Allison Nathan: The US commercial real estate industry has come under substantial stress this year as interest rates have continued to rise and banks have pulled back on lending following the regional banking crisis in March. No where is this stress more visible than in the office sector where these cyclical pressures have combined with a structural shift toward remote work to cause a sharp decline in property values. This is inflicting sizable pain on real estate investors. And it's also fueling bigger worries about the stability of small and regional banks. I'm Allison Nathan and this is Goldman Sachs Exchanges.

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On this special episode, we're breaking down the risks from
the commercial real estate crisis that were the topic of our most recent Top of Mind report now available on GS.com. We ask Scott Rechler, chairman and CEO of real estate investment firm RXR and Stijn Van Nieuwerburgh, professor of real estate and finance at Columbia Business School how the crisis might evolve, the implications for investors, and whether it could spark another round of the regional banking crisis.

Rechler first describes the challenges facing the commercial real estate market. He's pessimistic about the outlook for office properties in particular. But he also says that it's wrong to paint all office buildings with the same brush because some will be competitive, and others won't be.

Talk to us about what's driving stress in the commercial real estate sector right now.

**Scott Rechler:** So, the commercial real estate sector's stress is, I think, impacted by two things. One is the regime change in terms of going from a near zero interest rate environment for the last decade plus to a more normalized interest rate environment. Anything that was financed or purchased during that low interest rate regime needs to be
revalued and recapitalized to reflect the current interest rate environment. So, as loans are coming due, that's putting stress on overall real estate valuations and their capital structures.

If something was bought thinking it was relatively low leveraged, as they now need to refinance with a lower value and higher interest rate, it turns out it has too much debt on it and needs to have equity injected. And that has been coupled with also some other structural issues and cyclical issues that are impacting other sectors like office and the hybrid work environment.

The return to office debate has been determined, which is that people are returning to office. But the hybrid world is the new normal. Anywhere from three days a week to five days a week seems to be where people are settling. If we look at New York as an example, we've seen a big uptick in the transit systems, over 70 - 75 percent to where they were in 2019. We've seen in our offices on Tuesdays, Wednesdays, and Thursdays, we're back to levels that we would have normally seen in 2019, pre COVID levels. Mondays and Fridays, you still see a drop off in those buildings.
So, we're rebalancing to this return to this hybrid world. And also, on multi family, there is a surge of supply on the multi family space.

There are a million units of new development coming. So, that's going to weigh down rents for an extended period of time. So, there'll be a couple year period where multi family is going to be challenged. So, every segment of the real estate market is being impacted by this rate regime change and having to reprice and recapitalize.

But then there are certain sectors that are being impacted more because of structural or cyclical elements as well.

**Allison Nathan:** But is this story overexaggerated in terms of the stress that the sector broadly is facing?

**Scott Rechler:** As it relates to the office sector specifically, I think that the sentiment is worse than the reality. Everyone paints all office buildings with the same brush. **be the you need to distinguish between which of the buildings are the ones that are going to be competitive and which ones are not going to be competitive.**
And the reality is there's new tenant demand for the right buildings. Activity is very focused on the class A, higher quality buildings located next to public transportation. That magnetic and that attracts teams to come back and be collaborative and energizing, that has amenities, that has the right infrastructure, the right floor plates, in the right neighborhoods, etcetera.

We've leased about a million square feet of space this past quarter to a mix of law firms and consumer product companies and fashion companies and media companies. And the analogy that I think does a good job of describing this is what happened in the mall space after e-commerce became prevalent, right? When e-commerce became prevalent, people could buy online and there was a whole debate as to is there a future for malls? And over a number of years the malls that were convenient to get to, that were really about having an experience as an outing ended up flourishing. And the other ones became competitively obsolete and have been slowly being emptied out and converted for alternative uses or torn down. And I think that's what we're going to see with office, right?
The buildings that can be compelling and attractive, that people would want to commute to and come back to the workplace for will do well. And there will be a delineation between them and the other buildings, which then are going to need to find, as they become competitively obsolete, they're going to need to find alternative uses for those buildings or they'll be torn down over time.

