



Lessons Learned Oral History Project Interview

Interviewee Name and Crisis Position	Steve H. Kasoff ¹ Former Partner, Elliott Management
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Introduction:

The Yale Program on Financial Stability (YPFS) interviewed Steve Kasoff in the first of a pair of exploratory interviews regarding Kasoff's experience as a participant in the fixed income market events that preceded the financial crisis of 2007-2008.² 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.

Kasoff was employed at Elliott Management Corporation from 2003 until 2020. His responsibilities centered on developing the structured products and real estate groups 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 structured products such as CDOs and mortgage-backed securities, including earlier posts 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.

In this interview, Kasoff discusses his experience in different fixed income markets, the evolution of asset-backed security markets in the 2000s, collateralized debt obligation (CDO) structure, the development of the ABX index, the introduction of credit default swaps to create synthetic debt instruments, the balance between hedging and speculative strategies,

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 or previously had been affiliated.

² A stylized summary of the key observations and insights gleaned from this interview with Mr. Kasoff is available in the Yale Program on Financial Stability's *Journal of Financial Crises*.

and the practices of rating agencies and their interactions with those originating new instruments based on BBB subprime mortgage debt.

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

Transcript

YPFS (AM): I'd like to get a little bit about your background and how you got into mortgage debt markets in the first place and what you've done in that business over the last 20 or so years.

Kasoff: The irony is that my first exposure to any of these markets was when I was sophomore or junior at Yale. I was an Economics major and I took the finance course that David Swenson taught back then. One of the books that he had us read was Liar's Poker. That was my first introduction to any of this stuff. I was always someone that really enjoyed math and science and spreadsheets and number puzzles and things like that. So, residential mortgage-backed securities immediately caught my interest as something that was really cool. Most people probably don't think that, but it got me interested, got me excited about it.

During my senior year, I had to figure out a topic to write for a senior essay, a mini thesis that undergrads wrote. I don't remember who my advisor in the Economics Department was, but I told them I wanted to write something about mortgage-backed securities. And he said, "Well, you need an advisor. You should talk to this professor. I think he knows something about it. His name's Robert Shiller. He's done a lot of research on housing markets."

YPFS (AM): When was this?

Kasoff: '93.

YPFS (AM): **Bob Shiller was a fancy guy by then, but he wasn't a Nobel Prize winner yet.**

Kasoff: No, but he had the Case-Shiller Index that was already something that was known. But maybe I'm embellishing a bit ... What you may remember, and I certainly remember, was that his office on the very top floor of the Cowles Foundation was tiny and had a sloping roof. And was full of books all piled up and I could barely squeeze into it often to talk to him.

So anyway, I wrote my paper about mortgage-backed securities. And when I started looking for jobs on Wall Street, I put that on my resume. I got a call from somebody at the mortgage group at Lehman. Normally when you go work at one of these firms like Lehman or Goldman, you generally go into a rotational program and they place you wherever they want to place you. But I

got this call and they said, "Your background is perfect. We need somebody in the mortgage-backed securities group. Do you want to come meet us?"

One thing led to another, and that was my first job out of school. I was structuring mostly commercial mortgage-backed securities, which is a little different than what my background was. This was in the aftermath of the savings and loan crisis. The RTC [Resolution Trust Corporation] had recently been created as a government agency. It was designed to take all of the defaulted mortgage loans off of the books of these banks and the S&Ls and then securitize them, as a way to maximize the government's recovery.

And that was the birth of that part of the market. So, I was in it from the beginning. I did that for a couple of years, and then I went to business school, 1995 to 1997. I worked at Merrill during the summer in between, and then got an offer to go back full-time afterwards.

There was this new product that people were working on called CDOs, collateralized debt obligations. It was sort of like mortgage-backed securities, except you're putting high yield bonds or loans into the pools instead of mortgages.

They looked at my background and said, "You know how to structure, you know how to evaluate this stuff – why don't you do this?" So, I did that. After a couple of years, the guy that ran my group got poached by Deutsche Bank so a bunch of us went along with him to Deutsche Bank. I continued to structure CDOs. I spent about a year or two building out the European CDO business while I was there.

Then in 2003, I get a phone call from a headhunter saying, "Hey, do you know who Elliott is?" And I said, "No." Elliott was a relatively small hedge fund at the time, about three and a half billion of capital, compared to around 41 billion now. They were mostly focused on distressed investments at the time. They hadn't started doing activist or any of those things that they're known for now. Nor had they done anything in the structured products like MBS or CDOs. I took the meeting and they said, "We've been getting calls from the street about all these distressed CDOs that are being sold."

This was in the aftermath of the 2001-02 recession. There was no secondary market for this stuff, but there was one particular bank in the UK that owned a lot of it, and they were trying to unload it. The market didn't really exist. So, distressed focused hedge funds were getting called and asked, "Hey, do you know how to evaluate distressed bonds? This is just like a repackaged bunch of distressed bonds, but you have to buy it in a complicated structured format. But it's cheap, so go take a look at it."

They [Elliott] started doing a search. They realized, sensibly, that they needed somebody that understood it to help them do it, but I think they saw the value

right away. So, I got hired to do that, and I didn't really have a whole lot of expectations for where it was going to lead. It was a good time in my life and in my career to take a risk like that.

And just by good fortune, that was right at the beginning of a huge proliferation in new products in the credit markets. Some might say they were a good thing; some might say they were a bad thing, but you had all sorts of new derivative products designed around portfolio credit.

