees? The 1 or 2 percent or the 20 percent?

Mr. GRIFFIN. The management fees are generally taxed as ordinary income for most firms.

Mr. TIERNEY. What are you referring to as the management fees?

Mr. GRIFFIN. The 1 or 2 percent.

Mr. TIERNEY. One or 2 percent. Set that aside. You get 20 percent and the other partners get 80 percent of the earnings, correct?

Mr. GRIFFIN. That is correct.

Mr. TIERNEY. You get 20 percent for the effort you made in managing those funds, making those investments, and doing that type of work. That is being the chef, not in terms of selling the product. I know what you want to do, you want to wash it all through and come out the other end. But the fact of the matter is that is compensation for your day-to-day efforts of managing those funds, is it not?

Mr. GRIFFIN. Well, let's go back to the story of the chef. The chef in his salary every year is taxed as ordinary income. But if the restaurant has capitalizable value——

Mr. TIERNEY. But you are not selling anything when you are getting compensated for the day-to-day management efforts that you make.

Mr. GRIFFIN. If I make an investment that creates long-term capital gains, so I invest in a biotechnology company where the stock appreciates——

Mr. TIERNEY. A good portion of that money isn't yours. Right?

Mr. GRIFFIN. That is correct.

Mr. TIERNEY. So when you get 20 percent, it is for investing other people's money as well as your own.

Mr. GRIFFIN. That is correct.

Mr. TIERNEY. And some of that compensation is for your efforts in managing and investing those other moneys.

Mr. GRIFFIN. That is correct.

Mr. TIERNEY. Right. And that, my friend, I suggest to you is what we are saying ought to be taxed as regular income. You can disagree, but I just don't want you to take the chef analogy too far on that.

Mr. GRIFFIN. Just to be very clear, all of my income, or virtually all is taxed at the highest marginal rates.

Mr. TIERNEY. As it should be.

Mr. GRIFFIN. All right. So I speak to you from a conceptual——

Mr. TIERNEY. We don't disagree on that. I don't want you to take your chef analogy and confuse people with that.

Mr. Paulson, except for our disagreement on that particular issue, I was thinking that we probably had the wrong Paulson handing out the TARP moneys here, because I agree with you in essence about us not getting the deal as taxpayers that we ought to be getting. And fairly adamant. And I can daresay that you can't walk down the street at home in any of our districts that people don't make that point, is what the heck are we doing giving money to these institutions, and they are out there giving bonuses, paying high salaries without being capped, and then waltzing around giving dividends. I think that is an important point, and I know you have already mentioned that twice now, but I think it probably can't be mentioned loudly enough and clearly enough while the other Mr. Paulson is busy determining what he is going to do.

What I would like to know is whether the other four panelists here agree with our Mr. Paulson here that if we are going to have taxpayer money go to any of these institutions, we ought to get a better deal, you know, better security on that, make sure the compensation isn't excessive, and make sure in fact that dividends aren't given out in cash during that period of time when we have the guarantee of the investment made. Mr. Soros.

Mr. SOROS. I am sorry, I didn't follow the question properly. I am sorry.

Mr. TIERNEY. In my old business we used to be able to have it read back. Do you agree with Mr. Paulson that as long as taxpayers' money is being given to these institutions for the purposes of thawing out the so-called credit freeze that we ought to be getting a better deal for the taxpayers? We ought to be getting better security for that investment? We ought to be making sure that the banks or the entities are not giving excessive compensation with it, bonuses and things of that nature, and are not giving cash dividends while the stockholders, the taxpayers' money is there?

Mr. SOROS. I am not sure that I would agree with Mr. Paulson on that.

Mr. TIERNEY. Why not?

Mr. SOROS. I think that if you have a capital increase in the banks, then I think that as long as the money is put up by the shareholders, there should be no change in the—it is up to the shareholders how they compensate.

Mr. TIERNEY. But this is taxpayer money, not shareholders' money we are talking about.

Mr. SOROS. When it is taxpayers' money, no, that I agree. Yes. Yes.

Mr. TIERNEY. Thank you.

Mr. Simons, do you also agree?

Mr. SIMONS. Generally speaking I do, although I will make the point that when this first round of money was put into these banks some of them didn't want to take it. And then Paulson said everyone has to take it. And therefore, if you are going to—because he didn't want the public to distinguish which bank is stronger and which bank is weaker or so on, which maybe was a good idea, maybe wasn't. But the result is that everyone had to take it. And if you have to take it, well, then you can mitigate that a little bit by saying, OK, I won't gouge you too much or whatever it would be. So I am not saying the 10 percent is gouging, by the way, but some of this money was not requested by some of these banks. To the extent that it was, I think it was quite a sweet deal.

