

All the Credit® Episode 36

Transcript

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Female Voice: You're listening to *All the Credit*, a monthly podcast series brought to you by PGIM Fixed Income an active global fixed income investment manager. And now your host senior portfolio manager, Mike Collins.

Mike Collins, CFA, Host and Senior Portfolio Manager, Multi-sector Strategies: Hello and welcome to Episode 36 of *All the Credit*, PGIM Fixed Income's monthly podcast. I'm Mike Collins, just one of the many investment professionals at PGIM Fixed Income and your host of *All the Credit*. Central banks around the globe have been tightening monetary policy by rate hikes and quantitative tightening for about a year now. Simultaneously, fiscal policies have contracted sharply, and of course inflation has eaten away at real incomes. As a result, the excess savings stocked away during the pandemic have dwindled. The savings rate has returned to historic low levels, and recession probabilities have increased. Borrowers around the world are increasingly facing higher financing costs as a result of the surge in global interest rates. The Economist recently reported that global debt has increased by about 20% or \$50 trillion since just before the pandemic and that the interest bill on that debt could jump from roughly 12% of global GDP to almost 20%. Thus far, however, credit conditions, that is, the ability of borrowers to service and repay their debt, have actually not deteriorated much. In fact, the fiscal largesse and monetary stimulus during the pandemic largely allowed borrowers to avoid defaulting on their debt, and borrow, and in some cases, lock in really low interest rates. But now the confluence of higher debt levels, tightening policies and weakening growth are starting to raise red flags around borrowers' credit quality, and we are just beginning to see signs of financial strains emerge. And, of course, as one of the world's largest bond investors at PGIM Fixed Income, we are keenly sensitive to and on the alert for any signs of potential credit deterioration down the road. So, in this timely episode of *All the Credit*, we'll interview two of our most senior credit research investment professionals to discuss the underlying trends in credit fundamentals from corporations to commercial real estate borrowers, to consumers, and try to identify pockets of vulnerabilities across the world's credit markets. We'll share our expectations for credit defaults and credit losses over the next year or two, and even discuss potential paths to avert the crippling credit conditions we've lived through in past cycles. Our guests for this episode of *All the Credit* are Brian Barnhurst and Gary Horbacz. Brian Barnhurst is the Co-Head of Credit Research at PGIM Fixed Income. Previously, Mr. Barnhurst was a High Yield Portfolio Manager for our U.S. High Yield Team, and he spent several years in our London office as a PM on our European Leveraged Finance Team. Prior to becoming a Portfolio Manager, Brian was a High Yield Credit Analyst and a Leveraged Bank Loan Analyst covering a variety of sectors including energy, autos, and a range of food, beverage and consumer sectors. Brian received a Bachelor of Science in Business Administration with a concentration in finance from Villanova University and holds the Chartered Financial Analyst (CFA) designation. Gary Horbacz is the Head of Securitized Products Research at PGIM Fixed Income. Prior to this role, Mr. Horbacz was a Senior Credit Research Analyst specializing in commercial mortgage-backed securities, or CMBS. Gary currently serves as a

member of the alternative reference rates committee, think the transition from LIBOR to SOFR, and recently served as a member of the structured finance industry groups board of directors. Mr. Horbacz earned a Bachelor of Science in Management Information Systems and an MBA in finance from Seton Hall University. He also holds the Chartered Financial Analyst designation. Brian, Gary, and I are here to give you all the credit. Welcome, gentlemen.

Brian Barnhurst, CFA, Co-Head of Credit Research: Hey, Mike, how are you?

Gary Horbacz, CFA, Head of Securitized Products Research: Hey, Mike. Thanks for having me. Excited to get into this conversation.

Mike: So, Brian, let's start with you. You were actually our guest on *All the Credit* last summer in Episode 28, in which we discussed how rapidly this cycle is evolving. And at that time, we were focused on the dramatic shift in consumer preferences from goods to services. Also, at that time, the Fed had only raised rates three times to about 1.5 percent. Now with the Fed funds rate of full 300 basis points higher just since then, and nearly another 100 basis points of rate hikes expected to come, our emphasis is shifting to the growing impact of higher interest rates on the ability of all kinds of borrowers to service their debt. So, since you're our resident expert on corporate credit risk, let's focus on all things corporate credit, from investment grade to high-yield to leverage loans, both in the U.S. and abroad. So first, how would you broadly characterize corporate credit conditions today?

