

MEMORANDUM FOR THE RECORD

Event: Richard Bookstaber, SEC consultant

Type of Event: Group interview

Date of Event: May 11, 2010, 11:00 am

Team Leader: Greg Feldberg

Location: 1717 Pennsylvania Ave, Suite 800

Participants - Non-Commission:

- Richard Bookstaber

Participants - Commission:

- Kim Shafer
- Tom Stanton

MFR Prepared by: Greg Feldberg

Date of MFR: May 14, 2010

MFR Reviewed by: Alexis Simendinger on December 2, 2010

Summary of the Interview or Submission:

This MFR is a paraphrasing of the dialogue and should not be quoted as a transcript.

- Background: Bookstaber was head of risk at Salomon Brothers and then Citi in the 1990s. More recently advisor to Moore Capital and Bridgewater. Early involvement in derivatives, including a leading role in innovating the portfolio insurance that contributed to the 1987 stock market crash. Now at the SEC. Author of *Demons of Our Own Design*.
- The most glaring points where derivatives caused a problem... swaps, options, innovative products, there are two areas: manipulation and CDOs.
- Manipulation. The one that is catastrophic is the role of CDS in pushing the markets over the edge at the time of the Lehman demise. A lot of people were short Lehman. When you're short, you talk your book. This was as early as March or April.
 - The way to really disrupt a company is through its financing, particularly through CDS. Debt covenants were pegged off of CDS: higher CDS would result in an economic impact on the company. For example, if the CDS is over 400 basis points, you have the right to call your loan; your hedge fund may pull out its prime broker business; your commercial paper may not roll.
 - [How do we know there was manipulation?] The spreads were off the wall. They were pushed. There's over 50% probability of people pushing their CDS. If everything was in clearing, we would just say, who did the trades? I don't know if the SEC has investigated this.
 - [How does a hedge fund manipulate?] First, take a short position in the equity. Second, talk up the downside risk. Third, you have to understand trading in CDS. It probably doesn't take much to influence the market. In an illiquid market it doesn't take much, then you affect your position in the more liquid market. It's the tail wagging the dog.
- CDOs. It didn't take a rocket scientist to see the risks. CDO inventories grew from \$1 to \$5 billion.
 - Around 1994 we had problems in CMOs at Salomon. Toxic waste was called the Z tranche. Salomon would end up with the Z tranche. One hedge fund blew up, Ellington, but it was rescued. This time it was the opposite—they could sell all but the best tranche this time.
- Two problems with CDOs:
 - Maybe it shouldn't have been AAA. When something is AAA, it's hard for a trader to argue to his boss that he is smarter than Moody's or S&P. The trader has an interest in protecting his desk. A CEO like Prince wants to trust the ratings. His company is piling up the earnings.
 - Your job is to push things out the door, not amass inventory. As everybody in any business knows, if inventory is growing, that means you're not pricing it correctly. [Was the internal mispricing by companies like Citi a contributor?] Yes, it was a hidden subsidy of the CDO business by mispricing. The Chief Risk Officer should have been saying, "This inventory must not be priced well." He could say, "Let's test the market."

This wasn't a complicated thing. It's just pure common sense. Credit derivatives allowed for the complexity. If this was a stock, it wouldn't work.

