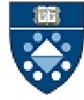

Yale SCHOOL OF MANAGEMENT
Program on Financial Stability

Lessons Learned Oral History Project Interview

Interviewee Name and Crisis Position	Steve H. Kasoff [1] Former Partner, Elliott Management
Interviewer Names	Andrew Metrick, Janet L. Yellen Professor of Finance and Management, and YPFS Program Director Greg Feldberg, YPFS Research Scholar Rosalind Wiggins, Director, The Global Financial Crisis Project and Senior Editor YPFS, Yale School of Management Matt Lieber, Independent Contractor Yale Program on Financial Stability
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Introduction

The Yale Program on Financial Stability (YPFS) interviewed Steve Kasoff in the second of a series of exploratory interviews regarding Kasoff's experience as a participant in the fixed income market events that preceded the financial crisis of 2007-2009.[2] Kasoff is an advisory board member of the Center for International Finance at the Yale School of Management with a research interest in the financial market structures and behavior that spurred the Global Financial Crisis. Here he discusses the roles and positions of different market players in the securitization processes, trading strategies, and faulty risk management procedures that led otherwise smart investors to make so many supposedly safe bets that turned bad fast and all at once. Kasoff was employed at Elliott Management Corporation from 2003 until 2020. His responsibilities centered on developing the structured products group at Elliott, where he was made senior portfolio manager, a member of the firm's management committee, and equity partner. Kasoff has extensive experience in the origination, trading, and management of debt securities, including earlier stints at Deutsche Bank, Merrill Lynch, and Lehman Brothers. He earned his B.A. in economics from Yale College and his M.B.A. in finance from the Wharton School at the University of Pennsylvania.

This transcript of a telephone interview has been edited for accuracy and clarity.

[1] The opinions expressed during this interview are those of Mr. Kasoff, and not those any of the institutions for which the interview subject is affiliated.
[2] A stylized summary of the key observations and insights gleamed from this interview with Mr. Kasoff is available in the Yale Program on Financial Stability's *Journal of Financial Crises*.

Transcript

YPFS (Andrew Metrick):What I want to do today was maybe drill down now and go through exactly the timetable a little bit and what it takes inside of a place like Elliott – how the decision process works – to convince the firm, "This is a serious bet we should make, here's why." And then, what's the timetable, in terms of you going out and talking to people who could help arrange the trade, you talking to your bosses at Elliott, or the investment committee at Elliott to get them to dedicate a certain amount of capital to it. How do those things relate to each other and all the structuring is going on?

Kasoff: Yes, OK. If it is OK, I am going to answer the questions not specifically with respect to Elliott. I've observed and interacted with enough other people and firms that were in the "subprime short trade", so what I'll describe is my perception of how these firms were generally thinking about the trade throughout that time period.

So yes, it was an evolution of thinking from what I described to you last time, which was looking at the busted multi-sector deals, multi-sector CBOs that were issued in '99, 2000 that were distressed as a result of owning Enron, WorldCom, a bunch of aircraft ETCs and probably a few other things that didn't perform well. And what was left in those structures was predominantly subprime and Alt-A securitizations.

And so, given how much was going on in terms of financial innovation during that time period, this was maybe 2004-ish, with the new credit indices and options and tranches on those starting to trade. It was a natural question to start saying, "OK, we know this stuff is cheap because everything in the CDO is something that also individually trades in the market." And so, you could observe the prices that they traded at, and see that you are buying the CDO at less than the value of the parts.

So, if you did not have a strong view about just directionally owning that, then you wanted to hedge it and just lock in that price differential. So, the natural question was, "OK, I'm effectively buying indirectly a portfolio of subprime bonds. How can I short something that looks similar?"

And so, a lot of people were asking those questions, and very quickly the Street developed a standardized contract, the Pay-As-You-Go credit default swap that you are all familiar with. I think that that was one of the ways that the market started to pay attention to subprime, which up until that point had been this relatively esoteric corner of the market and relative to the whole mortgage market was a relatively small portion of it.

At that point, depending on how much Alt-A and other stuff you included, it was probably 10 or 20% of the total mortgage market. And it grew a little bit bigger over the next few years, but not that much. So, thinking about that and seeing that you can short the BBB tranche of a subprime securitization for,

depending on the deal, between 200 to 300 basis points a year of premium on the CDS. And that was for something that was very leveraged to the underlying portfolio of mortgages. As a rough math, call it 5% below you. And the tranche was maybe three to 5% thick. So, if you had 10% losses, the whole thing was wiped out. The general logic said, well, if you have a minor housing crisis, not something that starts on its own, but rather starts because of a more general recession, that starts for other reasons, then these subprime borrowers, they are the most exposed to poor economic conditions relative to prime or higher quality borrowers.