Mr. TIERNEY. I think whether you request it or not, you ought to have a fair deal, not a lopsided deal on that. But we can discuss that later.

Mr. Falcone.

Mr. FALCONE. I agree. I think that to the extent that the capital is infused into some of these companies it should be more along the lines of market rates.

Mr. TIERNEY. Mr. Griffin.

Mr. GRIFFIN. I believe that market rates for many of these companies would be extremely high. And if one of our goals is to reduce the cost of consumer credit, this is in essence an indirect subsidy to the banking system that I hope they will pass on in some form or another to the ultimate consumers to whom they lend to.

Mr. TIERNEY. Thank you all for your answers. Thank you, Mr. Chairman.

Mr. TOWNS. Thank you very much. Mr. Yarmuth.

Mr. YARMUTH. Thank you, Mr. Chairman. I want to thank the panel. The testimony has been, I think, unusually candid and thoughtful, and I appreciate that very much. I am going to probably cross the line a little bit that Chairman Waxman set down, but I am going to try to draw the connection.

We have had a number of hearings related to the immediate financial crisis. And even going back some months we had a hearing on corporate compensation and its connection to the housing crisis. And we had a panel back then that included the former CEO of Time Warner, the former CEO of Merrill Lynch, Citigroup, and we had Mr. Mozilo from Countrywide. And one of the questions that I asked was when all these corporate executive compensation committee meetings met, was there ever a discussion of things like employee welfare, the communities that the corporation served, so forth, general corporate policies, or was there—the discussion always about stock price? And with unanimity they said the conversations were always about stock price. And one of the things that has become a common theme in hearings we have had is that when you tie everyone's compensation to stock performance, and relatively short-term stock performance, then you have an incentive or pressure for maybe riskier behavior that might have contributed to a lot of the crisis that we have.

So I ask you, as people who own significant positions in some of these companies, whether you have a concern about the corporate governance structure in this country and whether we should be doing things, whether it is related to corporate compensation generally or general corporate governance laws that might ameliorate some of this issue if you think it is a problem? Mr. Soros, would you like to start?

Mr. SOROS. I am definitely at a loss because it is not a subject that I have really given a lot of thought to.

Mr. YARMUTH. Chairman Waxman excused you.

Mr. Simons.

Mr. SIMONS. I haven't thought about it a great deal, but generally speaking I am more of a fan of profit sharing for CEOs than I am of stock options. The latter is very volatile, and you never know quite what he is getting.

Mr. PAULSON. In this case I would echo Mr. Simons' comments.

Mr. FALCONE. I am inclined to agree with Mr. Paulson and Mr. Simons that it is important to participate, from a compensation perspective as it relates to profit sharing, along those lines.

Mr. YARMUTH. Mr. Griffin.

Mr. GRIFFIN. I will concur with the other panelists.

Mr. YARMUTH. In today's Financial Times, Professor Malkiel from Princeton suggested that one of the things that might be considered is when you have compensation tied to stock options and so forth that it involve restricted stock that the CEO could not sell until sometime after he or she left the company, and therefore the concern would be more in the long-term interests of the corporation rather than short-term stock performance. Is that something that resonates with any of you that you think might be a good idea? You can say you didn't think about it.

Mr. GRIFFIN. I think that would be a terrible idea.

Mr. YARMUTH. Terrible idea?

Mr. GRIFFIN. And part of the reason is that we need executives in America to take risks. Whether it is to put the money down on the line for R&D in drugs or willing to try to create new ways to power America, we need executives to take risk. And what we find is as executives become more successful, they actually become more risk averse often. And so if you have their entire net worth tied up in stock options, which are inherently risky, and then they cannot monetize any portion of that until after they retire, I would be gravely concerned about the reduction in risk taking by America's corporate leaders. It sounds good on paper. I don't think it will give us what we need as a country. We need innovation.

Mr. YARMUTH. Does anybody else want to address that? I don't have any other questions. But if you don't, that is fine. Thank you, Mr. Chairman.

Mr. TOWNS. Thank you, very much. Thank you. The gentleman from Tennessee, Mr. Cooper.

Mr. SIMONS. I would like to excuse myself for a moment. I will be right back.

Mr. TOWNS. Sure.

