

## MEMORANDUM FOR THE RECORD

Event: Charles Calomiris, Columbia University

Type of Event: Group phone interview

Date of Event: September 10, 2010, 9:30 am

Team Leader: Wendy Edelberg

Location: 1717 Pennsylvania Ave, Suite 800

Participants - Non-Commission:

- Charles Calomiris

Participants - Commission:

- Greg Feldberg
- Ron Borzekowski
- Melana Vickers

MFR Prepared by: Greg Feldberg

Date of MFR: September 10, 2010

Summary of the Interview or Submission:

- I have an article coming out, *Origins of the Subprime Crisis*, a Chicago Fed article. I'll send it along. We've learned some things very recently.
- The US, of course, is looking for a global explanation... my view is different. I think it's useful to frame this with a US-centric view. [Starts with subprime.] The first question is, what are we trying to explain?
- Four things; they aren't just additive, they are multiplicative:
  - (1) Monetary policy. There is no question that monetary policy was unusually loose from 2002 to 2005. Low interest rates created negative real fed funds rates; the only previous time was the late 1970s, the high inflation period. By any Taylor Rule calculation, you'll get a FFR two percent below what it should have been.

The Taylor Rule is a rule for setting the FFR using three variables: the desired rate of inflation, the current rate of inflation, and unemployment... We were all shocked and kept being wrong, expecting rates to rise in this period, 2002-2005.

There are justifications for this policy. Rick Mishkin gave a speech... what the Fed was doing was insurance monetary policy rather than expected inflation monetary policy. That the Fed should worry about the downside, not on average expectations about the economy. We can understand what the Fed did.

It's absolutely clear that the Fed was heating up the pot, and had a huge effect... in terms of absolute levels. There are many studies showing that loose monetary policy produces much thinner spreads in market pricing. There are some that say it produces more risk-taking; that may be true. There are also arguments that it makes for an equilibrium where the pricing of risk is lower; if borrowers are wealthier, they can borrow more.

We know from the history of banking crises that monetary policy is typically part of the story, of how you get the pricing of risk to be very low in ways that foment... It is a necessary condition but not a sufficient condition for a financial crisis.

- (2) US housing policy. Starting about 1990, the tolerance for leverage changed dramatically, by Fannie and Freddie, and by FHA. None of the underwriting errors and changes in standards, the subprime new contracts, none of that would have made one iota of difference if leveraging policies hadn't increased. If you make a 20% downpayment on your mortgage, you're not going to go bust... and people that have bad credit aren't going to come buy a house because they're putting their own money at risk. The worst part of the government policy was the increased tolerance for leverage... The use of mortgage securitization to keep mortgage risk off-balance sheet was front and center to explain why subprime mortgages were where the risk pricing was most egregious.

Not just increases in leverage and affordable housing targets for FNM/FRE; changes in foreclosure protocols at FNM/FRE in the 1990s and at FHA in 2002. Had been conditional on 90 days delinquency. That went from 75% to 25%. They decided to tell originators that when loans went delinquent after 90 days, they shouldn't push for foreclosure, they should push for mitigation.

Then they got into no-doc, low-doc lending. FNM/FRE's entry into no-doc in 2004, over the dead body of XXX, led to a tripling of subprime mortgages in 2004. It's very clear that FNM/FRE were doing this largely for political purposes. They needed to show a commitment to this.

2006, Congress passed a bill that tried to prohibit so-called notching within the rating agencies. The Congress is sending a strong signal to the rating agencies that subprime securities should be rated in a lenient way. Fitch lobbies for this, S&P and Moody's are lobbying against this, because it is a race to the bottom. This is a story that is kind of

technical and complicated so the press doesn't get it. It didn't have any immediate impact on the crisis but it shows us the signals that Congress is sending are that they are fully supportive of this politically driven boom.

The assumptions these models were based on FNM, FRE wanting a basis to take on excessive risk; and **Congress bears primary responsibility for the crisis because of that.**

(3) Where the private sector bears responsibility. Sins of commission vs. sins of omission.

It's very important to emphasize that when we look at the private sector, there is big cross-sectional variation. BAC, JPMC, GS, MS, CS, DB, SC, HSBC, BBB, B Santander, are not exposing themselves to this subprime risk to any significant degree. Notice what a long list that is. On the other side you have ML, UBS, C; FNM and FRE end up with half of the subprime risk between the two of them. Also, LEH, BSC, AIG. The first thing to note is that the list of people who took that exposure on the buy-side, who was on the buy-side on net. FNM and FRE are the key players in my view.

