Global bond yields have moved sharply higher in recent weeks, setting the stage for a higher for longer rate regime. So, how much higher can yields move and what are the implications for investors?

Markets are going to try to feel their way to what level of yields the economy can sustain or other markets can sustain. And so, I would not rule out that you see an extension of the sell-off. However, I think that the sell-off would not stick. Meaning to the extent you see further sell-off from here, you increase the risk of a sharper reversal in these yields.

I'm Allison Nathan and this is Goldman Sachs Exchanges...
To help make sense of the turmoil in the bond market and the impact on economic growth in markets, I'm sitting down with Praveen Korapaty, chief interest rate strategist for Goldman Sachs Research and Anshul Seghal, co-head of US interest rate products trading in our Global Banking & Markets business. We'll first turn to Praveen who's joining us remotely from Europe. Praveen, welcome back to the program.

**Praveen Korapaty:** Good to be on.

**Allison Nathan:** So, let's start with some broader contexts here. Bond yields, obviously, they've been on the rise since early last year when the Fed started hiking substantially to deal with the inflation problem. But we've seen a particularly sharp sell-off in US treasuries in recent weeks. So, talk to us a little bit about what's behind that move.

**Praveen Korapaty:** I'd say there's a confluence of reasons. Now, if you go back a few months, most investors
were expecting a recession by the end of this year. Growth data all summer suggested that that was extremely unlikely. So, the first phase of the sell-off you've seen in bond yields is simply an upward growth re-rating and decline recession odds.

The second phase, which we've seen over the last few months, was really about investors internalizing the Fed's higher for longer message. Now, it seems to have broken through. We had thought that investors might take some time to come to this conclusion. But it's been a bit faster than what we thought they might take.

Finally, I think many investors believe this repricing is because of the unsustainable fiscal trajectory. Now, with the US looking set to run large deficits for the foreseeable future, there could be two ways rates appreciate higher. First, as still expenditures are stimulative, then you could see high growth rates support higher rates. And secondly, if the supply of debt combined with the lack of eager buyers could push up yields. It could be market clearing levels should be higher.

Now, I should say we're skeptical on both counts on these
latter two points. And there are a variety of reasons which we can discuss. But, of course, if a sufficiently large number of investors believe this, the bond vigilante narrative that you may have heard of could take hold at least for a while.

**Allison Nathan:** So, how much further can the sell-off in bonds extend after this very big move we've already seen?

**Praveen Korapaty:** Our view here is that we are pretty oversold. Our fair value measure here is closer to around 4.3 percent. And so, clearly, by that metric we have over overshot. Nevertheless, having said that, when rates break out of an old regime into a new regime, it's not the case that you move from the old regime to the center point that's a new range. Markets are going to try to feel their way to what level of yields the economy can sustain or other markets can sustain. And so, I would not rule out that you see an extension of the sell-off.

However, and this is an important caveat, I think that the sell-off would not stick. Meaning to the extent you see further sell-off from here, you increase the risk of a sharper reversal in these yields.
**Allison Nathan:** Let me just clarify. When we talk about this new rate regime, are we talking about just in the US? Or is this really more of a global phenomenon?

**Praveen Korapaty:** I think it's a global phenomenon. But in the US, you see to a great extent partly because the US economy, so far at least, has shown greater signs of resilience. Meaning you could see the US economy, with the Fed having hiked more aggressively than many of these central banks, still outperform these other economies. So, the economic response is giving a signal to investors as to how much where a rate level shift each particular economy could bear. And given that the US economy appears the most robust, you see a larger shift happening here.

But remember, even in Europe, just last cycle we were talking about Japanification and perma-negative rates. So, there has clearly been a regime shift there as well.

The last leg is what's in question. Clearly, growth data in Europe has been a bit weaker. So, it's unclear if we get that final leg of repricing that we've seen in the US play out in Europe. There have been spillovers, I should say, from US
long end yields to global long end yields. The question is whether it will stick as readily there as it might in the US.

**Allison Nathan:** That was my next question to you, which is how are bond markets around the world responding and reacting to these moves in the US.

**Praveen Korapaty:** So, you're seeing a sell-off in sympathy with US long end yields. Now, what is the impact of this move? I think it could vary by region. So, let's take Europe, for example. As I said, Europe does have a weaker growth outlook in the near-term. And the rise in long-end yields is a tightening of financial conditions. You don't want necessarily tighter financial conditions if you're already starting from a weaker place.