Mr. COOPER. Thank you, Mr. Chairman. The headline of this hearing is definitely *Paulson* v. *Paulson.* As has been enumerated, John Paulson accuses Henry Paulson of botching the bailout. Because taxpayers do want a good return for their money, and they are very worried when we are only getting 5 percent interest on the preferred stock, and not getting sufficient warrant positions. But I think the real purpose of this hearing is to understand better the role that hedge funds play. And I asked the previous panel, professors largely, if it is possible to distinguish between hedge funds that hedge and funds that are more speculative. Because Mr. Paulson, for example, bet right on the down housing market, but that was not necessarily a position—you know, for example, if you had taken that position 3 or 4 years ago you wouldn't be as wealthy as you are today. The only thing worse than being wrong about the market is being right too early. So is it possible to distinguish between hedge funds that hedge and those that are speculative?

Mr. PAULSON. Well, let me first say I hope this is not *Paulson* v. *Paulson,* or that I am accusing a Paulson of botching anything.

Mr. TOWNS. Would you pull that mic? We have a great difficulty hearing you, so could you pull the mic closer to you or talk a little louder?

Mr. PAULSON. Absolutely. I will be glad to do that, Mr. Chairman.

I in no way want to be critical of Mr. Paulson. He has done a tremendous amount for our country, is willing to change his position when the circumstances change, and I think he has reoriented the TARP program in the right direction.

The second part of your question—or I really wasn't sure what it was again.

Mr. COOPER. For example, Mr. Simons doesn't purchase credit default swaps, he is not leveraged much. Other hedge funds have quite different strategies. We will never know because it is a black box trade secret. But is it possible for the pension fund and other investors to know in advance whether they are buying interests in a hedge fund or a speculative fund? I know in the private conversations you reveal a little bit more of your operations. But most people have no idea whether it is a hedge fund that hedges or it is not. It is a question about truth in advertising.

Mr. PAULSON. Congressman Cooper, that is a very good question. Investors never have to invest in a hedge fund.

Mr. COOPER. I know.

Mr. PAULSON. If they don't get the proper transparency——

Mr. COOPER. They don't, but there is a Wisconsin school board that put money in SIVs that got traced all around the world. You know, a lot of investors don't necessarily know. So right now we have a hedge fund as a category that is not defined, and some of which hedge, but many of which do not. And people have no advanced notice. So there is no truth in advertising.

Mr. PAULSON. Well, we for one give a lot of transparency to our investors. And while we don't disclose them publicly, we do disclose a great deal about what we are doing to our investors. So I would encourage investors such as pension funds, that they invest with managers that give disclosure so the pension funds know what they are investing in.

Mr. COOPER. Do any of the witnesses know? Mr. Soros.

Mr. SOROS. I think that hedge funds, several hedge funds have claimed to follow a market neutral strategy exactly because institutional investors want to see low volatility, and I think that was rather misleading. I don't think it was deliberately misleading, but actually because there is this false paradigm that has prevailed, that has pervaded the thinking on this subject, people thought that they were market neutral, and in actual fact when an event occurred that was not a random fluctuation or deviation, then it turned out to be non-market neutral.

Mr. COOPER. Thank you. You mentioned that investors usually want low volatility. The markets have been unusually volatile recently, and some trading strategies depend on volatility. How much volatility is enough?

Mr. SOROS. Well, see——

Mr. COOPER. 200 points a day, 500 points a day, a thousand is more better?

Mr. SOROS [continuing]. Basically, what the prevailing paradigm has neglected is the uncertainty that is connected with this reflexive connection. We have become very adept in calculating risk. And by focusing on risk, we have left out uncertainty. And that has been our undoing in this particular case.

Mr. COOPER. How about the other panelists? Is a volatility only strategy appropriate? And if so, is more volatility always better?

Mr. SOROS. Well, you see, I think volatility is an indication of uncertainty. And the fact that normal volatility is 30, and it shot up to 50 and 70 and 80, it just shows the increased uncertainty that is currently pervading the markets.

Mr. COOPER. Does the government have a role in limiting excessive uncertainty?

Mr. SOROS. Well, I think that regulators have to understand that there is this uncertainty in markets. And that is why the risk management methods used by individual participants who are only thinking of their own risk is not appropriate in calculating systemic risk. And to protect against systemic risk, you have to impose restrictions on the amount of credit or leverage market participants can use. That is actually the core of my argument that I am putting forward.

Mr. GRIFFIN. Congressman Cooper, if I may.

