



MACRO Voices
with hedge fund manager Erik Townsend

Harley Bassman: Convexity Spells Opportunity

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Erik: Joining me now is Harley Bassman, managing partner at [Simplify Asset Management](#). Harley has prepared a slide deck to accompany this interview. Registered users will find the download link in your research roundup email. If you don't have a research roundup email, it means you're not registered yet. Just go to [macrovoices.com](#), click the red button above Harley's picture that says "Looking for the downloads."

Harley, I've been really looking forward to this interview with you this week because so many people are talking about the inverted yield curve. And I don't know the narratives and lore that go along with that. I'd like to push a little harder and drill down in this interview into what an inverted yield curve means specifically, what history tells us about it, and its impact on asset prices. Under what set of conditions does that make sense? Can we get into that in this week's interview?

Harley: Glad to be back. Wonderful to speak with you! Best podcast out there. We're going to talk about that and a number of other ideas of how to go and make money off the curve inversion.

Erik: Well, let's hit it. We've got the slide deck. Where do we start?

Harley: Well, there's a lot of slides here. But don't worry, we're not going to touch all of them. Let's just start with number one. I want to give some background first. Most few guests go into detail on the economy. I'm not doing that. I'll just make the statement that we had too much debt, a debt crisis after the Great Financial Crisis in '08-'09. And the Fed wanted to go and solve that problem. There are two ways out of that: you can grow your way out like we did after World War Two, or you can inflate your way out. They can't make growth happen. So they chose inflation. So inflation was a feature, not a bug. And that was their goal: to try and create inflation to reduce the debt-to-GDP ratio. Now, most people will say this didn't work. I say, au contraire, it worked exactly as kind of planned. We did get inflation, we got inflation in assets, not wages. And that was the problem we've had for the last decade, which has contributed to so many problems. I would say many of our political problems also stem from this, you know, asset inflation, where the rich get richer and the poor, not so much. But we'll leave that for later.

But we had asset inflation, stocks, bonds, gold, art, everything. In the last round here, we finally got fiscal policy. So effectively, Milton Friedman's money drop from the helicopter, and that gave people money, and they spent it, and we finally started to get some wage inflation, which was

good. And that inflation fed through to the overall economy. And you had this increase in CPI, PCE, all the other various measures of inflation that we use, pick your poison. The Fed stepped on the brakes. And so that's slide number two. There are lots of ways to measure the Fed stepping on the brakes. I like this way of looking at this five-year, five-year forward rate. So I'm looking at the yield curve to create a rate in the future and compare that to where the Fed rate is. And you can see whenever we have the Fed rate touch this green line forward rate, we kind of go into a recession, and the Fed drops their rate fairly quickly. We've just pulled right through that now. And we're still going. So the brakes are being applied. They're not working. Why is that? Okay, that's slide number three.

We have two things going on. You have a supply and demand issue. The supply issue is being flummoxed by boomers retiring early, that's slide three showing the predicted demographic. We know who's been born. This is no surprise; you could make these charts at any point. And you're kind of right because you can't go backwards in time. And people are retiring much faster. Why is that? Well, I would propose to you that the Fed's asset inflation in the prior decade, and who owns the assets, the boomers. They said, "Heck, man, you know, maybe I quit my job or stop my job during the COVID. I've got plenty of assets here. I can retire early, right? Let's go have fun." And so these well-experienced, productive boomers left the workforce.

On the other side of that, you have this millennial, page four and page five cohorts. Millennials get married about five or six years later than the boomer cohort. And so they're hitting about age 31, 32, 34 now, and they're having a baby. And when you have a baby, you gotta go and buy a house, a car, a baby carriage, diapers, all this stuff. So we have this demand coming from the millennials reaching that household formation age versus the supply constriction of the boomers retiring early. As well as, this is very important, do not troll me, please, page 6, immigration. You could think what you like about immigration, but the reason why the US has not had the same problem as Japan or Europe, or someday, you know, China and Russia, is we had immigration.