For a place like the US, where we've been growing above potential, it perhaps can weather this rise or tightening of financial conditions better and easier than a place like Europe where you're already at very low growth rates. And so, the sort of sell-off and the accompanying financial condition tightening may be unwelcome.

And just to elaborate on that a bit, one instance where you
see that show up clearly is in the case of Italy. Debt sustainability issues have come back before. And really, the question is whether the current levels of real rates are something that is compatible with the sustainable trajectory. Clearly, markets are questioning that. And so, I think this is going to play out differently in each region. And that will depend on where they are in their growth and business cycle.

**Allison Nathan:** And so, as you've said, we've seen bond yields basically reacting to the resiliency in the US economy and the Fed adopting this message that you're going to have to see rates higher for longer. The marketing internalizing that. But what's the risk that we see this higher for longer rate environment then start to actually weigh on economic growth? We've talked a lot about consumer resiliency. Will we see economic spillovers from these higher rates?

**Praveen Korapaty:** It's entirely possible. That remains to be seen. So far, the US consumer and economy as you said have been remarkably resilient to interest rate increases. Now, if you go by historical experience, this rise in interest rates should both directly and indirectly
contribute to tightening financial conditions. Indirectly because it might push equities lower, strengthen the dollar and so on. Our economists have a rule of thumb that says that if you have a 1 percentage point tightening in financial conditions, that roughly tightens growth by 1 percentage point over the next year or so.

And it's not to mention how much tightening are bad because it depends on the starting point. But let's say we add about a 50 basis point or so tightening in financial conditions, that should be about a half percentage point on driving US growth over the next year.

**Allison Nathan:** And so, is this all good news for the Fed? The market's finally getting the message that rates need to stay higher to reign in inflation and solve this problem for them? And then, what does it really mean for their next move?

**Praveen Korapaty:** So, some of this is not unwelcome news. So, clearly, investors for a long time believing or, rather, disbelieving the Fed in its higher for longer message meant that the long end didn't quite participate with the Fed tightening campaign. And so, might have been upon
the Fed to actually do a bit more at the front end. Now that the long end has caught up, it is helpful in the sense that they may have to do less. But there can be too much of a good thing.

To the extent you see the sell-offs continue, you may actually tighten financial conditions too much. And certainly, that is probably not something the Fed wants either.

The problem, of course, is unlike the front end which the Fed controls directly, the Fed doesn't really control the long end. That is still in market price. And so, it doesn't quite have the same degree of control in how financial conditions are affected by these moves in long end rate. So, while it can hope that the move is going to stall out, if this were to continue another 50 or 100 basis points, I think that could end up being problematic rather than a good thing.

Allison Nathan: And so, just to quantify all this, you said you think that the recent moves have been a bit oversold. But what is your forecast for ten-year treasury yields in the US end of this year, end of 2024?
**Praveen Korapaty:** So, end of this year, our forecast is 4.25 percent for ten-year treasury yields. We actually see the same level end of next year. But the path is not one of just being stagnant. We think there are some variations, some ups and downs along this path. But it so happens that our forecast for both those years are 4.25 percent. Both, I should say, lower than current levels.

**Allison Nathan:** So, what will it take for the market to correct as you expect?

**Praveen Korapaty:** There are two things we've been looking out for. One is that patch of soft data that would bring many investors back into worrying about a recession, which they just until recently were worried about. And two, you could see other markets, like equity markets, crack under the weight of higher rates. And that could also lead to a correction in yields.

Now, in terms of demand, I've been asked why there is this air pocket in demand that is pushing yields higher. And the general phrase I hear often is that I'd rather chase a rally than catch a falling knife. What that means to me is that you could see wild swings on the way up. But you could
equally see a sharp reversal once you get either that soft economic data or you see equity markets crack.

Allison Nathan: And then all of this talk about higher for longer regime, where do we ultimately expect long end yields to settle at?

Praveen Korapaty: If we don't have this recession, which isn't in our modal forecast from our economists, you could see ten-year yields settle around our year end forecast, so 4.25 percent. That's our fair value estimate as well. So, that's roughly where I would expect yields to settle over a longer period of time.