Mr. COOPER. Yes.

Mr. GRIFFIN. Good regulation, good policy helps to reduce volatility in the market. And we are extremely invested in the safety and soundness of our financial system.

Mr. COOPER. But doesn't your firm have a conflict of interest in grouping with CME to create clearinghouses and other means that might somehow prejudice the market?

Mr. GRIFFIN. In the sense of?

Mr. COOPER. Well, if you are partnering with the market maker or the clearinghouse, how do people know it is going to be a fair market?

Mr. GRIFFIN. Well, we would clearly have a very sharp distinction between our role as a contributor of intellectual property and know-how to the CME to expedite the launch of this clearinghouse from the day-to-day management of the clearinghouse. We will have no involvement in the day-to-day management of the clearinghouse. Because the positions of other market participants should not be made available to Citadel.

Mr. COOPER. That makes investors rely on a Chinese Wall instead of a greater separation.

Mr. GRIFFIN. Well, CME will be running the clearinghouse. So we are not running it, just to be very clear on the record.

Mr. COOPER. Thank you, Mr. Chairman. I see my time has expired.

Chairman WAXMAN [presiding]. Thank you, Mr. Cooper.

Mr. Van Hollen.

Mr. VAN HOLLEN. Thank you, Mr. Chairman, and thank all of you gentlemen for your testimony. We have had a lot of discussion about trying to create greater transparency over hedge funds. And as I understand all of your testimony, you agree with the idea that at least on a confidential basis it would be appropriate for some Federal agency, the SEC or some other Federal agency, to monitor and obtain that information for the purpose of making a determination whether there is systemic risk, putting the taxpayer at risk. Am I right about that?

Mr. SOROS. Yes.

Mr. SIMONS. Yes.

Mr. FALCONE. Yes.

Mr. VAN HOLLEN. Now, we had just before you a panel of a number of professors, including Professor Lo and Professor Ruder. And the question I posed was OK, let's say you are the SEC or the regulator and you are getting this information and data and you see your alarm bells go off. You say look, we really do think we have a problem here, whether it is to the investors or systemic risk. What authorities should they have then with respect to the hedge fund? And the response we got was maybe the SEC shouldn't have that authority, but they would provide the Federal Reserve with that authority, which according to their testimony would require additional congressional action.

So my question of you gentlemen is, is that something you think would be necessary? Because the obvious question that comes up once you say it is OK to collect the information is OK, you got it, now you make a determination that something is going wrong, shouldn't we also make sure they have the authority to deal with it? Especially in light of the fact that what we have learned, at least with respect to the investment banks, is that the taxpayer is of course sort of holding the risk as a last resort and is going to be asked and has been asked anyway to go in? So I would pose that question to you, gentlemen, whether you think, whether it is the SEC or the Federal Reserve, they should also have additional authorities, whether it is leverage requirements or some other powers that they can intervene with respect to a particular hedge fund that they determine is causing systemic risk?

Mr. SOROS. Well, I would definitely argue that is exactly what you need. That is what currently is missing and it needs to be introduced. We used to have that kind of authority. In earlier years, in my youth I used to be aware of them. They have fallen into disuse. And I think they have to be brought back, because there is a distinction between money and credit, and markets don't tend toward equilibrium, and it is the job of the regulators to prevent asset bubbles from developing.

Mr. SIMONS. Yes.

Mr. PAULSON. I would agree with that.

Mr. FALCONE. I would agree as well. I'm not so sure it should be the SEC or the Federal Reserve or a new regulatory agency, but I think it's a very good idea.

Mr. GRIFFIN. I think what is important in the concept is for the hedge funds that are subject to this new paradigm to understand the rules of the road. Are we heading toward a Basel 2 requirement for hedge funds, for example? So long as I know what the rules of the road are, I can conduct my business in a way to be well within the lines.

Mr. SIMONS. That's a very good point, I think.

Mr. GRIFFIN. And I would like to clarify one previous statement. On the issue of clearinghouses for credit default swaps, there were two primary solutions proposed over the last couple of weeks; one was the dealers in the consortium called TCC, the other is a solution by Citadel on the CME. A key distinction between these two solutions just a few weeks ago was that the CME solution is open to all financial market participants, both the buy side and the sell side.