When you total everything up, the economy is the number of workers times number of hours times productivity; that's the economy. If you have net emigration of people working, you get more economy out of it. You can haggle out the taxes and the theses and this and that, but I'm just telling you this, that if you choke off immigration, you have less economy. And how you solve that, I don't know. And those things combined have created this kind of inflation, in my view. So that's kind of where I stand on things. I do not think that you're going to see inflation dip down to the Fed's target of 2% anytime soon because of this combination of factors. The boomers are still going to retire; they have all the money, and the millennials are still going to have kids, and they're going to buy stuff.

Erik: Harley, I want to go back to page one and inflation because I think this is such an incredibly important point. I've talked to so many really smart macro guys who are saying, "Look, the inflation was caused by the pandemic, it was supply chain issues, you know, it's all unwinding, it's going away." And what I just can't help but come back to is we've got this overindebted situation that the Fed only has a couple of ways out of, and the reason that I have such a strong view towards secular inflation is not so much that I'm, you know, seeing data that

I'm convinced that it's here, but that I can see that the Fed has no other choice. Am I missing anything? Or is it as simple as the Fed has to figure out how to create inflation sooner or later because they have no other way to get out of this over-indebtedness situation?

Harley: Well, first of all, you and I are on the same page on inflation. There are others out there, some of whom I'm very friendly with, who disagree, and they're entitled to be wrong. The answer is this: I think that, do you want to get shot or stabbed? You have the Fed working on two ideas, one is inflation, and the other is unemployment. Which button do you want to push on that? And I think the answer is supposed to be, you want to go and... if you're going to make a mistake, you push unemployment up to try and force inflation down. And the reason why is if you take inflation, unemployment from 3.5 to 4.1, something like that, you got extra people hurt. But inflation hurts everybody. Well, not everybody, but the bottom quintile people, they're supported by public work, safety net. Top quintile of people, they got all the money they need, they don't care. The middle 60% are taking it on the chin, for inflation. So the question is, you know, if you're going into public policy, someone's gonna get hurt. You're supposed to go help the majority of the people and inflation hitting this middle 60% is a bigger problem than taking unemployment up, you know, a few notches here. And so I think the Fed has to go and keep kind of cranking and stay cranked until they get inflation under control. People will be hurt. Let's not fool around. But I mean, I think that's the choice they've made and I think they're right.

Erik: Harley, let's move on to page seven where you talk about bond investments, duration, credit, and convexity. What do those three things mean? Why do we care?

Harley: Well, now that we've pushed aside the notion of economics, I don't care about, frankly. Let's talk about where the rubber meets the road. If you're a bond investor, you have three levers you could pull: duration, credit, convexity, that's it. Duration is when you get your money back. So a 10-year is more risk, is more uncertainty than a two-year. Credit, you know, buying a junk bond, or IBM or Apple bonds. Convexity is how you get it back. That usually manifests as a callable security, where there's an embedded option to it. And so, in an ideal world, what the smart machine will do is say, "Okay, I'm building a bond portfolio. And I want to allocate dollars to each of these three risks. And as one gets more advantageous than the other, I will move money around accordingly." And so, we try to go and evaluate all these various risks.

So, let's look at duration. So, chart nine is a snapshot of the yield curve, it's inverted. What does inversion mean? It means that the shorter-term rates, the one-month, one-year, two-year rate, are higher than longer-term rates, 10-year, 20-year, 30-year rate, well, if the world says that, "Gee, in theory, I should get paid a higher yield for taking more risk because a 30-year bond can move an awful lot more than a two-year bond, given equal movements in interest rate. And I'm getting paid less for it. Ah, God, not sure I like that a lot." And this notion that there's no risk in duration is totally bogus. You go look at page 10. This is a 30-year bond issued a few years ago. It's down almost 40%. We're talking like an equity-style loss on a US Treasury. So, Can this bond comeback, can this do better, can rates go down? Yes, sure. But you're not being compensated for taking extra risk right now in duration. So, I don't like that.

