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GROWTH AND DEVELOPMENT OF THE DERIVATIVES MARKET

HEARING

BEFORE THE

SUBCOMMITTEE ON
INTERNATIONAL TRADE AND FINANCE

OF THE

COMMITTEE ON
BANKING, HOUSING, AND URBAN AFFAIRS
UNITED STATES SENATE

ONE HUNDRED NINTH CONGRESS

FIRST SESSION

ON

EXAMINATION OF THE GROWTH AND DEVELOPMENT OF THE DERIVATIVES MARKET, FOCUSING ON THE ROLE OF DERIVATIVES AS A PART OF RISK MANAGEMENT FOR CORPORATIONS AND FINANCIAL ENTITIES

OCTOBER 18, 2005

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C O N T E N T S

TUESDAY, OCTOBER 18, 2005

GROWTH AND DEVELOPMENT OF THE DERIVATIVES MARKET

TUESDAY, OCTOBER 18, 2005

U.S. SENATE,
SUBCOMMITTEE ON INTERNATIONAL TRADE AND FINANCE,
COMMITTEE ON BANKING, HOUSING, AND URBAN AFFAIRS,
Washington, DC.

The Subcommittee met at 2:30 p.m., in room SD–538, Dirksen Senate Office Building, Senator Mike Crapo (Chairman of the Subcommittee) presiding.

OPENING STATEMENT OF SENATOR MIKE CRAPO

Senator CRAPO. The hearing will come to order.

This afternoon, the Subcommittee on International Trade and Finance will examine the growth and development of derivatives markets.

Derivatives have come to play an extremely important role in our financial system and our economy. As Chairman Alan Greenspan has said, "derivatives have especially contributed, particularly over the past couple of stressful years, to the development of a far more flexible, efficient, and resilient financial system than existed just a quarter-century ago." Over the last three decades, the use of derivatives has grown rapidly. Some estimates of the current size of the market for derivatives exceed $200 trillion, an amount based on "notional value" or the underlying amount of all derivatives contracts, which is more than 100 times what it was 30 years ago. Congress played a role in the growth of this important market by first regulating commodity futures, then securities, including options on securities, and finally clarifying the law to allow the growth of newer and more complex OTC derivatives.

The more common types of derivatives include: Forwards, futures, options, swaps, caps, collars, and swaptions to name a few. And I am not going to profess that I am capable of discussing those at a high level of sophistication, although I have had occasion, over the past few years, as we have battled out some of the issues around here, to dig into just how derivatives are utilized in the market. And that is the purpose of this hearing as well. Some are traded over-the-counter, such as forwards and swaps. Some types are traded both on and off exchange. Some products are regulated, such as commodity futures and securities options. Some are not regulated, such as the OTC interest rate swaps. Dealers and customers may be regulated or unregulated. Both institutions and persons may trade derivatives, through the OTC markets tend to be institutional.

What all derivatives have in common, no matter what the label, how they are traded, or who regulates the trading, is that they are instruments designed to manage risk, allocating it to investors most able and willing to take it. Companies of all sizes use derivatives to manage all kinds of risk. Individuals use their derivatives primarily through options and futures exchanges. Financial institutions are major users of both exchange-traded and OTC derivatives. Energy companies, farmers, and hedge funds also represent some of the many diverse users of this multifaceted financial tool.

Airlines may hedge a risk on jet fuel, and manufacturers may hedge a risk of the price of their raw materials going up. And there is no end to the list of those who use derivatives.

One of the reasons for the growth of the derivatives market was the careful balance that was struck by the Commodity Futures Modernization Act of 2000, or what we all call the CFMA. Last month, the Banking Committee discussed issues relating to the pending reauthorization from 12 witnesses, including representatives from the agencies that make up the President's Working Group on Financial Markets. It is critical that we not undo the excellent work that was based largely on the President's Working Group back in 1999.

The United States has been a leader in the innovation and growth of derivatives, and American businesses were among the earliest to benefit from these important management tools. We are fortunate to have a group of experts with us today who are going to help us understand first the growth of the derivatives market and their role in the U.S. economy; second, the regulatory developments and the role of market discipline; and, third, how historically agriculture commodity markets became the centers of financial product trading.

Our witnesses today include James E. Newsome, who is the President of the New York Mercantile Exchange. Previously, Dr. Newsome served as the Chairman of the Commodity Futures Trading Commission from 2001 to 2004. In addition to his responsibilities at the CFTC, Dr. Newsome served as a Member of the President's Working Group on Financial Markets, and he was serving along with the Secretary of the Treasury, the Chairman of the Federal Reserve Board, and the Chairman of the SEC.

We also have Joseph P. Bauman, who is the CEO of JB Risk Consulting. Mr. Bauman has been in the derivatives business for 20 years. He served as the Chairman of ISDA from 1993 to 1994 and was a Member of ISDA's Board of Directors from 1989 through 1999. Mr. Bauman is also a founding Director of the International Association of Financial Engineers. He received his B.A. from Rutgers University and M.P.A. from the Wharton School of the University of Pennsylvania.

Paul Bennett, who is also with us, is the Chief Economist and Senior Vice President of the New York Stock Exchange. Prior to joining the New York Stock Exchange in 2001, Dr. Bennett served for over 22 years in a variety of research and operational positions at the Federal Reserve Bank of New York. He holds a Ph.D. in economics from Princeton University and an A.B. in economics from the University of Chicago.

And, finally, we have with us Charles Smithson, who is the Managing Partner of Rutter Associates. Dr. Smithson taught economics at Texas A&M University and is the author of numerous articles in professional and academic journals. Mr. Smithson is best known as the originator of the "building block approach" to financial products. He is the author of five books, including the best-selling text "Managing Financial Risk and Credit Portfolio Management." Mr. Smithson served as a member of the working group for the Group of Thirty Global Derivatives Project, the output of which is often referred to as "Sound Practices for Derivatives."

I want to thank each of you who will be here this afternoon testifying, and we look forward to your testimony and the help that you will give us on this Committee. I assume you have all been given the instructions. We like to ask you to try to keep your presentations to about 5 minutes, but as you can see, we are not going to have a full array of questioning from the Senators here. I think we do expect some to make it. But with the reconciliation battles going on and all the other fights going on right now in Congress, this is my fifth hearing today, and I think I am probably one of those with a smaller number. So what I am getting at is we may have time for you to slop over a little bit in your time. Now, that does not mean I want you to get carried away. So, I would like you to try to keep it to around 5 minutes, but if you are not done right at 5 minutes, I will give you a couple of minutes to finish up rather than cutting you right off like I usually do.

With that, why do not we start in the order I announced you, and, Dr. Newsome, you can begin.

STATEMENT OF JAMES NEWSOME
PRESIDENT, NEW YORK MERCANTILE EXCHANGE, INC.

Mr. NEWSOME. Thank you, Mr. Chairman. The New York Mercantile Exchange is the world's largest forum for trading and clearing physical-commodity-based futures contracts, including energy and metals products. We have been in the business for 135 years and are a federally chartered marketplace, fully regulated by the Commodity Futures Trading Commission.

Futures markets provide important economic benefits. NYMEX energy futures are highly liquid and transparent, representing the views and expectations of a wide variety of participants from every sector of the energy marketplace. As derivatives of cash markets, they reflect cash market prices and as a result are used as a hedging and price discovery vehicle around the globe. The price agreed upon for sale of any futures contract trade is immediately transmitted to the Exchange's electronic price reporting system and to the news wires and information vendors who inform the world of accurate futures prices. In addition to continuously reporting prices during the trading session, NYMEX reports trading volume and open interest daily and deliveries against the futures contracts monthly. Transparent, fair, and orderly markets are critical to the NYMEX's success as the most reliable hedging vehicle for physical transactions and financially settled over-the-counter transactions.

The Commodity Futures Modernization Act of 2000 was landmark Federal legislation that provided legal certainty, regulatory streamlining, flexibility, and modernization to U.S. futures and derivatives markets. It provided a reasonable, workable, and effective oversight regime for the regulated exchanges, while enhancing the abilities of exchanges to compete in a rapidly changing global business environment. Product innovation such as new platforms for trading futures and clearing OTC products are a direct result of the ability to respond to constantly changing industry demands. Market participants have benefited from more useful risk management tools, better use of technology, greater liquidity, more efficient pricing, and better customer service. Trading facilities have been able to provide more alternatives in trading platforms, products, and business models.

The CFMA, contrary to some beliefs, did not diminish the regulatory oversight responsibilities of the CFTC. All exchange actions remain subject to CFTC review and oversight and enforcement action. It remains the CFTC's responsibility to assure that all futures exchanges are enforcing their rules and remain in compliance with the core principles. As intended, the level of regulation established for designated contract markets is appropriate for the nature and participants of the markets. Therefore, the CFMA effectively ensures the market and financial integrity of regulated futures exchanges.

Volatility and high prices in crude oil, natural gas, and gasoline futures contracts have triggered unwarranted criticism of NYMEX. While a significant amount of energy trading occurs in other forums, such as in the OTC market, on electronic facilities, and on exempt markets, NYMEX is targeted largely due to its highly liquid and transparent markets. A new bill passed in the House 2 weeks ago calls for an investigation of NYMEX by the Federal Trade Commission. The General Accounting Office currently is studying the CFTC's oversight of NYMEX, and there is consideration of yet another independent study of NYMEX in the context of CFTC reauthorization. Misinformation spread by groups who do not understand the futures markets has led certain Members of Congress to draft legislation that potentially would roll back many of the significant advancements achieved under the CFMA. Generally, supporters of the legislation mistakenly believe that the bill will limit volatility and reduce prices of natural gas. A number of proposals have been discussed that would apply only to NYMEX natural gas futures contracts, including: Artificial price limits on natural gas futures contracts; a price limit that triggers an investigation of the market by the CFTC; and prior CFTC approval for NYMEX rule changes that expand price limits beyond 8 percent of the prior day's settlement price.

Prices are market driven and must be allowed to find their true level consistent with market fundamentals. Artificial restrictions prevent futures markets from reflecting true market value and prevent the use of the market as a dependable hedge against price volatility. Without NYMEX or other exchanges as a price discovery market, conducting business in the cash market will be severely impaired. Higher costs to do business quickly translate into higher prices for consumers.

The threat of investigative action each time a price limit is hit potentially would have a chilling effect on the markets. Moreover, and I think more importantly, the CFTC should have the flexibility to use its limited enforcement resources in the areas deemed most protective of the public interests.

Finally, NYMEX does not believe that the rule amendment process established under the CFMA for futures exchange products, other than agricultural commodities, should be repealed for one commodity on one exchange. There is clear evidence that the self-certification process has been a huge benefit to exchange growth and development without indications to date of regulatory risks.

Derivatives markets contribute to the efficient allocation of resources in the economy because the price, which is derived through a highly liquid, transparent, and competitive market, influences production, storage, and consumption decisions. These markets touch many aspects of the U.S. and global economy and, therefore consequently, our lives. They can only effectively serve their economic purpose if they are allowed to trade and respond to market fundamentals without artificial restraints.

I thank you, Mr. Chairman, for the opportunity to share the viewpoint of the New York Mercantile Exchange.

Senator CRAPO. Thank you very much, Dr. Newsome.

Mr. Bauman.

STATEMENT OF JOSEPH P. BAUMAN
CEO, JB RISK CONSULTING, LLC

Mr. BAUMAN. Thank you, Mr. Chairman. My name is Joseph Bauman, and I am honored to appear before the Subcommittee today. Throughout my career, I have been involved in the derivatives business and am currently a consultant to participants in the derivatives industry. In my career, I have worked for Chemical Bank, Citibank, and Bank of America, and I have also served as Chairman of the International Swaps and Derivatives Association, the global industry association that represents the privately negotiated industry, and was a Member of the ISDA Board for 10 years. Although this is my first testimony before this Subcommittee, I have testified previously on matters related to the derivatives market before other Congressional Committees and Subcommittees.