There are probably some risks in the other direction as well. I mentioned if there's a recession [UNINTEL] lower, because then investors would question whether we are, in fact, in that higher for longer regime. So, you could see that reset lower.

The other side of the story is if the economy is indeed resilient, you could actually see maybe inflation being a little sticky earlier than we think. And perhaps that would lead to upward repricing in yields. And the second, which
is somewhat more speculative, is the potential for generative AI to boost potential growth, at least temporarily, for a period of about five to seven years. That could support higher real rates in the economy.

So, there are these risk factors out there that give you this distribution. But if I had to pick a modal value, I would say our current year end forecast of 4.25 percent is a pretty good one.

**Allison Nathan:** Thanks so much for joining us, Praveen.

**Praveen Korapaty:** My pleasure.

**Allison Nathan:** We'll now turn to Anshul Seghal from our Global Banking & Markets business for his perspective on the market impact. Anshul, welcome to the program.

**Anshul Seghal:** Thank you for having me.

**Allison Nathan:** So, I was just discussing with Praveen that, broadly speaking, in recent weeks the market has really seemed to buy into this higher for longer rate regime. And we've seen this big sell-off in bonds. Talk us through
what you're seeing in terms of that sell-off and implications across other markets.

**Anshul Sehgal:** In terms of the broad sell-off that we witnessed, it's accelerated in the last couple of months. But realistically speaking, the sell-off started when the Fed started hiking. The difference is, when the Fed's hiking the front end of the curve, the front end sold off 500 basis points while the back end was still very, very low in terms of yield. What's happened since then is as the Fed's continued on with QT and the economy hasn't really rolled over, lots of people expected that the economy would roll over even when the Fed got to 300 basis points, let alone 537 basis points, which is where we are right now on the funds rate, as that didn't happen, people started to ask questions like, why exactly wasn't the economy rolling over? We always assumed that this was a super levered economy.

And a big reason for that is that the government is 25 percent of the economy today. The net position of the US government every year, fiscally it expands by 6 to 7 percent. Primary deficits are over 4 percent. And this is a global phenomenon. It's not just the US. European
domains are running primary deficits of 3 to 4 percent now. They used to run primary deficits of 1.5 to 2 percent. They've had a holiday in terms of the primary deficit.

So, as the markets basically got more comfortable with the idea that higher yields can be sustained for longer, the long end of the curve sold off. And it's had very little sponsorship for institutional money.

And to understand that, I think it makes sense to look at the last decade - the time from the GFC to the pandemic. In that timeframe, the US government expanded fiscally up by a lot. The rest of the world did not. So, as the US government was fiscally expanding, the buyers of that duration were central banks, the Fed in the case of the US, banks, brick and mortar banks were buying because cost of funds was zero and they could buy five-year treasuries with a 2 percent yield. Banks can lever up, give or take, seven to one. So, they're making 14 percent free tax returns. That hits their hurdle rate. They were buyers of duration for that reason.

**Allison Nathan:** And so, just to clarify, by duration you mean?
**Anshul Sehgal:** The long-dated treasuries.

**Anshul Sehgal:** They'd justify their deposit beta modeling and any number of other things hedging their liability exposure, but by and large, it was a massively positive carry trade that worked well in risk off environments. It was a win/win. And it was insurance companies, which is also a very big thing to actually pull apart.

So, in 2012, the boomers were in their early 50s. They had just gone through a big credit shock. They were preparing for retirement. There was the whole savings glut argument. They wanted to buy duration. They wanted to save for retirement. And that led to less consumption. Anemic growth. But also, a very big bid to the long end of the US rates curve.

The boomers right now are in their early 60s. They are entering retirement. Some of them have entered. A lot of them will be entering over the next couple of years. When they enter retirement, their bid for the long bond isn't there anymore. Where we sit today, the funds rate is higher than the yield on the five-year note. As a consequence, banks
aren't incentivized to lever up and buy five-year notes. They lose money on it.

**Allison Nathan:** Right. So, just to stop you there, Anshul, for a moment. So, we're really just talking about the supply and demand for long-end bonds.

**Anshul Sehgal:** Right. So, you end up in a place where you had many different constituents that wanted to buy sovereign bonds to a place where none of these constituents want to buy sovereign bonds at all. And concurrently, the government's fiscal stance has expanded meaningfully on the side of the pandemic.