Brian: So considering everything that's happened in the last year, slower growth, big movement rates, strength in the labor markets, difficulty in worker retention, and wage pressure, all the supply chain issues, inflation, now the shift in consumer preference from goods to services, credit is actually in an okay place. Certainly, a very healthy starting point for credit fundamentals helped, and right now, to me, the top-down is actually a lot scarier than what we're seeing on the bottom up. From here, looking forward for credit, it's all about economic growth. Credit goes as growth goes. Even if growth runs below trend, which is where we sort of are right now, but stays positive, I think it's a pretty good backdrop for credit. Negative growth, clearly a much different story, and the magnitude of the credit experience in that scenario is going to be linked to the severity of any contraction were it to occur. One thing I would say about corporate credit is that balance sheets are still in the adjustment process from the big move in interest rates, and that's before even considering the possibility that the market may need to think about, you know, a 6%-plus type Fed's funds number. But the fixed-rate portion of the market, the adjustment, it's slower, it's more episodic, it occurs at the time of new borrowing and new financing. The higher quality parts of the market, so US/European investment grade, the BB part of the high-yield market, they're very well equipped to manage the transition to higher rates and to handle higher financing costs. In response to higher rates, you know, all things constant, I think companies are going to solve for less debt over the medium term to manage financial risks. That's been the historical experience for credit markets in periods of rising rates. I think it will be similar in this cycle, and equity holders generally want stronger balance sheets. We're starting to see more of that out of the equity community. They want less debt, so there's actually alignment between equity holders and debt holders, which is interesting. The lower tier of the credit markets, the low single B, the CCC's that carry thinner cash flow profiles to begin with, narrower fixed-charge coverage ratios, and they're directionally less well equipped to handle a big fast jump in financing costs. For global loan markets, which are floating rate by nature, the interest rate adjustment is far quicker, and that's where we've seen the most stress already, and that's also the part of the credit market that is most vulnerable to future stress, both from slowing growth and from higher financing costs. So overall, I think current credit fundamentals are in an okay place. And again, I would say

from here, credit goes as growth goes. Ultimately, the destination for credit quality is going to be determined by the duration and intensity of any potential economic contraction.

Mike: Yeah, that's great color. And for what it's worth, at PGIM Fixed Income, our macroeconomic forecast really is a relatively benign soft landing/mild recession. Call it like zeroish percent growth this year, give or take a percentage point, and we probably have a two-thirds or maybe slightly higher than two-thirds probability assigned to that, kind of benignish scenario that as you said, it's probably okay, but there's also a reasonably high probability I would call 25% to a third of something worse, and I think that could happen if the Fed, as you said, gets that funds rate into the fives or maybe towards six and keeps it there for a long time. I think ultimately, some of those higher rates will continue to weigh on growth, but we'll see, but for now, pretty good outcomes there. So last time we spoke in July, Brian, the upgrade/downgrade ratios were actually overwhelmingly positive, meaning the rating agencies, as you will say, our lagging indicator, were generally still catching up from all the downgrades they made during COVID where they were cutting everybody's credit ratings, and last year, they were upgrading them, you know, across a lot of different sectors. Where are we today on those stats?