- "Tight coupling" (interconnectedness). May 6 happened very fast. If an event goes slowly enough, you can take care of it. Like the space shuttle, there is no time to take stock. The Bear Stearns case – this isn't a company that would have failed without tight coupling.
- The most severe aspects of contagion: Repo market and leverage.
 - Leveraged hedge funds: When the market had a shock, prime brokers wanted more margin because collateral values had fallen. "Procyclical margining."
 - Repo hits more at the heart of the financial system. It's the firms providing financing to everyone. It takes just one day and you can't finance. It's really pretty scary, in terms of the fragility of the market.
 - The New York Fed's Triparty Task Force is making major changes in the Repo market: (1) tightening up the clearing bank (JPMC/BONY) baton-passing to reduce intraday credit risk; and (2) making terms more transparent. The intraday exposure issue was critical with Bear. With Lehman the bigger contagion issue was the explosion in Lehman CDS spreads.
 - The solution is not to depend so much on overnight funding.
 - Drexel's failure was caused by excess leverage. At the time, John McFarland at Salomon Brothers increased the long-term repo, which saved the firm.
- Transparency. If you knew, or if at least a regulator knew, this whole thing could have been averted. It's ludicrous that regulators didn't know who owns what, who is leveraged. In September 2008, you would have wanted to know the positions of parties in CDS. The banks were in trouble; people were throwing fuel on the fire (through CDS).
 - The industry argument is that everybody will go offshore if you crack down. But London isn't exactly the Wild West.
 - Propose: Simplify and put them on an exchange; supervisors should say you have to justify customized derivatives.
 - During the crisis, all bets come off, prices can be ridiculous, that's nothing new.
 - Everybody knows there is a pricing spread on OTC markets because they aren't as efficient as exchanges.
- [Role of New York Fed?] The thing people have not focused on is the role of the bank supervisor at the New York Fed. They could crawl all over. A supervisor too could have asked the questions.
- [Credit derivatives vs. other OTC derivatives?] Credit derivatives are particularly damaging – they go to the heart of what allows a business to function... Look for a speech, it may have been Bernanke, describing insurance markets at the time of King George II: you could insure a ship you didn't own... so people were buying insurance and burning ships. The principle that emerged was that you had to have a bona fide interest to insure a ship.
- [Concerns about credit risk transfer instruments such as CDOs and CDS?] If you have \$10 billion in exposure, you should be able to transfer \$200 billion. There could still be trading if supply were fixed, for instance, if there were only \$10 billion in obligations, limit CDS to \$10 billion.

Just because you *can* convert a cash flow into a security doesn't mean you *should*. [Reform?]
Require cash settlement only.

- [Why did the crisis occur this time?]
 - The CDS obligations were concentrated in money center banks.
 - The investment banks were in a new business.
 - CDS hadn't existed 10 years earlier.
- [Did OTC derivatives other than credit derivatives play a role?] The counterparty problem is more of an OTC problem. In my 2007 testimony, I said we need transparency about positions, leverage, and the network of counterparty interactions. A regulator couldn't model what would happen if a counterparty failed.
- How do crises happen? Elements of a crisis:
 - Unstable situation. First you need an unstable situation. For example, Russia.
 - Trigger. Then you need a trigger. In the case of LTCM, it was the default of Russia. The crisis is something that causes contagion. The problem is if the liquidity isn't there.
 - Forced selling. You need a mechanism that forces selling – a drop in prices could increase selling; it could be high leverage; in 1987 it was portfolio insurance, on May 6 it was pre-programmed trading apparently.
 - Liquidity providers become liquidity demanders. People hit their risk limits. Uncertainty forces them out of the market. Contagion: if you can't sell who you want to sell, sell what you can sell. A flight to simplicity.
- Quant funds run in August 2007. Global Alpha, AQR, DE Shaw, etc. What happened? There was an initial trigger. Probably some quant fund had some subprime exposure. They would have bought and sold to unwind their positions. Based on the shock, they'd have to reverse their positions; prices really dropped; now they have to liquidate. They're very leveraged, while they thought they were hedged. This would argue for a National Transportation Safety Board equivalent for the financial world.
 - [How do we investigate the quant funds failure]: (1) To investigate, look at all the firms affected, talk to everyone involved. Ask exchanges who was doing what. I met AQR executive in March 2007. I said, doesn't it bother you that Global Alpha is doing the same thing you are? It's a crowded trade? He said, we agree, but it's too hard... (I don't agree:) Fifty percent of hedge funds are equity. Equity is simple. (2) Talk to the prime brokers or clearing agents. (3) Talk to securities lenders.
- [Governance?] The Chief Risk Officer wants to be friends with the trading desk. Suggest: (1) Sarbanes-Oxley-like rules on Chief Risk Officers. The Feds go in and ask the CRO, are there material issues that have not been resolved? (2) Use regulator as ombudsman. The FSA model. None of this works with a weak CRO, if the CRO is isolated. You also need a CEO invested in risk management. The regulator can do a lot more than the CRO.
- [Is risk management a compliance exercise?] That gets back to having the right person in the job. When I started, risk management was all traders and quants.
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