So, for example, tradable derivative indices backed by pools of corporate bonds, and then derivatives off of that, such as options, or tranches, where you could buy a different slice of the risk in a more junior or senior level, and it had a higher or lower return accordingly.

That made it really interesting because now you could actually trade this product in a relative value way by matching up CDOs with things that you could trade from the short side and try to isolate value and do creative things.

And around the same time, there was a developing opportunity to trade CDOs that were backed by other stuff besides corporate bonds. There were a bunch of these that were created in the late '90s that all busted during the 2000-02 recession and in the aftermath of 9/11 because they had a mix of different types of ABS [asset-backed securities] products in them. Including all sorts of mortgage-backed securities. They also had BBB-rated corporate bonds.

The managers of these CDOs all bought the *yieldiest* investment grade bonds that they could buy back then, which were Enron and WorldCom, which then subsequently defaulted. They also bought a lot of aircraft ETCs [equipment trust certificates, which is a securitized lease, secured by the aircrafts]. Those also performed horribly after 9/11 for obvious reasons. And so that became a part of the distressed trading opportunity. What was left in these CDOs was mortgage-backed securities. And most of that was subprime. It got me focused on looking at the opportunity in subprime.

This was maybe 2004. The same excitement around creating all sorts of new derivatives in the corporate world spilled over into the mortgage side as well.

When I started buying CDOs backed by all this stuff but with a lot of subprime risk in it, I wanted to hedge some of the subprime risk. So, it was a natural thing to pick up the phone and call up dealers and say, "Hey, I'd like to short subprime, how do I do that?"

And they were more than happy to invent a product and then look for somebody to take the other side of it, in a derivative format. So, I may have been one of the first people to short subprime back in 2004.

YPFS (AM): Were you shorting subprime then, in 2004, to lay off the risk of the stuff that you had in these CDOs you bought, or were you making a bet on subprime?

Kasoff: No. It was a hedge. It was just a hedge that we were using against the CDOs, which were clearly cheap. And we were trying to lock in that to create an arbitrage.

But the more I started looking at what was going on in subprime and studying it, the more it became apparent – not just to us, but obviously to a lot of people – that even in 2004, something was very wrong with that market. We all know the background and the history, but as we looked at it, we thought more and more about having the ability to short it.

And at the same time, there was a standardization process occurring in the market. This was happening around what was called the “pay-as-you-go credit default swap”. This was a derivative contract that was basically meant to mimic the cash flows for the entire life of a subprime bond. So, it would be equivalent to just shorting outright without having to go through the onerous process of finding a bond that could be borrowed (which was the normal process for shorting securities).

YPFS (AM): That was attached to a very specific tranche, right? A pay-as-you-go default swap would be attached to a very specific tranche of a subprime securitization.

Kasoff: Yes. You would reference an actual tranche and monitor the cash flows of that tranche. And you would just pay the cash flows. If you were short, you would pay the cash flows, and if later on there were losses, you would receive a payment equal to those losses.

YPFS (AM): What kind of collateral postings did you have to put up? When you were engaged in one of those transactions that was effectively a synthetic tranche. What kind of collateral posting rules would you have? Did they depend on how well the underlying security performed?

Kasoff: So, there was obviously a mark to market that you would have to post, based off of price changes. But at inception, the I.M., or initial margin that you were posting – if you were on the short side – was pretty insignificant. So, if the bond was a 200bp spread bond with an average life of anywhere between three and seven years, depending on extension or repayments, your maximum loss was roughly 10 points (e.g. 200bp x 5 years). And so, initially, you were probably posting five or six points and then as the product got more standardized, it was probably closer to a year to two years of spread, so call it 2 to 4% of notional. It was a fairly efficient product to short., and needless to say, it was like any out-of-the-money option, there was massive convexity in your favor.

YPFS (AM): And this market, now you're talking about subprime bond users, not CDO users, right? So, you were actually going into the underlying bonds that had been bundled into the CDOs? I'm curious about the transition from things originally motivated by hedging into the much more complicated products that we had then.

Kasoff: Yeah, so there were a few steps and, generally speaking, we were probably thinking along similar lines as many others. We were not the only ones that were thinking about subprime.

I think a number of hedge funds probably started out by saying, "This is just a good core hedge against a recession." And then, they said, "OK, well, not that we think it's going to happen for sure," but rather, "If there's a recession, and nobody knows when it'll be, but if there's a recession, the people that are borrowing these subprime loans are among the people that are most levered to the economy and are more likely to lose their jobs. And those subprime borrowers are more likely to find themselves in financial trouble and therefore they're more likely to default on the mortgages, right? That's why they have the subprime loans in the first place." So, there was a logic to saying that this is a good way to hedge general economic conditions.

Also, people were generally shorting the BBB tranche of these securitizations. And so you had inherent leverage because, in a typical subprime securitization, the BBB would go from between, say 5% and 10% in the capital structure, meaning it had 5% subordination and it was the next 5% of risk. And so, if you had more than 5% of losses in the mortgage pool, then this tranche would start absorbing the losses, and by the time you had 10% of losses, it would be wiped out. It was a little bit more complicated than that because there were some structural features that could act as a shock absorber of losses under some circumstances; but that's the general layout.

And so, some people would look and they'd say, "OK, subprime bonds have historically had lifetime losses of two to four percent, and so if you have a recession and you have a multiple of that, then this is a pretty good short."

And so, as people started doing that by early 2005 – this is documented in some of the books – the dealers got together to try to standardize the product and create a standardized document for shorting these things so that it would become more liquid and more easily tradable.