Let's go to credit. Page 11, we measure credit by saying I got a five-year treasury. And then I slap on the odds I might get that zero in five years because it might default. So IG is investment-grade, that means triple B minus and above that trade, that's a derivative, so you can easily measure it. If you take a basket of these investment-grade credit bonds, you can see right now it's trading around 65. That's about the forever average of credit. That's not bad. That's not good either. And looking forward to a possible recession, and the fact that the Fed seems to want to jam us into a recession as a way to reduce demand to reduce inflation, I'm not sure I want to buy credit as take credit risk as my alpha, my added yield when the Fed's kind of told me, "Hey, guys, we're gonna go and cause a problem here in the near future." If I'm gonna take credit risk, I want to get paid a lot more for it. And so I don't really care to be involved. It's not bad, but it's not that good.

And page 12, same thing for junk bonds, we call them high yield now to be politically correct, kind of wonky in finance, it's trading at, you know, low 400's, 415, 424, 430, whatever it is. Once again, about average, I'm not getting paid more or less. And there's a great story that you're going to see high yield junk bonds hit the wall in the next year and a half because they borrowed money a year, two, three years ago at very low rates. Most financings are five-year credit. So starting a year and a half from now, they're gonna roll their debt over at a much higher interest rate than they had. And that's what causes a lot of problems. And so am I getting paid for that? No, getting paid close to the average for that. So that's not that good either. So, duration and credit, whatever. Pitch their team move index, implied volatility, implied volatility is the measure is the cost of convexity, the cost of an option, the cost of unbalanced leverage.

That's what it is. It's a measure of what you're getting paid or what you're receiving for taking convexity risk. And what does convexity mean, as a reminder, convexity just means you could make more than you lose or vice versa. So if you look at an investment or any kind of wager or bet or something, if you could, for equal up and down equal changes, if you make two and lose one, that's positive convexity. If you lose three and make two, negative convexity. If you make one, lose one, zero convexity. So the MOVE is kind of measuring the value, the cost of that, and you can see trading up at you know, it's been in the 120s for quite a while, as well above its long-term average. And so, you're getting paid an awful lot right now to take convexity risk. And that's why I like that part of the risk world, that's the risk vector I want to move my money to, is to go sell the optionality. Usually I'm known as a long convexity guy, but as they say, "No bad bonds, just bad prices." And with the MOVE up at this level, it's a better sell than a buy. And so that's where I'm gonna look. Let's compare this to something else, maybe. Slide 14, everyone has seen this slide here. It's the MOVE versus the VIX. The MOVE is the VIX for bonds. Okay, it's a one-month implied volatility on a treasury market, and you could see how high it is. Why is it high? We could talk about that a little bit, but certainly you're getting paid handsomely to sell implied volatility in interest rates.

Erik: So what you're saying is that what the market is paying through the nose for is to essentially incite me to become an options market maker in fixed income markets because options premium for whatever reason are being bid up very high, if I am willing to take on optionality risk as a seller of optionality in this market.

Harley: What I'm saying is, if I have to go and take my \$1 of investment, and take credit risk, duration risk, or convexity risk, I want to go and take mostly convexity risk. The price of that risk has been expanded to the point where I can sell it and then the odds are in my favor of winning.

Erik: Okay, now hang on a second Harley, because you're known as the Convexity Maven and a lot of this stuff is just second nature to you. For people who may not be completely familiar, the word convexity simply means a line is curved, not straight. There's a little more to it than that. So tell us what is this convexity thing? Why is it so important? Why have you and your career become known as kind of the guy who's obsessed with it?

Harley: You know, there's no right or wrong as to a lot of things; you've got to kind of look at what the markets are doing and what they're offering to you. And where you're being paid more for one risk versus another. Presently, you're being overpaid to take the uncertainty of when a bond will mature, or you're being paid more than the risk that a bond will default. So look at page 15. This is a comparison of implied volatility versus the spread of junk bonds. And you can see how they kind of go together. And usually what you will see is duration, credit, and convexity, those three risk vectors tend to go, they travel with each other as they should because in theory, if you've got three risk vectors, people will move money from one to the other, and will keep them kind of in line. What you're seeing right here is that implied volatility, the measure of the cost of an interest rate option, has been elevated, yet you have not seen a similar elevation in credit. We could go into why that is unclear, but it is the fact that interest rate volatility is elevated, you should see junk bond and credit spreads widening also to reflect that uncertainty. If we have so much uncertainty in the rate market, why doesn't that uncertainty bleed through to the credit markets? It should. And it's not. I'm not gonna try to find why. But it is what it is. And I'm gonna take advantage of it.