The key thing I also want to emphasize, the first inkling we had that the assumptions were no longer true, that comes in the middle of 2006. Josef Ackermann speech – by May or June 2006, it was clear the jig was up. As soon as you have a deceleration of prices, you're going to have massive defaults. JA said, we knew what was happening, so we made sure to insulate ourselves. Fitch says by the middle of 2006, you knew the jig was up.

The markets knew by the middle of 2006 that things were changing. For the next nine months, origination volumes, mainly driven by UBS, C, ML, origination volumes of subprime remained at their peak levels for nine months. That is a remarkable fact. There was clear on the buy side, clear ex ante knowledge that the models being used were incorrect.

The thing to focus on here is the cross-sectional variation. Why did some of these places promote this – they're the ones taking the exposure on their own balance sheet. They're buying their own securities. They're retaining huge exposures to this. You have to ask yourself, what were they thinking, what were they doing.

I like to focus on the concept of agency problems. Why were people on the buy-side willing to take ex ante what were not good risks, at the expense of their stockholders? There are two views. One has empirical support and the other is pretty much rejected.

One is that it is the result of compensation differences of CEOs. The notion that some CEOs might have benefited from some short-termism. That view has been refuted. It's not possible to make this argument cogently. Several papers show that the CEO's did not have portfolios that benefited from increases in risk. They did not understand the

risks, particularly at Citibank. There are three papers: Shenkman? and somebody else. Two guys at Wharton. We pretty much refuted the idea that the CEOs did this on purpose. If you look at my own writings from 2008, I gave credence that this was possible; I've since changed my mind.

Second, that it was more that some firms had better internal risk management protection than others. That means that in places where risk managers have real authority, risk managers force the guys on the trading desk to justify the risk-return tradeoff. Where they couldn't they couldn't do the buying. People on the buy side, the middle managers at these institutions, if they're compensated based on the amount of assets they hold and buy, they're going to increase risk. That view has a lot of legs. Why? It makes sense. Paper by Viramilli (?). One variable: the ratio of the salary of the CRO the CEO explains a lot of the cross-sectional variation. There were big corporate governance lapses at these institutions that allowed middle managers in the buy side to profit based on where their compensation was structured, at the expense of their stockholders.

It's hard to put weights, because each depends on the others.

In the presence of those first two- if the private sector had said, we don't want to do it, it would have been just a story about FNM and FRE. The story about agency problems focuses on risk management practices. You can't give collective blame on Wall Street greed because most of them weren't doing it.

- (4) Prudential regulation. First failure: risk identification and capital from 2003 to 2008. **Second failure, between March and September 2008, failing to do anything about the newly created TBTF problem.** TBTF was not a big issue prior to March 2008. The first is a risk measurement error. The banks needed more capital, but only relative to risk. Banks that had more capital relative to their requirements were the most hard hit. You can't say, only if we had put more capital in we wouldn't have this problem. The key is not being able to have a regulatory system that can look at institutions and measure their risk, and set capital accordingly.

What's going on with risk measurement? Banks are being regulated by the Fed, the OCC, investment banks by the SEC. There is no story about deregulation. People use the word loosely but I haven't been able to figure out what they mean. We never had an effective proper regulation ever. The regulations have gotten more complicated and have increased over time. For example, the investment banks weren't regulated before 2002, but after that, were subject to the Basel standards. It wasn't effective because risk wasn't being measured.

The way we measured risk for the largest houses was their own internal models, and the rating agencies. These are conflicted policies. You don't have a strong incentive to give the regulators a good forward-looking measure. The notion that we had... without thinking about the incentives of who was measuring risk, was a problem.

We've increased the role of credit ratings... Ratings are used for appropriateness guidelines. They're also used to set the capital standards. What does that tell you? It tells you that buyers, the banks, insurance companies, have very strong incentives to want ratings to be inflated. The view has been that it's the sellers, the originators, that have driven the ratings. That's wrong. The first study of this was by the New York Fed, Canter and Packer, showing that rating inflation was confined to securitization instruments that were held predominantly by institutional investors. I've spoken with people at rating agencies, studies about how rating shopping occurs. The key is, to get at this problem, the fact that the sell-side is buying the ratings is completely irrelevant. Example: A high executive at one of the rating agencies. Sponsor goes out with a deal. If the rating agency gives him higher leverage, he'll include that agency; if a different agency says a lower amount of AAA, they'll be uninvited. One of the clients bought the paper. The rating agency said, we didn't rate this deal, why did you buy it? The investor said, we have to put our money to work. That is the definition of an agency problem.

TBTF: University of Illinois looking at spreads found no evidence of a TBTF implied subsidy prior the crisis. There's no evidence of an expectation of favorable treatment prior to the crisis for example at investment banks. But, once BSC was bailed out in March 2008, everything changes. The key mistake that regulators made was to allow Lehman and others to sit on their hands and not raise capital. There's no justification that the Fed, the SEC, can give because they had power, they had regulatory power, they just had raw power. They could have said, you will raise capital. They wasted precious time for six months.

