

MEMORANDUM FOR THE RECORD – MFR

EVENT: Interview of Mark Adelson and Brian Markley, Standard & Poors

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SUMMARY OF INTERVIEW & SHORT BIO OF INTERVIEWEE :

This is a paraphrasing of the interview dialogue and is not a transcript and should not be quoted except where clearly indicated as such.

Brian Markley mentioned S&P's confidentiality agreement dated March 30, and that this interview and prior S&P interviews are subject to those protections.

Q: What was the actual role of the insurers in the early years?

A: The typical role of the bond insurers from the mid-90's to the 2000's was to insure the securities.

Q: Which tranches were they insuring?

A: In the early deals, there would be a piece of protection for them, and then only one class of securities would be issued, and they would be insured. I think what you're alluding to, is later on there were some deals. In particular, one deal, I remember standing in an analyst's office, and there was one security which was subordinate and it was there to protect the insurer. Some people thought those were appealing because the presence of a bond insurer in a deal gave it more discipline and oversight. And the bond insurers saw that as protection. But that was a much more infrequent structure.

Q: So when you write that the vast majority of home equity ABS had bond insurance...

A: Those were deals that had one tranche.

Q: Pre-97, the earliest deals, the residuals were all held on the books of the originating firms. Caused them lots of grief because of the accounting scandals.

A: The top of the deal is protected by bond insurance and the bond insurer has some subordination protecting it.

Q: And the bond insurers back then were the same ones I'm thinking of today?

A: Yes and no, the names are changing. And the fortunes of the bond insurance industry has changed. But back then, it included Ambac, MBIA, FGIC, and FSA, which got merged into XXXXX.

Q: You make the breakpoint in '97, so what happened when the average bond insurance went from 70% down to about 40%?

A: You had the introduction of the senior-sub structure for ordinary deals. The HEL ABS included subprime, which back then was called B/C. Second lien loans of 2-stripes, closed-end loans of lines of credit. Plus, depending on who was doing the credit, you would see the small sectors of the mortgage space. Time shares, among others would get thrown in there sometimes. So the differences in counting depended on who's numbers you took. The difference in b/c product back then, there wasn't perceived to be an appetite for uninsured paper. Then Conti came out with a structure that had senior/sub with no bond insurance and it was very well-received. So bond insurance went from covering all b/c down to half.

Q: Was bond insurance there from the Guardian deals? Or was bond insurance a 90's innovation?

A: I do recall them on some deals in the late '80s. There were other players writing insurance. Other deals, not subprime, used pool policies as a form of credit enhancement. One of the oldest in '82-83 used PMI. The guardian deals as best I recall didn't use bond insurance. But that's quite old stuff and it wasn't quite branded as b/c. People came to know it as subprime product later. The company didn't have a reputation as a b/c type lender like a traditional b/c lender had. Back in those days, b/c business had been established: household finance, the money store, beneficial finance, champion mortgage. They had business going back to the '60s, so there had always been that sector, but it came into securitization much more intensely in the '90's. When Guardian and Long Beach Savings were securitizing (in retrospect) subprime loans, they were quite exceptional for doing so.

Q: So that's the early germination of this: the 88-89 deals, and you're witnessing the first bond insurer structures in 1992?

A: Guardian and Long Beach were doing deals from '86 onward. There were a few others: Advantacorp. It wasn't a big sector. I gave a talk back in 98-97 and it included a slide of a lot of the companies were gone. They had booked too much gain-on-sale that didn't come in. That's what caught those companies, it wasn't the credit problems, in the first instance. The gain on sale is what the accounting required, so it gave them incentive to use optimistic assumptions, which gave them high EPS. One executive paid himself a \$130 million bonus. They used to call the sector, when it got hot, specialty lending. There was a magazine called "specialty lender." The reporter who covered it was a nice man named Jim Allen, who's now CFA director in Charlottesville. That magazine had a list of all the executive salaries. 2/3 of the earnings they booked didn't come in, and negative cash flows, so when they couldn't finance the residuals anymore, they were just dead. When people would write about gain-on-sale, this was the issue. It produced a distortion in how the companies behave, definitely a distortion in how they kept their financials. You ended up with securities claims from people who felt the stock had been run up improperly and felt the value of the residuals had been run up. What you had was said because the executives thought they were doing great. We had the experience back at Moody's. One of the big lenders, might have been Conti, came in. And one of the analysts walked through the facts very methodically, and demonstrated to them that they were losing money on every loan they made. So the accounting was out-of-sync