So, you've now got a fairly meaningful supply/demand imbalance. Now, again, there were other constituents that over the last 50 years, if you go back pre GFC, the government was still able to place its debt. But that's because if you look at any other prior massive fiscal expansion that we would miss, whether it was Reagan outspending the Russians, whether it was the Great Society, whether it was the Vietnam War, in each of those cases someone was running a surplus outside of America. And as a store of value, they were buyers of sovereign
bonds.

In this world, the government's fiscal expansion isn't going towards any of those things. It's actually entitlement spending, a whole host of things, that are going to the households. So, the eventual buyer of these bonds necessarily will be the household because the wealth transfer that's occurring from the public side to the private side is basically from the government to the household, not from the government to a surplus domain that is exporting goods to America.

So, the question then becomes when will the household be incentivized to basically save more as opposed to spend and buy bonds? The problem there is that the boomers that have been the dominant buyer of sovereign duration, even pre GFC, are actually in retirement at this point in time. The dependency ratio is going the wrong way. The worker is incentivized to basically continue to consume in this current world. At some point, at some level of yield, that will turn. And we don't know what that level of yield is. And that's what the markets are trying to figure out.

**Allison Nathan:** But even though you've gone through
this history, which makes a lot of sense, and you've talked about this bond sell-off that really began early last year when the Fed started tightening to rein in inflation, ultimately, we have seen it accelerate. I think for a long time the market didn't believe that long end yields were going to remain higher. So, what has changed in your view, the market psychology, at this point?

Anshul Sehgal: It was a little bit of a rude awakening for the market because everyone woke up and assumed that some of these constituents will continue to exhibit the same behavior that they had over the last 15 years. The reason the reaction was delayed in my mind is because in the first six months of the year, you had the debt ceiling issue. So, what was happening was as the Fed was doing QT and buying fewer bonds, the government was spending down its own account because it couldn't issue more debt.

Then the debt ceiling got resolved and the government basically issued a lot of debt over a short period of time. Much of it was front loaded. But still, it issued a lot of debt. And then, starting somewhere like end July/early August you had the double effect of QT where the Fed's not buying and the government issuing more. And that's when
everyone realized that, basically, no constituent was a material buyer of long dated duration. And that's why the sell-off accelerated. Then it fed on itself. And you end up in a place where we are today.

**Allison Nathan:** As we're sitting here this morning on Tuesday morning, we are seeing yields falling pretty substantially. I think the largest move we've seen in that direction for, let's say, roughly six months. What's driving that? The big news, of course, over the weekend has been these horrific events in Israel. Is the market digesting that? Or how would you explain a bit of the backup this morning?

**Anshul Sehgal:** So, there was definitely a flight to quality bid to the market when the market opened Sunday night on the back of everything that's going on in the Middle East. In addition, yesterday, Lorie Logan from the Dallas Fed and Jefferson, Vice Chair of the FOMC both spoke. The Fed is concerned about the velocity with which the long end sold off. And they basically, again in Fed speak, it's difficult to read, but most market participants thought that they're not going to be hiking, at least in the November meeting. And to a certain extent, we might have seen the
last hike or there's an increased likelihood that we've seen the last hike and the market priced that in, in addition to the flight to quality bit to treasury.

So, the combination of those things led to a 10-12 basis point rally. And it's a little bit of a consolidation move right now for the market because the market sold off something like 75 basis points in a straight line. You had a bump of payroll print. Market got spooked right after the payroll print. And then the Fed basically came out and calmed markets a little bit. And that's why we're seeing the rally today.

**Allison Nathan:** Right. But yields are still quite elevated relative to where they were.

**Anshul Sehgal:** Absolutely.

**Allison Nathan:** What is the implication? What are you seeing in terms of other assets how they're responding to this big move in bonds?

**Anshul Sehgal:** That's a great question. So, risk assets have taken it on the chin. It's been rough for risk assets.
It’s difficult for me to disentangle how much of it is because the velocity of the move and how much of it is because the discount rate's now higher. So, future cash flows need to be discounted at a higher rate. And that makes owning risk a little more challenging.

For me, I think there are different cross currents when it comes to broader risk profile. So, for example, credit. In an inflationary world, credit should trade just fine mainly because the debt burden decreases in real terms year after year. So, credit has not been challenged this entire cycle. Which makes a lot of sense to me.