I actually supported the decision to bail out BSC in 2008.

- The Dodd/Frank bill is the worst piece of legislation in American history – not addressing the key problems, and creating a lot of regulatory costs.
- [There were capital raises between March and September. You mention the authorities could have done more.] It's not just Paulson and Bernanke. The SEC of course is their prudential regulator. They could have said, based on our analysis, you must raise capital. I can tell you... if any one of those three parties had had a one-on-one meeting with Mr. Fuld and said, either you raise a lot of capital, or I'm going to ring-fence you...
- It's completely ridiculous for the Fed and the Treasury to claim that they were helpless.
- The key issue is the culture of risk management – GS and MS, they had a good culture of risk management. **Being more regulated and a commercial bank does tend to promote a culture of good risk management. Citibank was an outlier.** Even though being a commercial bank, it had a horrible culture of risk management. Why was Citibank such an outlier in risk management?

That's the issue. The investment banks were more heterogeneous. Bear was known to be most aggressive, Lehman not far behind.

- [Thriffs?] I don't see them as quantitatively worth looking at. Overseas: Landesbanks and Spanish thriffs. Risk management and cultural factors were quite important. Iceland is another example. Within the US, thriffs are small potatoes. I was the chairman of the board of a thrift institution until 2009. That institution ended up being taken over by the FDIC. We had no subprime exposure really. What's interesting is how we were affected—the market for acquisition, the crisis destroyed the ability to be acquired.
- [Subprime definition?] I like Pinto's definition. Subprime is as subprime does. If something has a default rate that is 7-10 times a normal prime mortgage, then we can safely say it belongs with other things that have 7-10 times default risk.
- Events that caused things to increase... allowing lower FICO scores was part of the story too. People can have low FICO scores because they're unemployed. **FICOs are not the Holy Grail in risk management.** Three things: Credit scoring; doing diligence to know who the borrower is; having enough downpayment.
- Focus on leverage as the key driver, as well as the no docs, low docs, interest only. Leverage is the key. These people need to self-select.
- [We've done ex post analysis of portfolios. The risk of any mortgage is a function of the many aspects of a mortgage.] You have to have a way to distinguish bad luck from bad underwriting. People are projecting for 2004 vintage, 4-5%, rising to 6% in 2006. Actual losses are more like 30%.
- [Also Bob van Order, etc. Scoring ex ante, seeing how much of the realized outcomes are explained. It seems like about half can be explained by what you might have seen with a better model. The rest could be R&W, loan tapes inaccurate, etc.] Let's talk about the housing price assumption. I gave a speech in February 2007 to this group of risk managers – Primia. My speech was, have you lost your minds. The idea to get your distribution from a 10-year lookback is crazy. There's only one business cycle, in 2000, which is the only business cycle in history when prices were increasing rapidly. You're stress-testing based on an outlier. **A lot of it was, I hate to say, intentional. The rating agencies were catering to buy-side investors.** You didn't have to satisfy Goldman Sachs, you just had to satisfy who was buying. There was enough buying out there. **There was an implicit conspiracy to believe things that were not reasonable.**
- Barbara Boxer wrote something like this into the bill, it was shot down by the buy-side. My fix would be to tell rating agencies that for NRSRO purposes, they do not give letter grades, they have to give a number, a probability of default. You'd want the LGD too.
- **In December 2005, before CDOs doubled in origination volume in 2006, a BBB corporate security had a 5-year default probability of about 2%. The 5-year default probability of a BBB CDO was 20%.** That's in 2005. Did the institutional investors know that? Of course. The data was sent to them. The most important area will be in the As and BBBs.
- I haven't given up on this. There's a new division in the SEC that has the burden of NRSRO regulation.