with the economic reality. You had executives of the companies with lots of stock options that they never exercised. It all became worthless when the company blew up. There were guys with strikes at 30 and the stock was 60 and they weren't exercising because they thought the sky was the limit.

Q: If you have any details on the structure of those deals, it would be fascinating. We could see the evolution of these deals to the antecedents of the crisis.

A: What you want is something that takes the big picture, not deal by deal. Back in those days, Moody's did sector write-ups—a year in review and outlook. That would give you a flavor of how much was bond insurance, issuance trends. I don't think there was a lot written contemporaneously that there was going to be a problem from the gain-on-sale. That came in after the horse was out of the barn. There was a lot of accounting discussion about gain on sale before it happened and the effects were not what the accounting policymakers envisioned.

Q: This is history repeating itself in various ways—anything you have that describes this would help us. In your chronology, in 1992 the bond insurers were playing a role. Do you have a sense who was buying the subordinate tranches around the turn of the structure?

A: The guys who had abilities to understand the more risk—those buying subordinate tranches of mainstream deals had the infrastructure: Sun America. And others: you'd have some insurance company books where they'd be going for a little boost in yield. You'd have some money managers with allocations from fixed income managers. When I say Michelle Russel and Sam Rainieri, they'd been around the block. The mortgage area staff at the bond insurers. They knew a lot about it—all the nuts and bolts. Because of this, they had confidence in themselves.

Q: Was it a slower market back then? We hear that in 04-06 deals happened fast, so there wasn't the time to study a deal?

A: Yes and no. In the sense that the structured market always moved fast, investors in the structured market were always given information late in the game and the nature of the disclosure materials was that they were so voluminous that decisions had to be made in the summaries. Those practices go back before 2000-whatever. The thing is that despite how fast everything was, you could say that following the rise of ABS CDOs as another reservoir of demand that any real money investor felt pressured to act faster, respond quicker, to an invitation by a dealer to sign up to a new issue. If you were tardy, you got nothing [28 mins]. That's when the discipline starts to go away. It didn't take too long before the traditional subordinate buyers got pushed to the sidelines that the originators realized they could loosen their practices and push weaker product into deals.

Q: So there were 2 things that happened at the same time: insurers go away and CDOs become the purchasers of subordinate tranches...

A: They're causally connected. Having CDOs come on the scene produced a change in the pricing. The CDOs were more eager and price the risk more aggressively, accepting it for a lower yield. It's in the paper in one of the charts. One called home equity ABS yield spreads.

Q: We've been trying to document that phenomenon in two ways. We've heard underwriters say that they always had plenty of demand for the entire capital structure.

A: And they did. Once the subordinate tranches started out in 97, they always sold. So even though that structure didn't fully replace insurers—they coexisted for many years. But they moved the prices. There are times when a market is hotter and a time when a market is cooler.

Q: So if someone says there was a lot of demand for subordinate tranches outside CDOs...

A: It's demand at what price. You had a lot of interest at $\text{libor}+250$ let's say. But at $\text{libor}+100$, it's just the CDOs.

Q: But once the subordinate market goes to 100, there aren't MBS that issue at 250.

A: That's the point, everything is pricing at the tighter levels. The more discriminating buyers go to the sidelines.

Q: So the CDOs take over, they're driving prices up on the lower tranches. What's the effect on the higher tranches?