But they also created what was called the ABX index, which was a tradable index. I think it was 25 identified CUSIPs.

Later they created additional series to trade. There was a series one, a series two, etc., that each had their own characteristics and became very liquid for trading. People who wanted to short the market would use it. And dealers and others that were involved in the production of the new ABS.

YPFS (AM): Was this, at this point, because of the standardization? Were there now much more limited amounts of doing it on individual CUSIPs?

Kasoff: No, there were a couple of things that were happening. One, in hindsight, the trade seems obvious because, you could have just thrown darts at a list of CUSIPs and shorted those. And at the BBB level especially, they pretty much all got completely written off over time. But at the time, there was a lot of work being done by people that had spent a lot of money building models, gathering data and doing other types of research to try to figure out which CUSIP to short. And they were looking for different types of risk profiles and risk layering. So certain originators were thought to be worse than others, and certain risk factors were considered to be worse than others.

And then sometimes it was obvious, like, no-doc loans were worse than full doc loans. But then trading levels were also different. So, you could try to find things that the market wasn't pricing for. And again, in hindsight, it didn't matter, but at the time, the difference between paying 200 basis points versus 250 or 300 basis points was meaningful. And so, you're looking for that right mix.

Some people were focused on geography, they wanted stuff that had a lot of California or a lot in Florida. Others were looking at other factors. For example, the LTV [loan to value] levels or the existence of second liens behind the mortgages that were in the pools. There was a perverse thing that the market generally thought that purchase loans were better credit than refi loans, and particularly the re-fis where people were taking cash out.

Eventually research suggested that purchase loans were actually more risky than re-fis because they tended to correlate with first time home buyers that were less likely to understand the financial obligations that they were getting themselves into. And that was just one interesting permutation. But these loans had dozens of characteristics that everybody was going through with a fine-tooth comb trying to figure out. So, there was a lot of customization for that reason.

And then the other reason, which we haven't gotten to yet, is the CDO of ABS product. And so that was an important part of driving this market. So, this was maybe the next generation of those CDOs that had everything but the kitchen sink in them. By 2003 and 2004, people were saying, "Hey, subprime offers good yields, while being investment grade rated, and it performed well" — actually very well during the 2000 to 2002 recession. Partly because interest rates were cut by many hundreds of basis points. So even bad credits or people who lost their jobs could just sell their house at a profit and pay off their mortgage in full, avoiding default.

But market actors told themselves that subprime was good credit. And so, people started creating CDOs that were backed entirely by subprime bonds. At

first it was a mix of prime, Alt-A, and subprime, and gradually it migrated to more and more subprime. But it was all mortgage-backed security risk in it, residential mortgage-backed security risk. Also, these CDOs had managers that selected which subprime bonds to buy into the CDO portfolio, and then had the ability to trade that portfolio over the life of the CDO. This was a significant difference compared to other types of ABS or securitized products, which were not actively managed.

These CDO managers pitched themselves as being able to select good credits, and to make smart decisions on which bonds offered the best value. But what happened was there weren't a lot of subprime bonds available because it was a relatively small part of the overall mortgage market. And if you're only trying to find the BBB tranche, they were only 5% of the total market. And so, it didn't take long before the CDOs started pushing the spreads tighter, to the point of being not as economical.

But, good luck or bad luck, you can decide, right around the same time, you had this new group of people trying to short those same BBBs synthetically. So, it didn't take long before somebody, or a lot of somebodies, said, "Well, wait a second. If we can't find the bonds to put into the CDOs, why don't we just do a synthetic CDO and just let these hedge funds short those BBB bonds synthetically into a CDO? And then we'll be able to produce as much of it as people want to buy."

And so, where that led was to this interesting dynamic where, first of all, you couldn't use ABX because the managers were telling everybody that they were selecting new credits in a thoughtful way. And then this tension started building between managers that were generally looking for better quality credits who were trying to avoid the worst bonds in the subprime universe, and the people on the short side that wanted to short the worst stuff they could find. And so naturally you had a market and, prices adjusted until they found their clearing level.

Some managers were willing to waive in some of the worst bonds at a higher spread because it made their deals look good, maybe just with a portion in the portfolio, figuring it would increase the yield of the whole thing. Others were more careful, and there were gradations, in between. But that became a market that was arguably as big or bigger than the ABX market.

YPFS (AM): Of the synthetic stuff, what tranches were you synthesizing? Was it tranches that had high yields that were BBB tranches of the CDOs themselves, or was it the AAA tranches of the CDOs, which of course were built with BBB tranches of the subprime securitizations?

Kasoff: Right. This was a time in market where all of the above was usually the right answer, but you had a few different classes of products. So first you had CDOs

that owned BBB tranches of subprime deals. So that was the first thing where the CDO was a physical CDO that issued actual cash tranches, but the assets of the CDO were synthetic.

YPFS (AM): Yeah. The assets of the CDO were synthetic. OK. And those tended to be synthetic BBB tranches of subprime securitizations, right?

Kasoff: That's one iteration. And so if you looked at the CDO bonds itself, looking at an SPV (Special Purpose Vehicle), the SPV was holding cash and then the SPV would enter into derivative contracts, pay-as-you-go default swaps, and then the cash collateralized their exposure on the swaps.

But then you also had a class of CDOs that are called high-grade CDOs, where they were buying AAA and AA rated subprime bonds. And that happened a little later. The logic there was that you could get a lot more leverage within the CDO. In those CDOs, the BBB tranches only had around 2% subordination, on the theory that the underlying subprime bonds were higher quality. Eventually, saying this in hindsight, it almost sounds like a joke.