They are more likely to lose their job. They are more likely to find themselves without reserves or emergency funds, and so they are more likely to default on their mortgages. It was a great way to get a generalized hedge on any portfolio that you would own as a hedge fund – relatively inexpensively, and with a huge amount of convexity.

So that is where it started. And then, and then once a product starts to become more mainstream and the dealers standardize it and the trading friction reduces, it naturally grows and attracts other people and dealers do what they do, which is to go on the road and start talking to people and pitching the product.

And so that was happening. And meanwhile, as you wrote about, they were sourcing the long side of that risk through the CDOs. That product, through late '04 and '05, was growing. And again, these things tend to be a little bit circular in that they see the demand on the short side, and they try to solve for where are they going to put it.

They realized that CDOs can do it. So, then they started pitching CDO managers to do more deals or bigger deals or deals concentrated with more subprime risk in them. And so, it goes along the chain.

YPFS (AM): **So, let me just ask about that because as it stands, the premise here is that there is some smart money that wants to short the risk in these things. How does the CDO deal, the CDO managers putting together more portfolios, that's just more risk that then needs to be sold to the market. So, how is that... They are not on the other side, the CDO managers are on the same side as you. They are also selling risk??**

Kasoff: No, the CDO managers, they are neither ... well, they are buying the risk, but then they are effectively distributing it through the CDO.

YPFS (AM): **Right.**

Kasoff: A CDO manager is not a risk-taker for their own account. Their business model is to build AUM. But you are right. They were buying the risk. So if you're a Merrill or Deutsche or whoever, and you have a group of people that structure CDOs – this is what I did at Deutsche before going to Elliott, although not so much on the subprime side, but mainly with CLOs – what you're

doing as that banker is, you're going into a manager and pitching the idea of "Hey, why don't you do a CDO? And we will work on it for you. And we will charge a little bit to structure it, and you'll earn your 30 or 50 basis points running management fee on that portfolio."

And what the CDO manager then needs to do is go and accumulate the collateral, which means buying the subprime bonds, or if it is a synthetic deal, sourcing it synthetically. And then you need to go on the road with the dealer and meet with the AAA buyers, and the AA buyers and so on. And convince them that you are a good manager of that type of risk so that they buy the CDO tranches.

YPFS (AM): **And so, in this world ... I am going to try to understand how one of these structures might go from start to finish. So, in this world, the CDO manager goes out, gets a whole bunch of, let us say, BBB tranches of subprime, puts them all together. And now the CDO issues, let us say 75% AAA and AA, or 80% AAA and AA. And then a thin layer of BBB. And then the equity tranche layer below that. But now, instead, the dealers have come to them and told them, "We already have someone who will provide most of even all of the BBB subprime bonds."**

Kasoff: So now you are talking more about the synthetic deals where you have a single party shorting all of the risk into the CDO. Deals like the Abacus series, which Goldman structured, or Deutsche's START program, and there were a few other programs like that. And then the various Magnetar deals. Deals like these were catalyzed by somebody going to a dealer, or in some cases it was the dealer themselves, like with Abacus, where they would say, "Okay, we'll do the short side."

You could argue maybe it is not relevant because they're still shorting the subprime bonds at market levels. There was a process to validate that these were at market levels. But yes, this was very different from a cash CDO, where the process of accumulating actual cash BBB subprime bonds was time-consuming, which added risks to the process. In this type of synthetic CDO, you could just snap your fingers and be done. Because you had somebody that was willing to do the whole portfolio at once (e.g. short the risk into the CDO). And that was one segment of the process that was a shortcut, which meant that you could do a lot more of these deals with a lot less risk. But just like a regular CDO, you still had to sell the CDO tranches.

And in some of those deals, they still had a manager, who had to convince investors that even though you had some hedge funds shorting the portfolio, or at the extreme, one hedge fund shorting all of it, that they still had gone through the subprime bonds and approved them and that you should trust them.

And by the way, even with a manager supposedly looking out for you, it is not necessarily the case that all buyers of the CDO tranches really gave a lot of weight to that. I think in a lot of cases, they still thought, "Well, we don't real-

ly care. They're not as smart as we are, and we have the list of bonds in the portfolio, so we can do our own analysis, and draw our own conclusions."

And that was true at the very junior, riskiest, levels of the capital structure, where you had sophisticated players buying the equity, for example. While at the AAA level, there tended to be more of this sort of denial about there being risk, that it just didn't matter, because you were so risk-remote that it didn't really matter if the manager was smarter or not. And if you look at the CLO market by contrast, there is some truth to that. There are people that will seek out the CLO managers that are deemed to be the worst because the AAA tranches trade a few basis points wider. At least in the CLO experience, you have never had a loss on any of those AAAs. But obviously, things were different here.