A: It's less pronounced. Because the spread starts much tighter to begin with. But you do see some effect. I remember seeing AAA 5-year tranches moving between 50-25 BP at various times, but it was less about this story than just about bigger overall movements in credit spreads. For this part, on the sub tranches—the BBB risk—the thing that's key, the piece we didn't talk about yet is that there wasn't actually enough real paper being issued to satisfy the demand. This is when doing it synthetically became all the range. The amount of synthetic exposures created on certain tranches could be many times more than the size of the tranche.

Q: Why did the bond insurers all leave?

A: There's a step I should highlight. Normally, when we think of the relationship between the cash market and the derivative market. We'd think that the derivative draws its price from the cash market. We expect the puts and calls on a stock to be priced on the price of the stock and its observed volatility. That's not the only way the world has to work. Sometimes you get a reverse feedback. Sometimes derivatives start to influence the cash side. In my view, that's part of the story here. The derivatives got so excited and bid the price down to such tight spreads, and that fed through into the cash market.

Q: And the demand was for the subordinate tranches?

A: Yes.

Q: And that's going to force the cash deals to have very aggressive pricing on the sub tranches. So then there's a little more money to give the AAA investors, or the prices are going to come way down, or there's a lot of profit for New Century.

A: I think you hit the nail on the head with the last one. Nobody was sending more savings to the consumer in the competitive environment.

Q: So you take the YSP and pocket it?

A: Yes.

Q: So I don't understand why the insurers are getting out of this space or why people don't need the wrap.

A: The bond insurers, like traditional bond investors, were connoisseurs of mortgage risk. They would take the risk on at 250 or 350 BP but not 100. They had more experience. They were used to getting paid more for that risk. At 100 it didn't seem more attractive. They didn't believe it was profitable enough to deploy their capital. This is being done by their department who has a long history with mortgage risk. They're mostly not quants, they're mostly not derivatives people. Its mortgage people—a community. They all know each other and trade bonds with each other. In the first instance, the actual tranches would go to CDOs. The CDO manager and investor are not the same kind of folks who just backed away. They're derivatives folks. There was a saying that I sometimes heard. It's pretty bad to hear it, but one said "I'm a specialist on the structure; I don't need to be an expert on the underlying assets and risks, because the structure takes care of that." You'd hear something along those lines every so often. In 2005 or 06, I went to the IMN conference at the Roosevelt Hotel. A conference on CDOs. You started getting a lot of mortgage paper in CDOs at that time. I was on a panel with mostly CDO guys, not mortgage guys. They knew the mortgage lingo, and they started talking about the mortgage issues because chinks (worries about housing) had started to appear. I interjected because I'm not sure the audience is following us. I said to the audience "just by show of hands, how many are familiar with LTV." And pretty much no hands went up. It might have been Debt to Income ratio or something, but an ordinary term. We tried that with a few other terms. It verified that the gang in the audience was not very well versed with mortgages and mortgage risk. It was all different folks from the CDO industry. The organizer would have an attendance list.

Q: We've heard from some people that some of the people buying this paper were professionals. Is it true that those people will be drowned out by the people who don't understand LTV, etc.

A: Yes.

Q: You characterize it as pushed aside.

A: I characterize it as stepped aside.

Q: Walk me through how this gets back to the originators knowing how they can put more risk into the pools.

A: I don't have an answer for that—how they managed to perceive that the restraints weren't there. One thing that is very clear is that the pattern of deterioration is not linear. It was slight at first as evidenced by the difference in the subsequent performance of the successive vintages of loan production. Early 2005 loans do better than late 2005 loans etc etc. The change in the quality started out small from one half year to the next, then got bigger. It's fair to conclude that the realization that restraints weren't really operating became a more powerful factor with the passage of time. It appears to have behaved [some word].

Q: If it wasn't for the demand for subordinate tranches, you couldn't do these deals. The bottleneck is the subordinate paper, is that correct?