YPFS (AM): About CDO-squared?

Kasoff: Right. Right. And so, you actually started seeing people say, "Well, wait a second. If the BBB tranches of subprime deals traded at LIBOR plus 250, the BBBs of the CDOs traded at plus 350. So why don't we create a CDO backed by the CDO BBBs?" And that was not as common. Those were harder to put together, but there were definitely a significant number of those as well.

YPFS (AM): You've pointed out here that roughly 5% of the capital structure of these things was BBB. Maybe not in synthetic cases, but in general. So that for every five cents of borderline investment-grade stuff that you have, that people are trying to figure out what it's worth, there's 90 cents or 85 cents of AAA stuff that is out there at the same time. Does that hold through this whole stack that you're describing? So in other words, not only at the subprime stage where they're manufacturing the stuff, but then later also at the CDO stage, did they also have 85 cents of AAA stuff for every five cents of BBB stuff that they had?

Kasoff: More or less, it was. Let's start with a subprime securitization. These are averages, but they tended to be pretty similar. A subprime securitization would have:

- 0 to 5 would be unrated or not investment grade.
- 5 to 10 would be BBB; and then you would have A, AA, AAA; the AAA would usually be at around 20.
- 10 to 15 was A.

- 15 to 20 was AA.
- and then 20 to 100 was AAA.

And often that AAA tranche was also tranching into pieces with different average lives. And they had the same credit risk in theory, like the old CMO structures. They would do what they called time tranching.

A CDO of the ABS was relatively similar to those numbers. The BBB tranche, again, was approximately five to 10, maybe it was six to 12 or thereabouts. And then the next couple of tranches were maybe a little thicker, so the AAA, instead of going 20 to 100, might be 25 or 30 to 100.

YPFS (AM): So, you guys were mostly playing in and investing in and analyzing the BBB type tranches, right? Not the AAA trenches?

Kasoff: Yes. Mostly.

YPFS (AM): So, who was largely on the other side of those trades? Was it investors who were just looking for that extra 100 basis points of yield? Was it other people in the investment/speculation space who were making bets that were in the opposite direction? What were largely the counterparties?

Kasoff: So, it depended on each layer. So generally speaking, one of the big factors in all of this – and it's still a factor in the fixed income markets – is that the biggest fixed income investors in the universe are banks and insurance companies. Central banks weren't really relevant back then.

And banks and insurance companies are primarily driven by regulatory capital models and frameworks that are imposed on them. They're complicated and they all differ in one way or the other. But the common factor is that the higher the rating, the less capital you have to hold against something. Or to put it another way, the more leverage you could have, implicitly. And, I guess in the case of a bank, more explicitly. In the case of an insurance company, it was more implicit.

But the thing that mattered most was that tug of war between what's the rating and what's the yield? And so, the Holy Grail was what can you buy within a given rating level that has the most yield? And insurance companies, then and now tended to find that a combination of BBB and A rated securities are the sweet spot. Whereas banks tend to be higher up in the capital structure in terms of credit risk. But the motivations are still the same.

And these products had higher yields, sometimes materially higher yields, at a given rating level than corporate bonds. And so that caused them to be significant buyers of the product. So, in the subprime bonds themselves, you also had Freddie and Fannie, who were big buyers of the AAA bonds for other reasons. It helped them meet some of their some of their government mandated lending rules.

YPFS (AM): It was a spread trade for Fannie and Freddie. They could borrow at US government rates and invest in a AAA that had spreads in it.

Kasoff: Yes. Well, they viewed it as also meeting some of their policy mandates because they couldn't directly buy or guarantee subprime mortgage loans. And so, this was a way for them to support that market indirectly.

YPFS (AM): The evidence is that it certainly played that policy mandate role, but Fannie and Freddie had way more subprime exposure than they needed for any policy mandate purpose.

Kasoff: Sure. Yes.

YPFS (AM): So, would you say it was the insurance companies, the search for yield on the part of the insurance company? There were so many different constituencies demanding this stuff. And in the end, 75 to 80% of it was rated AAA. But dealers couldn't play in the BBB space without the AAA. Why were they able to place all this AAA stuff?

Kasoff: Well, the BBB tended to be harder. In most deals, placing the BBB, BB and unrated parts of the capital structure were what got the deal done. Placing the AAA was usually not hard. You often had one or two people buying it and buying it in size.

One other participant that was active in the AAA market back then, which was something called the negative basis trade. Monoline insurance companies were guaranteeing a AAA security. Often it was still banks that were buying it, but the regulatory treatment was even, even better. I think it was pretty much at the zero or very close to zero risk rating.

YPFS (AM): On the role of the rating agencies, you already pointed out that those ratings were heavily relied upon in the regulatory process. What the rating agency said was quite important, even so far as to the point that you can get these negative basis trades in some cases.

What do you think the role of the rating agencies was in this? What kind of information did they have? Were they making out-sized mistakes? Could you trade against them or not?

Kasoff: There's no question that these deals just would not have happened without ratings. Full stop.

There was really nobody that was going to buy 85, 90% of the capital structure without ratings, even if you could show somebody that you had a ton of subordination and that it was bulletproof for credit risk. But if it didn't have a rating, it didn't make sense for them to be buying because they would have to hold too much capital against it. That was just the nature of the market and still is.

The rating agencies are always very careful to make clear that they are assessing credit risk and not market risk. I heard that from them a lot. What they meant is that market prices could also move around for reasons that are not related to credit, such as liquidity or structural complexity or just what's in and out of favor.