YPFS (Greg Feldberg): Steve, can you clarify something about the rating transformation and how it worked with the CDOs? And I assume this is pretty much the same whether it is a cash CDO or a synthetic CDO. But in general, the asset side would be the stuff that the hedge funds want to short, which would tend to be the BBB subprime bonds. So, you might have a synthetic CDO whose assets are predominantly BBB rated and then the rating transformation magic means that your investors are getting liabilities that are mostly AAA.

Kasoff: Yes. So, two things. One, in terms of <u>synthetic</u> versus cash, the rating agencies took the view, which I think was reasonable, that as long as you made sure that operationally the synthetic CDS contract was functional and that you eliminated the counterparty risk, then the credit risk was the same, whether you bought synthetically or in cash. And they did a reasonable job at dealing with the counterparty aspects of the risk. Now, on the actual credit rating, you wrote about it very well in your paper. They took something that worked fairly well in the corporate market, with CLOs, where you had bona fide diversity within those portfolios. And so, whether it was the Copula model that they used later or the binomial model, which was its predecessor, the underlying philosophy was sort of the same. You would assume that the portfolio of assets could be modeled as a quantifiable number of independent default probabilities. From that you could mathematically calculate the aggregate default probabilities of the portfolio. Even if it was not perfect, it made reasonable sense. Of course, when you started going into portfolios that were entirely mortgage risk, you did not have diversity.

The next problem, which I think you also described very well, was that even if you had some diversity, when you start putting in tranches of another securitization, those diversity benefits don't transmit into the second level of securitization because they've already been, for lack of a better word, used up in the rating of the top level of securitization.

YPFS (GF): What's weird is in retrospect, even when you describe it now, it sounds so obvious. But of course, people were not catching onto this at the

time, I guess. But that is my question. To what extent was the model the target of your short interest? (Laughs)

Kasoff: Yes, yes, I think it was fairly obvious. There is a guy at S&P that I would really like to interview – he was a senior person in the structured products group. He will recall this (though maybe he does not want to recall). He would run these meetings where he would have 50 of the S&P analysts in that group sit in a conference room at S&P. And they would have a practitioner roundtable or Q&A, where they would have four or five people like me, all sitting in.

It was their goal to try to understand better what the people that the users of their ratings were thinking and how they could do better. I was invited to one of these roundtable meetings. I told them this beforehand, this was probably in 2006 or 07, that I might say some things that you would not be happy with.

And he said, "Yeah, it's okay, come on in." So, I said it, right in front of that whole group – the high correlation or lack of diversity, it meant that the ratings were wrong. When I talked to him afterwards, the comment he made to me – I can remember this well His boss (I forget her name) had apparently and coincidentally walked out of the room before I made the comment. And he said, "You know, I'm glad you made the comment for the analysts to hear, but I'm also glad she had left the room (laughs) before that." So, if he is willing to speak, it would be interesting if he remembers that conversation or not.

But I think there was a certain amount of hubris at all of these rating agencies, that they had smart people that spent a lot of time and effort developing these models. And the fact that somebody from the market came in and told them they did not agree with it, I do not think they really were that concerned.

YPFS (AM): What was it like to be in the community of shorts? Was this something you guys just talked about every night over drinks? I have done the models where this was a widely known fact in Greenwich?

Kasoff: No, you tended to not to have a lot of interaction with the other hedge funds, because unless you had a personal connection that you knew somebody, maybe you'd catch up, but you'd still be very close to the vest. Now by the time we got into 2007, at every one of these conferences, people would be talking about it. And everybody knew who the shorts were, and everybody knew who were the longs. And there would be these big debates about who was right and who was wrong.

And the people on the long side would kind of smirk at us on the short side, as if we were idiots and we are wasting our money and they were getting rich off of our stupidity. Because the CDO managers that went from doing two deals a year to doing five deals a year, they were getting rich. And not just in a theoretical sense, literally the money was going into their firms and into their bank accounts on a real-time basis.

And we on short side were, at least for me, and I am sure others, you never really know if you are right. I felt good about the trade, but we would talk about how big of a position we wanted to have, because it cost 200 or 300 basis points a year, we had a lot of notional. Some other firms like Paulson had basically bet their entire firm and reputation on the success of that trade – that is how big they were. He raised new funds solely for this short trade, that were by design going to lose 100%, within a two or three-year period, if the trade did not work. It was not a fund in the traditional sense. It was you are in this trade, and that is the profile of the trade. It is either going to work or it is not going to work.

YPFS (ML): **What was the timeframe on your trading strategy? Were there shorts who got weak knees when they are losing, they are paying those premium?**

Kasoff: Yes, there were. There were moments. People forget that this was not like a one-way direction in how it moved. There were some moments of real fear – and real short cover rallies, where people were trying to get out of risk. The first one of those was – let me see if I can get the timing right – I think the first one of those was maybe August, or September of '07. There was an announcement by the Bush administration about some program.