Let's go look at on page 16. So this is an interesting little toy here. This is a measure of a regular 30-year Fannie Mae mortgage bond. There's almost 7 trillion of these bonds out there, 30-year mortgages, it's the biggest asset class after treasuries, they're very liquid, they treat like water. And they tend to be measured as a spread over the ten-year rate. If you look at this right now, at like nearly 180 basis points over the ten-year. I mean, we've only hit this thing twice before, you know once for the COVID panic and once during the GFC, we're at financial crisis spreads for a bond that cannot default. That's kind of crazy. And the reason why has to do with the embedded optionality in a mortgage, a mortgage bond is nothing more than a treasury buy, right? You buy, effectively a 10-year bond, and you sell a three-year call against it. That's not what it actually is. But you could model it up that way. And because the call option is so very richly valued, you create this huge spread, I think is the best investment in the industry market right now. I think it's better than duration bets, is better than credit bets by far, it's there for everyone to deal with right now.

Erik: And that bet is what specifically, the trade that you want to put on is what instruments?

Harley: I just want to go and buy near current coupon. So mortgage bonds, they're trading at \$1 price of 97,98, somewhere near 100. And we'll get to this a little more in a second. But that's the idea, I want to buy bonds trading near there. And the thing is the bulk of the mortgage market, the mortgage index is trading at an \$85 price with a 3% coupon because everyone in their brother refinanced two years ago, right? Everyone took out these 2, 2.5, 3% mortgages. And you know, they refinanced and they put them that's where most of the mortgage market is. We now have new bonds that have been created in the last nine months. These bonds are very interesting because they have a five and a half percent coupon to them. And we'll get to that one second.

But I want to go and dig into this forward rate concept. And this is the meat of the story. This is going to hurt. Page 17, it's going to hurt, I'm sorry, but we got a little math over here. Some of you may have read the book, *Liar's Poker*, the fun and games the Salomon Brothers in the early 80s. And all these guys having fun and making tons of dough. What they did was not rocket science. Well, guess it was. It was not rocket science. What happened is they figured out what a forward rate was before anybody else did. And they could figure it out because that's when the futures market started trading interest rates. Early 80s is when you started seeing bonds trade on the Chicago Futures Exchange, which basically laid bare forward pricing. And no one got it, but the Salomon guys did.

What's a forward price? Okay. Simple terms. You, or grandma, she could buy a one year CD at 2%, or two year CD at 3%. Which one should she do? Ah, wow, that's a hard question. Well, not really. If you borrow the 2% CD for a year, as opposed to the 3%, one for two years to break even. That means the next year has to be 4%. So you get two for the first year for the second year, or 3%. Over the entire time, I'm ignoring the discounting and compounded all that stuff. This is basic math, that's all it is.

If I know the one year rate, and the two year rate, I then know what the one year rate one year forward has to be. It's just kind of one minus the other, that's it. And we can do this across the entire yield curve, we can figure out what the 20 year rate five years forward should be, or from my first slide the five year rate five years forward, what that should be. That's very important, because it basically is kind of teasing out information from the market. So if we go to slide 18, this right here is today's one year rate. And the one year rate one year forward, the difference between the two. And what it's saying right now, and I ran this, today, that spread is negative 108 basis points. 108. So specifically, the one year, so forth LIBOR rate, whether we'll call it is 542. The two year rate is 489. Which means I take those two together. And I could say one year from now to be indifferent between a one year today, and then a one year next year versus a two year today. I have to get a 4.34 rate down 108 basis points to I think that's going to happen. No, it's not gonna happen. The feds not cutting rates anytime soon. But that's what the markets kind of pricing in. This is where everyone gets all hung up. What I would offer you is this. I don't think the market is actually saying the Feds going to cut rates next year by 100 basis points. I think what it's saying is, there's an 85-90% Chance rate stay here in a 10 to 50% chance that rates go to 1%. Because we go into some, you know, car crash and recession, different things happening here. It's a binary distribution of 90% we're here. And then 10% rates are down by

400 basis points, which and that will you do the math that will give you this current number. So I think people are kind of not really looking into the shape of the yield curve, what it kind of means I have to disagree, I don't think we're going to crash and burn. So I'd rather have money in short term.

