Eurodollar University Season 2, Part 3

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Erik: Welcome to Part 7 of MacroVoices Eurodollar University with [Alhambra Investments](#) CIO, [Jeffrey Snider](#). I'm your host, Erik Townsend. There is a slide deck to accompany this podcast and we recommend that you download it before listening, as we'll be referring to the charts and graphs it contains throughout this program. You'll find the download link, along with the other parts of this series at https://www.macrovoices.com/edu (for Eurodollar University).

At the end of the last episode, Jeff explained in detail how the system had broken down to the point where collapse was accelerating and starting to get out of control. Now let's jump back in right where we left off as Jeff starts to explain the Fed's efforts to intervene. We're on Slide 93 on the PowerPoint deck.

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Erik: Okay, Jeff, given that description of the problem, moving on to Slide 93, where and how does the Fed try to intervene, and how successful are they?

Jeff: That really registers, going back to the beginning of the presentation – the difference between the traditional understanding of monetary policy and what it can do, versus what the system actually was and what monetary policy really couldn't do.

So put yourself in Ben Bernanke's shoes, not that I'm trying to paint him in any kind of sympathetic light. But if you're Ben Bernanke and you believe the system operates like it did in 1955, where do you intervene? What exactly do you do here? How do you stop this procyclical forwarding of balance sheet capacity?

And where you shouldn't have sympathy for Ben Bernanke is that he should have known better. It was his job, right? The idea of the Federal Reserve is that they are the monetary banking steward.

Therefore, they should have had all of this stuff mapped out beforehand. They should have known all about the Eurodollar system, its potential for fragmentation, and all of the faults and all of the ways in which it broke down.

Again, going back to where Bernanke was in early 2007, the reason he said subprime was contained was because this stuff was hidden from him. But as it became revealed as a big problem and a global problem, because he didn't really understand the system as it was – and they still don't today – where do you intervene?

On Slide 94, they only tried to intervene in one particular spot, which was the liability side, which was what we think of as traditional liquidity in just the Bank B portion.

Now that's where they did the TAF [Term Auction Facility] auctions. That's where we had the effect of lowering the federal funds rate. That's where they had their collateralized discount window types of alternate programs. That's where the dollar swaps all went. It never intervened in any of this other stuff – like credit default swaps, derivatives, balance sheet capacity – simply because they didn't realize that that was where they needed to intervene.

Not only that, their interventions on that particular part, that one specific piece – the liability side of Bank A – they were always behind. They were never able to actually respond effectively.

So, not only did they leave the asset side, the more important side of all of this dark leverage and all of these derivatives, out of their monetary policy response to the crisis. Even where they did intervene on the liability side, it was half measures that were poorly thought out and ineffective anyway.

Putting it all together, there was probably zero chance that the Federal Reserve could have done anything in 2007 and 2008 that would have been effective. I've often said that the only thing they could have done (possibly) that would have maybe had a chance of forestalling crisis, at least of the magnitude it became, was if they had actually taken over AIG and all of the other insurers and completely taken over writing credit default swaps on behalf of all of those insurance companies.

Not just taking their assets onto their books and effectively quarantining them, but actually doing all of the functions of the credit default and interest rate swap markets so that banks could go back to the way – or at least try to go back to the way – of efficiently managing their balance sheets without having them reverse on them.

And even then, I don't think it would have been enough. I don't think the Federal Reserve ever had any chance. Even if it had done some really exotic balance sheet type activities, I don't think it would have been enough because the way things progressed and the way that the banks were recoiling and hoarding their capacity was probably beyond the control or the ability to control of anybody.

Erik: So, the point that we're really making here is this is not about credit risk. This is about systemic contagion and liquidity and things breaking down all across the system.

Is that right?

Jeff: Yeah, that's what we're really talking about here. We're talking about the monetary system. We're not talking about subprime mortgages and the ability of less-than-qualified borrowers to pay back on Alt-A or NINJA loans.

That was just one of the first indications of stress. But what we're really talking about here is liquidity structure, money structures that spread not just inside the United States and into these very weird and exotic places, but all across the world.

Remember, when we talked about August 9, 2007, it was a European money market fund operating in US dollar asset-backed security commercial paper. This was a global monetary issue.