YPFS (GF): **Was it the Super SIV?**

Kasoff: No. This was well before the Super SIV. This was just a direct-to-subprime borrower type of program. I just do not remember what the name of it was. And by then, by summer-fall of '07, it was pretty clear what was happening in subprime market. It was not clear yet that it was spilling over into the broader economy.

YPFS (AM): **The BBB, that already the BBB spreads had already blown it.**

Kasoff: If you go backwards, the real first sign that the short trade was working was in December of '06, you had a couple of subprime mortgage originators – MLN was one that comes to mind – that had their warehouse lending lines pulled and they went bankrupt right around then. That was the first sign. Because what was happening then was that borrowers were defaulting before they even made their first mortgage payment. That is how crazy it was – they apparently thought they were going to re-fi again within a few weeks after taking out the loan. The originators would typically have an obligation to buy the loan back if something like that happens. Usually the first 90 days, or so, if a payment is missed, they would have to buy it back.

Of course, these originators had no capital. So as soon as that started happening, they went bust. I think it was in March of '07 when New Century went bankrupt. And that was a big deal. Because MLN was tiny, but New Century was a big player. That is when it was clear that some really bad things were happening. I think it was also in early '07 that the TABX was launched. That was the tranched version of the ABX Index.

YPFS (AM): That was January '06?

Kasoff: No. I think that is when the original ABX index was launched. TABX was a bit later. And so, ABX, if you think about, was similar to buying a bunch of subprime bonds. But until TABX there was no proxy for buying the tranches of an ABS CDO.

YPFS (AM): That's correct. If you did have the BBB tranches of a subprime, but not the BBB tranches of a CDO.

Kasoff: Right. And so why this is relevant is because you had these synthetic positions referencing tranches of CDOs, like the super senior tranches that were held on dealer balance sheets. And because there was no proxy in the market for the value, dealers would mark them at ridiculously and inappropriately high levels. And, even for more junior positions that we had short positions on, we would fight over what the proper mark was.

And so, I actually think it was Valentine's Day 2007– we later called it the Valentine's Day Massacre – that's when TABX launched. (So TABX meant tranched ABX, which was like slices of risk on a portfolio of subprime bonds, like zero to five, five to 10, 10 to 20 – the attachment points may be wrong, but that was the idea). And literally on the first day of trading, the prices just collapsed. And then, people that had these risks mismarked had no way to justify it. That was a big event for the market. For the dealers that had super senior risk on, that was the day where they could not hide it anymore. Sorry I got off on a tangent.

YPFS (AM): That's a very important tangent, Steve, actually. Because I did not know about that. I know about the ABX BBB tranche stuff. So, this particular stuff, the fine slices – and it was the fine slices of the CDOs that includes super senior?

Kasoff: Yes. So, one of the things that was happening also was that by around late '06 early '07, it was getting more expensive to short BBB tranches of the CDOs. So also, the ABX, but particularly CDOs. People were waking up realizing that they did not want to be long that synthetic risk. So hedge funds, who wanted to add to their short positions, were rationally deciding, "Well, if I can't short the BBB tranche of the CDO, why don't I short the single A, or the AA tranches of the CDO, or even the junior AAA tranche, which was the AAA below the super senior?" Because if you believe that the correlation was that high, actually pretty close to one, then it did not really matter what tranche you shorted. And if the price was half or less compared to the BBB, then they figured "we'll short 10 times as much at a lower price." And so, people were starting to move up the capital structure.

YPFS (AM): Sorry. Did other people have follow-ups? I had follow-ups, but I did not want to cut you off, Greg, Matt, Roz? Okay. So, there is a lot of different directions to go in here. I have a lot of questions for you but let me pull

back to something that is very macro that you can help that you have already given some insights on it. You could give more insights.

So, in the FCIC report there is a very important and interesting section in there effectively about, I think you guys called it, the "CDO machine," is that right, Greg? So effectively the idea behind it, which I think is a very important idea that you could help us explore here. The reason we kept being able to sell all this subprime – that the banks were able to keep writing all the subprime stuff – was that ultimately when it was securitized, we had buyers for the BBB. And the buyers for the BBB were in large part the CDOs that took all that BBB stuff and put it together and made 75 or 80% of its AAA, or AA.

Kasoff: Yes.

YPFS (AM): Now, and that makes a lot of sense. And so of course, a lot of the owners of that stuff ended up being the same people who just wanted more AAA, and they found some slightly higher yielding AAA, which were the AAA tranches of the CDOs, and that helped build it.

Kasoff: Yes.

YPFS (AM): But in addition to those people were – there had to have been additional people out there who were buyers because in addition to the cash market that was supporting this whole infrastructure there was also – it sounds like a ratio of two to one or two and a half to one or something like that – a desire for selling the BBB tranches, just as a hedge or as a trade – am I right or not? That happened, right, or, not right?