Whereas the TCC solution, the dealer solution, was to be open only to the dealer community. And I believe that all of us on the buy side, whether we are Pemco, Black Rock, Citadel, Paulson, would want a platform that is open to all. It goes back to transparent and fair markets. And we have seen the dealer community trying to create doubts as to why the CME solution is the best one, this issue of Chinese walls. Let me just make it clear; we need a solution to meet the needs of all market participants. And I believe that our work with the CME to do so is in the best interest of our Nation and the entire world's financial system.

Mr. VAN HOLLEN. Thank you for that. Let me also just say, with respect to your answer to the previous question, we appreciate it. We may need all of you gentlemen to continue to provide that input as we go forward. Because, as you know, just the notion of providing greater transparency has been proposed in the past, it was proposed after the failure of Long Term Capital Management took a case to the Supreme Court that you are all very familiar with. And the fact of the matter is, not you as individuals, but certainly the industry, fought efforts to provide greater transparency, to provide greater oversight and some of these things. So as we go through this effort to provide reasonable regulation of the financial markets, we appreciate your input going forward as well as today.

Thank you, Mr. Chairman.

Chairman WAXMAN. Thank you, Mr. Van Hollen.

Mr. Issa.

Mr. ISSA. Thank you, Mr. Chairman.

Mr. Soros, it's good to meet you at last. I'm very intrigued at some of your comments, and one of them particularly has to do with leverage. Is it enough, or would it be at least a good quick beginning if the Congress—obviously with the President—were to create a truth in, if you will, transparency of leverage, require standards and disclosure as to leverage, and of course that means that, derivatively, if you leverage something and then you go to resell it, it would be standard so that if you leverage a leverage a leverage, then that would have to be transparent and flow through. If that were one of the items on President Obama's short list of things to be done in that first 100 days, would it go at least a long way toward preventing the kind of over-leveraging that you're speaking of, at least the lack of visibility on over-leveraging?

Mr. SOROS. Well, certainly the introduction of newfangled financial instruments has made it much harder to calculate leverage because some of those instruments are leveraged instruments. So, given all the derivatives that have been introduced, calculating the leverage becomes a very, very complicated problem. And especially if you have tailor-made instruments, then it becomes even more difficult. So I think that it may be necessary to actually—while it is certainly necessary for the regulators to understand what they are regulating, and if they don't, they should perhaps not allow some of those instruments to be used. So I think that the instruments themselves would have to be authorized, approved by the SEC, or whatever, before they could be used.

Mr. ISSA. Good point.

Mr. Paulson, first of all, congratulations. I'm not an investor with your fund, but I've noticed that you manage to be still up about 1 percent at a time in which the walls are falling all around most other people. In order to have the kind of stellar gauge you've had, including obviously dealing with some of what we rename, we call them, you know, caustic and corrosive and acidic products, were you able to make sound decisions as to the real leverage that you were buying into in your investments?

Mr. PAULSON. Absolutely. What we did was primarily buy protection on debt securities. And at the time, we bought this protection, it's like buying an insurance policy, the premium was very, very low, on the order of 1 percent. So if the debt security never fell, we would lose the value of that premium. But that premium in our base funds was only about 1 to 2 percent, and that was the extent of loss we would realize if our investments didn't pan out.

Mr. ISSA. So to characterize what you've just said, you gambled less than those who went routinely long on any investment.

Mr. PAULSON. I believe that's the case.

Mr. ISSA. So the people who invested with you, including the pension funds and so on, were gambling less because of your technique—which was available to them and you have a track history since 1994—they were gambling less because you told them that you had, in fact, hedged outcomes in order to protect their investment.

Mr. PAULSON. I prefer not to use the word "gambling."

Mr. ISSA. And I didn't use it for you, I used the word "hedge" for obvious reasons. And the term "gambling," and just correct me if I'm wrong, most mutual funds, whether they're in small cap, mid cap, large cap, foreign, they basically tell you they're going to be 100 percent invested or they're going to have a ratio. And no matter what happens in the market, they don't go to all cash, and many of them refuse to go short to market as a matter of it's in the prospectus; isn't that right?

Mr. PAULSON. That's correct.

Mr. ISSA. So your technique and the technique of virtually all hedge funds is, in fact, to limit risk by stating how you will maneuver in a market as it becomes less than one directional up; isn't that true?

Mr. PAULSON. That's true. An important goal of our funds is to limit risk and reduce volatility.

Mr. ISSA. Last question, if I could, Mr. Chairman.