And the issue was largely that there was tremendous liquidity risk embedded in all of these systems that was misdiagnosed as the opposite, because everything was perceived to be safe. The way in which all of these structures were built was done so in a way that there was very little risk at all.

Not just credit risk but, more importantly, that nobody appreciated the liquidity risk because it was assumed that all these markets would be together forever, that they would operate seamlessly as a flexible, dynamic whole – when, in fact, there was a massive risk that these could all fall apart. And when it all fell apart, there would be no way to put it back together again.

So the issue wasn't subprime. It was always Eurodollar.

Erik: Since this is Eurodollar University, let's talk about Eurodollars and the role they played in terms of predicting and acting as an indicator as to what was coming and, perhaps, what was still to come.

Jeff: Look at something like the Eurodollar futures markets, which are derivative contracts that are settled in LIBOR. They are a money market rate and they are cash-settled, which means they don't actually settle in actual Eurodollar deposits.

But, because they relate to LIBOR and the money market rate that's tied to all of this stuff that we've been talking about, Eurodollar futures were a pretty good indication of not just how things were progressing, but, more so, what that would mean over the long run. And that's what we're really interested in here.

Now sitting here 10 years later, still talking about the crisis in 2008, obviously there are issues that have never been resolved. We want to understand what those issues were. And I think the Eurodollar futures market was a good indication in real time not only that things were falling apart, but that, as they fell apart, they were going to fall apart in a permanent way.

On Slide 96, for example, what I've highlighted in dark blue is the Eurodollars futures contract that expired in June 2007 – just before all of this stuff started to happen. What I hope you can notice from this slide is that, starting even in late 2006, some of the other Eurodollar futures contracts fell below in price that June 2007 maturity.

What that was saying to Ben Bernanke and Bill Dudley and all those guys in the FOMC was that, hey, the market's getting a little nervous about all of this stuff.

Now, the FOMC and policy makers were starting to write off the housing bust as nothing more than a small thing. Okay, it would cause some heartache and some mild anxiety, but it wasn't a big deal. When the Eurodollar futures market was essentially saying, okay, you've raised the federal funds rate up to 5.25% through 2006. We're going to believe that before the next couple of years you're going actually to have to lower it.

That's what the futures market inversion at that point was saying: We expect LIBOR rates to be lower, not higher. And that was contrary to what the Federal Reserve was thinking at the time. Again, Bernanke was saying subprime was contained.

And the Eurodollar futures market was telling us at the time that, okay, maybe this thing isn't contained. Maybe it's a lot bigger than what we think it is. This market is particularly important and particularly in a prime position to understand the dynamic nature here because of where the Eurodollar futures sit in terms of balance sheet capacity and managing everything.

Eurodollar futures are intimately tied in to things like interest rate swaps. So that market, as it became more problematic, was hedged and was used as a proxy for dollar futures too. So the Eurodollar futures market as it went through, after August 2007, kept showing and kept indicating that, of course, the Federal Reserve was behind the curve and that interest rates were looked to be going lower and lower and lower into the future.

On Slide 97, you see the 2008 contract, which was the head of the curve, the head of the federal funds curve that is the federal funds target going down in that period of time.

Not only that. After Bear Stearns had failed (Slide 98), it showed us that the Eurodollar futures market was reacting to that LIBOR spread as well. So the market was indicating not just that there were problems but also where those problems were.

Slide 99, because the further-out maturities, the longer maturities like the June 2010 and June 2011, were starting to price in a much lower future interest rate environment in terms of money rates in terms of LIBOR, which meant that the Fed was going to (number one) have to reduce the federal funds rate all the way down to zero.

Number two, they were going to have to keep it there for a very long length of time. And the market was expecting this at a time when people didn't think this was all very much of a big deal.

Even after Bear Stearns had failed, it was still the consensus this wasn't even going to be a recession in the US. There wasn't going to be anything more than this one failure of this one investment bank on Wall Street. The market is saying, no, this is not only going to be a much bigger deal. It's going to be a much bigger deal that lasts a very, very long time.

That's where we get to on Slide 100. You start seeing some of these longer-date contracts like June 2010 – not only through the crisis – you have the LIBOR spread. But then afterward, you see the prices of these Eurodollar futures contracts approach 100, which is closer to zero [Feds fund interest] rate further out into the future.