In the many roles that I have played in the industry and in the several institutions for which I have worked, I have observed the phenomenal growth in the derivatives business. In my written remarks to the Subcommittee, I highlight the important role that the regulatory framework in the United States for swaps and other privately negotiated derivatives, with the components of market discipline and legal certainty, has played in that growth.

In a way, market discipline and legal certainty are a check and balance on the effective functioning and growth of any market. In brief, market discipline provides an environment in which all parties to a transaction understand that they are accountable for both the profits and losses that result from their decisions, and legal certainty is the core principle by which participants to a transaction know that the terms of their agreement will be binding and enforceable under law. But it is the regulatory framework through which market discipline and legal certainty are reflected that could have the greatest impact on all market participants.

In my remarks today, I would like to emphasize the need for this Subcommittee and other relevant Committees of Congress to ensure that when it comes to a regulatory framework for the derivatives markets, the Congressional intent as embodied in critical provisions of the Commodity Futures Modernization Act, continue to be carried out.

OTC derivatives are built on a foundation of bilateral, privately negotiated, contractual relationships. Anything that calls into question any piece of that foundation can have serious adverse effects on the willingness of parties to engage in transactions. From the enforceability of essential contractual provisions to the essential right of two parties to engage in derivative transactions, ISDA's primary concern has been to ensure that when two parties agree to a transaction they have the certainty that their rights and obligations will be enforced.

In the United States, a major focus of ISDA's efforts for over 15 years has been the recognition, confirmed in the Commodity Futures Modernization Act, that swaps are not appropriately regulated as futures under the Commodity Exchange Act. If swaps were futures, then swap transactions would be considered unenforceable as illegal, off-exchange futures. Throughout my tenure on the ISDA Board, which began at the time of the promulgation of the 1989 swaps statement by the CFTC and ended just prior to enactment of the CFMA, the potential of a court determination that swaps for futures was a significant concern for the industry. The substantial growth of the business during that period was, in no small part, due to the consistent view of regulators, including the CFTC, and the intent of Congress, as embodied in the 1992 Futures Trading Practices Act, that swaps were not appropriately regulated as futures contracts.

It is worth highlighting that the only action inconsistent with those longstanding policies was the issuances of a CFTC concept release in 1998 which raised questions about the possible need to regulate the OTC derivatives market. Congress acted promptly to prevent the CFTC from proceeding with that initiative and directed the President's Working Group on Financial Markets to produce a report on OTC derivatives. That report, published in 1999, served as the basis for many achievements in the CFMA.

But the experience of the 1998 CFTC concept release demonstrates that concerns about legal certainty are neither academic nor speculative. It is also instructive as an example of the need for Congress, regulators, and the industry to remain vigilant to ensure that Congressional intent continues to be carried out.

The 5 years since the passage of the CFMA have proven the law's wisdom. In those 5 years, privately negotiated derivatives have continues to thrive and product innovation has proceeded unabated. Even more importantly, thanks in no small part to derivatives, the markets have been able to withstand significant shocks to the financial system. The legal certainty provided by the CFMA has been an important part of this success.

The CFMA provided broad exclusions and exemptions from provisions of the CEA for many different types of OTC derivative products. Recently, significant concerns have been raised within the financial community regarding developments that threaten to set back that progress. These concerns arose in testimony before the Senate Banking Committee, in a recent report of the Senate Agriculture Committee in connection with the CFTC reauthorization legislation, and in a recent judicial decision, specifically the case of *CFTC* v. *Bradley*. These have raised questions regarding the scope of the exemptions and exclusions for over-the-counter derivatives enacted in the CFMA, suggesting that the relevant exemptions and exclusions are somehow limited in scope to the underlying transactions and do not cover the persons engaged in those transactions or their related conduct and activities.

This view, which is clearly contrary, we believe, to the CFMA, if unaddressed, could resurrect the very legal concerns that led to enactment of the CFMA. Steps by the Subcommittee to clarify this issue should be prominent in the Subcommittee's consideration of CFTC reauthorization and related issues.

I should also emphasize that the success of the CFMA is not limited to the legal certainty it provides to over-the-counter derivatives. By and large, the CFMA remains a crowning achievement of financial services law. By creating flexible rules for organized exchanges, providing legal certainty for sophisticated market participants, and encouraging the growth and development of new financial products, the CFMA has positioned the United States to remain a financial innovator for years to come.

Thanks very much for allowing me to address the Subcommittee this afternoon. I appreciate your continued leadership in ensuring the legal certainty for privately negotiated transactions, and I look forward to answering any questions you may have.

Senator CRAPO. Thank you very much, Mr. Bauman.

Mr. Bennett.

STATEMENT OF PAUL BENNETT SENIOR VICE PRESIDENT AND CHIEF ECONOMIST, NEW YORK STOCK EXCHANGE

Mr. BENNETT. Thank you. I am Paul Bennett, Chief Economist of the New York Stock Exchange. On behalf of the NYSE and our Chief Executive John Thain, I want to thank you for inviting me to testify today before the Subcommittee. The NYSE greatly appreciates your leadership in overseeing the international aspects of our Nation's evolving financial markets and the ability of U.S. companies to successfully and fairly compete on a global basis. The NYSE is both a nationally and internationally focused organization. We list the stocks of U.S. companies valued at $12 trillion, plus we also list the stocks of non-United States companies valued at $9 trillion in Asia, Europe, Africa, and Latin America.

Because we compete with stock exchanges around the world, many of which trade a variety of products, including financial derivatives, we believe strongly that to service our customers competitively in this environment we need to continue to have well thought out and effective regulation in the United States. This implies, among other things, regulatory parity between cash and derivatives markets, including an intelligent policy of portfolio margin requirements for a full range of instruments.

Servicing our customers is also the driving force behind our new hybrid market which will give a greater range of choices about how to trade stocks than is offered by any other equity market in the world. In addition, our planned merger with Arca will provide our customers with another choice of trading platform, an opportunity to trade options in addition to cash equities, and the ability to expand the range of business activities we pursue as a newly public company, both domestically and internationally.

Thank you.

Senator CRAPO. Thank you very much, Mr. Bennett.

Dr. Smithson.

STATEMENT OF CHARLES SMITHSON
MANAGING PARTNER, RUTTER ASSOCIATES LLC

Mr. SMITHSON. Chairman Crapo, thank you for the opportunity to testify about a market that is crucial to both industrial firms and financial institutions, but one that is widely misunderstood.

Over the more than 20 years I have been involved in derivatives and risk management, I have been collecting empirical evidence generated by my academic colleagues on the impact of derivatives on the markets and on the firms that use them. The best way I know to share that evidence with you is through the answers to four important questions.

The first question is: What happens to the volatility of financial prices when derivatives appear? I sometimes hear it said that the introduction of derivatives leads to increased price volatility. While the story has a ring of plausibility, the empirical evidence does not bear it out. The 39 academic studies on this topic that I was able to find indicate that the introduction of derivatives reduces price volatility in the underlying markets.

Question two: What happens to the bid-ask spread and trading volume for the underlying assets? The academic studies indicate that the bid-ask spreads in the underlying markets decline after the introduction of derivatives and that the introduction of derivatives is associated with either no change or an increase in trading volumes in the underlying markets.

Question three, shifting from the markets to the firms that use them: If a firm uses risk management, does the market regard the firm as being less risky? If a publicly traded firm is exposed to financial price risk, the returns to that firm's equity would be sensitive to changes in interest rates, foreign exchange rates, or commodity prices. Consequently, question number three could be rephrased as: If such a firm uses derivatives to manage one or more of those risks, do the exposures decline?

As we reported in a recent article, Professor Simkins of Oklahoma State Univeristy and I found 15 studies that examined this question—6 focused on financial institutions and 9 focused on industrial companies. Overwhelmingly, the studies indicated that the use of risk management led to a decrease in the perceived riskiness of the firm.

Finally, we are to the payoff question, question four: What impact does the use of derivatives have on the value of the firm? This is the newest question to get examined by our academic colleagues. So far, there are only 10 studies, the oldest of which was published in 2001. Six of the studies examined the impact of managing interest rates and foreign exchange rates. The other four examined commodity price risk management, with one looking at commodity users and the others looking at commodity producers.

What do they say? Managing interest rate and foreign exchange rate risk with derivatives is associated with higher firm values. Similarly, the study of commodity price risk management by commodity users found that fuel price hedging by airlines is associated with higher firm values. The three studies that looked at commodity price risk management by commodity producers found either no effect or a negative effect on equity values, which suggests that investors buy the equity of these commodity producers to gain exposure to the commodity price and, therefore, would not reward the firm for reducing that exposure.

I believe the answers to the four questions are important enough that they bear repeating.

Number one, the introduction of derivatives reduces price volatility.

Number two, the introduction of derivatives decreases bid-ask spreads and does not reduce volume in the underlying markets.

Number three, firms that use risk management are perceived by the market to be less risky.

Number four, the use of derivatives to manage interest rate risk, foreign exchange rate risk, and commodity price risk by commodity users is rewarded by the market with higher values.

Derivatives have dramatically reduced the cost of transferring risk to market participants who have a comparative advantage in bearing them; that is, from individual firms to well-diversified institutional investors.

Derivatives are often described as a "zero sum game," and they are. But even though one party's gain is another's loss in an individual transaction, the more efficient risk sharing afforded by derivatives reduced total risk for all market participants.

In order for derivatives to deliver the benefits that they are capable of providing, there must be a high degree of certainty as to their enforceability and their regulatory treatment. Congress made extraordinary progress in ensuring such certainty in 2000 with the enactment of the CFMA. The growth in the depth and breadth of the derivatives since 2000 is a testament to the importance of legal certainty and the success of Congress' efforts.

Mr. Chairman, thank you again for the opportunity to testify. As I began, I indicated that derivatives are widely misunderstood. Your Subcommittee is making progress toward removing those misunderstandings.

Senator CRAPO. Thank you very much, Dr. Smithson, and to the entire panel, I want to thank you.

When I was elected to Congress, I did not know I was going to eventually become—I was going to say "an expert." I am nowhere close to being an expert on derivatives, but become thrown into the business of learning about derivatives, because they are so important to our markets. I can still remember the first floor debate that we had on a critical battle we had over how to manage derivatives and how to regulate derivatives. And the training that I had tried to put myself through to even just talk lucidly about derivatives on the floor of the Senate was somewhat foreboding. I imagine it was like what Harriet Miers might be trying to go through right now to get ready to go before the Judiciary Committee.

But my point is that when this issue first started becoming prominent just in the last couple of years—I know it was very prominent back in the late 1990's as the President's Working Group was working on it, but the public did not really pay a lot of attention to that. That was below the surface. After Enron and some of the other circumstances where derivatives were blamed as a part of the problem, it started to get more public attention. And as that developed, it became very evident to me that not only I and other Members of Congress but that the public in general needs to start learning a lot more about what derivatives are and how they work.

The first time I asked Alan Greenspan a question about it to explain derivatives, he was in his gentlemanly way very succinct. He just said, "Senator, I could probably go on a long time trying to answer that question, but the easiest way to think about it is that it is a way that markets allocate risk from those who can bear it least to those who can bear it most if they work efficiently." And it may be that that is how I am going to have to—that one level I have gotten internalized. It may be that I will have to just stick at that level of understanding, but I think that I and the rest of us can get a much better understanding, and we certainly need to as we go forward with this issue.

To help a little bit on that, I would like to have the first part of our discussion just focus on kind of explanations of how derivatives work, and maybe I would ask each of you just in your own mind to maybe come up with an example of how a derivative could be used to manage a risk. And feel free to discuss this whole question in a little more broad terms than that if you want to in your answer, but could you each just by way of example help share with me how derivatives work? Do you want to start out, Dr. Newsome?

Mr. NEWSOME. I would be more than glad to, Mr. Chairman. I will use an example from the energy sector, and Dr. Smithson made a comment about the airline industry and hedging the risk with regard to fuel prices.

There was an article in *Time* magazine maybe 2 months ago that analyzed a number of the airlines, those who were using derivatives contracts to manage risk and those who were not. And I think it is a pure example of placing a hedge to create a floor for a price into the future.