Sometimes they used that mantra as a bit of a crutch to say that if we think it's rated at a certain level, we don't care if the market is trading it at prices or spreads that are suggestive of it being a very different credit profile. They would sort of say, "That's just the market and as long as we feel comfortable that our models are appropriate..."

Academically, that's a sensible thing to say. At the same time when the market is sending you a signal for long enough and consistently enough, you probably ought to sharpen your pencil and understand where they're coming from. I'm not sure that that was really happening.

During those years preceding the financial crisis for the major rating agencies, ratings structured credit – CDOs, ABS, etc. – was roughly 60% or 65% of their total revenue, up from about zero 10 years prior. That doesn't mean that it was an undue influence, but it's suggestive of that.

YPFS (AM): To what extent did the rating agencies' role extend to the types of synthetic transactions that you guys were sometimes involved in? You go to a dealer and have the dealer set up a transaction and find a counterparty. We have two counterparties, the dealer, and then we also have the rating agencies as potential players in this. What's their role during this structuring?

Kasoff: The ratings agencies were sort of agnostic about synthetic versus regular CDOs. Their view was that if you were building a CDO and it was backed by 50 or 100 subprime bonds that had a certain rating, whether you own the actual bonds in the CDO, or had synthetic exposure to them, they were agnostic. As long as they could do the diligence around the mechanics of the synthetic structure to make sure that somehow you weren't transmitting additional risks through the structure.

They would have rules about the credit of the counterparty, to the derivative and collateral posting and things like that. But setting that aside, if you were exposed to 100 subprime bonds that you owned versus synthetically, it would be the same rating, either way.

YPFS (AM): I can see this wouldn't necessarily be very different than if you were building the actual thing, but of course these were sometimes trades that were being built really by a small number of people who were working on what exactly the structure would be at the same time that they were negotiating the trading. And it wasn't necessarily something that already existed in ages, so it didn't have a rating.

How would something like Abacus come together? Please walk us through the specifics of how to build a big trade.

Kasoff: So I don't think the rating agencies... Again, going back to the point about the reliance on their process and their models, if they've rated a whole bunch of subprime bonds at the level that they think appropriate, the fact that some hedge fund has combed through that universe and picked the 50 BBB bonds that they thought are least deserving of being BBB and asked to securitize them, they're going to treat them the same as any other BBB bonds.

YPFS (AM): To your "sharpen your pencil" point, the rating agencies have rated everybody. They now know that clearly some hedge fund has combed through all of their ratings and picked the 50 that they would like to short, and there's no sense in which they're going back and looking at those 50. They're relying on the original rating they wrote.

Kasoff: No, to clarify: When the ratings agencies rate a bond like this, part of the deal that you pay them for is for ongoing surveillance. And so, in theory at least – and it's debatable how well or comprehensively they did this – they receive updated information from the issuer of these bonds or the trustee and will update the ratings periodically.

YPFS (AM): Right. But they didn't do very much updating until 2008.

Kasoff: No, the ratings agencies are not relying on the original rating. So, in theory, they're looking at the current collateral characteristics and performance of these bonds.

But there's a larger point that you're making: the rating agencies aren't factoring in whether it's somebody who's smart, who has adversely selected from their universe? And no, they take the view that people will do whatever they're going to do. They hold that that's a trading decision, maybe driven by market factors that are outside the scope of what drives their ratings.

YPFS (AM): Now are the ratings agencies involved in anything like rating the synthetic stuff that gets put together?

So, if I'm Morgan Stanley and I'm putting together the short for you of a combination of subprime securities. This big thing I'm putting together is itself tranching. You're ultimately perhaps going to be short the BBB tranche of it, and someone's going to be long the AAA tranche of it.

Who's setting the level of how much subordination there is for the AAA and a BBB deal? That's the rating agencies, right, still?

Kasoff: It is. Regarding the models, the ratings agencies are usually pretty transparent with their models. Every dealer has reverse engineered those models. Typically, before I went to Elliott, I would interact with the rating agencies. Someone like me would call them up and you'd say, "We have a new deal." They'd assign one of their analysts to be your contact person. You send them a spreadsheet with a whole bunch of information, a spreadsheet with a model portfolio, which could change over time, but it would be a model portfolio.

They'd run it through their model, which before you sent it to them, you've already run it through their model too. So, I know exactly what the results are going to be. They can, in theory, tweak things, for any reason that they want. Typically, they would follow the model. They would also comment on the documents. They would be looking at the documents for holes to make sure there wasn't risk being introduced because of the way the cash flow distribution priorities were set up or whatever. But by and large it was a very, very predictable process.

YPFS (AM): OK. Continuing on this example of a trade being organized, you're combing through and picking the subprime securitizations you want. The counterparty will end up on the long side of these things, also a sophisticated player presumably who knows that you've combed through.

Kasoff: It's a series of sophisticated players, right? It's people buying in all different tranche levels.

YPFS (AM): Let's say a hedge fund goes over to Morgan Stanley and says, "We'd like to set something up with these 50 subprime securitizations." What's Morgan Stanley doing to find the counterparties? How does the negotiation go about what ends up in there or not?

Kasoff: So there are a few different permutations of how these deals get put together, ranging from a more market-oriented approach on one end and then you mentioned Abacus, deals like that, on the other extreme.

In a market-oriented approach, let's say I'm a banker and I find this CDO manager, that I think has a good reputation. So, I call them up, meaning that it will

be easier for me to sell the tranches of the CDO with that manager's name and reputation attached to it. I call him up and say, "Let's do a deal." And we decide to do it.