- [Risk management?] FNM/FRE are highly politicized. We know from their internal emails they were making politically driven decisions. My testimony to Waxman in 2008 discussed those emails. Those are the institutions selling a put option to the market. They let it be known that they were not setting R&W.
- Given that R&W violations were very big and widely known. It's interesting, around July 2008, it became clear to me that this crisis was going in another direction. We started to see how deep the problem was at Fannie and Freddie. I was invited to a discussion with Paulson and others. The puzzle was the spread on FNM/FRE debt was widening. The Secretary said, why is it widening, we said we would stand by it. We said, with all respect, you're only going to be in office for a few months.
- There was a perception that FNM/FRE could provide a put option while making a market with no risk. FNM/FRE were pretending they had less risk than they did. July 14, 2008, Krugman in NYTimes said that FNM/FRE had zero exposure to subprime because it's illegal for them to hold subprime, which of course is wrong. The fact someone could write that shows how widespread this misunderstanding was.
- Gary Gorton says it's not until January 2007 that you get through the ABX market some aggregation of market opinion about the subprime market generally. Nobody was collecting information before that. I had to pay the mortgage brokers society for data.
- Why people were believing that this put option to FNM/FRE would be good to use.
- [How does DB figure it out?] There's a difference between the buy side and the sell side in terms of what they knew. If you're a sell side guy, you're willing to keep originating, you've got the 600 lb gorilla in the secondary market saying, wink-wink, everything's fine. We have to understand the role that FNM/FRE played in perpetuating the market for that last nine months.
- From the buy side, we need another story. That has to do with agency, driven by poor risk management. Ackermann is saying, we all saw, which Fitch agrees with – **the rating agencies are saying, in mid-2006, that things are changing – but they're not changing their ratings for another nine months. That's the weird thing.**
- Good risk management: DB, GS, MS, BofA, JPMC, HSBC, BBV, Santander, CS. The interesting thing is, the number of players that are not doing this is bigger than the list of players that are.
- [Economic impacts?] First, the notion of liquidity risk magnifying the costs of the crisis through its effects on the balance sheets of lenders... it's very clear we had a huge magnification of the crisis through the effects of the liquidity piece of the crisis on the financial sector. **When spreads widened to 1000 bps, that didn't mean the expected loss in some long-term sense was 1000 bps; what it meant was, you were in a liquidity stress environment where there was forced selling of the assets.** There's a lot of evidence. Your question is a course that I give. You can see very clear evidence that the spreads and flows are related to this. The liquidity risk was magnifying the credit risk. You probably know the paper on ABCP markets. There's also work by Huerova (?) at ECB on the EurLIBOR market. Also Gorton/Metrick on repo. We kind of see ABCP, repos, LIBOR (Chris DeSchwartz), and a lot of the securitization stuff (Vikram Pish?).
- **We've got a lot of good information that is telling us, that as short-term debt markets, money markets are risk-intolerant. That risk-intolerance means that if the possibility of default risk**

**rises, the penalty in terms of credit rationing in money market instruments – repos, ABCP, EurLIBOR – those markets shut down.** They don't want to price risk, they want to run away from risk. On the short-term end, you have a credit-rationing story. Not the same as the Stiglitz story. My article on credit rationing before the crisis pointed out that this type of credit-rationing has not been written about in the literature. Going back to financial history... in the banking industry, deposits are pretty much 100% insured because of CDARS. This results in a flight to liquidity. That happened, yes.

- Corporate balance sheets had become more liquid. The dividend tax cuts had had a big impact improving leverage. Corporations returned, from 2003 to 2007, to lower leverage from the mid-1980s. That's why the crisis hadn't spread further because they had been deleveraging. What about wealth effects? What about leverage effects? The average deleveraging... being more levered as a corporation created impact on your returns... Paper, Scharfstein and Ivasina.
- If you look at lines of credit being drawn down, there you see a lot of the story.
- Even though securitization dries up for a few months in September 2008, the credit card market comes back. I think we can clearly see that credit cards, because they were operating with good, time-tested underwriting standards, were never written out of the market.
- I don't think it's right to say there was a longstanding rejection of securitization, or consumer credit securitization; there was a rejection of bad ideas in subprime which were taken too far.
- Wealth effects. I've been working a lot on wealth effects of housing. Academics know nothing. The data is complete crap. I'm trying to create new data. Be very careful using any academic study of housing wealth effects. I'm convinced the data are horrible and the analysis has been worse. The measurement of the house values are problematic. The OFHEO data aren't reliable until the mid-1980s.
- I'm in the middle of getting results. My results say, you have to know a lot of demography. Housing wealth effects are large. Our earlier study using crappy Case-Shiller data had found small housing wealth effects; we're finding bigger housing wealth effects, but they're not bigger than market wealth effects, and they do vary across states. If you're a state with a lot of elderly people, your housing wealth effects would be greater. Arizona twice the national average.
- Was there a lot of home equity withdrawal? Yes. Does that mean there is a housing wealth effect? No. People are borrowing against rising expected income.
- From September 2008 through March 2009, I was highly critical of what they were doing; they didn't do enough to prevent the financial crisis from spreading. Having screwed up the TARP plan so badly.... Check Caballero at MIT. My recommendation would be that the political constraints were not partisan. Both presidents would have done more if it wasn't such political suicide to have done more. Americans were so consumed with hatred about Wall Street and the banks. We should be angry about FNM/FRE.... The anger turned into this hatred that was so severe that it hamstrung effective policies.