But let's go a little more forward, you can go look at this in a bigger context away from just the one year the two year go to slide 19. This is the 10 year rate. Three years forward. A 10 year rate three years from now is supposed to be 25 basis points lower using market derivatives. Is that going to happen? I don't know. I don't care. What I do know is this. When you put together this sort of yield profile, the option market has to go make prices accordingly. The options market, the derivatives market, the financial markets, they price arbitrage free, that means you can't make free money. That means the price of gold in London and the price of gold in New York will always be within the cost to go ship this stuff across the ocean, right? If it doesn't, there's free money there. The price of oil here versus there. It's got to be somewhere within the bounds of insurance, transportation storage. That's what is arbitrage free conditions do right now the current yield curve creates the notion that rates will be lower in the future. And this totally screws up the option market.

Erik: Harley, when I see a chart like I see on page 18 and 19, okay, we got something here that hasn't dipped below zero hardly ever since the early '90s. And all of a sudden it's going deeply negative. What that just makes me think is, okay, wait a minute, something has changed dramatically. I want to understand what that is, and whether or not it's the same some things that I already know about. So the some things that I know about are at the end of the 40-year bond bull market seems to have happened. I think we've got a secular reversal in interest rates. But as you've explained this, that doesn't seem to explain this particular indicator and why it's suddenly turning negative because I don't think it's a reflection of a change in the secular direction of interest rates. What's going on that these two charts are different now than they've been in 40 years, well 30 years?

Harley: You know, that the question you brought was interesting, I'll push back by saying, No, forward rates are not per se a prediction. They are just the back end of an HP, you know, 40, that's all it is. It's a calculation, I have a one year rate at two-year rate, I can create the one year forward one year rate. Now, we tend to think, Okay, if the yield curve is shaped in such a way, that's implying a market consensus of a view, in this case, here, the rates will be lower a year from now. But it really is, it's not a prediction. It's just a number that is arbitrage-free, such that there's no free lunch for Wall Street people to make by buying and selling the three-year rate and the 13-year rate. In this case, it's just a number. Shorthand is it's a prediction. But isn't it it's just a number. And that's and you can trade that number, whether you believe it or not. And in your case, you don't believe it, which is good, because I don't either. So I can make some money on this. If I don't believe that we're going to have a lot lower rates in the future. And when you have this sort of yield curve structure, certain securities, which have to also price arbitrage-free is no free lunch, become very compelling. The reason why mortgage bonds are trading at you know, 175 over treasuries, which is basically, a financial record away from the financial crisis is because of the inverted curve.

And if you think this curve is going to go and steep it out, for a variety of reasons, you could make a lot of money owning mortgage bonds or callable minus, and let me show you how page 20. This is the last math, I apologize, I have to do math. Your blue lines here is, let's call it the current yield curve. Okay, it's been a few months ago, but it's good enough. It's a good fit for rates of 5%. And a 10-year rate of three and a half, and a little inversion in the background of the market. And below that, I have a 10-year rate of three and a half. But a forward rate of 331. It's 90 basis points below the current. If I go to the right and say, let's go and migrate to the Forever Wall Street average, what's the Forever average Wall Street, usually you see the Fed funds rate, right on top of inflation. So let's call Fed funds rate two, you usually see the two-year rate, about half a percent over the Fed funds rate. Okay, were two and a half, you usually see the 10-year rate about 1% over the two-year rate, that's three and a half. And then I put the back end, I flatten that out. So 10s bonds is flat, just by doing that simple twist, right kept the tenure unchanged, took the front end from five to two. And the back end up a little bit. Look at that three-year into tenure rate, it goes from 331 to 385.