Southwest hedged 85 percent of their fuel costs and had a price per barrel locked in at $26. They had a breakeven price per barrel at $65.30.

On the other side of the spectrum, you have Delta, who hedges 0 percent of their fuel. Prices at the time were $50 a barrel, so they had a breakeven price per barrel of $13.80. So, I think that is a pretty real-life example of how companies can use these markets to hedge risk.

Senator CRAPO. I read that same article, and the analysts, if I remember the article, were saying that you could buy Southwest stock safely—they were giving it a "buy" ranking. But they were not giving that to very many other airlines. And basically, if I understand it right, that is because Southwest was able to use—well, tell me, what did Southwest do?

Mr. NEWSOME. I think when you look at particularly today's industry, where you have volatility in the energy markets and you have people complain about the level of volatility and the higher prices, the reality of the business is that the exchanges and other instruments are there to protect customers against the very price volatility that they are complaining about. So, I think this is a perfect example of Southwest having the feeling that fuel prices were probably going to go higher because of the political volatility in the Middle East, uncertainty in Venezuela, and other energy-producing areas, and the recognition that energy markets have become global. What happens in corners of the world does have a dramatic impact on energy prices here. Southwest saw the opportunity to lock in what they thought was a fair price with an upward trending market and certainly have benefited because of that now.

Senator CRAPO. And now somebody is losing in that transaction, if Southwest is buying gas at $26 a barrel.

Mr. NEWSOME. Yes.

Senator CRAPO. Where is that playing out in the market?

Mr. NEWSOME. As I think Dr. Smithson said, again, it is a zero sum game, so for every winner there is an equal and offsetting loser. But typically, as you would see a bank take the opposite position of, say, a Southwest Airline, then they would enter into other transactions to spread their risk. So, I think that is what Chairman Greenspan was referring to, when the risk gets allocated among those who are better able to stand it.

Senator CRAPO. Thank you.

Mr. Bauman, do you want to weigh in?

Mr. BAUMAN. I will take it back to my banking experience in the sense that banks around the country—and this is not the large banks, this is the thousands of community and even savings banks—generally are characterized by bearing interest rate risk in their activities. They generally are raising funds, paying depositors on the long-term basis, and maybe lending money on a short-term basis, meaning their interest rates that they will receive will vary over time. And that leaves them imbalanced and open to the risk of their income shrinking significantly if that interest rate gap reduces or reverses, and certainly if that occurs, it impinges on what those banks could do going forward with their customers.

The interest rate swap market allows those banks to equalize to—as you started off this hearing pointing out, using these products as a risk management tool allows the banks to smooth out their imbalances and their interest rate exposures. And to the point of where that risk goes, there are certainly many corporations that are looking at essentially making investments in fixed cost plant and equipment, fixed cost assets, but borrow to produce those assets on a short-term basis from the point of interest rate exposure, and they too could benefit or be hurt by a change in that relationship. Their way of managing that risk is to try and eliminate it, and therefore, they have the opposite interest of many of the banks. And it is the matching of those two interests that the derivatives market facilitates.

Senator CRAPO. Thank you.

Mr. Bennett.

Mr. BENNETT. Let me give you an example from the equities market. If I were a money manager managing a portfolio of equities on behalf of customers, and I received perhaps unexpectedly some cash to invest, if I had no derivative type instruments available to me, then I would either be sitting there with cash with the risk that the market would move up before I had a chance to invest it, which would harm my customers, or alternatively, I would have to try and hurry up and pick stocks very fast, faster than I was comfortable with, which would create an allocation of capital which was not optimal.

By being able to hedge the cash with index futures, being long on index futures, that hedges me against fluctuations in the overall market, and then I can take a little bit more time and make a little bit more of a thoughtful selection of stocks to invest. I would still have risk in terms of how each of those stocks performs relative to the index while I am making the investments, and I also have to manage the purchase of those stocks in an orderly way.

However, in a fundamental way in terms of the broader market risk, it hedges me against that and allows me to make a more efficient set of decisions.

Senator CRAPO. Thank you.

Dr. Smithson.

Mr. SMITHSON. Given that we have talked about managing commodity price risk, interest rate risk, and equity risk, I probably should talk about foreign exchange risk management. Instead, I am going to shift to a different dimension from those we talked about so far—asset liability managements or managing the ongoing operation of firm. Another place where firms find derivatives and risk management practices to be useful is in getting access to funds.

My second favorite debt issue, of all I have ever seen, was issued in the late 1980's by Magma Copper Company. Magma was a new organization. They needed to borrow $200 million; but they knew that, if they issued a straight bond, nobody was going to buy it. The reason nobody was going to buy it is because everybody knew that they were making a "copper play": If copper prices went up, Magma would pay the coupon; if copper prices went down, Magma was going to tell you where "they left the keys"—they were going to default. And so a straight bond was not going to work.

What Magma did was issue "copper interest index debt." What that means is that the coupon floated but, it did not float with LIBOR, it floated with the price of copper. If copper prices moved higher, Magma paid a higher coupon. If copper prices fell, the coupon went down.

What Magma had done was use options. They had sold options as a paying way of part of the coupon on the debt.

Everybody won on that issue. Magma's management credited that bond with getting them the breathing room that they needed to get the mine refitted and working. The investors won. I used to try to check the price on that bond and never could really get very firm quotes on it, because it went into investment portfolios and stayed. The investors liked it; and they kept it. As a matter of fact, when I said that Magma would have had trouble raising the $200 million with a straight bond, this "copper interest indexed" bond was oversubscribed when it was issued. And the shareholders won. It turned out that Magma got their house in order—got that mine in Arizona working well. It was eventually bought by Broken Hill Properties, and I think the shareholders are still smiling about the price they received.

Senator CRAPO. Thank you. I think all of those examples are very good, and I note from the examples that—well, first of all, I think we all know that—you probably know if I am right about this, but it seems that agriculture was where all of this started, is that right? And we did not have an agriculture example, but that is obviously one area where it is a big issue.

Dr. Smithson, you talked about metals. We have had energy, interest rates, equities, cash. Is there any commodity or industry in which derivatives are not now a very significant part of the industry? Can you think of any?

Mr. BAUMAN. I do not think so, Senator. I think that derivatives are used in one context or another by all aspects, all industries.

Senator CRAPO. Just economy wide. I do not know why, it was hard for me to get my head around trading interest rates, but when I realized that it had expanded to the point where literally exchange rates, cash, interest rates, whatever, that these types of transactions could work in those arenas, it became evident to me that it could work anywhere. And it is working virtually everywhere. Would that be accurate?

Mr. NEWSOME. Yes.

Mr. BAUMAN. Correct.

Mr. BENNETT. Yes.

Mr. SMITHSON. Yes.

Senator CRAPO. I would like to ask each of you if you agree with this. Again, back when we were having the Enron—in fact, I want to speak specifically about Enron. In fact, when the Enron debacle occurred, Enron used derivatives, as I think does virtually every major company these days. But some people were making the argument that Enron's collapse was because of its use of derivatives. I disagree with that then, disagree with it now, and I do not know the extent to which any of you understand the details of what happened at Enron.

But do any of you disagree with that, and could any of you comment more specifically about that?

Dr. Newsome.

Mr. NEWSOME. Mr. Chairman, I was involved in a lot of the Enron situation.

Senator CRAPO. You were regulator at that time.

Mr. NEWSOME. Yes. And I think it is important to look at not only Enron, but REFCO is a more current scenario.

Senator CRAPO. Right. I was going to get to that, so go right ahead.

Mr. NEWSOME. And in many instances the derivatives industry, just because the company is involved in certain aspects of trading derivatives, gets painted with a black brush, and that is certainly not the case. I think particularly if you look at REFCO, which we brought up, certainly there is one aspect of the legal entity of REFCO, Inc. that has filed for bankruptcy, but when you look at other segments, both regulated and nonregulated, the company, at least those in the regulated divisions, have operated within the guidelines of the law. REFCO, LLC, which is the registered FCM for REFCO, continues to be a member in good standing of all the major exchanges, continues to be not only properly capitalized, but also has excess revenue on hand at NYMEX.

When you start looking at the problems there, you go back to accounting fraud, regardless of what business the company may have been in. But certainly, specifically to your question, I do not think there is any evidence whatsoever that points to Enron's uses of derivatives as a cause to their collapse.

Senator CRAPO. Thank you. As I indicated to you at the beginning, there are critical things going on all over the Capitol right now, and I have just been given an urgent message that I have to make a communication right now. So, I am going to have to recess the Committee for just 5 minutes, slip out and get on the phone, and I will be right back. I apologize for this.

This Committee will stand in recess for 5 minutes.

[Recess.]

This hearing will come to order. I want to thank everybody very much for that brief recess. We are trying to put together the reconciliation bill for this Congress, and it is one tough deal, and I happened to just end up sitting on three Committees that are in critical postures right now.

Before I left I had just raised the issue of Enron, and I appreciated your answer, Dr. Newsome. I do not expect that any of the others, necessarily, because Dr. Newsome was the regulator at the time. But do any of the others of you want to comment on the Enron situation?

Mr. BAUMAN. Senator, the only additional comment I would add is maybe on the other side of the question is how the markets themselves were able to react to situations such as Enron, and there I would point to in my remarks focused on the CFMA and the strength of legal certainty that was provided by that Act.

Even in an Enron situation, where a company is on the ropes, what the CFMA allowed is a very orderly understanding of market participants of what transactions, what exposures they had with that company that was in difficulty. And, really, the markets were able to absorb that much better than they could have or might have before the CFMA was enacted.

Senator CRAPO. Mr. Bauman, you actually just led right in to what my next line of questioning was going to be. And the reason I brought up Enron was to kind of set the stage for a question that I asked back then to Chairman Greenspan at a hearing like this, where I asked him, about Enron, and then about derivatives. His response was that—in fact, this response I think was not only in the context of Enron but the stock market collapse and a lot of the economic downturn that we had seen in the turbulent times there.

I do not recall if this was before or after September 11, but we had had a number of serious shocks to the economy and we were in a tailspin and were starting to stabilize and grow back. And Chairman Greenspan's remark with regard to derivatives was that had we not had a strong, stable derivatives market and a good regulatory climate relating to it, that we would not have had as strong a build-back in the economy. We were able to stabilize quicker and recover better because of it.

Any comment on that from the witnesses?

Dr. Smithson.

Mr. SMITHSON. I think the analogy that most comes to mind to me is to think about dropping a rock into a pond of water and watching the ripples as they hit the shore. If you can make the pond bigger, by the time the ripples get to the shore, they are smaller than they were.

Senator CRAPO. Good example.

Mr. SMITHSON. That is what derivatives do. They make the "pond" bigger.

Senator CRAPO. I appreciate that, because like I say, I think just in a very basic way we, as a public, need to begin understanding how derivatives work a little better because they are so significant, and because we are more and more getting into policy issues relating to how we manage and regulate—hopefully not overregulate—these important parts of our economy.

Many, if not all of you, have mentioned the CFMA. It is my opinion that in order—first of all, it is my opinion that the work that the President's Working Group and then Congress, following the recommendations of it, did in passing the CFMA was extremely valuable, and actually helped to facilitate the strong growth in the utilization of derivatives. Anybody disagree with that on the panel?

[No response.]

Everybody seems to agree. It is also my belief that in order that we not undo the significant achievements of the CFMA, as we are now looking at its reauthorization, that the reauthorization should be very limited, and should be formulated to avoid creating barriers or undue burdens for legitimate business, undermining legal certainty or creating any unintended consequences.

I would appreciate it if each of you would discuss with me, in your mind, are there issues outstanding with regard to the CFMA that we need to address?

In one sense, I think that we could just have a straight reauthorization as is, but I think Mr. Bauman and some others, you may have raised some questions about some improvements, and certainly we want to look at the improvement, if we can, without creating any additional problems.

So the question I have is what is the scope, what should we be looking at as we look a reauthorization of the CFMA?