Kasoff: I do not know. It does not sound crazy though. But just to take a step back, with a CDO, there is always a part of the capital structure that is the hardest part to sell. In the old days, when I did CLOs, it was the equity that was the hardest part to sell. And back when I used to do that on the sell side, when you got somebody to buy a piece of equity, it was like high fives and everything.

YPFS (AM): Okay tell us the equity for this stuff.

Kasoff: The people that were doing the massive shorts, that were shorting, whether it was a Magnetar type of trade or a hedge fund just randomly shorting a significant amount of the subprime bonds into one or more CDOs, what a lot of people were also thinking about was "hedging the hedge". Or to put it another way, they were paying a lot of money to maintain these short positions, 200-300bp on a billion of notional. So, they wanted to find something to offset that, something that would generate positive cash flow.

Now remember that most people on the short side believed that the correlation within the CDO portfolio was very high, much higher than the rating agencies or long-side investors thought. So, if correlation was indeed very high, then that would make every part of the capital structure equally risky

or at least very similar. But you had AAA tranches yielding LIBOR plus 20-30bp, and moving down the capital structure, those yields increased, to around LIBOR plus 300-400 at the BBB level.

And then there was this big jump below the BBB. LIBOR was 3-4% or so in 2005 and maybe around 5% in 2006. So, the yield for the BBB tranche of the CDO was 6-8%. But right below that you had this equity tranche that in a benign scenario would generate 25% IRRs. And not only that, but it was front loaded cash flows. So, it was very low duration. You would get 35% of your cost basis back in the first year, or maybe the first year after the ramp up was complete.

So, it was the highest yielding by a very significant margin. But it also de-risked very quickly because of the front-loaded cash flows. And so in 2006-07, thereabouts, until early '08 when things really started to unravel, most people felt that subprime would be a slow moving train-wreck because the bulk of the mortgage defaults would be concentrated around the reset dates on 2/28 ARMs or 3/27 ARMs. And that it would then take a few months, or a few quarters, after that to cycle its way through the different securitization structures.

Of course, once that happened, the equity tranche would be worthless. But if you had a two- or three-year window before that happened, you were going to still receive cash flows from that equity equal to 70-80% of your cost basis. And remember, that is in the scenario where subprime performed very poorly, so your shorts would do very well. On the other hand, in a scenario where your shorts didn't pay off, where you were totally wrong and home prices just kept going up, the return on this equity tranche was going to cover a material amount of the cost of the short position. Not only that, but if you owned all the equity tranche, then you could call the deal, which means you had a legal, contractual right, built into the CDO, that would allow you to basically unwind the whole CDO. That would also cancel out the shorts, so you could basically just get out of the trade.

So, there were huge incentives for the people on short side to own the equity from the CDOs.

YPFS (AM): **Right, on the short side. Kasoff: Yes. Though there were also investors that just liked the profile intrinsically. They were buying it. Oh, there were a fair number of people who were long the equity tranche and short the BBB or single A tranche of the same CDO?**

Kasoff: Right. Like Magnetar – they were the ones that were most aggressive at doing that kind of very particular trade. Most people felt it did not really matter from one CDO vs. another. If they could short any BBBs from other CDOs, they were sort of agnostic about which ones.

YPFS (GF): **Right. So, to be clear, you are saying that it was very common for the equity tranche of a CDO to be held by a hedge fund who was also short.**

It was relatively rare for someone to be short in the actual same CDO, which is what Magnetar was doing.

Kasoff: Yes, that is generally right. Magnetar, there's a couple of permutations. Magnetar was not only shorting the subprime into the CDO and buying the equity, but they were also shorting the BBB tranche of that CDO itself. That was part of their deal that they had pitched to managers and dealers. Of course, by making that deal, a dealer would then have to find a home for that synthetic BBB CLO tranche that they had just acquired. And as you know, they would often try to sell it into the next CDO that they were ramping up.

YPFS (AM): But they would hold onto the equity a lot of times? They would pass the BBB through, but hold onto the equity?

Kasoff: Well in the Magnetar deals, Magnetar would be taking the equity. I do not think the dealers held onto the equity very often, because it did not really fit nicely within the risk parameters that most trading desks had. But hedge funds often bought equity. If a hedge fund was shorting, whether they're shorting 100% of the subprime into the deal or just shorting random bonds in the market – they didn't really care because each CDO was so similar that you could short into one CDO and buy the equity off another. There might be a little bit of basis there, but it ultimately did not matter a whole lot.