That is a very big deal. Because if you go one more level down, if you look at this three-year option, so three dash 10 years means a three-year option on the 10-year rate, it's presently worth about six points 6.01. If I leave everything else unchanged, and just twist the curve, that option value goes down by almost two points to four. That's it. I didn't change the fall or anything else on credit. I just moved that curve. And that option moved by 35%. If a mortgage bond can be constructed as a buy, right, where you buy a 10-year treasury and sell a three or call option on it. If you bought that mortgage the Treasury at 100 and sold the call for six points. Well then you bought that package for 94. If that call option then goes to four points. That means that package goes to 94 to 96 You make two points on that package. That's what's going to happen in the next year and change, it's gonna steepen out. And these mortgage bonds are gonna go up by two points. And muni bonds are critical by three points without anything else happening just by the shape of the curve moving, the forward rate moving, and that embedded option going down in price, it's a lot to swallow. And you could see it on page 21, where I have this mortgage spread relative to the yield curve, you see how one follows the other.

So if you want to go and bet that the yield curve is gonna go and steepen buying a mortgage bonds, a pretty fancy way to do it, if you can get a five and a half percent yield on a basically government guaranteed security, that's going to do better. If the Fed pulls down that rate. This is a pretty good way to do it. I know it's a lot of math, I apologize. And you have to go through a few types of things to understand this thing. But this is what's going on in the market right now. The Fed has created an amazing opportunity for you to make very solid investments. And the same thing happened in the muni bond market. muni bonds are mostly callable. They have the same issue of a callable security, where it's a 30-year bond, there's a callable after 10 years. And that's that second one, right with a five-year to 20-year and options with 10 points, it goes to the well being was 70 Change points with the curve moving in this whole area of tenure point fixed, which is what I think is going to happen.

Erik: Harley, tell us about page 22, what's going on with the pink and green here.

Harley: Okay, I buried you in numbers. I know your eyes are rolling in your head, I apologize. Let's go back to nice happy charts with happy colors. Page 22. is the mortgage spread. So the amount of money you get extra from getting a mortgage bond over a corporate bond. As a reminder, why is a mortgage bond? Why is it has no credit risk? Why is it trade at a yield spread over treasuries? Because that mortgage Bond could be called in two years, or could be called in 12 years, you don't know when you're getting your money back. That's the convexity risk. You're investing in a security that could be a two year or a 15-year for God's sakes. And you don't know. And in credit, you're making the bet of giving your money for five years, but I might not get it back. Right? So I'm basically saying what is the extra yield I get for a credit bond, what's the extra yield I get for a mortgage bond, where I'm short that option. And you can see how they kind of go in line, as I said a while ago, you tend to see duration, credit, and convexity travel with each other. Please, don't try and trade one versus the other. They move way too slowly, with way too many lags to them. But we kind of look at a very long-term chart here, you could see how mortgages and corporate risks tend to go together. And all of a sudden, the mortgage risk is blown out versus the credit.

Erik: Is that COVID related? I asked that only because just looking at the chart, it seems like it's around the beginning of COVID that the divergence occurs here.

Harley: That you saw both the green line and the pink line explode higher during COVID. And they both came down after COVID when the Fed cut rates, you know and started doing some more QE. But notice when they started to go and raise that short-term rate, and invert the curve, that's when the pink line just keeps going up. And the green line started coming down. Now, it might come down, it's kind of crazy. Because if you think about it, the Fed has said we're gonna step slam on the brakes until someone crashed through the windshield to create a recession. Like you think the corporates would be widening here. They're not, don't care why, they're not. Mortgage spreads have widened because of the shape of the yield curve. And right now, you could pick up over 100 basis points more for taking convexity risk, instead of credit risk. That's the story this slide right here. That's the whole thing is the money shot.