**Allison Nathan:** Stijn Van Nieuwerburgh however believes that even the highest quality office buildings are vulnerable and could see sharp declines and value.

**Stijn Van Nieuwerburgh:** The office market I look at basically from the lease level up at the cash flows. A lot of the data I use for this is a new data set of lease level data from a company called CompStak, which is a crowdsourced broker lease level data.

And what we find in that data set is that cash flows to office buildings have fallen around 20 percent since the onset of the pandemic in real terms. Right? And that's a big shock. But it's important to realize that only about a third of all the leases that were outstanding before the pandemic have actually come up for renewal. Because a lot of these
leases are long term in nature. Which means that 2/3 of leases have not come up for renewal. And so, if those tenants have to make an active space decision, a lot of them in the next three years, they will likely make similar decisions to the tenants that have already made those decisions. And those decisions have been often to not renew these leases or to renew for substantially less space.

And so, we expect a further deterioration in the occupancy rates in these offices. And further deterioration in the cash flows and the revenues of these properties.

We've built an asset pricing model to value the office stock in the United States. And our headline finding is that the office stock is worth about 40 to 45 percent less than it was before COVID as a result of remote work, hybrid work, as well as some interest rate changes. So, that's a huge shock. 45 percent. And that's an average.

And at the same time, we document flight to quality. So, the A plus, the trophy assets, maybe the top 10 - 15 percent of the market is doing fairly well, often because it attracts the tenants that are leaving a worse building and taking less space in a better building, in a more amenitized
building. So, that space we calculate loses only about 20 percent in value. Which means that the rest, the A minus, B, C class office loses 60 percent or more.

And so, when we look at what's happening today, and we do start to see these types of trades. Earlier, a couple of buildings traded in New York for 66 percent discounts to their pre COVID values. In San Francisco we've seen several trades at even more, 70 - 80 percent discounts to pre COVID valuations.

So, even though we've seen relatively little trade, we are beginning to see this distress materialize.

**Allison Nathan:** And Nieuwerburgh is less convinced than Rechler about the return to office. He notes that office occupancy rates have barely budged over the last year and a half.

**Stijn Van Nieuwerburgh:** Actual physical occupancy data points don't show a strong return to office. One indicator that a lot of people follow is the Kastle turnstile swipes [?]. The latest data indicates that office occupancy stands at around 50 percent of pre-pandemic values. So, it's half of
what it was. This 50 percent number has been very stable for the last roughly 18 months.

Other indicators like a company called XYSense that is using sensor data to measure physical presence in the office suggests that office use is around 30 percent. And before the pandemic it was, maybe 60 percent. So, that's also consistent with about a 50 percent drop in occupancy.

Even if some people return to the office, offices are still widely underutilized. There is basically a lot of waste in the office. Even before the pandemic, there was a lot of waste in office. And I think people have come around to the view that there might be ways of rationalizing their office demands. Companies are able to do with less office space.

I also think we've got to make more progress ecologically in how we organize our labor force and find new ways of being as effective with less space. A lot of people want to tell the cyclical story where we're still rebounding from COVID. But I really see this as a structural change in office demand.

**Allison Nathan:** Rechler and Nieuwerburgh do agree that achieving stabilization in the commercial real estate market
won't happen quickly. Rechler believes that we're still in the early innings of what he sees as a years long process of revaluation, deleveraging, and recapitalization, akin to the aftermath of the savings and loan crisis.

**Scott Rechler:** The entire CRE space is going through this interest rate regime change recapitalization and revaluation, right? And it's going to require re-equitizing, deleveraging the sector as we go through that process.

I would liken this to the early '90s and the savings and loan crisis. And if you recall, what drove that was we had tax policy that was in place that drove capital to commercial real estate amongst other assets for tax reasons, not necessarily for the fundamental values. It artificially inflated values.

And in 1986, they changed the tax law. And so, anything that was bought or capitalized pre 1986 tax law had to be adjusted in value for that new regime, that new tax regime. And in the early '90s, that took two, three, four years as loans matured and had to get through these restructurings and a lot of losses with lending institutions and owners that had to work through that process. So, I think that's
what this compares to.