The point I wanted to make earlier is that the equity was easy to sell. And as you know, the top of the capital structure also tended to be very easy to sell because usually you could sell the whole tranche to a single buyer, usually a large bank. So that left the tranches in the middle that were harder to sell. In the early days you had more insurance companies participating. They liked BBB and A tranche. Those tranches had the best ROE in the insurance company risk models, it tended to be very efficient for them to buy it. As the market grew, they kind of exhausted that demand and had to find other homes.

And I think that is what led to the hot potato approach of putting BBB tranches into the next CDO that was ramping up. And as you pointed out in the paper, the BBBs went into the typical "mezz CDO" that would generally own BBB subprime bonds but would have a 10% basket for BBB CDOs. And then high-grade CDOs that were buying A, AA, and AAA subprime, would put in a little bit of the AA tranches of a CDO and then have a basket for that.

YPFS (GF): So you've made an interesting comment, which bears on what we talked about in the crisis report, which is what we were told was commonly called the correlation trade, which is when a hedge fund was short some tranche and then typically long maybe a more junior tranche of another product. And you just described essentially that kind of thing, but you said partly that the motivation was to finance the short position in a sense. To what extent would it not be the equity tranche, but it would be maybe a BBB tranche that they would use?

Kasoff: Almost never. Because the yield was so much higher on the equity. And also because of the front-loading of cashflow.

YPFS (AM): What's really interesting and one that I want to keep exploring with you, Steve, beyond this day and with the whole team here is: I have a hypothesis (it's the best kind of hypothesis because I don't have any data and thus you can't prove that I'm wrong).

The hypothesis is that part of what enabled this to work so well is that these equity returns at the bottom of the CDO – there is an enormous equity return. And where does that equity return come from? Basically, it's coming from the fact that if you draw out the risk curve for these things, there was a lot of gain in the conversion of stuff that used to be BBB tranches of subprime into 75% AAA stuff. Because the AAA stuff sold from a risk perspective below the curve.

So, people really wanted to have the AAA stuff because it could be used as collateral, it has all this convenience value and things like that. So there's this real extra demand for the AAA stuff, which meant that when you plotted it all out, if you could transform a whole lot of BBB subprime into 75% AAA, but then sell that at a higher price, lower yield than you should because of that convenience yield. All that extra value ends up being expected value for the equity tranche. And that gives a huge incentive for the equity tranche, but you need the people to really want the AAA in order to get that big value down at the equity tranche, right?

Kasoff: Yes. The demand for the AAA, it was a different market. The typical buyers of AAA were big money center banks that just had vast amounts of capital, compared to insurance companies. When you are marketing a BBB tranche, you are marketing a BBB tranche that maybe is 40 million in size. And if somebody comes in for 10 of that, it is like a high five type of situation – you are excited. With a AAA tranche, that could be 400, 500 million in size – it is still just one investor.

YPFS (AM): These are your friends Greg, in your paper. Now, in your paper, how much of the loss is maybe we do not know this actually, or we know this only in some cases. But do you have a sense... if it is in your paper, I apologize for forgetting what the ratings breakdown was of the bank holdings of CDOs. How much of it was AAA, AA, BBB equity?

YPFS (GF): I have got numbers that I have made up for presentations that I give, but I don't have solid data on that. What we did in that paper was compare the aggregate numbers of losses that banks had reported to the total that we were able to calculate on the CDO.

Kasoff: What was interesting too was, it was the money center banks, as opposed to the broker dealers like Goldman and Bear Stearns and guys like that had huge amounts of AAA risk in their treasury.

YPFS (GF): **Plus, Merrill Lynch.**

YPFS (AM): **Merrill had written tons of protection.**

Kasoff: Yes, I am trying to remember, I think Merrill was different. I think some of that may have been in the trading book. And then Morgan Stanley is another different unique situation in that you had a prop desk that was buying these synthetic AAAs because they did not have to hold any capital against it. And so, there were effectively borrowing the treasury capacity for free. And I think that the treasury people there did not understand what was happening.

YPFS (AM): **No, that is absolutely. Right. Yes, for Citi, the predominant losses were on liquidity puts they had written on the ABCP, which is a type of CDO we did not talk about yet. And then what you just mentioned that negative basis trade, the synthetic AAA functions. So yes, it is not clear that they were conscious about what they were getting.**

Kasoff: Yes, those off-balance sheet ABCP structures, I am trying to remember what the Citi vehicle was called. Was it Alpha? Was Alpha the Citi one? There was one called Alpha… (this is where the passage of time is sort of not great because I used to have better memories). But I think there was a company that I thought was like a spin-out from Citi called Gordian Knot.

YPFS (AM): **Oh, yes, Gordian Knot.**

Kasoff: They ran the biggest of those programs. It had over a hundred billion of this kind of stuff in it.