There was a whole question about the risk process of accumulating the risk prior to issuing the deal that had to be managed, which we call the ramp-up.

Some deals would be ramped up very fast, especially in the synthetic deals because you could do it quickly. But in those cases, the manager might say, "OK, I'll pick the names that I want to put in here and then I'm going to go out to the market with 10 names at a time, and do what's called a BWIC." The "Bids Wanted In Comp" is a process similar to an auction, where you just go out to everybody through a dealer that would say, "Here's ten CUSIPs that I want to sell protection on," meaning I want to buy synthetic risk. "All of you hedge funds out there that want to get short, tell me what's the most you're willing to pay to short each one of these bonds." And then the market clearing levels are where we would trade.

And that manager obviously will have some knowledge that if he picks credits that are just too good, then that people won't pay as much and the economics of the CDO won't work. But in that iteration, which was probably the largest component of the market, the manager is driving the bus, so to speak. They're internally making their own decisions about knowing that they need to accept a certain amount of lower-quality credits (which will have a higher yield) in order to have an overall portfolio yield that's high enough to work, but striking the balance they want.

Sometimes hedge funds themselves would go out with the inverse of one of these BWICs. It's called an OWIC (Offers Wanted in Comp), where a hedge fund might say, "Well, I know that there will be demand for synthetic exposure, so I'll list the names that I want to short, and ask buyers to indicate what prices they would pay." A list of 10 or 20 bonds that a hedge fund wants to short synthetically might end up getting distributed across 10 different CDOs. And then in either case, you can have dealers that are as intermediaries maybe just inventorying this risk, because they can then offload later.

YPFS (AM): Right.

Kasoff: The other extreme were transactions like Abacus; it was a program of Goldman. Morgan Stanley had a program called ABS-Short. Deutsche had one called START. There are a few others, all the Magnetar deals that I'm sure you're familiar with. They all had astrological names. I think they were all pulsars or something like that. All of these CDOs were driven by somebody on the short side, who said, "Instead of me just shorting a handful of bonds into this CDO and a handful of bonds into another CDO, I'm actually going to

drive the process and short 80% to 100% of bonds into a single CDO that I'm working with the dealer to create."

Sometimes there was a manager involved in those deals, which was always a tricky relationship to manage, but often those deals were marketed as static.

YPFS (AM): In most of these tranches, these are subprime bonds – the BBB tranches of subprime bonds – that they are shorting, not BBB tranches of CDOs that are out there, or is it both?

Kasoff: Well, both in separate ways. And to complicate things further, some CDOs backed by subprime bonds, they would sprinkle in 5% or 10% BBBs of other CDOs.

YPFS (AM): For sort of CDOs 1.2?

Kasoff: Right. Not quite CDO-squareds, but on the way. We used to joke about what would happen if you put this to its logical conclusion, where all of these CDOs were just paying each other.

YPFS (AM): (laughs heartily)

Kasoff: But you did have the problem that if losses happen, it **will** take sometimes a couple of months for them to cycle through the different layers of securitization.

Abacus was a program where, like some of the others, the approach was to not hide the fact that somebody was selecting the shorts. It was almost a dare to people on the long side to say, "Are you as sophisticated and smart as you think you are?"

They would say, "OK, somebody wants to short these bonds, it's going to be a static portfolio, it's never going to have a manager trading it, and we'll tranche it into the usual AAA, AA, etc." And the spreads will be a little higher, because the guy on the short side needs to pay a little more to get it done. So you don't have a manager that you have to pay, so that extra money can be paid to people on the long side. And if what you're saying is, "Somebody wants to short these, but that's how markets work, and you're a sophisticated investor, you have all the information that anybody else has, and draw your own conclusions."

YPFS (AM): Largely speaking, was it hedge funds that ended up on the long side of these things that were just taking different bets? Was it insurance companies who wanted a little extra yield or sovereign wealth funds? What would be your general sense of the market? Because there's no data on this.

Kasoff: Yes, it was generally the same people that were buying, but maybe just a subset. So, at the BBB / A level, there were probably certain insurance companies

that were more or less likely to want to buy this product. Some people might say "I believe my model, and I think that the housing market is secure, and so I'll take the extra spread." And there were others that said, "I want no part of it."

And then as you got to the junior levels of the capital structure, you did have hedge funds and people like that buying at the very bottom where you could have 20 to 30% modeled yields in their benign scenarios. And the guy shorting the portfolio would also buy the junior tranche as a way to just reduce his risk.

YPFS (AM): Right. Matt posted a question in our chat: "Were the regulators able to keep up to speed with the innovation, the transformation with deals? Did their models change as the deals formed?" Not much.

Let's walk through the thinking of when you shifted from what you were doing into 2004, so to thinking there's really a big matzoh ball flying around out here, and we should figure out how to trade on that big matzoh ball. As you decided that overall, this was no longer just a micro issue of a couple of deals here and there that we can take advantage of, but rather, how can we figure out what's going on over the whole market and how to trade on it?

Kasoff: Sure. I don't think we were unique. I think that lots of people like Elliott were all going through the same evolution of thought process from first thinking of this as just a cool hedge against the overall macro risks. And then by end of '05 or maybe early '06, they were starting to feel like, because they'd done so much good work and understood it so much better: "Wow, this is actually an alpha short." An alpha short means a short that wasn't just for hedging, but also that you thought could work in the absence of a recession because things were just so over the top.