Dr. Newsome.

Mr. NEWSOME. I will start first, Mr. Chairman, and admit to the Committee that I am somewhat biased in my view of the CFMA. Bill Rainer as Chairman of the CFTC at the time, had the opportunity to work with numerous committees to develop the legislation, and I had the honor of implementing the CFMA, and worked very closely with the Congress to make sure that we implemented the Act following the intent of the Congress.

I think a couple of the primary segments of the CFMA have been brought out in earlier discussion. Certainly legal certainty for over-the-counter markets was a critical point of the CFMA. Flexibility for the exchanges to operate outside the old traditional regulatory box was also another important part. But clarifying the CFTC oversight of the off-exchange forex fraud was also an important part of the Act.

I had the opportunity to utilize that authority very aggressively. I think during my tenure we brought actions against some 40 forex bucket shops, and even after I left, the Agency continued to use that authority aggressively.

As I think everyone knows, a Federal court has thrown some uncertainty into whether or not the CFTC maintains that authority, and there has been a big discussion over how to clarify that authority to the Agency, and whether that authority should be expanded to go beyond forex. I have not been involved in a lot of those discussions that have been held by the Congress, but I do feel that clarifying the Agency's authority over that type of fraud was important. Whether the Congress chooses to specifically look at that type of fraud and try to find a way to reclarify the Agency's authority or whether it gets broadened, I guess is less important to me, but simply that without that kind of authority, you have some major fraud activity that is basically going to go unchallenged just because of resources by the Justice Department or others who do not have the expertise to dig in.

So, I guess the only thing I would look at in terms of primary changes would be to make sure that we, if anything, enhance and strengthen the enforcement abilities of the Agency to go after those who are involved in fraud.

Senator CRAPO. Thank you.

Mr. Bauman, did you have any thoughts?

Mr. BAUMAN. I guess the one thought I would have would be that—not that I see reason to change. I think that there is a very good bill there, and probably all other things being equal, I would not recommend any changes to it.

But to the extent that we are seeing, either through policy or through court decisions, some either erosion around the edges of loosening of what were thought to be the standard set up by the CFMA and the legislative history behind it, the only changes I would see would be things that would close down those frayed edges, to make sure that legal certainty stays the goals of the system.

Senator CRAPO. Thank you.

Mr. Bennett.

Mr. BENNETT. I agree. I think that the CFMA has set up a very productive and balanced regulatory process, and so at the most it would need to be just tweaked and looked at like any other piece of legislation. I think that the President's Working Group, if there were going to be any changes, I would seek their advice on them because they were obviously very valuable in the initial legislation, and they have a very well-informed set of views.

I think that on particular issues that are I think on the table now, the margin rules for single-stock futures, I think that it is important that they stay harmonized with the margin rules in the cash market, so that there is no inequality there. I also think that the portfolio margining is a very sound concept, and it is very workable, and I think it should be extended to the broader range of financial assets.

Senator CRAPO. Thank you. I appreciate that very much and you may know, I also believe we have to be very careful to let the President's Working Group do its job today and weigh in on these issues, and they are working on those issues.

Dr. Smithson.

Mr. SMITHSON. I defer to Dr. Newsome on the fraud aspects that he brought up. The aspect that keeps coming to mind for me is how well the Act has worked since 2000—it has been tested since 2000—and how much effort went into getting us to this point. I guess I have to come back to the point that it would be marvelous to have a one-sentence reauthorization.

Senator CRAPO. Thank you very much.

One of the battlegrounds that I—I was going to say "I think." I do not even need to think this, it is already developing. One of the developing battlegrounds is going to be energy, and with all of the recent market activity in both the cash and futures markets for energy commodities, crude oil, gasoline, and natural gas in particular, there are some who have suggested that narrow price limits be applied to futures markets as a way to decrease volatility.

Now, that reminds me of one of your points, Dr. Smithson, that the derivatives can actually accomplish that on their own, but can you—and this is open to the panel—can you tell us what the likely effects of mandating a price limit for energies futures products would be, and probably for NYMEX. You might want to start out on that, Dr. Newsome.

Mr. NEWSOME. Again, I would probably be a bit biased in my answer, so I will make a few comments and then turn it over to my colleagues. But I think putting on the old CFTC hat, the CFTC itself is not even supportive of narrow price limits. In fact, there are no Federal rules that require price limits. The only directive from the CFTC is that if the exchanges choose to use price limits, that they not set those price limits so tightly that it disallows the market to function and to operate.

Certainly, from my personal standpoint, I am not a big proponent of price limits. I think that the role of the markets is to discover the true price, and if that is your goal, then you have to allow the markets the flexibility to move based upon fundamentals.

I think the reality is, even if, say, the Congress chose to put tight price limits on contracts and NYMEX, that action will have no effect on energy volatility or energy prices. It will simply drive that activity to over-the-counter or to exempt markets to operate and to take place outside of the regulated exchange.

Senator CRAPO. Thank you. Any other input on that?

Mr. BAUMAN. I would certainly agree with Dr. Newsome's comments, particularly the last part of it. I would analogize it to the balloon that you are squeezing in one sector, and it is going to expand out in another sector. Trading will either go offshore or to other markets or find other ways of being reflective of the true price.

Mr. BENNETT. I agree with that except just to add a point, is that if there are certain types of transactions that really are more comfortable in the futures markets, if you put an abrupt end to the trading in those markets, it may actually generate more volatility than would have otherwise happened outside in the overall market and for the underlying market. And it depends on which commodity we are talking about.

Senator CRAPO. Right.

Dr. Smithson.

Mr. SMITHSON. So far, I have told you about empirical evidence. There are some of my colleagues who do experimental economics, which is an interesting area. As they have told me about their experiment, and they have actually looked at what happens, when you try limits where prices could only move in a certain range during a certain period of time. It turns out that the price followed the same pattern that would have existed in their absence.

What I am trying to say in a long-winded way is that the evidence, so far, is that they do not do a very good job. If anything, they kick a little extra volatility in instead of taking it out.

Senator CRAPO. Thank you. Last month before the Banking Committee, the witnesses representing the agencies that make up the President's Working Group, said that it was unnecessary to offer any kind of additional regulation of the energy and natural gas derivatives, as we look at reauthorization of the CFMA. How would you respond to those who think that we should expand the regulatory reach of the CFMA and extend and create additional regulation of energy and gas derivatives?

Mr. NEWSOME. Mr. Chairman, I think those who are wanting to add layers of regulation, particularly in energy, are trying to do two things, and both are misguided. They are trying to decrease volatility and trying to decrease prices. All the proposals that have been laid on the table that I am aware of to this point would do neither.

Senator CRAPO. Any disagreement?

[No response.]

Certainly, there are lots of people looking to try to figure out how to reduce the price of petroleum or gas products, but I tend to be one who believes—and I think your previous answers indicate this—that the price is going to be reached by a world economy, and neither this Congress, nor the CFTC is going to be able to dictate what the price of oil is going to be. We need to look to better energy policy maybe to deal with that issue.

How do each of you—and I know Dr. Smithson's answer here, but you are welcome to amplify on it—respond to the suggestion that the CFMA somehow contributes to price spikes and volatility in markets? There are those who are making that claim.

Mr. NEWSOME. You know, sometimes when you have a comment that is made so off base, it is hard to come back with a logical explanation. I find myself in that situation now. I think when you look at the exchanges, you look at the CFMA, the CFTC, they are all price neutral. The goal is to provide the marketplace and the regulation around that marketplace to allow true prices to be discovered. So how anyone can say that the regulatory scheme adds volatility is beyond me.

I would have to assume that they are referring to the Agency not creating position limits tight enough or price limits tight enough that it allows this volatility to take place, but we discussed that just a moment ago.

Mr. BAUMAN. I was hesitating I think for many of the same reasons as Dr. Newsome. It is a hard idea to get one's mind around from our side of the table. But maybe a practical example of why I hesitate on it is that for the last couple of years I have actually gotten close to the credit derivatives market, as opposed to the interest rate and currency markets of old. When I started, when I left working for the banks in 2000, there were what we would call maybe 15 individual credits that were actively quoted in the market. And if a bank wanted to hedge its risk against a specific credit exposure, it really had to search around for somebody who could provide them with that hedge, and prices were very far disbursed, not very visible, transparent, and few transactions were done. A good deal of that uncertainty related by the marketplace on what a credit derivative was in a legal context.

With the CFMA making clear that credit derivatives fell into the regime of over-the-counter derivative contracts, the activity built up, the liquidity built up, many more names were quoted, bid offer spreads became narrower, and it became very easy for a bank to hedge its position in an individual credit. So just the opposite, I think actions such as the CFMA have contributed to the transparency and liquidity of the markets, and not made them more volatile as such.

Senator CRAPO. Thank you.

Mr. Bennett.

Mr. BENNETT. I would agree with that assessment also. I think that these good rules help coordinate the markets, makes it much more likely that you are not going to have spikes and volatility for that particular reason. You will have volatility for other reasons, but I think you just have to say that it reduces the likelihood of spikes and excessive volatility.

Senator CRAPO. Anything else, Dr. Smithson?

Mr. SMITHSON. I think it has all been said.

Senator CRAPO. I want to come back for a moment now to the REFCO case, and I do not expect that any or all of you will be experts on this, but to the extent that you do understand what has been happening with regard to REFCO, some of the press accounts regarding the recent events at REFCO have suggested that the unreported related transaction between REFCO's CEO and its unregulated entity, REFCO Capital Markets, may have been more difficult to detect because over-the-counter derivatives trading is exempt from Federal regulation. I personally think that this is—when we have problems like Enron or REFCO or some of these things, and they are engaging in derivatives transactions, which as we have indicated, any major company is going to be doing, and people do not quite understand what derivatives are, then all of a sudden they tend to become the culprit.

It is important to note that this kind of trading is subject to very rigorous market discipline, and there is also the various antifraud aspects of the regulatory regime we have in place.

But that having been said, the question I raise to you, to the extent that you may know enough about it to express an opinion, is, does the issue, failure to disclose between REFCO's CEO and its trading entity, have anything to do with derivatives trading?

Mr. NEWSOME. Not at all. In fact, we are talking about two separate legal entities within the umbrella of REFCO, REFCO, Incorporated, REFCO Capital Markets, versus REFCO, LLC, which was the futures commission merchant, or the regulated entity of the CFTC and of all the exchanges in which they traded. We have no indication that any of the fraudulent activity was related to over-the-counter markets, certainly not the futures markets, and that it looks like a serious case of accounting fraud.

Senator CRAPO. We are not necessarily prejudging anything here, but let us say that the problem here is accounting fraud, which is what the early indications are. That is illegal already and heavily regulated, is it not?

Mr. NEWSOME. Correct.

Senator CRAPO. So the fact that the fraud occurred in an arena in which derivatives were being utilized does not mean that the derivatives caused the fraud or that there was anything with regard to derivatives regulations that would have changed it, am I correct?

Mr. NEWSOME. I think not only are you correct, Mr. Chairman, but I also think there is argument to be made that the accounting fraud did not even occur within the derivatives regulated entity of REFCO, so even more separation.

Senator CRAPO. We had the same point under Enron, if I remember correctly. When we ultimately got into the bottom of it, it was not even the derivatives which were at issue, although they were blamed. I just think it is important that we start getting into these kinds of things, because we are going to face these kinds of questions as we move forward.

Another question: Have REFCO's difficulties caused any broader disruptions in financial markets?

Mr. NEWSOME. I will only speak specifically to NYMEX, and I would say that in terms of REFCO, LLC, the registered entity, that they currently are in a good member status standing as a member at NYMEX and all the other future exchanges, that they are not only appropriately margined, but they have excess capital on hand at the exchanges. So we have seen no activity in terms of REFCO, LLC or their trading that has created concern.

I think the credibility issue of the parent company has created enough uncertainty that a number of their customers have started unwinding positions on the exchanges, a number of their customers have started leaving REFCO as their clearing member, transferring their accounts to other clearing members on the exchange, but all of those have occurred in a very orderly manner and certainly have had no negative impact on the markets themselves.