YPFS (GF): **So those are SIVs, which were kind of cousins, but not the same as something you might do?**

YPFS (AM): **I am remembering some of the details of Gordian Knot, but not all of them - do you remember the structure of that? Maybe that was even in the FCIC report?**

Kasoff: Well, those were SIVs, and they were similar to the SIVs that that Citi had. But SIVs are for the most part different from CDOs, they were mostly not exposed to mortgage-backed securities and they tended to blow up for different reasons. So, they did not have anywhere near the level of the default losses on the asset side

YPFS (AM): **I thought it blew up largely when the wholesale funding markets blew up.**

Kasoff: Yes, it was driven by liquidity, as opposed to actual defaults or credit losses. They had issued commercial paper that they could not roll. But I think the liquidity puts that you are talking about is what brought a lot of that type of risk back onto bank balance sheets.

Citi had two categories. It had the commercial paper that the SIVs issued, and that was like $80 billion, which they had to bring on balance sheet, which was a huge balance sheet hit. But it ended up resulting in $3 billion of losses. But then they had the liquidity put on the ABCP that they issued from the commercial bank, and that was 30 billion, or 28 billion dollars of liquidity puts. And they essentially just bought that commercial paper on the market immediately in July when the CP market fell apart and absorbed huge losses on that.

YPFS (AM): **But why is that losses? It was their own debt. I can see that they have a liquidity problem. I have 40 billion of ABCP outstanding and I cannot roll it. And the market marks it down to 20 billion or whatever and then I buy it back in.**

YPFS (GF): **What you are getting is a huge bus load of BBB tranches of MBS and CDOs.**

YPFS (AM): **Oh, OK. That is fine ... all right. That is what I was just making sure. So, in other words, it is because I am taking the assets back on the balance sheet. It is not the paper itself.**

YPFS (GF): **Yes, well, the first step is that you are taking the paper.**

Kasoff: So, these structures – I do not know if they held BBB tranches. I think they tended to be higher up in the capital structure. They were kind of like high-grade CDOs or CDO squareds if you want to think of it that way. But the whole point of them was, it allowed banks like Citi to have hundreds of billions of dollars of assets – deconsolidated, off the balance sheet.

YPFS (AM): **Yeah. So, this one is also interesting, but calls for a longer discussion than we have time for today, but which I would like to get to.**

So let me, let me cycle back, Steve, in the last few minutes that we have today to talk about the trade as it evolved. At the beginning, you mentioned a very important twist and one that I most certainly have not emphasized in the past, but should, which is that a lot of the learning – and a lot of the production of the products – came from a desire to hedge. And a lot of the knowledge base came from that. And it was a hedge and that can also help the market develop because that can help people on the long side of it, because the CDO managers can go out and say, "Oh, the hedge fund managers who are short here are short because they're hedging other positions, it's not necessarily a bet, right." That is part of the story.

But now as this starts developing and we get into '06 and '07 and things like that. Let us go back to the internal discussions that would have taken place at various hedge funds. Not necessarily Elliott, but all the other places that are out there about. OK, you are making the case about the trade – how do you decide? The internal argument is around, at this

point, what you were describing before, which is, we see this as sort of a slow-motion collapse as we go through the reset periods. How do you decide on how big of a bet this can be? How much capital can go towards this particular bet? How does that internal analysis work?

Kasoff: It depends on the fund. Different funds with different structures. So, for example, Paulson was building it up in their main fund and they put a lot of it in there. But clearly there were practical limits on what they could do. They actually went out to their investors and others and said, "We're doing a special fund just for this." And the way we are going to structure it is, like I said before, we are just going to put the entire bet on this trade. Everything in this fund is just going to go into this trade, and it is going to pay for premium for some amount of time. And at the end of that time, if it has not worked, it is a wipe out. And so, the size of the trade was just how well did they market that vehicle and how much money did they get.

I think Magnetar I had specialized fund for this, maybe not just this, but for structured products where they may have been more unconstrained. A firm of the type that was similar to Elliott that is a multi-strategy fund that's doing a lot of other things, they're not going to load it up disproportionately. They are going to think of it maybe at first as a hedge and then eventually as a hedge plus an alpha short. But either way, the way that they are probably going to think about it is to say, "OK, I'm a $10 billion fund and I'm comfortable with this trade being a 1% drag on my performance. Without this trade and in a good year, I expect to earn 10%. So now with the trade that will be 9% instead. So that means I can spend $100 million a year in premium." And then you work backwards to optimize how you are going to spend that money. That was a common way of thinking about it. And, in some cases that might lead people to be trying to be efficient and short things that have lower costs. That way you could do more notional. That was a big reason why CDO equity was popular – because it mitigated the cost of shorting stuff because you had all of these other cash flows coming in. That that was a common way of thinking about it for funds that were not specialized in this space.

YPFS (AM): Now, how does that short actually work? So, in this particular case, you are a naked short, so it's not as though you bought the thing and so to what extent are you putting up collateral for the premia, escrowing stuff? How does that end up getting structured?