A: I think you're on a wrong turn there. It's not a question of whether the deals would happen. It would have been: what's the character of the loans going in, and what's the pricing of the deal. It could have been all the same people, but it would have been loans to them at lower LTVs or in different houses.

Q: There may not have been a lot of supply in 2006 with high house prices to make a full-doc 20% down loan to a perfectly secured buyer. Part of me is trying to understand the tradeoff between pricing the BBBs and AAAs.

A: It was pretty easy to execute all throughout that time, as the growth in the market shows. You were making money on both sides. It was easy enough for desks to move the senior and subordinate tranches, most were oversubscribed on both counts.

Q: What does it mean if you can get a synthetic deal done faster. What does it mean when you have a surfeit of investors prepared to do that?

A: You can make it to feed the CDO machine. That's what was really getting hyped. And the CDO machine was an easy way to do a deal with a room of people who didn't know mortgage lingo.

Q: It seems that you're focused on the mezzanine slices of CDOs. Did the AAA buyers change?

A: That's a very good point. The buyers at the top of the capital structure who never ventured further down, for the most part, didn't study as hard, didn't focus as hard because they felt they didn't need to. They felt they had enough padding. There was a snowball where the change started out slight and got faster and faster and faster until the late 2006 and 2007 vintages really displayed a meaningful deterioration.

Q: Were there changes in who was buying the residual pieces/equity in RMBS?

A: The answer is really "sort of but not so much." There wasn't much of a market for the real residual. But what many deals did was cut the residual into two halves and sell the top half as a NIM security. It would include a different combination of exposure to prepayment and credit risk and they had some following and sometimes had bond insurance. Sometimes they'd be called securitizing the residual. That was done for a while. There were some people coming in and buying those. I couldn't tell you who they were. But the bottom residual even when there was a NIM, had to stay with the securitizer. For example, Nomura, where I was, had a lot of residuals. And had a lot of work in valuing and marking them as conditions began to slip. Ultimately they turned out to be "nothing there."

Q: Were the equity tranches just not large enough? Why didn't that matter to quality?

A: It's fair to say that the trader in charge of putting the deal together is taking a relatively short time horizon view. The most important thing for the trader is to book a large P&L on the deal. So he wants to mark the deal at inception at a high mark. This makes a tension between the trader and risk management to mark the residual. Then, time goes by, the trader has got his bonus, but the cash flow on the residual is not what was expected. So risk management might say "we need to mark the position down." The mark will come out of the trader's P&L for whatever period he's in, so he's going to try to resist it. He can always try to prove the mark wrong by trying to sell a position for more than it's marked at. But he probably marked it for higher than he can sell it for. But it's not until risk management has marked it down that he can sell it without booking a loss. So the incentive is to carry them at more than you can sell them for, and only to sell them when it becomes more expensive to hold it than to take the loss to your P&L by selling it.

Q: I have to say this doesn't sound like a good set of incentives.

A: Well... it's capitalism. It's what we go to war for. You wouldn't want people to try to book a loss, would you?

Q: It's the nature of any kind of trading that when you buy a position, you think it's worth more than what you paid for—that's why you bought it. Price is what you pay and value is what you get.

A: The trick is accurately measuring the P&L.

Q: What about CDO managers that did have folks with mortgage experience?

A: The big names: TCW, PIMCO, Blackrock, obviously have a lot of knowhow when it comes to mortgage stuff. Even so, it's not always the case that their mortgage guys and their CDO guys are so close together. But assume the best case. It's also true that you had loads of CDO managers who didn't have mortgage knowhow. This is reflected in the fact that there was a wave of new CDO managers coming into existence, peaking in 2006. Where you'd hear statements like "everyone and his uncle wants to be a CDO manager." That was an observation voiced repeatedly at industry conferences around those times. It was very lucrative. The synthetic proposition meant that people could get a piece of the action with very little cash up front, which encouraged a lot of speculative behavior. There's some evidence that managers really had to curry favor with the big investment banks and be willing to take paper from the big investment banks in order to get their deals placed.