Senator CRAPO. Any difference there? It seems to me that what you just described is a good example of market discipline helping to be a part of the ultimate resolution of these kinds of issues.

Mr. NEWSOME. Correct.

Senator CRAPO. Let me turn to the international situation. How best can we—this is a broad question, I just want to get a discussion going on the international context here. How best can we position the U.S. markets to compete internationally in the context of derivatives? That should be open-ended enough for you to jump in any way you want.

Mr. NEWSOME. Certainly, the CFMA gave the CFTC the flexibility that it needed to embrace international companies to do business in the United States. We do not quite have the same amount of flexibility for U.S. companies trying to do business offshore. The NYMEX just opened a fully regulated entity in London to participate in the European marketplace. It was a matter of months before we received that regulatory approval. We are currently seeking approval in Dubai to develop a crude benchmark to openly and transparently trade Middle Eastern crude, and we have yet to experience that process, but certainly I can tell you it is not quite as easy going offshore as it is welcoming participants onshore.

Mr. BAUMAN. I think there are probably two things, one of which we have talked a good deal about, which is legal certainty, which continues I think to be a reason for companies, for trading firms to look to trade in the United States under its legal regime.

But one we have not talked too much about—I am sure any of us could—is innovation, and that we want to maintain an environment that encourages innovation in financial products, and that in and of itself is something that is a competitive tool for the U.S. economy to exercise.

Senator CRAPO. Thank you.

Mr. BENNETT. What I would add to that is that having a good regulatory environment in the United States and a level playing field is one very important thing. Also U.S. companies have to go out and expand aggressively globally. The stock exchange is in the middle of changing over our trading systems to our hybrid market to merging with Arca, and this will create a public company, and I think these will give us the tools to compete domestically much better, but also internationally, because the stock exchange business is becoming a lot more international as well, not only in trading stocks but also in trading various types of equity-linked derivatives or other derivatives.

Senator CRAPO. Dr. Smithson.

Mr. SMITHSON. Coming back to the question you posed—how could the U.S. markets be able to compete more effectively internationally? If you look back to see where we have been successful, you find that we have been successful as innovators, and so I echo what Joe Bauman just said: Make sure that nothing is done that blocks innovation, and that we keep in mind that the innovators should enjoy the fruits of that innovation.

Senator CRAPO. Would it be fair to say that right now the United States is, as far as policy with regard to derivatives, that the United States is not over regulating to the extent that we are pushing derivatives business or businesses that are derivatives related out of the country or pushing them offshore? Is that fair to say, we have not overdone it?

[All nod.]

Senator CRAPO. Let me ask the other side of that. Is it fair to say that we have a better climate here? I mean are we at the cutting edge in the derivatives arena so that we are a desired place to do business globally?

Mr. NEWSOME. I think that is exactly the case, Mr. Chairman. The CFMA was the right legislation at the right time. Not only did it create the environment for the flexibility that my colleagues at the table have mentioned, but it also created a regulatory environment in which global banks and global businesses want to do business. I mean we just signed on a clearing member that is one of the largest Japanese banks because they want to increase business in the United States. They want to do it as clearing member of exchanges. I think we are going to continue to see more and more of that type of activity.

Senator CRAPO. Anybody else want to add anything there?

I just have one more question, and again, it is going to be a broad open-ended question, maybe so broad that there is no answer to it. But the question is: Where do you see the derivatives market, the derivatives issue going in the next 4 or 5 years? Any prescient thoughts as to where you think we are headed with this? Feel free anybody to jump in if you would like.

Mr. NEWSOME. I think it is a hard question to answer because probably 5 years ago, no one would have envisioned that the business would have exploded as much as it has during that time period. I do not think it is an accident that the tremendous growth in the derivatives business and the passage and implementation of the CFMA occurred at relatively the same time. I think in fact the two are very connected.

As long as the flexibility and the certainty provided for in the CFMA is maintained, we are going to continue to see tremendous innovation, tremendous usage of the markets. Even though the markets have grown two- and three-fold since the passage of the CFMA, there is still a lot of cash market participants who do not utilize the derivatives industry, and I think we have a lot of opportunity to expand and reach those type of customers.

Senator CRAPO. Okay.

Mr. BAUMAN. I certainly agree with that. In fact, I probably would have said it a little bit differently. I have observed that all of the statistics about online retailing show phenomenal rates of growth, yet it is still only a very small percentage of retailing in general. I think there is still growth in the risk management disciplines that could take the use of these instruments far above levels that we think are quite high today.

Senator CRAPO. Good.

Mr. Bennett.

Mr. BENNETT. I would add to that that I think the integration of the cash and the derivatives markets will probably continue, so 5 years from now they will be much more integrated in terms of the way people use them.

I also think that this will show up as we move to more electronic platforms, which really unify the trading of those two types of assets in a more integrated fashion. They will move very quickly and be very tightly linked.

Senator CRAPO. Dr. Smithson, we will give you the last word if you want to take it.

Mr. SMITHSON. Thank you. It is clear that derivatives use is becoming standard operating procedures inside firms. No longer will we ask a firm, “Do you use them,” rather we will ask questions about “How do you use them?” and “How do you track them?”

It is clear that we are going to see new applications of derivatives technology. Since I did not predict credit derivatives, I am probably the wrong one to ask what the new applications will be, but the technology will move to the next step.

So most of what I would see for the next 5 years is very positive, but I will also add a little leavening: I am afraid that over the next 5 years we will still see *The Wall Street Journal*, every time they mention the word "derivatives" put "complex" in front of it.

Senator CRAPO. I probably contribute to that a little bit myself. When I read that list at the beginning, that was a complex list, and I bet if we have this hearing in 5 years, it will be a longer list. That list that I just read was forwards, futures, options, swaps, caps, collars, and swaptions.

[Laughter.]

I am going to learn what a swaption is before the next hearing. These guys know over here already.

[Laughter.]

I think we have accomplished a lot of the objectives of this hearing. This obviously is a very critical issue with immense potential for our economy, and the decisions that we are embarking upon making here in Congress with regard to the regulatory policy which we will adopt relating to them is critical. I think that you have helped significantly not just the Committee, but the public, to understand a little better what this issue is all about, and hopefully help us make the right policy decision.

I would like to thank again all of the witnesses for the time that you put in to preparing your testimony and coming here and sharing your wisdom with us.

And without anything further, this hearing is adjourned.

[Whereupon, at 3:53 p.m., the hearing was adjourned.]

[Prepared statements, response to written questions, and additional material supplied for the record follow:]

PREPARED STATEMENT OF JAMES NEWSOME

PRESIDENT, NEW YORK MERCANTILE EXCHANGE, INC.

OCTOBER 18, 2005

Mr. Chairman and Members of the Committee, my name is Jim Newsome and I am the President of the New York Mercantile Exchange (NYMEX or Exchange). NYMEX is the world's largest forum for trading and clearing physical-commodity based futures contracts, including energy and metals products. We have been in the business for 135 years and are a federally chartered marketplace, fully regulated by the Commodity Futures Trading Commission (CFTC).

On behalf of the Exchange, its Board of Directors and shareholders, I thank you and the Members of the Committee for the opportunity to participate in today's hearing on "Growth and Development of the Derivatives Market."

Introduction

Futures markets provide important economic benefits. NYMEX energy futures are highly liquid and transparent, representing the views and expectations of a wide variety of participants from every sector of the energy marketplace. As derivatives of cash markets, they reflect cash market prices and as a result are used as a hedging and price discovery vehicle around the globe. The price agreed upon for sale of any futures contract trade is immediately transmitted to the Exchange's electronic price reporting system and to the news wires and information vendors who inform the world of accurate futures prices. In addition to continuously reporting prices during the trading session, NYMEX reports trading volume and open interest daily and deliveries against the futures contracts monthly. Transparent, fair, and orderly markets are critical to the NYMEX's success as the most reliable hedging vehicle for physical transactions and financially settled over-the-counter (OTC) transactions.

A key attribute of these products is their leverage. For a fraction of the cost of buying the underlying asset, they create a price exposure similar to that of physical ownership. As a result, they provide an efficient means of offsetting exposures among hedgers or transferring risk from hedgers to speculators. The leverage and low trading costs in these markets attract speculators, who play a valuable role as liquidity providers enabling commercial traders to get in and out of the market as needed. As liquidity increases, so does the amount of information absorbed into the market price, leading to a more broadly based market in which the current price corresponds more closely to its true value.

Impact of the Commodity Futures Modernization Act

The Commodity Futures Modernization Act of 2000 (CFMA) was landmark Federal legislation that provided legal certainty, regulatory streamlining, flexibility, and modernization to U.S. futures and derivatives markets. It provided a reasonable, workable, and effective oversight regime for the regulated exchanges, while enhancing the abilities of exchanges to compete in a rapidly changing global business environment. Product innovations such as new platforms for trading futures and clearing OTC products are a direct result of the ability to respond to constantly changing industry demands. Market participants have benefited from more useful risk management tools, better use of technology, greater liquidity, more efficient pricing, and better customer service. Trading facilities have been able to provide more alternatives in trading platforms, products, and business models.

Most importantly, these major changes to the regulatory landscape have not compromised the integrity of the marketplace in any respect. Support for this notion is demonstrated by the routine reviews of NYMEX's self-regulatory programs conducted by the CFTC. Exchanges remain at the top-tier of CFTC regulation, subject to 18 core principles covering all aspects of exchange operations, including customer protection, financial integrity, market integrity, recordkeeping, and conflicts of interest. Moreover, the NYMEX's Derivatives Clearing Organization is subject to 14 additional core principles. The core principles establish broad performance standards that must be met by the regulated entity, but gives the entity the flexibility as to how it complies with these standards.

NYMEX's Compliance Department ensures that the core principles are enforced and the Exchange disciplines violative activity by its members. The Department is staffed with highly experienced individuals and equipped with cutting edge technology to conduct market surveillance, trade surveillance, and financial surveillance to monitor market activity for abusive behavior. Automated surveillance systems are used to detect market manipulation, wash trading, prearranged trading, trading ahead of customer orders and violations of position limits. Staff also monitors trading activity during volatile markets to determine if a participant's activity is disruptive or manipulative.

The CFMA did not diminish the regulatory oversight responsibilities of the CFTC. All exchange actions remain subject to CFTC review and oversight and enforcement action. It is the CFTC's responsibility to assure that all futures exchanges are enforcing their rules and remain in compliance with the core principles. As intended, the level of regulation established for designated contract markets is appropriate for the nature and participants of the markets. Therefore, the CFMA effectively insures the market and financial integrity of regulated futures exchanges.

Growth and Development of Energy Derivatives

It is well-documented that, beginning in the late 1970's, the introduction of deregulation dramatically increased the level of competition in the energy markets. This competition prompted the development of the first-ever exchange-traded energy derivative products. The success and growth of these new contracts attracted a broad range of new participants to the energy markets. The addition of new participants to the markets also led to the introduction of new and wider varieties of energy derivatives. Today, the NYMEX, other exchanges and over-the-counter markets worldwide offer futures, futures options, swap contracts, and exotic options on a broad range of energy products, including crude oil, fuel oil, coal, heating oil, unleaded gasoline, and natural gas.

The futures industry has experienced tremendous growth since the adoption of the CFMA in December 2000, a clear sign that the current regulatory regime is appropriate for these markets at this time. Trading volumes in 2004 for futures and options globally increased 300 percent over the 2000 volume levels. U.S. futures and options volume for the same timeframe increased over 200 percent. NYMEX's futures and options volume alone as of 2004 had increased over 50 percent since year 2000 volume levels. Individually, NYMEX's flagship futures contracts showed significant volume increases as well, including crude oil—up 43 percent, heating oil—up 34 percent, and gasoline—up 48 percent.