The next question is the last step in that process that some people never got to, and some people got to later, beginning some time in '06, middle of '06 or so. There was a level of confidence with the short side that this was a great trade. That if it didn't work, you wouldn't lose that much money. But it had a likelihood of working even without some sort of external macro trigger, that things had just gotten so bubbly. And it was going to collapse under its own weight at some point.

But what not everybody had recognized was how this little corner of the US mortgage market was turning into a systemic risk for the overall global markets. And that was not at all clear to anybody (then). I think about it in hindsight and I think we had some good insights, and yet we were not perfect. Maybe some people were better, but we were better than most. But when I think about trades that could have done if we had really connected those dots, right. Credit default swaps on Lehman Brothers I think were trading at like 25 basis points in late '07.

YPFS (AM): The stuff was trading at a very high level in August of 2008. The Fed agreed as late as May of 2007. They did a whole lot of analysis and they were like, "Yeah, yeah, yeah, subprime is a problem. It's a big deal. We're going to lose a lot of money there, but it's not a systemic risk."

Kasoff: Right, because subprime, I think the outstanding balance of all subprime loans around that time was something like six, \$700 billion, on an overall US mortgage market of nine, 10 trillion.

YPFS (AM): It did not seem like a systemic risk, and that's for sure. It's a really important point because I do think it is missed in a lot of the popular treatments. There's a tendency to conflate the subprime crash, which was in some sense analyzable, with the panic of 2008. And it doesn't seem like anybody built that into their trading deals.

So, you form the conclusion – this evolution that you made between 2004-05 and 2006 – this goes from a hedge to really thinking that it might be a good alpha short. So, a little bit on how you got there. In late 2005, AIG stopped writing protection on super senior tranches of some of these things and got out of the business because they kind of saw this coming too. Merrill Lynch took over that business from them and started writing all that protection.

So, experts in the market saw it. The puzzling thing then is why it continued from that point. From late 2005 when AIG is getting out and Merrill Lynch is getting in and where you guys are noticing it and starting to put together these trades, how are we sustaining the demand side at that point? You were picking your trades and you knew who the other side was. What was the long side thinking?

Kasoff: I remember, I used to go to these conferences a couple of times a year where if you had no idea of how bubbly things were getting, just seeing that these conferences went from 500 people in '04 to 6,000 people in '07, that would've been a good hint. In *the Big Short*, there's the story of that Deutsche Bank dinner. I sat at the same table that Greg [Lippmann] and some of the other guys mentioned in the book were at. I didn't hear all the conversation, but I had similar types of conversations myself. And you were next to CDO managers or banks, insurance company people that were on the long side of the trade.

And it wasn't like you didn't talk to each other, you debated. You talked about it. And they knew we were short, and we knew they were long. Maybe today, the fact that people would have diametrically opposite opinions and have a productive, polite conversation may seem a little more unusual. But it happened back then. It's so interesting to hear the perspective.

And I would say the people on the long side, they were not blind to the fact that the borrowers were not the highest quality borrowers in the world. But I think

that they felt that at the end of the day, it was a secured loan. You had a first lien on a house. And that when you looked at it, and this is true, when you looked at the history of the US housing market, from whatever point in the '30s, after the Depression through that point in time, there had never been a single year-on-year drop in home prices in the aggregate on a national level. There had been regional pockets that people remember, either California in the '90s or New England in the '80s, the oil region around Texas, that was also in the '80s. Things like that, but there had never been a nationwide drop in home prices.

And I used to look at people when I'd hear that, and I'd say, "Well, home prices just went up 10% a year for two years. That's never happened either." But the reality was that there was data that supported the idea that when homeowners got into trouble, they could sell their house and pay off the mortgage. And maybe they'd lose a little of their equity, or even most of it, or maybe they'd make a profit because prices had gone up. But even if the underwriting of the borrower was wildly off, the value of the house, while it might've been a lot higher than a couple years ago, was a real value because transactions were occurring.

And therefore, if you had an 80 or even a 90 LTV mortgage, you had cushion for bad things to happen. So obviously, needless to say, that logic works really well when there's one guy in the neighborhood that loses his job and has to sell his house and not when 50 out of 100 people in the neighborhood are all listing their house for sale at the same time.

YPFS (AM): And so your sense in opposition to those on the long side, or the reason that you felt somewhat comfortable – one piece being your losses were limited no matter what – but some subset of the heroes were explaining that they could foresee the coming crash because they knew about all of these subprime loans that were either 2/28 or 3/27 that were going to have their adjustment periods coming up, and once those adjustment periods came up, it was all going to collapse like a house of cards.

What do you think about that scene? And how much did that kind of calculation about the subprime mortgages themselves being designed to fail, in some sense, play into your analysis?

Kasoff: Yes. Well, I don't remember the scene, but I definitely remember doing a lot of my own analysis. When we mapped out our expectations for the trade, it was very much focused on these teaser loans resetting after either two or three years to a higher interest rate. We thought that that would be the catalyst for things to unravel, so it's ironic that's not what happened. It happened a lot sooner than that. But you're right, the structure of those loans was designed so that people were not really paying a whole lot of money to own the house until the reset period.

Up until that point, people were just refinancing at end of the teaser period. And oftentimes taking out even more money and never having to worry about it. So, we felt that the catalyst for unraveling it would be if home prices – they didn't need to decline, they just needed to stop going up. As soon as these resets started happening and people couldn't refi, that's when it would start to reverse itself.