There was some talk on the earlier panel about tax treatment—and I know this isn't the Ways and Means Committee so I want to limit it, but do any of you see a way in which we could look at the long term gains that you and your investors achieve when you're long for a period of more than a year and differentiate between those and any other investor in stocks and other equity products or debt products? Do any of you see a way in which you could effectively differentiate, because we're often talking about hedge funds and saying, well, we've got to get rid of their capital gains treatment, the only reason I ask is, can any of you—because you're very smart people—think of a way that we would separate your category from every other mutual fund, if you will, and the capital gains treatment they get?

Mr. FALCONE. If I may, if you plan to go down that road, there might be one possibility where——

Mr. ISSA. By the way, I don't plan to go down that road.

Mr. FALCONE. Instead of having the horizon be 12 months, maybe make it a little bit longer for hedge funds. I would hate to see that eliminated in its entirety because there are truly individuals in the hedge fund market that are investors, and if you extend that timeframe, that could be one way of looking at it.

Mr. ISSA. Thank you, Mr. Chairman.

Chairman WAXMAN. Thank you, Mr. Issa.

I want to thank the Members of this panel. The Members, I think, have asked very important questions, and you gave very thoughtful answers which is very helpful to us. Congress usually has trade associations at hearings, and they give the predictable responses, which are in what they see their self interest. And that's why we wanted to have you testify here today to get an unfiltered response, and your comments and recommendations were very helpful.

I believe there has been a consensus or near consensus that hedge funds can pose systemic risks. And there has been a similar consensus that there should be more disclosure about the activities of such hedge funds. Several of you have urged more oversight and reasonable restrictions on leverage and closing the tax loophole that benefits hedge fund managers. You have also provided insightful criticisms of the Federal response to the financial crisis.

We're facing a terrible economy and enormous disruption in our financial markets, and I think your testimony is very helpful to us in pointing out ways that Congress and Federal regulators can help restore our markets. So I thank you very much for what you have done today.

That concludes the business before the committee, and we stand adjourned.

[Whereupon, at 2:03 p.m., the committee was adjourned.]

[The prepared statement of Hon. Edolphus Towns follows:]

ONE HUNDRED TENTH CONGRESS

Congress of the United States

House of Representatives

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Statement of Rep. Edolphus "Ed" Towns

Committee on Oversight and Government Reform Full Committee Hearing Entitled "Hedge Funds and the Financial Market."

Thursday, November 13, 2008 at 10:00 a.m. in Room 2154 of the Rayburn House Office Building

I want to thank the Chairman and Ranking Member for holding this hearing on the regulation of hedge funds. When discussing the financial system, it is important that we take a look at the trillion dollar hedge fund industry.

According to Bloomberg, hedge funds have dropped in value by an average of 15.5 percent so far this year. The diverse investments made by hedge funds are tied to entities throughout our economy. When very large funds fail, they have the potential to create serious issues for investors, banks, and creditors.

The current financial crisis has taught us to take a close look at what is going on in the financial marketplace, so that we can address major problems early enough to prevent ripple effects which can destabilize our entire economy. Hedge funds are major players in that marketplace. Monitoring the marketplace includes keeping an eye on hedge funds in order to know when a fund poses a risk to the economy as a whole. I encourage my colleagues to take advantage of this opportunity to discover new and better ways for us to be on the lookout for problems. In doing so, I hope that we can tread lightly and not overreact to the current economic situation.

Hedge funds can be risky to investors, and large hedge funds can be risky to the marketplace. Despite this fact, I must urge my colleagues to use caution as we move forward in responding to the economic crisis. In attempting to prevent future disruptions in the U.S. economy similar to that which we have seen in recent months, we have to be very careful not to go overboard.

The American economy is driven by entrepreneurial individuals who take risks and supply the investments that support the growth of all of the various industries in the United States. We have to make sure that our economy has the appropriate safeguards to remain healthy while also making sure we do not stifle the driving forces behind its growth.

We have floated a number of ideas on Capitol Hill in recent years with regard to hedge funds. I am particularly concerned that some of the ideas that have been put forth to regulate hedge funds would unfairly limit the ability of individuals to have access to the tools and arenas to grow and build their wealth. For the first time in history, certain segments of our society have access to real promise of the "American dream." People who started out with next to nothing are able to work really hard, make smart choices, and invest their money to earn real wealth. We need to protect our economy, but not by restricting access to the tools for building wealth to the people who are already wealthy.

Mr. Chairman, I urge my colleagues to take a thoughtful and balanced approach to the examining how we address issues with the financial markets as we grapple with restoring stability to our economy.

Thank you Mr. Chairman.