Q: I was told by someone that CDOs were designed to withstand a 5% drop in house prices nationally. Do you know what the stresses were of subprime mortgages?

A: The S&P old version of levels used a home price shock of 34.5% drop for AAA stress. I don't recall whether there were specific lower shocks for the lower rating categories. The thing people miss is they say "well if the model contemplated a drop of 34.5%, how come any deal got into trouble?" You have to connect a home price drop to both a default frequency and a loss severity on defaulted loans. It turns out that because of things that happened in 2005-2007 that when home prices took a big drop, both the propensity and consequences of default broke from the historical patterns and were quite a bit worse.

Q: Moody's used at the time was called Moody's mortgage metrics, which used over 1,000 scenarios and looked at the outcome over all those scenarios. Mortgage securitization funding.

A: It's always been short-term funding for the securitization pipeline. This isn't peculiar to the subprime area or anything. It pertains just as much to the origination of plain old boring prime quality performing loans that would go to Fannie Mae or Freddie Mac. Mortgage originators have to finance their pipeline on a forward basis. Whether that entails a revolving line from a commercial bank or investment bank—which liked to do it because it could entice the customer to do the underwriting business (customer is originator).

The desire to use ABCP for this goes back to the early 90's. There were challenges then. The expansiveness got bigger. The thinking about credit risk over a short horizon became sharper as time went by. It had historically been a low risk proposition. It wasn't that the loan would go bad, but that it would be rejected on delivery because of some technical defect (notarize, missing docs, etc.). In which case the lender wouldn't get money back for financing the warehouse. So moving it to ABCP or to repo is just a natural transition as those devices for short-term financing became bigger. 1993-98 CP came on line in a meaningful way. Whole loan repos might have gone back to 80's

Q: Is a company well managed if its operations guy or treasurer doesn't have a fallback?

A: That's a guy who's really exposing himself, because if that source dries up, he's got a real problem, and his borrowers may have a real problem.

Q: What level of loan detail was used on rating of RMBS?

A: All the big rating agencies used loan-by-loan data for rating US residential mortgage loans. In the S&P system, the system collected several dozen different data fields per loan, then would bucket the loans into 10 risk grades (RG1-RG10) and then run from there. There was an intermediate step of bucketing, but the bucketing used all the data.

Q: Is there anything you think is vital that we need to focus on?

A: I'll give you 2 minutes of thoughts about that. I think you're focused on a lot of details and that's really good because the devil is always in the details. But I also think it's fair to step back and ask the big picture questions. Some of those would be "what do we want from our financial system?" "Why do we have a financial system?" We'll be better off if we have an answer to that question. That will inform policy how to regulate the financial system to help America get what we want out of it. I can hardly think of a better body than the commission to do it.

On a similar vein, if you're going to zero in on banks, one of the big picture questions you might want to ask is "how do we want banks to think about how they manage risk? How they take risk? Do we care, and if we do, what are we looking for?" The first time I spoke with your colleagues, I encouraged them to ask how the banks decide how much risk to take? And the problem may have been that they didn't really think about it so hard. That's my 90 seconds and two cents worth and I hope it helps, but I know you guys have a lot of wood to chop.

Q: Is there a particular trade off when you say "what financial system Americans want?"

A: It's a political question. It has to be debated in congress and decided: do we want a financial system for the purpose of making sure American families and business get ordinary financial services: checking accounts, savings accounts brokerage accounts? Or do we want a system that helps capitalism function, that helps the economy's invisible hand to move resources from their less productive uses to their more productive uses? Or do we want something more, such as building an export society, that helps our balance of trade -- a system that offers services similar to what other foreign financial systems to provide. Those questions will inform what activities you want financial firms to do and what license you give them. Any business where you give people money and ask them to hold on to it for you is going to attract the wrong kind of people. [verify this quote]