Erik: This seems unprecedented for Eurodollar futures to be approaching 100, which basically means that people are lending at zero. What are the implications of that? What is that telling us?

Jeff: What we should normally see, if that period in 2007–2008 had been just a normal business cycle that was just a severe recession for example, what you would expect, especially June 2011 and further-out contracts, you would expect them to go back up to their normal prices they were beforehand. Because that would tell us that, okay, the market expects that LIBOR will be at a rate consistent to where it was before 2007.

But, because the contracts instead went closer and closer to 100, what the market was saying was, okay, this is not just a temporary recession-type event, it's turned out to be a permanent break. At the time, it was like, okay, this is a much bigger thing than just a temporary setback.

A severe setback nonetheless, because you know what happened with, not just Bear Stearns, but Lehman Brothers, AIG, and the rest. But everybody expected that this was still going to be a business cycle, that we'd get into recovery, that the money system would eventually heal.

And Eurodollar futures are saying, no, this is much more than that. We're into something that is very different here where what happened in 2007 and 2008 through to 2009 was a permanent rupture in the system.

Therefore, we don't expect that the Federal Reserve is going to get off of its zero interest rate policy any time in the foreseeable future. That's a big deal in terms of understanding that this was not a one-time thing. This was not a one-off problem.

Markets were saying – and, again, Eurodollar futures being where it is situated in the system had a good seat to what's going on in the shadow world – is that this is a permanent rupture. This is not a temporary break.

Erik: So, what we're saying here is Eurodollar futures are really that leading indicator that's telling us a very important message back at that point in time. And that is, hey, everybody thinks this is a cyclical problem, that we're just going through a business cycle. And we're getting a very clear message from Eurodollar futures saying, no, actually, something is systemically broken and it's going to stay broken.

Moving on from there, I see on Slide 101 we're moving into – speaking of things really being broken – that blowup in LIBOR.

So what's the Fed thinking at this point? Have they figured out that something is systemically broken and going to stay broken? Or are they still stuck in cyclical thinking?

Jeff: You would think that, especially after Lehman Brothers and all the stuff that went on in September of 2008, they would have realized that they had a lot more on their hands than just what they had thought, and this was no longer just a subprime issue or even a credit issue but a full monetary and liquidity issue.

But they didn't.

One of the ways that we can analyze, and one of the ways that we can display that lack of progression and evolution in their thinking, is something called IOER, which is the interest paid on excess reserves.

Now, they had authorized the payment of interest on excess reserves for the banking system way back a couple of years before. That wasn't supposed to begin until 2010. Because what happened in October 2008 was full-blown panic, the stock market crashing and everything else, they moved up that authority because they wanted to address this issue where the federal funds effective rate kept being below the target rate, which is a problem.

Because, remember, the way monetary policy works is you want the effective rate to be close to the target rate on either side, not too high or not too low. So they instituted IOER to act as a floor because what it would do would be to allow banks to deposit funds, essentially, to the Federal Reserve.

These reserve balances that were being created by all of the various liquidity operations that the Fed was undertaking, they would then be paid at this rate that was initially set at 35 basis points below target.

And it was believed that that would be an effective way to put a floor underneath the federal funds effective rate because why would you lend at less than IOER when you could get IOER from the Federal Reserve? If IOER was set at 1.5%, why would you lend in federal funds at 1%?

What ended up happening (Slide 101) is that IOER never worked as a floor. In fact, it got to be such a big problem that by early November 2008 they even erased the spread. In other words, they raised the IOER rate so that it was equivalent to the federal funds target.

They raised it so that if IOER was going to be effective at providing a floor at 35 basis points less, it should be more effective at a rate consistent with the federal funds target. But, as you can see, it was actually less effective.

So the Federal Reserve (Slide 102), even though they changed their tactical approach to this one particular problem, they never really got outside of that thinking. They kept approaching the system from the perspective of bank reserves and these limited reserves that they were creating for monetary policy and how that related to the federal funds rate.