Brian: Yeah. And Mike, just to react to what you just said before, before I get to the upgrade/downgrade, if you talk about that scenario where we get below-trend but positive growth, like I said, I think credit fundamentals do okay, and when you marry that up with where we are in terms of nominal interest rates, you know, much different than the past decade, and credit spreads which look okay, that's an environment where you could see really healthy credit returns, and obviously the other scenario which you described, which is a smaller percentage of the house view looking forward, that's a much trickier environment from a credit standpoint. On the upgrades/downgrades, like you said, in July we talked about this as a lagging indicator, but actually, I think it sort of tells the story of one of the things I just hit on, which is the pace at which the rise in rates is going to transmit through the lower-tier credit markets and also floating-rate credit markets. So last summer, we talked about we thought loans would bear the brunt of the early downgrades both for the pace of that interest rate adjustment because the balance sheets are floating rate and not well hedged, and because of the poorer starting credit quality. And that's laid out. Remember, about half of the U.S. loan market is mid-single B, so B2 or lower. That's double the high-yield market, right? So you can observe the quality difference between two markets. And as a result of that, something like almost one in six term loans were downgraded in 2022. The pace of downgrades has accelerated to four to five-to-one in the early part of '23, depending on exactly how you measure it. And that upgrade/downgrade trend has been a lot less pronounced and slower to develop in high-yield markets because of the better starting quality and because they're fixed rates, so it takes a longer time for those balance sheets to adjust to current market interest rates. And then just to punctuate the notion that it is a lagging indicator, even though it's got some interesting takeaways, which I just talked through, there are 100 billion of net rising stars last year in U.S. credit markets, which is a big number. It's a record number, and that just punctuates that 2020 was a very interesting year. Coming into the year, we had a lot of economic and credit tailwinds, and coming out of the year, obviously, much slower growth in the trickier credit environment.

Mike: Yeah, those rising stars, those are high-yield companies, mostly BB companies going to investment grade, which is the exact opposite of what happened during 2020 with COVID, when you have a lot of downgrades into high-yield. And you and I Brian had the pleasure of working side by side on our high-yield team, geez, about two decades ago.

Brian: That's right.

Mike: And like you said, the high-yield market has actually improved in quality over our careers. It's probably as high of a quality of an index or a market as we've seen, whereas the leveraged loan market has gone in the opposite direction.

Brian: That's exactly right, Mike, and you make us both sound old referencing the two-decade mark, but that's exactly right, and over the last five or six years, ahead of the pandemic, the loan markets really bore the brunt of the lower quality issuance, the private LBO issuance, and that's now manifesting itself in these big quality differences between the two markets, and the initial or earlier negative credit migration is certainly skewed towards the loan market for those reasons.

Mike: Yeah, so Brian, you run our global credit research departments and worked in London for a while, so obviously, you are very keen and sensitive to credit conditions outside the U.S. Are there any distinguishing factors you'd describe in terms of the European credit markets?

Brian: It's a good question, Mike, and one we would have answered much differently a year ago. We're right around the anniversary, reset anniversary of the start of the Russia-Ukraine conflict when U.S. and European credit markets began to dislocate, and then that dislocation accelerated in the build-up to natural gas pipelines in the continent last summer, but ultimately, the continent managed the gas shutoff really well, and Europe has avoided the worst-case scenarios. Certainly, a warm winter helped. So much of that valuation dislocation between U.S. and European investment grade or U.S. and European high yield alone, you know, it's narrowed, and those trading relationships look much more normal, maybe even through normal, Europe looks like it may even avoid recession. China reopening is helping in Europe considerably. Gas prices are down sharply off the peaks that they skyrocketed to over the summer, which should boost European industry alongside that China reopening. So, there's always cross-currency dislocations and opportunities we invest against, but thematically, it's harder to identify asset class-level dislocations that are investable, and we're really hard-pressed to identify big sectoral excesses that may cause dramatically different return outcomes in either market. I mean, the one I would highlight is the European property sector that we've written about. It ballooned in size during the low-interest era from a very small component of the European investment grade market, to now the third largest sector in European investment grade, and the low interest rate costs that fuel growth in sector are now causing it to suffer from the exact reverse as rates have gone up, so higher financing costs for the businesses, and then the discount rate effect of higher interest rates on property valuations. So, it's predominantly been a high-grade sector, but there's lots of dispersion in that sector now. We're going to have a bunch of fallen angels into the European high-yield market, and that's going to present really interesting opportunities for active security selection. So that's the one sector I would highlight in Europe that's creating, you know, really interesting opportunities at the moment.