NYMEX keeps its markets available for trading after the close of the open outcry trading session through the internet-based NYMEX ACCESS® electronic trading system. With NYMEX ACCESS®, NYMEX is open virtually around the clock. Traders can log on from any internet-enabled computer almost anywhere in the world. The after hours electronic trading session allows traders to protect themselves against exposure to price risk overnight. Total annual volume for NYMEX ACCESS® in 2004 was a record 8,239,700 contracts, breaking the previous record of 5,880,455 contracts set in 2003.

The CFMA, in addressing legal certainty for OTC derivatives, also permitted the clearing of OTC derivatives transactions by regulated futures exchanges. End-users and merchant energy companies that were existing customers of the NYMEX asked the Exchange to develop the clearing of standardized OTC energy products. NYMEX ClearPort® was the result of this request. During the initial period, 25 contracts were launched and currently the NYMEX ClearPort® program comprises over 175 products in the electricity, coal, NatGas, oil and emissions markets. Today, over 30 per cent of total NYMEX volume comes through the NYMEX ClearPort® system. This sustained growth can be linked to the addition of OTC clearing to NYMEX's range of services offered, which allows energy companies to mitigate their credit risks.

Additionally, NYMEX's global expansion has recently included the addition of cleared futures contracts for Singapore Fuel Oil and clean petroleum products, and European Fuel Oil, Naptha, and Gasoline. This new clearing service has restored confidence, transparency, and liquidity to the marketplace and has once again allowed the economic benefits of derivatives to benefit the marketplace as a whole.

Off-exchange contracts submitted to NYMEX for clearing are afforded the same protections available to other futures contracts. The clearinghouse provides market participants with protection against counterparty default and is backed by a $130 million guarantee fund and a $100 million default insurance policy. The advantages of doing business on a regulated market are now available to any business entity with credit or price exposure in the energy markets. The ability of energy companies to now mitigate their credit risk with cleared derivatives brings liquidity, transparency, and market confidence back to the trading community.

As a result of the demand by customers to mitigate their counter-party risk through new clearing products, the parent holding company of NYMEX has recently launched a new exchange in London to trade Brent Crude oil via open outcry. Additionally, the Exchange has announced the creation of the Dubai Mercantile Exchange—DME. The DME will bring the mitigation of counter-party risk to new contracts that will be traded in the Middle East region. In Singapore, the NYMEX has begun to add liquidity to regional Fuel Oil contracts through the use of the existing NYMEX ClearPort® Clearing system. Combined, the global expansion of the

NYMEX brings the ultimate level of counterparty protection, liquidity, and transparency to derivatives and regulated futures contracts.

New investment opportunities in the form of mini energy futures are offered by NYMEX for its highly liquid crude oil and natural gas futures contracts. The contracts are 50 percent of the size of the standard contracts and are financially settled at the settlement price of the physical commodity futures contracts on NYMEX.

Recent Legislative Proposals

Volatility and high prices in crude oil, natural gas, and gasoline futures contracts have triggered unwarranted criticism of NYMEX. While a significant amount of energy trading occurs in other forums, such as in the OTC market, on electronic facilities and on exempt markets, NYMEX is targeted largely due to its highly liquid and transparent markets. A new bill passed in the House 2 weeks ago, calls for an investigation of NYMEX by the Federal Trade Commission. The General Accounting Office currently is studying the CFTC's oversight of NYMEX and there is consideration of yet another independent study of NYMEX in the context of CFTC reauthorization. Misinformation spread by groups who do not understand the futures markets has led certain Members of Congress to draft legislation that potentially would roll back many of the significant advancements achieved under the CFMA. Generally, supporters of the legislation mistakenly believe that the bill will stop volatility and reduce prices of natural gas. A number of proposals have been discussed that would apply to only the NYMEX natural gas futures contract, including:

- Artificial price limits on natural gas futures contracts;
- A price limit that triggers an investigation of the market by the CFTC; and
- Prior CFTC approval for NYMEX rule changes that expand price limits beyond 8 percent of the prior day's settlement price.

Prices are market driven and must be allowed to find their true level consistent with market fundamentals. Artificial restrictions prevent futures markets from reflecting true market value and prevent the use of the market as a dependable hedge against price volatility. In addition, artificial restrictions in the marketplace would result in:

- Greatly reduced (if not completely eliminated) price transparency;
- Higher costs;
- Higher price volatility—in the off-exchange market where price transparency is at the discretion of market participants subject to their parochial business interests; and
- Other classic symptoms of artificial price controls, such as government-induced shortages.

Without NYMEX as a price discovery market, conducting business in the cash market will be severely impaired. Higher costs to do business quickly translate into higher prices for consumers.

The threat of investigative action each time a price limit is hit potentially would have a chilling effect on the markets. Moreover, the CFTC should have the flexibility to use its limited enforcement resources in the areas deemed most protective of the public interests.

Finally, NYMEX does not believe that the rule amendment process established under the CFMA for futures exchange products, other than agricultural commodities, should be repealed for one commodity on one exchange. There is clear evidence that the rule self-certification process has been a huge benefit to exchange growth and development without indications to date of regulatory risks.

Conclusion

Five years ago, Congress took a giant step in revising the regulatory framework for futures trading. NYMEX has experienced first hand the business opportunities provided by that extraordinary law and would urge that the major provisions of that law remain unchanged, including the rule self-certification process and the ability of the futures exchange to determine the best terms and conditions of a futures contract listed on its exchange. Derivatives markets contribute to the efficient allocation of resources in the economy because the price, which is derived through a highly liquid, transparent and competitive market, influences production, storage, and consumption decisions. These markets touch many aspects of the U.S. and global economy and, consequently, our lives. They can only effectively serve their economic purpose if they are allowed to trade and respond to market fundamentals without artificial restraints.

I thank you for the opportunity to share the viewpoint of the New York Mercantile Exchange with you today.

PREPARED STATEMENT OF JOSEPH P. BAUMAN

CEO, JB RISK CONSULTING, LLC

OCTOBER 18, 2005

Mr. Chairman and Members of the Subcommittee, my name is Joseph Bauman. Throughout my career I have been involved in the derivatives business, and I am currently a consultant to participants in the derivatives industry. In my career I have worked for Chemical Bank, Citibank, and Bank of America. I also served as Chairman of the International Swaps and Derivatives Association and was a Member of its Board for 10 years. Although this is my first testimony before this Subcommittee, I have testified previously on matters related to the derivatives markets before other Congressional Committees and Subcommittees.

In the many roles I have played in the industry and in the several institutions for which I have worked, I have observed the phenomenal growth in the derivatives business. While there are many reasons for that growth, I believe that the regulatory framework in the United States for swaps and other privately negotiated derivatives, with the components of market discipline and legal certainty, has been among the most significant factors contributing to that growth. It is those factors that I would like to highlight for the committee.

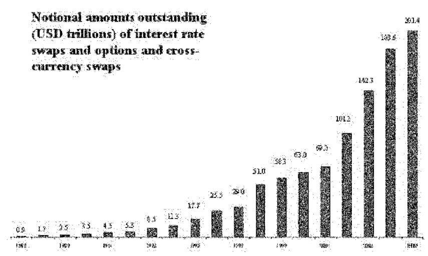
Role of Derivatives in the Economy

Derivatives play a critical role in our economy. By allowing corporations to take certain types of risk out of their operations, derivatives allow those businesses to plan with greater certainty and to better withstand unexpected economic developments. As Federal Reserve Chairman Alan Greenspan noted in testimony before this Committee 3 years ago, "on balance they [financial derivatives] have contributed to the development of a far more flexible and efficient financial system—both domestically and internationally—than we had just 20 or 30 years ago." Derivatives afford a means for a company, say an airline, to manage risks not intrinsic to the business itself, such as jet fuel price fluctuations. The airline can hedge the risks to those price fluctuations by entering into swaps or options which ensure that, regardless of developments in the oil or jet fuel markets, the manufacturer is guaranteed a certain price for its jet fuel needs or limits its exposure to rising prices. In other words, derivatives allow a business to focus on its core operations (in this example, flying planes and running an airline) while minimizing the chance that something completely outside of its control (fluctuations in jet fuel prices) will undermine its planning. Airlines, such as Southwest, actively manage this risk, which is, in part, a reason for their ability to thrive in the current difficult climate for airlines. In fact, an article in this past Sunday's *New York Times* highlighted that Southwest Airlines' fuel cost hedging contracts had protected it from spikes in the price of fuel and contributed to its profitability.

Growth of the OTC Derivatives Business

Derivatives (and in particular, privately negotiated derivatives) have become an indispensable part of most large and medium-sized businesses' financial management in the last 20 years. ISDA has published figures on outstanding notional amounts in the interest rate and currency derivatives business since 1987 and in recent years has published similar information for credit derivatives and equity derivative. The chart below shows the growth in that business. I should emphasize that these figures demonstrate the growth in trading *activity*. It is important to keep in mind that the notional amounts reported are not a reflection of outstanding exposures or risk. Figures published by the Bank for International Settlements indicate that, on a net basis, outstanding counterparty credit exposures on interest rate and currency products are less than 1 percent of notional amounts outstanding.

Growth of swaps activity, 1987-2005



Source: International Swaps and Derivatives Association

Role of Market Discipline

Market discipline is the most important factor influencing how derivatives activity functions, and is beneficial from the standpoint of both market stability and providing a high quality of service to end-users. First, market discipline benefits market stability because firms operate in an environment in which they understand that they are accountable for both the profits and the losses that result from their decisions. The result is sound risk management practice and high credit quality. Second, market discipline benefits end-users because of the importance of competition and reputation. Competition among dealers ensures that, if end-user concerns are not addressed, another dealer stands ready to step in and do so. And reputation—which takes years to build but can be destroyed in seconds— is of great importance because it provides clients a means of quality assurance in an environment when you only have one chance to get a deal right.

It is also worth pointing out that, since the privately negotiated market is limited to firms qualifying as "eligible contract participants" on the basis of either asset size or income, there is no "market regulator" for over-the-counter derivatives activity in the same sense as there is in the United States for securities (Securities and Exchange Commission) or futures (Commodity Futures Trading Commission). At the same time, the majority of the derivative dealers are regulated, most of them as banks or as securities firms, either in the United States or across a large number of other jurisdictions. Since the vast majority of transactions are either between two dealers or a dealer and an end user, this ensures that those major institutions are subject to the appropriate oversight for their business focus.

The Importance of Legal Certainty

OTC derivatives are built on a foundation of bilateral, privately negotiated contractual relationships. Anything that calls into question any piece of that foundation can have serious adverse effects on the willingness of parties to engage in transactions. One of ISDA's principal achievements has been the establishment of a sound contractual and documentation framework that facilitates the ability of parties to engage in these transactions. ISDA's Master Agreement, supported by legal opinions from over 40 countries on the enforceability of its core provisions, is the global standard for documenting OTC derivatives transactions. ISDA has worked with legislatures and regulators around the world to enact laws that recognize the enforceability of these core provisions. Efforts here in the United States have led to several significant changes in laws relating to these core provisions, including most recently the changes to the Bankruptcy Code and bank insolvency laws that became effective on October 17 of this year.

ISDA's efforts on the contractual framework would be for naught if the fundamental right of parties to enter into these privately negotiated transactions was thrown into question by the legal or regulatory framework in which the parties operate. For example, ISDA has worked to change laws in various countries that were it not for these changes, would treat these transactions as unenforceable gaming contracts and not the legitimate hedging tools that they are.

In the United States, a major focus of ISDA's efforts has been the recognition, confirmed in the Commodity Futures Modernization Act (CFMA), that swaps are not appropriately regulated as futures under the Commodity Exchange Act (CEA). If swaps were futures then swap transactions would be considered unenforceable as illegal off-exchange futures. Throughout my tenure on the ISDA Board, which ended just prior to enact of the CFMA, the potential of a court determination that swaps were futures was a significant concern for the industry. The substantial growth of the business during that time period was, in no small part, due to the consistent view of regulators, including the CFTC, and the intent of Congress, as embodied in the 1992 Futures Trading Practices Act (FTPA), that swaps were not appropriately regulated as futures.