Erik: Harley, I want to jump ahead to page 25 because this one is particularly near and dear to my heart. I've been reading a lot lately about S&P 500 hedges being the cheapest in decades. And I don't understand this because it seems to me like there's a lot of us who are concerned that this market feels kind of frothy. You'd think there'd be a lot of people buying hedges, and they wouldn't be that cheap.

Harley: Well, this tends to be a fancy Wall Street, I will call it a trick, but a marketing tool to make people transact. So page 25 shows you the cost of an out-of-the-money put on the S&P, and the dollar price of this 5% out-of-the-money put seems to be, you know, as cheap as it's ever been. Page 24 is the math behind it; save that for later. All that's happening here is this: the Fed took rates up. So a few years ago, we had the S&P 500 with a 2% dividend, and maybe a quarter percent Fed funds rate. You can create a forward price of those two things; you can create a forward price of the S&P. So back then, if the S&P was at 4000, the futures contract

would be trading at, you know, 4350, been trading under because of the you earn 2% on Spooos. But you only have to pay a quarter percent on the rate when you flip those two rates. So now you have a 2% yield (dividend yield) on the S&P, but the financing rate is now 5%. The futures contract actually goes above. So if 4000, you know, futures spot price would be would be at 4100 futures price. And once again, it has to happen to make an arbitrage-free situation; otherwise, Wall Street dealers or Citadel, Susquehanna will go out there and buy the S&P 500, buy or sell a futures or the money, lock it up, and make free money; you can't have that by inverting the yield curve. By putting the short-term Fed rate well above the dividend yield of the S&P, you've made the futures price go above the market price. And therefore a put is now out of the money as far as the model is concerned. I'm not sure how else to go and dig into this thing.

Page 24 shows you two screenshots of a put price from a couple of years ago and a put price now. Both were they had about the same market price. But you can see in very fine print there, that forward price went from being below the spot price to above. And so all you're seeing here really is the impact of the Fed changing rates. Yes, it does cost less, the actual put is a lower dollar price. So that is true. But it's not because of the market is less worried. It's not because vols (volatility) are lower. It's strictly a function of the yield curve. And this over here is kind of the same idea that I had about mortgage bonds or callable corporates. When you invert that yield curve, you get some really kind of strange outputs into the market. And you are allowed to go and take advantage of that. And effectively when you buy or sell somebody securities, what you're doing is you're investing money implicitly at five and a half percent, as opposed to a quarter percent. And thus, the option or the security is cheaper.

Erik: Okay Harley, I love the look of page 22. But to tell me how I actually make money from this, how do I short the green line and long the pink line here or do I even want to do that? Am I looking for convergence between the two.

Harley: All you want to do is buy the pink line, just put your money there. So here's the deal, if most people who and almost all the products out there, ETF products, or others invest in the mortgage index, that's all the mortgage bonds that are out there, people like indices and why not buy that? The problem is the bulk of the mortgage index is made up of bonds that were created mortgages issued 12-3 years ago, those bonds had a 3% average coupon. And they now since rates are five and a half for mortgage securities, they have adult as of 85. When you look at these mortgage bonds, they're kind of weird, a mortgage bond, you could kind of think of it as I said before the buyer, right? So think of buying a mortgage bond at 98 or 95, and then selling a call strike at 103. That's kind of what a mortgage looks like, is a buy right? Where you buy the bond at 100. And you sell the call at 103. Because once you get 50-60-80 basis points lower in rate, people will refinance and your bond will be calling from you. Why would you want to buy a bond strike at 85 and sell a call 103? You're 250 basis points away. You're selling a call for pennies, it's not even worth it. And that's what you're getting when you buy the mortgage index.

And you can see on page 23, I've modeled this thing up and it's very low it's like a tenure duration security. And it only yields 60 basis points above treasuries, and that's a good yield but

you know, whatever. If you buy a newly issued mortgage that's been created in the last year, it'll have dollar priced about 98, a coupon of five and a half a distribution yield of five, six, versus the mortgage index of three and a half a duration of four as opposed to seven. That's because the bond market call, it's priced at 98. The calls at 103. Mikey called that picks up 100 basis points, or 200 basis points, it coupon, and 100 basis points in yield to maturity. That's what I want to do, I want to go and buy these newly issued mortgage bonds at 98. Problem is, it's very hard to do that, as a civilian, very hard to do that as a civilian. So what I'm doing is creating a product, a strategy that will only contain newly issued mortgage bonds, priced around 97-98, held your coupon of around five and a half.