Mike: Yeah, and in a few minutes, we'll dive into the impact of higher rates on property values with Mr. Horbacz, who's suddenly a specialist in that. In the meantime, what other kind of leading signals are you seeing in terms of distress? I mean, one thing people look at is the distress ratio. How much of the markets are trading at really low dollar prices or high spreads relative to history? That typically is a good leading indicator of the fall, so what does that look like? And what is your team's forecasts for default rates in the high-yield market and loan market going forward?

Brian: It's interesting. So observed stress in leveraged financial markets right now looks relatively normal versus the post-global financial crisis timeframe. Just under 10% of the combined loan and bond markets in leveraged finance trade at distress levels, which we would define as bonds with a spread in excess of 1,000, and loans with a market price below 80. It's reasonably similar to market convention. And that 10% is roughly in line with what we've seen in the post-global financial crisis period, maybe a couple 100 basis points higher, but nothing overtly alarming, and that would translate to a forward default rate in the low single digits, which is not too dissimilar from our own expectations when we talked last summer before 2023 where we were in the 4% camp. It still seems reasonable, and kind of dovetails with the comments I made at the beginning about credit being in an okay spot, in part because of the healthy starting point for fundamentals, in part because of the relatively short two-year upcycle, so it's hard to identify severe imbalances or excesses that would catalyze an outsized default cycle. So to get a much higher default experience, growth would have to contract meaningfully, and any of the higher default forecasts that are out there, and there are plenty of them, they do just that. They embed an assumed economic decline into that outsize default forecast. One other thing I want to highlight is defaults rightfully get a lot of attention, but I do want to talk about shadow defaults, distressed exchanges, because those are increasingly prevalent in global leveraged finance. They're absolutely a byproduct of a decade of very poor documentation and leveraged credit markets, and now it's coming home to roost. In 2022, there were 20 billion of distressed exchanges. That's a really big number. That's roughly equivalent to all the combined distressed exchanges over the previous three years, which included 2020, the pandemic year when we had about half of the distressed exchanges we have this year. And if you look at defaults and shadow defaults, as I call them, so those distressed exchanges, but defaults and shadow defaults on a combined basis, typically, shadow defaults would be like 10% to 20% maybe, in any given year. In '22, they represented half of the distressed credit events, so it's a way for equity sponsors and equity owners with limited options to try and extract value at the expense of certain creditors, and it's increasingly a prevalent component of global leveraged finance. And I think when you talk about defaults and credit stress, you have to talk about the shadow defaults.

Mike: And the good news is, you know, we have built up a really deep capability at PGIM Fixed Income in analyzing distressed credits and making sure we're on the right side of that equation in as many cases as possible, which has really helped a lot of our clients and our high-yield clients as well over the last few years. So let's end on a positive note. Generally, you know, you have a pretty constructive tone on credit markets in general, which is good, notwithstanding a really bad economic outcome. You talked earlier about some of the adjustments. Sometimes these higher rates could actually portend better balance sheet management by companies, and it seems like we're seeing some early signs of that. What's your view on that?

Brian: Yeah, Mike, I think that's exactly right. We touched on it a little bit earlier but exiting the bull market and rates is going to impute back into corporate behavior, and businesses are going to solve for the optimal capital structure, the right level of gross debt, the appropriate level of gross debt, to have the right level of financial risk. And owners, whether it's a private equity owner or a public equity owner are going to help to govern the appropriate amount of balance sheet risk, so I really do think that over the medium term, it'll be an adjustment process. It'll take time, but companies are going to be more creditor-friendly, in a sense because they're going to want to manage down to lower debt cost, so that they can have excess free cash flow for capital investment, for M&A, for other activities, so I think that's a trend that aligns equity holders and debt holders and will play out over the medium term.

Mike: Yeah, just listening on your credit meetings this morning, there were at least a couple of examples of companies that have bonds coming due this year, and they have enough cash and free cash flow, and the view is they're just going to take those bonds out, instead of refinancing them with new, much higher coupon debt, so that's actually a really positive tailwind.

Brian: That's the importance of understanding that companies aren't frozen in time. They're living breathing things, and they're going to react to whatever backdrop exists. And in this case, they're going to react to higher financing costs, higher cost of capital, and they're going to solve for lower balance sheet risk, lower financial risk in order to find a more optimal level of capital costs.