Now look, the flip side, so what are the people that I was talking to at these conferences, what did they say? Their argument was, "Well, look, this is a great (thing) on a policy level, on a human level. This is a great product for people that have low credit scores. Because by the end of the two-year period, maybe not all of them, but a lot of them will have made 24, 36 successful months of payments on their mortgage. And so, it doesn't matter where the reset is, they're going to be eligible for prime loans. Or for a Freddie or Fannie conventional loan. And so, they will be able to refi even in the absence of more home price appreciation."

YPFS (AM): Right. What we did find is that home prices didn't just stop rising, but fell, which caused these falls to happen much earlier. It is interesting looking at the data, the adjustments for the very worst years of this, actually those adjustments often went down because it just [inaudible] by so much by then.

Kasoff: Well, the process that we thought would happen at the end of the teaser periods, it happened, but for different reasons. Every market reaches its peak for exactly the same reason, it's that you run out of buyers. That's kind of a self-evident statement, but instead of happening through the refi process, it just happened at an earlier stage. It happened through the origination channel for these mortgages. And that's what caused the quick unwind.

YPFS (RW): Revisiting the role of the regulators. Having lived through this seated on the side of the industry, do you feel that the regulators should have done more either to manage the mortgages or types of mortgages that were being written as we started getting into the boom of subprime and the no-docs and everything?

And then also, do you feel like they should've regulated the products? I know you said they couldn't keep up with the innovation, but is that something that was just an inherent failure on their part?

Kasoff: You're referring to different regulators with different aspects. On the regulation for insurance companies and banks and the reliance or perhaps over-reliance on ratings, there's no question that they outsourced the process to rating agencies in the hopes that as these products evolved, the rating agencies would reflect that in their ratings. It maybe happened somewhat, but it was inadequate, and that's clear in hindsight.

And so that would be the first question: Does the credit risk analysis, as it gets used in regulatory capital models, get outsourced too much to rating agencies that may be responding to financial incentives of their own? Or just simply the fact that, not to put too fine a point on it, but the smartest guys in the financial markets are generally not the ones working at the rating agencies, they're the ones that are setting prices in the market. And so, should you be relying on the ratings so much? And I realize that market prices can whip around for exogenous reasons, but there was definitely an arbitrage happening around the rating agency models. Once it was identified that something was wrong with the models, we didn't really talk about it.

There was one particular critical assumption that the rating agencies made that was wildly off, that more than anything else was responsible for what happened in terms of their ratings being wrong. But yes, you have two or three rating agencies and you're putting all your eggs into that basket.

YPFS (AM): Was the flawed assumption that the ratings agencies got the correlation structure wrong?

Kasoff: Yes. Which is why, when you look at CDOs and other forms of securitized product that actually had legitimately diversified portfolios, they largely survived over that time.

YPFS (RW): Are we just always going to be stuck with the financial regulators trying to play catch up to the innovation of the street?

Kasoff: Well, there's always an element of cat and mouse here. Rules get created and then the people that are supposed to trade by those rules are going to look for ways to "optimize" around those rules. They look for loopholes. But that's a function of not just capital markets, but all sorts of things in regulation and laws. The guy that gets on the highway and sets his cruise control at 54, is he "arbing" the rule? People that do estate planning are right up to the edge of what's allowed.

But I do think there has to be some responsibility on the part of regulators to understand when they've accidentally created loopholes and that there are people that may be following the letter of the law, but you're getting unintended consequences. And I know that's easier said than done.

Also, when you have a product that explodes in popularity like this, it's often an indication that something is being exploited. And it may be OK, but that's a good signal for where to focus any investigation.

YPFS (RW): I find it interesting that 10 years earlier there was the effort to try and regulate derivatives that got squashed. Then as these things exploded, that should have been a flag to go back and look at them. But nobody really wanted to because they were doing so well. I would say, when the

flags are out there, maybe taking the time to actually look at it just in case.

Kasoff: Yes. Well look, not all derivatives are bad. They serve a useful purpose. And derivatives themselves versus the amount of margin that's required are separate issues. I think often the problem is that the margin levels being inadequate.

YPFS (ML): On the post-crisis regulations and your discussion here, I also think of incentives as the flip side of regulation. You've told the story of the trades, the evolution of the incentives of different players here. How have the post-crisis reforms – the regulations by government, ratings agencies and the banks – have they changed the incentives that you described from the 2004 to 2008 period? How much have those incentives been changed? And in what ways?

Kasoff: I don't know that the incentives have changed a lot, to be honest. I think that you've had a few things. Certain markets have been effectively shut down, or radically changed. For example, residential lending right now is completely different. The subprime product is a lot harder to create now than it was back then.

Now that said, you're seeing some similar activity. They don't call it subprime or Alt-A anymore, they call it non-QM, which means things that are not qualifying. So qualifying mortgages would be the safe harbor under Dodd-Frank.

YPFS (AM): There's a new prime, in a sense. The thing that matters to the banks the most.

Kasoff: Right. It's a sensible rule. But the fact is that you're seeing from four, five years ago, almost zero issuance of non-QM loans to now significant amounts. Now I think that the quality of those loans is vastly different than subprime originations in 2005, '06, '07. But they're trending the wrong way. And it's a function of bull markets that people get complacent and the envelope gets pushed and that happens until something pushes back.

YPFS (ML): Are the current non-QM loans being securitized? Because I think you're describing the retail lending, but securitized?

Kasoff: Yes. They are being securitized. The structures are simpler and arguably more prudent. But they are being securitized.

YPFS (AM): This has been tremendously helpful. And what you get by doing such a good job is that we want to do it again...

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