You know, in '08, it was really more people went into '08 with a lot of speculative borrowing, high leverage, speculative assumptions assuming high pricing and assuming things were going to continue to get higher. And that created a highly leveraged system that imploded. But then they were able to fix the spots where the greatest risks were and then inject capital and reduce interest rates to help this recover relatively quickly.

I don't think this is going to recover as quickly. It's going to be more of a process that we need to work our way through.

**Allison Nathan:** So, where are we in the process?

**Scott Rechler:** We're in the early innings is the reality because a lot of the recognition as to where the valuation marks are and the loans that are maturing haven't yet happened. Right? If there's $2.6 trillion of loans maturing between now and the next five years and they all have to be reset in terms of where rates are, we're just starting to see this as we're heading into the fourth quarter. Lenders are
starting to capitulate and realize, okay, I need to mark loans. I need to recapitalize. And I think we'll see that starting to pick up momentum as we go into '24.

And then really, I don't think till '25, will we have worked our way to a point where we have some stability. Most of the liquidity on the sideline is opportunistic liquidity. Looking for higher yielding, higher octane-type investments. The challenge is you still need a more traditional first mortgage lender to be active to help participate in this recapitalization. And that is something that is going to be a little bit more complicated because the traditional lenders are under pressure to reduce their commercial real estate exposure, whether that's from the regulators or the rating agencies or their shareholders or their boards. And so, they're not actively lending today. Right? They're lending to their best customers, to their best projects. And so, we may need to spark that.

**Allison Nathan:** Nieuwerburgh, for his part, believes that the solution is a reallocation of office space for other purposes. But such reallocations will take a long time, even when they are physically and financially possible, which they often aren't.
**Stijn Van Nieuwerburgh:** The fundamental problem is we have a resource with allocation. We have too much space used for office and too little space used for other things. And so, the only solution in the long run is to reallocate that space and to adaptively reuse it for other uses. And that process, in general, it's a painful process because somebody needs to lose their shirt for that reallocation to happen.

The good news, I think, is if you can buy that asset at a cheap enough basis, there's a lot of alternative use that becomes possible that was not possible before. So, it's not just conversion from class B to class A plus office, that's one conversion play, taking advantage of the flight to quality. But there are many other conversion plays possible. You could imagine last mile distribution centers at that price. You could imagine more mixed use, more retail, entertainment space. Pickle ball courts. Basketball courts. You could imagine medical office, hospital space. Education space. Childcare.

And then, of course, the big one is housing. Right? We have too little housing in all of our cities. It turns out housing is
tricky because oftentimes these large offices have floor plates that are not conducive to apartment living. Or it makes for strange layouts. Often there are zoning and building code regulations. Apartments must have bedrooms with windows. Sometimes these windows must be operable. Turns out a lot of glass and steel skyscrapers don't have operable windows. They must have multiple staircases. You have to bring a lot more plumbing in to have a lot more bathrooms than you have in a typical office building. It's hard to get light and air into the interior of the building. So, there's lots of loss factors associated with all that interior space that you cannot effectively use.

I have done a study around this conversion, which is called converting brown offices into green apartments. And the paper does two things. It tries to quantify what fraction of office buildings is physical suitable for conversion. And we end up with a number around 10 to 15 percent of offices in the US are physically suitable for conversion.

And if you do the math, that turns out to be about maybe 400,000 apartments nationwide that we could create, which is not a small number. But it's also not a huge number. So, that's one point we make.
The second point we make is that the financial return of these conversions is often very tricky. I like to describe it as a narrow path. There's a narrow path to a profitable conversion. And the key factors are what is your basis? How cheap can you buy that old office building? What is the rent that you can charge when you're done converting your apartment? That sort of depends on the strength of the rental market at the time that your conversion is finished. And the cost of the conversion itself. To soften the hard costs of the conversion, which are a little bit market dependent. The structured costs have gone up in the last several years. It's not easy to construct. It takes time. It's expensive.

And so, to solve for, let's say a 15 percent return IRR in these types of conversion projects, you sort of need the stars to align.