Mike: That's great. Thank you, Brian.

Brian: Thanks, Mike.

Mike: So, Gary, let's turn to you. First of all, welcome to *All the Credit*. Your experience and expertise is really in analyzing the types of loans that are typically lumped together to create the collateral to support a variety of securitized products like commercial mortgage-backed securities, collateralized loan obligations, and a variety of consumer-related asset-backed securities. So, let's start with an area that many people are increasingly worried about, commercial real estate. What are some of the challenges and headwinds facing that area?

Gary: Yeah, yeah, again, thanks for having me, Mike. Yeah, I think commercial real estate agree with you. There are definitely a few headwinds here, and first, you know, you've already touched on rising interest rates. And this really has a two-fold impact on commercial real estate. First, it increases the cost of borrowing, and so that makes the return from holding commercial real estate lower and perhaps less attractive. Perhaps more importantly, it also reduces property values, and it does that through forcing the commercial real estate capitalization rate to increase. And let me just step back. So, the cap rate really is a key metric that's used to value commercial real estate, and really, the cap rate is the required return to the borrower or the expected return of the other property owner. And as interest rates rise, as risk-free rates rise, that required return should increase, thereby requiring property values to decline. And then secondly, lots of headlines on office, and I think a big headwind here is simply work-from-home and the impact of the COVID pandemic. This is still playing out. I think this is going to be a long-term story. There's still a lot of uncertainty, but clearly, we're already seeing the impact on office properties, so the, you know, loans backed by offices throughout the country. And we're seeing that higher vacancy rates, lower rents, and these are generally longer-term leases. They're generally 5-to-10-year leases, so this is going to take some time to play out, but even companies that have these long-term leases, they're putting space up for availability, and that's having negative impact on rental rates. And so, the net operating income, or the income produced by these properties, is struggling. And I think here, it's going to be a bifurcated story. I think it's over exaggerated to say it's the death of office. I think the better located properties will perform well, better amenities, and newer properties, and it's more that class B, C, less well-located is going to require a lot of CapEx, I think, to keep it alive. And it's not dissimilar from the mall story we've been talking about, you know, class A versus B, C for the past 5-10 years. And then the third really potential headwind here is a recession, and that would likely pressure net operating income for all the property types. It would obviously exacerbate office, and in particular though, hotel loans, and we're very cautious on hotel since those properties really react almost instantaneously to a drop in demand, and it's basically the equivalent of an overnight lease. We've got some significant headwinds, I think, here in commercial real estate.

Mike: So, what are your expectations for defaults on those loans or mortgages that finance the purchase of commercial real estate. It tends to be, as you said, a levered asset class to start with. In fact, there have been a handful, Gary, of pretty high-profile defaults announced within commercial real estate. I think more of them have leaned toward office, like you said, maybe lower-quality, less well-positioned office. Are you seeing any other signs of strains emerging from the actual underlying debt?

Gary: So, there's definitely some well-publicized headlines, and I think they're important. They're big assets, deep, pocketed sponsors, and I think it's rightly grabbing the market's attention. We do think this will continue, but the piece of deterioration is really going to vary depending on which sector of CMBS we're talking about. Let me talk about, you know, maybe the two different sectors. So, I'll start with conduit, and by conduit, what we refer to is really pools of, you know, well-diversified, call it 50 loans on stabilized properties. They're fixed rate, fixed coupon and generally a 10-year term. Here, yes, we expect deterioration, but I think it's going to be slow, and I think there's a couple of reasons. First is, you know, that 10-year term. So the loans that are maturing in 2023, were underwritten in 2013, so even if we think with the interest rates causing cap rates to back up, we think property prices will be down, call it 10% to 20%, maybe 30% for, you know, underperforming properties. Despite that, these loans and properties that were originally underwritten in 2013, property values on average have doubled, and so while there's still significant equity remaining in these properties, and since it's basically a 10-year market, less than 10% of the conduit universe is maturing in 2023. The other side of this for conduit is they are fixed-rate loans, and so at times, we do see defaults during the term of the loan, and that will occur when there's just not enough net operating income to pay the debt service. Generally, net operating income rents have fared very well across really all the sectors with the exception of office. The rise in interest rates really not yet has had an effect on these loans because they locked in -- these borrowers locked in their rates, and so at some point, they're going to have to refi but that's going to be down the road, and at least they've got some time for net operating income to increase to at some point offset higher interest costs if rates stay where they are when they have to refi. So again, we do expect defaults to go up in conduit. I think most of the pressure is going to be in office. It's going to take time to play out, and I think over the next year or so I think it's going to be minimal.