Kasoff: The Pay-As-You-Go CDS was just an OTC derivative product. So, it was governed by an ISDA and had all of the usual bells and whistles that were in an ISDA. Typically, your IM (initial margin) was very small because the risk was limited to just paying a premium for some period of time. So maybe that it would be 1% or 2%, or sometimes less than that. For shorting ABX, for example, because of the liquidity, it was only about 50 basis points. Now, of course, as it moves in the money, you are going to start seeing variance margin flowing back and forth. That could be much more significant. But in terms of the amount of leverage you could get, it was pretty significant.

YPFS (GF): That raises an interesting question. As a short investor, when do you start getting the variation margin coming your way – in the middle of '07?

Kasoff: Yes, well, so that was my point about TABX. There were big fights at a lot of moments around marks. Because the dealers that tended to be on the other side of the trade were also marking the trade, which determined how much margin you got. (AM laughs) And so one place where those became very, very contentious was in the summer of '08, for trades where your counterparty was Lehman. And not just Lehman, but also Merrill at the time. Because if you had insufficient margin posted when somebody like that went bankrupt, guess what? You were unsecured for the balance.

And then of course, as they were approaching their bankruptcy in August and early September, the marks were going in your way as a short. People like me were on the phone multiple times a day, using words that I will not repeat on a recorded conference call. Yelling and screaming to get things marked correctly. And then asking them "show me a bid at that level. If you think it is the right level, put your money where your mouth is." Those were very, very heated. And a lot of people lost money because they were not able to fully get the proper amount of margin when Lehman went under.

YPFS (AM): And what is super remarkable about that – and then we will let everyone go for today, but it is really cool – is that Lehman overall was relatively flat in this space. So, what is happening is Steve is really nervous about Lehman. He is calling them up and saying, give me collateral, because if the trade moves against Lehman and Lehman goes bankrupt, Steve's screwed, so he is really aggressive. Whereas on the other side of the trade, when Lehman is going after a counterparty, if they laid the risk off somewhere else, that counterparty is just telling them, "No." Right. And that counterparty does not have the same concerns that Lehman has at that point.

Kasoff: Yes. Well, the one check that you had on dealers was that, if they had different trades on with the same security, they obviously have to mark it at the same level for everybody.

YPFS (AM): But you guys were asking them for a mark. So, they were marking it at that level. You guys were asking them for more aggressive mark, which was absolutely your right. And you should want it, but they were unable to get that mark from the other side. They tried to, so they would mark it X you had come in and go, no, that is crazy. It should be 0.9 X.

Kasoff: It also might have been the case that they were not matched up on the hedge. So, for example, if I shorted bond X to Lehman, and then, Lehman's got 50, 100, or 1000 positions like that. They have not directly matched them up. They might just have ABX or something against it.

YPFS (AM): Right, right. Exactly.

YPFS (GF): **To be clear, are we talking about synthetics CDOs, or are we talking about other things?**

YPFS (AM): **Well, no, this could just be cash. This can be cash stuff.**

YPFS (GF): **I know, I am just talking specifically Steve's experience.**

Kasoff: Yes, in my experience, it was on more esoteric stuff. So, Lehman, for example, traded a lot of CDS on UK nonconforming bonds, which was sort of the equivalent of subprime, in the UK. Which did not perform quite as badly, but it was a similar story.

YPFS (AM): **It might have been hatched on some vanilla thing in the U.S.**

Kasoff: Yes, it was just not as liquid. So, getting marks was harder. But yes, the more illiquid it was, obviously the harder it was to get a proper mark. And they had a disincentive to because as they were losing their much-needed cash if they posted margin that is like cash out the door.

YPFS (AM): **This is how we got runs on the dealers here.**

Kasoff: People were trying, in the days leading up to that, people were working very hard to unwind positions that were facing particular counterparties. If you were trading with somebody that was solvent, everybody had a little disclaimer on their Bloomberg messages and everything saying that "These levels are subject to counterparty approval," or, "Only good for new trades," or "Acceptable counterparties." People were definitely trading at off-market levels to get out of risks to certain counterparties. And so, it was not just Lehman. People were doing that with Merrill, especially, around that same time period, which proved to be unnecessary after the fact.

YPFS (AM): **Steve, this is fantastic. I think our team is going to confer. Steve is an ICF fellow for the year, so he does not know what he got himself into. So, we will confer and ask more questions for you. I hope you do not mind continuing this conversation.**

Kasoff: Not all, not at all.

Kasoff: Yes. And as I said, it is becoming clearer the kinds of people I should be trying to seek out in this process and think I can find some interesting people to talk to.

YPFS (AM): **Great. All right. We'll talk again.**

Kasoff: Yes, definitely. All right. Sounds good.

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