Erik: Hang on sanity check is that the pink line on page 22?

Harley: Yup

Erik: Okay, thanks. So you are creating an ETF that will allow me to buy the pink line on page 22. That's correct. And it's not ex- the green line or anything, it's just the pink line.

Harley: It's just the pink line. So you will get it; it'll have a distribution yield of about, you know, 53-54, somewhere in there. And it'll trade like a five-year treasury, the duration of a five-year treasury's a little shorter, and the yield to maturity, you know, around 5.85. So 100 basis points more than the index, we're creating a strategy that could buy the pink line because you don't really want to buy the mortgage index. When you buy the mortgage index, it's like a 10-year treasury, like, why are you doing that if you are that bullish on interest rates, buy the 10-year, man, you want to mix it; you want but it's gonna move a lot if rates go down a lot; you don't want to buy it, right, if you think prices are gonna go up a lot. I think as I said before, what you're going to see is a curve rotation, where that front end goes from five and change to two and change. And the tenure stays around three and a half. And that happens, you're gonna see, shockingly, you're gonna see that newly issued MBS go up in price, and the mortgage index go down in price. So it's a very clever way to kind of grab that embedded option and sell it and have no credit risk. It's basically the full faith and credit of the US. It's kind of like a 10-year Treasury, and a three-year call option sold against it with the move up at like 120 kind of doesn't get better than that. And why no one's done this before. Truth be told, I have no idea. But like most things in the world, I mean, like post-it notes, I mean, darn good idea. Why wasn't it invented 30 years ago? I, you know, they should have been most good ideas kind of come out of nowhere. I'm surprised this hasn't been done yet. And everyone's asking me all the time, because I've been reading a book just for quite a while now. How do I go and buy that pink line? Well, I couldn't find a way to do it. So I made it up.

Erik: Well Harley, I have to break the news to you that post-it notes are more than 30 years old now, and so are we. I'm not gonna say by how much; I'm gonna leave that one alone. Before I let you go, though, tell us a little bit more. It sounds like you've just added a new ETF to the cadre at Simplify. For any of our listeners who aren't familiar with what you do at Simplify Asset Management, what's the story there? And what is this new product you're talking about something that's actually launched? Is there a ticker symbol for it? What's the story?

Harley: You know, I can't talk tickers, Erik, and let's call this a strategy for now. But yes, there will be something to trade in the relatively near future. Simplify Asset Management is just very clever. What happened was, you know, three, four, or five years ago, there was a change in regulation at the SEC that allowed people to put derivatives, futures, options, structured swaps, all these various professional investment tools, into ETFs. That's what was new; rules changed. Our firm is two and a half years old. We have two and a half billion dollars. We're the fastest-growing ETF issuer managers out there because what we're doing is using derivatives in ETFs to give you a better profile. There are a lot of products we have that are identical to ordinary indices. But by using derivatives instead of buying the actual cash investment, we can offer a higher yield with no more added risk because there are tools that professionals use to be clever without taking on a lot more risk. That's what we do. Yeah, my strategy that we created a couple of years ago, the seven-year put option on the 30-year Treasury, that was the number one return ETF last year, up 92%. It's up 14% right now year-to-date. And it's still a clever idea. Where else can you buy a seven-year put option on a 30-year Treasury for civilians, listed on all the exchanges? You can trade them on Robinhood if you want, and that's what we do. We found a number of ways to create interesting products where we take professional investment tools and offer them to civilians via the ETF framework. It's shockingly simple, and I'm glad I'm there because it's a hand-in-glove fit for me because, you know, I'm a Wall Street-driven guy.

Erik: And you can find out more information at simplify.us. Patrick Ceresna and I will be back as MacroVoices continues right here at macrovoices.com