Mike: And these conduit diversified pools, typically the way we're positioned at PGIM Fixed Income, we're almost solely in the very senior, mostly AAA tranches. They really need a lot of these loans to default before we have to worry about any principal hit, so we're really defensively positioned, and your team has done a great job of staying away from those transactions that have a disproportionate amount of lower quality in office and lodging-type of loans, so thanks for the help there.

Gary: Yeah, absolutely. We're positioned to the top of the stack. Maybe moving over to single-asset, single-borrower, or the SASB market as we like to refer to it, so this, as the name implies, is deals that are backed by a loan on a single property or on a pool of properties owned by a single borrower. And here we expect the deterioration perhaps to be much faster than we're going to see in conduit, and there's really a couple of reasons. First of all, unlike conduit, these loans are much shorter term. Generally, they're two-year term, but they generally have a three-year extension options. Close to 40% to 50% of that SASB universe is actually coming up for at least an initial maturity in 2023, so a significant number. Unlike conduit, these loans were underwritten much closer to the peak, so they don't have a lot of that embedded appreciation, and in fact, some loans that are underwritten 2021/2022 are probably now actually and so you're talking about a 60% to 70% LTV. Perhaps these LTVs are 75 to 85, and maybe even higher for underperforming property. So just from a valuation perspective, there's more pressure, and you have this action that needs to be taken to at least try to extend these loans. Secondly, unlike conduit, which are fixed-rate, these are floating-rate loans, and so here you do feel the effect of rising rates, and so for over 400 basis points, the coupons are reacting

accordingly. They're going up by the same amount, which is significant. And so fortunately, lenders do require an interest rate cap to kind of hedge that difference between sort of like a fixed operating income with these rising interest rate costs, but that cap is only for the initial term, and so when the extension option hits this year, the borrowers, they'll have a choice, so most likely be required to buy another interest rate cap, and it's just much more expensive today than it was, and there are going to be at least several points on the loan balance. It's going to be interesting here because I think there probably will be some posturing. I think there'll be negotiations with a special servicer, so I do expect a lot of noise. I think we'll continue to see the headlines that you just mentioned, particularly in the SASB market, and I do think these properties at some point will need equity infusions in order to eventually refi these loans into either conduit or new SASBs. You know, it's going to take some time.

Mike: So, let's shift over to consumer loans. Right? In the last episode of *All the Credit*, I actually interviewed Kaustub Samant. He's our expert on residential mortgage-backed securities, so let's avoid those but, you know, the things that you and your team are following, unsecured consumer loans, auto loans, even credit card balances, and all of which are used to create different securitized products. What are some of the current conditions impacting consumers? And how is their ability to service their debt progressing here? I know there's some signs of delinquencies going up, etc.

Gary: Right. Here, the key headwind, obviously is inflation and the impact it's having on the consumer. And as expected, we're seeing a more significant impact on the lower-income consumers, just given the percentage of income that they have to dedicate to food, gas, energy, paying rent, and so forth. But there are tailwinds here, though, as well, for the consumer that still remain. It's really a resilient job market, and at least nominal wages continue to increase, a moratorium on student loan payments, and then as you mentioned, there's still elevated savings relative to pre-COVID, but that is getting spent down. All that has come to create basically conditions where we are seeing defaults rise again. I mean, they were abnormally low post-COVID given all the stimulus payments. They are reverting back to where they were pre-COVID. We do see a difference between lower income and higher income. Lower income, definitely more deterioration, and they're probably above pre-COVID levels at this point, defaults and delinquencies. Higher income still is increasing as well, but that cohort really is still below pre-COVID levels. I think here, there are certain ABS issuers that were more focused on the higher-risk, lower-income cohorts that perhaps, you know, loosened the underwriting box post-COVID, where things were looking really good, a lot of focus on online lending and perhaps artificial intelligence lending algorithms and their defaults, you know, again, this is select, far exceed what we saw in pre-COVID. And the financial press is really focused on these few instances, and I think perhaps that paints a bleaker picture than is warranted when we step back and we look at the whole consumer base or at least what we're seeing in ABS.