It is worth highlighting that the only action inconsistent with those longstanding policies was the release of a CFTC Concept Release in 1998 raising questions about the possible need to regulate OTC derivatives. Congress acted promptly to prevent the CFTC from proceeding with that initiative and directed the President's Working Group on Financial Markets to produce a report on OTC derivatives. That report, published in 1999, served as the basis for the many achievements in the CFMA.

The experience of the 1998 CFTC concept release demonstrates that concerns about legal certainty are neither academic nor speculative. It is also instructive as an example of the need for Congress, regulators, and the industry to remain vigilant to ensure that Congressional intent continues to be carried out. Despite the policies embodied in the FTPA and the position of the CFTC over the 10 years preceding the concept release, suggestions that the CFTC might consider changes in that regulatory treatment through administrative action raised alarm bells throughout the industry, the President's Working Group, and Congress.

Because of the continuing potential for an adverse court ruling or a change in administrative determination creating legal uncertainty of the status of swaps and other privately negotiated derivative transactions, participants in these transactions, both dealers and end users and both U.S. and foreign firms, welcomed the 1999 Report of the President's Working Group and the efforts of Congress in 2000 to provide clarity on this issue.

Experience Under the CFMA

Recognizing the peril presented by a broad interpretation of the reach and scope of the CEA, Congress in 2000 undertook to ensure that privately negotiated derivatives contracts between sophisticated counterparties would be legally enforceable and subject to the normal rules of contract law, rather than forced into an ill-fitting Federal statutory regime originally designed for agriculture producers. The CFMA created the means by which financially sophisticated parties, called "eligible contract participants," could continue to engage in risk management without fear that their privately negotiated contracts would be unenforceable. ISDA was privileged to help play a role in achieving this historic legislation, and is dedicated to ensuring that the legal certainty created by the law is not undermined.

The 5 years since the passage of the CFMA have proven the law's wisdom. In those 5 years privately negotiated derivatives have continued to thrive and product innovation has proceeded unabated. Even more importantly, thanks in no small part to derivatives; the markets have been able to withstand significant shocks to the financial system. The bursting of the dot.com bubble, the terror attacks of September 11, and the financial scandals and bankruptcies at Enron, WorldCom, Adelphia, and others would, in the past, have created serious economic dislocation and threatened long term prospects for growth. However, through the use of derivatives major market participants have been able to limit their exposure to losses from these types of events, passing on the risks that in the past would have potentially been concentrated in a few institutions and possibly driven one or more of them out of business. While the events creating these shocks may have occurred in any circumstance, modern risk management practices, and in particular the use of derivatives, have saved countless businesses and jobs over the last 5 tumultuous years by limiting the consequences of these events or spreading the effects to a broader category of risk takers in amounts that, while possibly painful, did not threaten their existence. The legal certainty provided by the CFMA has been an important part of this success.

At various times since enactment of the CFMA, and currently in the CFTC reauthorization debate, there have been efforts to modify the provisions of the CFMA that have provided the fundamental legal certainty intended by Congress. While these efforts have been primarily focused on energy trading, the implications of those efforts go beyond energy trading into other OTC derivative products. The President's Working Group on Financial Markets has consistently opposed attempts to roll back the legal certainty created by the CFMA, much as it did in 1998 in response to efforts to erode the protections provided by Congress and the CFTC at that time. The opposition of America's top financial regulators, evidenced by letters going back to 2002, clearly shows a consensus view that privately negotiated derivatives transactions, far from adding to upheavals in certain commodity markets, in fact help to alleviate problems caused by dislocations and disruptions in those markets.

The CFMA provided clear guidance regarding the scope of transactions subject to regulation under the CEA and, as a corollary, certainty as to the legal status of the institutional over-the-counter derivatives market. And the listed and OTC derivatives markets have each flourished in the aftermath of the CFMA—a testament to the importance of regulatory efficiency and legal certainty.

The CFMA provided broad exclusions and exemptions from provisions of the CEA for many different types of OTC derivative products. Recently, significant concerns have been raised within the financial community regarding developments that threaten to set back this progress. These concerns appear to have been raised by testimony by the former CFTC General Counsel before the Senate Committee on Banking, a recent Report of the Senate Agriculture Committee in connection with CFTC reauthorization legislation and a recent judicial decision (in the case of *CFTC* v. *Bradley*). As I understand it, these have raised questions regarding the scope of the exemptions and exclusions for over-the-counter derivatives enacted in the CFMA—suggesting that the relevant exemptions and exclusions are somehow limited in scope to the underlying transactions and do not cover the persons engaged in those transactions or their related conduct and activities.

This view, which is clearly contrary to the CFMA, if unaddressed, could resurrect the very legal certainty concerns that led to enactment of the CFMA. Steps by the Subcommittee to clarify this issue should be prominent in the Subcommittee's consideration of CFTC reauthorization and related issues.

The past few years have seen tremendous upheavals in the energy sector, from the California energy crisis to the collapse of Enron to the current price volatility in petroleum-based products. There has been little evidence that shocks in one market have spilled over into others. Where in the past shortages and anticompetitive behavior could be expected in the wake of these upheavals, properly functioning markets, reinforced through effective risk transfer made possible by derivatives, have allowed the United States to weather the current period of difficulty more effectively than was the case previously. It would be a grave mistake to tamper with the regulatory framework, including the legal certainty created by the CFMA, in light of the success it has brought in difficult times.

The success of the CFMA is not limited to the legal certainty it provided for OTC derivatives; by and large the CFMA remains a crowning achievement of financial services law. By creating flexible rules for organized exchanges, providing legal certainty for sophisticated market participants and encouraging the growth and development of new financial products, the CFMA has positioned the United States to remain a financial innovator for years to come.

PREPARED STATEMENT OF PAUL BENNETT

SENIOR VICE PRESIDENT AND CHIEF ECONOMIST,
NEW YORK STOCK EXCHANGE

OCTOBER 18, 2005

Mr. Chairman, Ranking Member Bayh, and Members of the Committee, I am Paul Bennett, Senior Vice President and Chief Economist at the New York Stock Exchange (NYSE or Exchange). On behalf of the New York Stock Exchange and our Chief Executive Office John Thain, thank you for inviting me to testify today before the Subcommittee. The NYSE greatly appreciates your leadership in overseeing the international aspects of our nation's evolving financial markets. We find ourselves at a critical point in that evolution, and your attention to these issues could not be more timely as we seek to maintain the competitive leadership of U.S. financial markets in the world and to protect the interests of investors, both individual and institutional.

Evolution of Today's Financial Markets

The New York Stock Exchange is the world's largest cash equities market. We serve 90 million investors, the institutional community and over 2,700 of the world's leading corporations. The companies listed on the NYSE have a total global market capitalization of $21 trillion. During the first 9 months of 2005, our average daily trading volume was 1.61 billion shares, worth over $55 billion a day. We are an important cog in the capital formation engine, helping to provide companies and investors with opportunities that translate into job creation and economic growth.

You have asked us to speak about the growth of the derivatives market and its role in the U.S. economy. While the NYSE does not run a derivatives market today, the importance and growth of that market have had a significant impact on the NYSE, and have helped shape our strategy for the future.

Equity Market

The U.S. equity market has grown steadily in the past decade. The consolidated daily volume in the U.S. equity market, including both the listed market and OTC market, has reached about 4 to 5 billion shares a day representing $80 to $100 billion traded daily.

Decimalization and technological innovation have continuously decreased costs for investors on the U.S. equity market. According to the GAO's 2005 study on the Securities Market, costs for institutional investors have decreased by 30 percent to 53 percent overall, and by 90 percent for individual investors.

Today, there are more buyers and sellers than ever before. Forty-two percent of adults in the United States today own shares; moreover, since 1990, the portion of U.S. households' assets in equities and mutual funds has nearly doubled, from 9.6 percent to 16.8 percent at the end of the second quarter in 2005.

The NYSE is committed to providing those investors the highest value proposition. And to do so, we must recognize the new realities of financial services. Today's market differs greatly from that of a generation ago. The diversified products, the rise in electronic trading, and the globalization of our capital markets have utterly transformed the way our markets work.

Derivatives Markets

The biggest financial story of this era may be the bold and imaginative new ways we are creating to manage risk, reduce the costs of hedging, and make markets more efficient. For investors, the result is an explosion of new opportunities to invest in new products on new platforms.

A derivatives market that started with futures contracts on agricultural commodities, like butter, milk, and live cattle, in the 19th century, has turned into the principal means for investors to manage their risk no matter what the investment. Today, options, futures, swaps, and other innovations have become widely used and even required risk management tools for sophisticated investors and financial intermediaries. While the $100 billion daily trading is an impressive figure in the equities market, it has not escaped our attention that the value of contracts traded on the Chicago Mercantile Exchange (CME) averaged over $2 trillion a day for the first 6 months of 2004.

And while volume on the NYSE remained relatively flat in 2004, total volume in equity options, both in the United States and abroad, soared by nearly 30 percent. From 1995 to 2004, options volume has increased by 400 percent. Over that same period, the total number of options contracts traded in the United States has risen from 288 million to 1.2 billion.

For futures, the CME's 2004 annual volume was more than 787 million contracts, representing double-digit volume gains for the fifth consecutive year. The Chicago Board of Trade's (CBOT) 2004 annual volume reached nearly 600 million contracts, a record high for the CBOT and the third consecutive record-breaking year for the CBOT.

Competitive Landscape

In addition to the growth in new products and platforms, today's financial markets are facing a new global challenge to the traditional leadership of U.S. capital markets.

There is now greater mobility of capital, greater international participation in local markets, and greater competition among markets in different geographical areas. Financial institutions, investment firms, and other financial intermediaries have increased their trading across national boundaries, in numerous different markets, outside traditional exchanges, and even directly among themselves.

Today, traditional rivals like the Deutsche Börse are becoming better capitalized, and better competitors. While this is true for the equities market, it is especially true in the derivatives market. Eurex, which is jointly owned by Deutsche Börse and SWX Swiss Exchange, is the world's largest future and options market for euro denominated derivative instruments. In addition, according to Eurex's monthly statistics from third quarter 2005, it has the largest market share in terms of contract turnover for the entire international options and futures markets—12.84 percent. The next four biggest players are CME (11.28 percent), CBOT (7.69 percent), Chicago Board of Options Exchange (CBOE) (5.44 percent), and the International Securities Exchange (ISE) (4.88 percent).

And investors are responding to these opportunities. An increasing portion of U.S. portfolios is going overseas into non-U.S. investments. Since 1990, in U.S. investors' portfolios, the equity portion alone of non-U.S. stocks has nearly tripled, from 6.0 percent to 16.8 percent.

In addition, the NYSE's competitors have become stronger through demutualization and consolidation. In response to growing competition, many marketplaces in both Europe and the United States, such as the London Stock Exchange plc and Nasdaq, have demutualized to free themselves from the constraints of their membership structures and to provide greater flexibility for future growth. In recent years, the number of new market entrants, the need to respond to the globalization of capital markets, and the desire to provide global, cross-border services to clients has also led to a wave of consolidation, both in the United States and abroad.

In order to compete effectively in this global climate, and in order to provide investors and issuers with the best possible marketplace, we must become a multi-product, global competitor.

We are looking at the possibility of expanding or adding new platforms in areas that can benefit from increased transparency. We are currently seeking an SEC exemption to expand our investor friendly corporate bond platform to trading unregistered bonds of our listed companies.

We are also making great progress in one fast-growing asset class, U.S. Exchange Traded Funds (ETF's), whose total funds have soared over 50 percent last year to $227 billion. ETF's provide investors an excellent way to manage risk and diversify by trading a portfolio of stocks in a designated area such as gold, natural resources, the S&P, or Chinese-based equities.

But ETF's represent only a single star within the giant constellation of financial markets. We need to expand our universe much more broadly in order to compete successfully.

NYSE is becoming a public, for-profit company to give us improved access to capital, and the ability to use stock as acquisition currency. We are merging with Archipelago, an outstanding, entrepreneurial company that is pioneering leading-edge trading platforms and customer focus.