In terms of equities, I think to a certain extent, equities have ramped up a whole lot. On the government spending, the fiscal, the combination of all of those things, there was a lot of euphoria. And there is no easy way to put a price on growth stock. So, for all of those reasons, equities continue to look like really good value to me in a world where there is the chance that inflation reemerges in a meaningful way. Equities are much more immune to inflation than bonds are. And the excess government spending is going to the household. The boomers as they retire will be spenders. And they will be consuming. So, as
a consequence, equities, by and large, ought to be supported.

So, for me, the recent drawdown in equities was mainly driven by the velocity of the move. If we could say for certain that the Fed's done with the hiking cycle, I think equities would actually recover a lot more from where they are right now.

**Allison Nathan:** Where do you think the market psychology is at this point in terms of the Fed and what the expectations are?

**Anshul Sehgal:** So, it's complicated because after the speeches by Lorie Logan and Jefferson yesterday, the market took down the probability of a hike in the Nov meeting to about 20 percent from about 35 percent. Which is just risk premium in the funds market. And then it gets complicated from there on out because you might get a government shutdown after that. In which case you're not getting a hike in December. Let's say that happens. Is the Fed really going to hike going into an election cycle when inflation is materially lower, even if it reemerges? As of now, it's materially lower than where the funds rate. So, it
becomes challenging for the Fed to hike again.

So, my personal view right now is that at least in the near-term, the Fed is certainly done with the hiking cycle. The sell-off in the long bond, the tightening in financial conditions that's led to the combination of those things. I think the economy looks fairly tight. Also, Q4 growth is expected to be soggy. So, one would really need to stretch one's imagination to think that the Fed will want to continue hiking into slower growth when real rates are as high as they are.

So, my guess would be, like, between now and February we're not seeing a hike. And then it's enormously difficult. Things would have to turn quite meaningfully for the Fed to hike between February and November. So, most likely, I would say, yeah, the hiking cycle is done.

Allison Nathan: Praveen ultimately expected that yields are going to move lower, not in a straight line, but, you know, his forecasts are more the 4.25 range, end of this year, end of next year. Do you agree with that? Or, you know, do you think that the market generally is oversold at this point? Or where do you think yields might end up?
**Anshul Sehgal:** That's a great question. For me, I can certainly see paths that lead to yields being materially lower than where they are. But then, if the households, the buyer of sovereign debt going forward globally, is the household that excited about buying seven-year paper at 4 percent yield and taking the month to market risk on that? To me, the GFC to the pandemic timeframe was the anomaly where inflation was for long stretches in that period, inflation was higher than where bond yields were. Where we are now is much more normal. There's risk premium in the market. So, can yields go back to 4.25 percent? Absolutely. Do I see yields going back to 4 - 4.25 percent without the Fed reducing the funds rate so that a lot of the participants that we discussed, whether it's banks or insurance companies or sovereign wealth funds, so that makes it easier for them to buy bonds with an upward sloping yield curve? Yeah.

So, like, I don't see yields going to 4 - 4.25 percent without the funds rate coming down a lot more. For me, if placement of sovereign debt is a consideration, then the Fed should cut just for that reason. If it's perfectly legitimate, if inflation's at, say, 3 - 3.5 percent, they can
easily justify 4 percent funds rate. It's stimulative for the economy, which is a good thing. By and large, the housing market, which has just come to a standstill, reemerges. And then, yeah, I can see the long bond rallying 100 basis points from where it is. Absolutely.

But absent the Fed cutting rates or ending QE, it's really hard for me to see the long end rallying. Of course, bad things happen in the world like what we witnessed over the weekend. Treasuries will have a flight to quality bid. But structural buyers do not emerge until the funds rate is lower.

**Allison Nathan:** Fascinating discussion. Thank you so much for joining us, Anshul.

**Anshul Sehgal:** Thank you very much.

Thanks for listening to another episode of Goldman Sachs Exchanges, recorded on Monday, October 9th and Tuesday, October 10th, 2023. If you enjoyed this show, we hope you follow on your platform of choice and tune in next week for another episode. Make sure to share and leave a comment on Apple Podcasts, Spotify, Stitcher, Google, or wherever
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