Mike: Do you see any distinction at this point between auto loans, let's say, or unsecured consumer loans, or credit cards, or is it pretty broad?

Gary: No, there's distinction and let me just step back. I think going forward here, I think assuming we can get inflation under control, we do expect defaults and delinquencies to continue to deteriorate marginally for both prime and subprime, but we really think changes in unemployment are going to be the key determinant going forward for changes in defaults. And here we generally would just kind of call it like a one-to-one relationship. So, in a soft landing, I think things marginally deteriorate. In a hard landing where unemployment goes to 6%, yeah, we'll see more deterioration. It'll be more significant. In autos, so again, these are loans made three-to-seven-year terms to prime and subprime borrowers for both new and used vehicles, prime has continued to perform well. We expect that to continue. There was some deterioration

right back to pre-COVID levels, and in a hard landing maybe a little worse, but we're not anticipating really any pressure on the ABS trust. We think the structure is resilient. Subprime again, you know, absolute losses, of course, are higher. We're probably above generally because it really varies substantially by issuer, generally above pre-COVID levels, and we expect that to continue to deteriorate. I think here the ABS trust certainly the top of the capital stack, I think is going to be well protected. There may be select issuers that if we do hit a hard landing, perhaps down in credit, the bottom of the stack may have some issues. Turning to unsecured consumer, so these are uncollateralized loans made to consumers, primarily subprime, and here we see a big distinction in the type of lender. So, lenders that may maintain a physical presence, so branch-based underwriting, in-person underwriting, we see far better default performance than those lenders that are more again online and perhaps got a little more aggressive post-COVID. So here, I think the brick-and-mortar lenders, again, you know, we are seeing deterioration. It's moderate, and we're not overly concerned. And again, we think the structures are resilient and things will be fine even in a hard landing. These other players with a more online presence, really hard to predict. These are some of the players where defaults are well in excess of what they were in pre-COVID. Our guess is they'll continue to deteriorate, and in a hard landing, probably even more significantly. And then in wrapping it up, credit cards, here, really not much of a story to tell. The large money center banks that utilize ABS to finance that business generally are lending to prime consumers. The accounts that are in the ABS trust that we see are very seasoned. You know, you're lending to really the best, highest-quality borrowers here. And again, yeah, we are seeing some deterioration, again, perhaps back to pre-COVID levels, but even in a hard landing, we're not expecting anything material here, and I think credit is going to be fine here, in credit cards.

Mike: Well, thanks for all that insight, and Brian Barnhurst, thank you. And Gary Horbach, thank you for all that color. Just to summarize a wayward position, you know, you get a good sense from these deep credit resources that we have seen risks picking up, and we've anticipated this as growth slows, so we've actually been really proactive in making sure that our portfolios, our position in the right property types, in the right types of collateral, up in quality when necessary, looking at more seasoned loans in some cases. So, we've actually taken a lot of the right steps to really try to defend our portfolios against that probability of recession. So, thank you, and thank your, you know, huge credit research teams for doing all that. I just want to remind all of our listeners, you can see all of our thought leadership on our website PGIMFixedIncome.com where you can look at some of our real hard-hitting quick updates on the bond blog. It's on our website, you can also type in the bond blog. In fact, a recent piece by Robert Tipp, our head of Global bonds, called, you know, *Bonds Are Back; Yield is Destiny*. is getting a lot of play, and these higher interest rates that we're talking about today are actually really good ultimately for fixed-income investors over the longer term, so that's something that's really a good read. And so, I actually interviewed Robert in a recent podcast a couple of months ago, so you can listen to that one as well. Otherwise, thank you again for listening. Until next time.

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