That is also why we are building the Hybrid Market; we are responding to the demand of many of our customers for greater ability to trade electronically. The Hybrid Market will give customers the choice of two investor-friendly paths: Either the sub-second speed of automatic execution, or the price improvement and best value that distinguish the auction market.

Ten years ago, these changes at the NYSE would have been unthinkable. But today, moving forward without these changes is what would be unthinkable. We must respond to investors' needs and thereby preserve the position of the United States as the leader in our global financial marketplace.

Regulatory Developments

As you can imagine, there are also regulatory considerations that affect not only the competitive landscape but also dictate where and how individuals and their representatives invest their money. Two such examples are capital requirements for broker-dealers and margin rules for brokerage accounts.

Capital Requirements

For years, U.S. broker-dealers have moved much of their derivatives business overseas because of stringent capital requirements that make conducting such business in the United States less attractive.

In August 2004, the SEC adopted rule amendments that established a voluntary, alternative method for broker-dealers to compute net capital. This rule allows them to use internal models to calculate net capital requirements for market and derivatives related credit risk. One condition to using this alternative method is that the broker-dealer's ultimate holding company and affiliates become consolidated supervised entities and consent to group wide oversight (consolidated supervision) from the SEC. Another condition is that the broker-dealer must maintain $5 billion of tentative net capital in order to participate, which limits the number of broker-dealers who are able to take advantage of this rule.

The Exchange currently has rule proposals before the SEC to modify its capital rules to reflect a different level of capital and to change its margin rules to accommodate derivatives business that may come back into the United States. To date, five internationally active firms, including Goldman Sachs, Merrill Lynch, Bear Stearns, Lehman Brothers, and Morgan Stanley, have either applied or been approved for CSE (consolidated supervised entity) status.

Relaxation of the capital rules by allowing firms to use internal models to compute charges has encouraged the firms using this alternative method to study whether to bring their OTC derivative dealers back into the U.S. broker-dealer. There is significant benefit to the firms from a legal netting standpoint to have all transactions with a single counterparty in one legal entity. They are studying the technology issues as well as other regulations that might be applicable before reaching a final decision.

Portfolio Margining

Another regulatory development that affects derivatives concerns potential changes to portfolio margining.

The evolution of the equities and derivatives markets puts into focus the need to ensure a sensible regulatory approach that will foster competition among markets and strengthen the U.S. position in the global marketplace.

As the Banking Committee's hearing last month on Commodity Futures Trading Commission (CFTC) reauthorization highlighted, it is essential that regulation of the security futures and equities markets maintain the competitive balance that was established by Congress in 2000 in the Commodity Futures Modernization Act (CFMA).

One aspect of that regulation that has been under scrutiny is the margin rules that apply to different products. We strongly agree with the many participants in the financial markets, several of whom testified before the Committee, that portfolio margin rules should be developed not just for select sectors of the marketplace, but for all equity products. Currently, margins for security futures customers are calculated using a strategy-based approach, which computes margin requirements for each individual position or strategy in a portfolio. Portfolio margining, used for all futures contracts and for security options at the clearing level, is risk-based, and more accurately reflects economic exposure to the marketplace.

The NYSE is working with the NASD, CBOE, CFTC, and other commodities exchanges and market participants to develop a portfolio margin rule that would apply to all equities. We consider this initiative a top priority and will be working with our fellow regulators to produce a rule for SEC consideration by year-end.

Conclusion

Today's financial markets have evolved significantly over a relatively short period of time. Technological changes have increased the speed of transactions and reduced the costs of those transactions. The equity market has grown steadily, while the derivatives market has grown exponentially with the introduction of new products. The international competitive landscape has forced U.S. markets and market participants to think globally.

While some may see this change as a threat, the NYSE sees opportunity. Investors will increasingly need platforms that can meet all of their investment needs, including equities, futures, options, or swaps. As the NYSE proceeds with its plans to become a publicly traded company and merge with Archipelago, thereby increasing our capitalization and diversifying our product offering, we are looking to take advantage of the opportunities that this new competitive landscape will present.

Mr. Chairman, and Ranking Member Bayh, and Members of the Committee, thank you for the opportunity to present this testimony. I look forward to answering your questions.

PREPARED STATEMENT OF CHARLES SMITHSON

MANAGING PARTNER, RUTTER ASSOCIATES LLC

OCTOBER 18, 2005

Chairman Crapo and Members of the Subcommittee, I am pleased to have the opportunity to testify before the Subcommittee today about a market that is crucial to the effect functioning of both industrial firms and financial institutions, but one that is widely misunderstood.

I am Charles Smithson. I am the Managing Partner of Rutter Associates, an advisory firm that specializes in financial risk management. My colleagues and I assist banks, insurance companies, and industrial companies in measuring and managing their exposures to financial price risks (that is, interest rate risk, foreign exchange rate risk, commodity price risk, and equity price risk), credit risk, and liquidity risk.

While the benefits of freely functioning markets are without question, the interaction of willing buyers and sellers can lead to price volatility. Since derivatives provide market participants with a means of dealing with that price volatility, the derivatives market we are discussing here today is a consequence of the increased price volatility we witnessed in the 1970's and 1980's—increased volatility in foreign exchange rates resulting from the move to floating exchange rates, increased volatility in interest rates associated with the move to damp inflation in the late 1970's, and increased volatility in commodity prices associated with deregulation of those markets.

What can be said about the *consequences* of derivatives? Over the more than 20 years, I have been involved in derivatives and risk management, I have been collecting empirical evidence, which today I will share with you in the form of answers to four important questions.

Question #1: What happens to the volatility of financial prices when the financial risk management products appear?

Some argue that the introduction of derivatives leads to increased volatility. John Shad (former Chairman, Securities and Exchange Commission), one of the more outspoken proponents of this view, saw derivatives as "the tail wagging the dog," escalating price volatility to "precipitous, unacceptable levels." Others suggest that there is no reason for the introduction of derivatives to have any effect on the volatility of underlying assets. Derivatives are "created assets" (for every long there is a corresponding short). Thus the introduction of these contracts would have no predictable effect on trading in the underlying security. Still others argue that the introduction of derivatives should lead the volatility of the underlying assets to fall, not rise. After all, the newly created trading opportunity in this derivative security should increase market liquidity for an underlying asset.

This question has been extensively examined by academics. When we searched the academic journals, my colleagues and I found 39 empirical analyses, starting with the Holbrook Working's classic 1960 study of the impact of the introduction of futures on onion prices through a 2000 study of the impact of the introduction of options on share prices. While the "derivatives increase volatility" story seems plausible, the empirical evidence supports the contention that the introduction of derivatives reduces price volatility in the underlying markets.

Question #2: What happens to the bid-ask spread and trading volume for the underlying assets?

My colleagues and I found 5 academic studies that examined the impact of the introduction of derivatives on the bid/ask spread in the underlying market. These studies indicate overwhelmingly that the bid/ask spreads in the underlying market declines after the introduction of derivatives.

Some have suggested that the introduction of derivatives reduces volumes in the underlying markets. Finance theory suggests that the reduced bid-ask spread noted above and the ability to arbitrage one market against the other should increase volumes in the underlying markets. My colleagues and I found 6 published studies in which academics looked at what happens to the trading volumes in the underlying asset when derivatives on the asset are introduced. These studies indicate that the introduction of derivatives is associated with increases in unadjusted volumes in the underlying and either an increase or no change in market-adjusted trading volumes.

Question #3: If a firm uses risk management, does the market regard the firm as being less risky?

Over the years, most of my interest has been focused on this question and on the "payoff" Question #4 to follow. After all, if I am going to suggest that firms should manage financial price risk, I should have a pretty good idea that the market will reward them for doing so. What I am going to tell you about today come from an article Professor Betty Simkins (Oklahoma State University) and I published in the most recent issue of *The Journal of Applied Corporate Finance.*

In the context of Question #3, if a publicly traded firm is "exposed" to financial price risk, the returns to the firm's equity would be sensitive to changes in interest rates, foreign exchange rates, or commodity prices. Consequently, Question #3 could be rephrased as: If such a firm uses derivatives to manage one or more of those exposures, does the exposure decline?

Professor Simkins and I found 15 studies that examined this question, 6 that focused on financial institutions and 9 on industrial companies. Overwhelmingly, the studies indicated that the use of risk management led to a decline in the perceived riskiness of the firm:

- In the case of financial institutions, all 6 of the studies reported that the use of derivatives reduced the sensitivity of the equity returns to interest rates;
- In the case of industrial companies, 8 of the 9 studies reported that the use of derivatives reduced the sensitivity of their equity returns to financial price risks.

Question 4: What impact does the use of derivatives have on the value of the firm?

All of the empirical evidence on this question is very recent. Professor Simkins and I found only 10 studies that focused on this question, the "oldest" of which was published in 2001.

Six of the studies examined the impact of interest rate and FX risk management (one looking at banks and 5 looking at industrial corporations). The other 4 studies examined commodity price risk management, with one looking at commodity *users* and three looking at commodity *producers*.

- Managing interest rate and foreign exchange rate risk with derivatives is associated with higher firm values.
- Similarly, the study of commodity price risk management by commodity *users* found that fuel price hedging by airlines was associated with higher firm values.
- In contrast, the three studies of commodity price risk management by commodity *producers* found either no effect or a negative effect on equity values—If investors take positions in commodity producers as a way to gain exposure to the commodity price, the firm should not necessarily benefit from hedging the commodity price risk.

Summary & Conclusions

We have answered four questions about risk management using empirical evidence provided by the academic community:

1. What happens to the volatility of financial prices when the financial risk management products appear?

The introduction of derivatives has reduced price volatility in the underlying market.

2. What happens to the bid-ask spread and trading volume for the underlying assets?

The introduction of derivatives has decreased bid/ask spreads and has had little effect on trading volume in the underlying market.

3. If a firm uses risk management, does the market regard the firm as being less risky?

Yes—Firms that use risk management are perceived to be less risky.

4. Does the use of derivatives increase, leave-unchanged, or decrease the value of the firm?

The use of derivatives to manage interest rate risk, foreign exchange rate risk and commodity price risk by users of commodities is associated with higher firm values.

Perhaps the principal benefit from the innovations over the last two decades has been the improvement in the allocation of risk within the financial system. Derivatives have dramatically reduced the cost of transferring risks to those market participants who have a comparative advantage in bearing them. As Merton Miller said: "Efficient risk-sharing is what much of the futures and options revolution has been all about."

Derivatives markets provide corporations the ability to hedge against currency, interest rate, and commodity price risks far more quickly and cheaply than was possible before. Derivatives have permitted the transfers of risk from individual firms to well-diversified institutional investors. This transfer has not only lowered mortgage rates for homebuyers, but it also should help protect the financial system from another disaster like the one experienced by the savings and loan industry.

Derivatives are often described as a "zero sum game;" and they are. But, even though one party's gain is another's loss in an individual transaction, the more efficient risk sharing afforded by derivatives can reduce total risk for all market participants.

Derivatives have expanded the technology available to firms and individuals to manage risk. They have reduced the costs of managing exposures, thereby increasing liquidity and efficiency.

In order for derivatives to deliver the benefits that they are capable of providing, there must, of course, be a high degree of certainty as to their enforceability and regulatory treatment. Congress made extraordinary progress in ensuring such certainty in 2000 with its enactment of the Commodity Futures Modernization Act of 2000. The substantial growth in the depth and breadth of the listed and OTC markets for derivative products in nearly all asset categories since 2000 is a testament to the importance of legal certainty and the success of Congress's efforts.

Mr. Chairman, Members of the Subcommittee, thank you once again for the opportunity to testify before the Subcommittee on these important subjects. Our economic success depends on a clear understanding of the relationship between financial instruments, their use and their regulation, on the one hand, and the market consequences of their use and regulation, on the other hand. I would be pleased to assist the Subcommittee and its staff going forward in connection with the Subcommittee's efforts to understand these relationships.