And then the other point is that politicians want to create affordable housing. The last thing they want to do is create more luxury housing. They want to create affordable housing. Now, once you impose an affordability mandate on a fraction of these apartment units that you're creating,
that severely hurts the MTZ [?] of those conversion projects to the point that they're no longer privately profitable. So, nobody would undertake them unless you had subsidy.

Allison Nathan: In short, Nieuwerburgh sees the current crisis in office as a train wreck in slow motion.

Stijn Van Nieuwerburgh: The way I think about this, there's all these lags [?] built into the system. The tenants are on these long-term leases. Or these leases are slowly rolling off and they're slowly not being renewed. This then slowly causes refinancing issues for the debt. And the debt is typically ten-year fixed. So, it's when your tenants didn't renew, and your debt is coming up that you might have trouble refinancing these loans.

Then the banks will typically try to work with you for a while before they give up. So, that adds further delays. And then it takes another three to four years to convert this asset from an office into an apartment building. So, this whole thing could drag on for five, six, seven years, I think, easily before we get to the bottom of this. So, I've been calling this a trainwreck in slow motion.
Allison Nathan: We then asked Rechler and Nieuwerburgh what this could all mean for real estate investors. Both see significant pain ahead for equity as well as debt holders. Here's Nieuwerburgh.

Stijn Van Nieuwerburgh: So, a typical capital structure for an office or, let's say, downtown retail property would be roughly 30 to 40 percent equity and 60 to 70 percent debt. The equity in office, or sort of more generally in commercial real estate is extremely widely dispersed. It's a combination of owner/occupiers, companies that own their own offices, pension funds, sovereign wealth funds, some REITs, publicly listed vehicles, or some non-traded REITs. You have a lot of local owner occupiers. Could be family offices. Could be some dynasties of local families that have been owning buildings for generations. It's all of the above.

So, that's good and bad news. It's bad news in the sense that your pension fund might very well have a bunch of offices in its portfolio. And so, this might end up hurting all sorts of people that don't even know that they had exposure to commercial real estate.

It's also good news in the sense that it's not concentrated
holdings in a few levered institutions. So, these
deleveraging cycles, I think, are not necessarily going to be
a big problem on the equity side.

The debt is much more concentrated. CRE debt, about 60
percent of it is banks. Among the banks, 2/3 of the risk is
held by smaller, regional banks. The second largest holders
are insurance companies, around 14 percent. The CMBS
market is around 10 percent of the debt. And then you
have some mortgaged REITs. Some publicly listed REITs
that own debt. That's around another 10 percent.

Now, if you think that my 40 percent reduction in value
number is correct, it means that in the typical office deal,
the equity would be wiped out because there's only 40
percent equity. And if you believe in my 60 percent
number, decline for class B office, it means that not only is
the equity wiped out, the debt also takes roughly 30
percent hit on CMBS. Historically, losses given default on
retail bonds have typically been on the order of 50 percent.
So, 50 percent loss given default for the debt is not an
uncommon occurrence in a distressed situation in real
estate.
**Allison Nathan:** And here's Rechler.

Who will bear the pain of restructuring?

**Scott Rechler:** The pain will be felt across the board. It's going to fall on the borrowers that borrowed are going to have to take write downs and take losses associated with this. And the lenders that lent are going to take write downs and losses from this.

And when you go through a valuation adjustment, again, depending on which sector we're talking about, some are going to be worse than others, but we've seen in the office space already, we're working on transactions where we're recapitalizing loans at 50 cents on the dollar from where those loans were pre this period. So, in that instance, right, the equity is wiped out and half of the loan is wiped out of that.

**Allison Nathan:** The key question though is what the stress in commercial real estate could mean for banks, the largest holders of commercial real estate debt. Rechler warns that another round of the regional banking crisis could be on the horizon.
**Scott Rechler:** Regional banks have the greatest level of exposure because of commercial real estate bank loans, regional banks hold about 70 percent, or banks that are 250 million or below. So, they have the commercial real estate vulnerability right now on their books. Which they got this [UNINTEL] marking this CRE exposure combined with also the same duration risks that we saw at Silicon Valley Bank combined with the fact that it's harder for them to keep deposits and more costly for them to keep deposits than it used to be in the world of deposits move around more quickly. And the regulators are going to be more focused on them, so their cost of doing business has become greater than it was before.

What you saw with SVB and Signature Bank and First Republic, that was one round. But I think there's another round of these banks that will play itself through. Maybe not as large in terms of the scale of those banks. But that it will play itself through and become part of this cycle the next couple of years as we get through dealing with the challenges.

And so, I wouldn't be surprised if two years from now
there's 500 to 1,000 fewer regional banks. I'm not saying they all go out of business. But I could see that some do go out of business. And then some heavy consolidation of regional banks that realize that for them to be competitive, they need scale to be able to deal with the incremental costs of running their business. Different than in '08 where there was a concentration on some big money center banks. This will be more broadly felt. And felt in communities that relied on these regional banks to be active lenders for small businesses, personal loans that may not be as active because of that.

**Allison Nathan:** Nieuwerburgh also worries about another round of the March banking crisis.

**Stijn Van Nieuwerburgh:** I wouldn't be surprised if a couple of hundred small banks toppled over. That wouldn't necessarily be a big problem to the broader economy. I also see consolidation.

I think the closest parallel to this is what happened in the '80s with the savings and loan crisis. Similarly, we had a huge real estate boom preceding it. We had weakness in commercial real estate back then. And we had a rapid rise
in interest rates. So, these are all parallels. And as a result of all of these things, ultimately, 747 thrifts [?] failed in the United States. And the Resolution Trust Corporation had to be invoked to essentially sell all the distressed commercial real estate assets that these thrifts were holding onto. And that ended up costing the taxpayer $150 billion in those days. That was a lot of money.

So, is something like that possible? I think so. A few 100 banks going under. One thing that people, I think, underappreciate is that banks have actually three times more CRE exposure today as they did in those days or in the mid '80s. That's a big difference. Tripling of that exposure.

And the other thing that people sometimes say is in those days we had over building of commercial real estate. We didn't have so much in the supply increase this time. But at the end of the day, the problem is the same. We have too much office right now in this time. It's because remote work reduces the demand. But it's still the same problem.

Ultimately, we have more office than we need, just like we did back then. So, I think that's actually a pretty good
analogy. And banks are extremely levered, like ten to one. So, as a fraction of equity, the average amongst small banks under 10 billion is their CRE exposure is 280 percent of their equity. For medium sized banks between 10 billion and 250 billion, that number is 180 percent. And for the largest banks, it's around 55 percent.

But even 55 percent of your equity, that's a big exposure if there's a 10 percent loss. It's a non-trivial shock.

If the CRE shock was the only thing that hit the US economy, it's unlikely to be a large systemic crisis. But this shock is not happening in isolation. Rates have structurally gone up. Everything is repricing, not only CRE. And not only office, but also apartments and industrial and also all sorts of other corporate loans are going to have to reprice and going to have difficulty refinancing. So, it's just a much broader shock.

And when interest rates go up, banks lose deposits. Deposits are leaving the system. And it's supposed to contractor lending. That's what the Fed is hoping to accomplish by raising interest rates. And that's, in fact, what's happening. The question is, are the banks going to
overdo it? And are they going to essentially tighten lending standards so much that we're going to get into a credit crunch that could potentially tip the economy into a recession?

Credit standards today are about as tight as they were at the height of COVID, as well as at the height of the GFC. And it's not just CRE lending standards, it's also CNI lending standards, it's also credit card lending standards. So, this is already spilling over to the broader economy, even though the risk hasn't fully materialized. My benchmark is the mild recession that could potentially come from all of this.

**Allison Nathan:** So, what's our main takeaway from these conversations? Commercial real estate risk is one to watch. I'll leave it there for now. If you enjoyed this show, we hope you follow on your platform of choice and tune in next week for another episode of Goldman Sachs Exchanges. Make sure to like, share, and leave a comment on Apple Podcasts, Spotify, Google, or wherever you listen to your podcasts. And if you'd like to learn more, visit GS.com and sign up for Briefings, a weekly newsletter from Goldman Sachs
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