They never really understood the wider stuff, the wider shadow market stuff that we've been talking about. And it showed because of the way IOER never really worked as intended. To this day, it still doesn't work as intended. It never became a floor for money market rates because the Fed doesn't really know what's going on in all of these money markets.

As I wrote on Slide 103, IOER has never worked as a floor. And, even today, it's not used as a floor. But that's the way it was instituted and that's the way they used it during the crisis. And yet they had no idea why it wasn't working. Why wasn't this working? And they never did really figure that out.

Erik: Jeff, for the last few minutes we've been focusing on a lot of Fed policy issues, things that happened in the United States specifically. Let's tie this in to the bigger picture of what was going on globally and how these events affected the global financial system.

Jeff: We're looking at Slide 103. The big thing that sticks out is the orange line, which is three-month LIBOR. And that's – we remind ourselves that this is a global problem. This is not just a United States problem.

One of the ways that's the reason IOER never really worked was because the Fed conceived of their mandate from a geographical standpoint. They believed that their mandate ended at the borders of the United States when, in fact, what we're really talking about is a global dollar currency, Eurodollar currency, that involved banks all across the world.

And the only way that they ever really tried to address that fact was in these dollar swaps that at the time – again, you go back to IOER. IOER was instituted in large part because of the reserves created via dollar swaps.

So, as the Fed is going heavily further into these dollar swaps with foreign central banks, it wasn't working. Because, not only was IOER unable to restrain the shallowness in the effective federal funds rate, those dollar swaps were doing nothing to LIBOR. They were not bringing the LIBOR spread back down to earth, which indicated that we're not having a whole lot of success offshore either.

And one of the reasons for it (Slide 104) is everything that we've been talking about. Banks in Switzerland have always traditionally been a huge part of the Eurodollar system. They take in dollar deposits in the early days. They take in dollar deposits and then redistribute them throughout the rest of the system, largely having nothing to do with the US at all – dollars that circulate outside the US. And they're not really dollars but they're really just bank liabilities.

But, as you can see on the chart on Slide 104, in the middle 2000s especially, Swiss banks became aggressive in their Eurodollar redistribution, so to speak. Before the middle of 2007 and all the crisis that erupted at that time, the Swiss banks were a major point of redistribution and a major source of dollar funding all across the rest of the world.

And what's really evident here is exactly what we've seen in all of the rest of these various pieces like the credit default swaps and everything else: Up until 2007 you have tremendous growth in these dollar activities in this one offshore conduit. But afterward, it didn't matter what the Fed did, because the Swiss banks perceived the system in the way we've described it, which is before it was all return and no risk, and afterwards it's all risk and no return.

Therefore, under that asymmetric situation, you don't want to participate in it. It doesn't matter what the Federal Reserve is doing. It doesn't matter what anybody else is doing any place else.

What you do is you get out of that position. You've gotten yourself into something that's only risk, that only causes pain and only causes losses. And so you get out.

So, from especially 2008 forward, the Swiss banks, which were, again, a huge part of redistribution and creation of these Eurodollar assets (and liabilities, actually), decided they didn't want to do it anymore.

Erik: So if the Swiss don't want the business, what does that mean for the rest of the world?

Jeff: Nothing good, Erik. Again, hindsight makes it pretty apparent what exactly happened. But if we look at it from the perspective of, again, a global currency system, we can use something like the Chinese currency and the dollar exchange rate with CNY (China Renminbi).

Up until July of 2008 – if you remember, at that time people started using the word "decouple." The idea was that, okay, there is a problem in the US economy. There is a problem in the European economy. But the emerging markets are going to be fine. They're going to grow. And it's a pretty good bet that, even though there are problems in the developed world, the emerging market economies would suffer no fallout from it.

And up until about July of 2008, that seemed to be the case, even in some other financial market indications like CNY and oil prices, for example. Following that, however, there was this contagion running through GSE paper.

At the same time, Ben Bernanke was speaking in front of Congress. The United States Security and Exchange Commission issued an emergency order banning the practice of naked short selling on not just the GSEs Fannie and Freddie, but also primary dealer bank stocks.

And the reason they did so was, in large part, that the foreign pieces of the Eurodollar system were starting to develop not just economic uncertainty, but they were starting to participate more directly in these Eurodollar problems as they developed in terms of balance sheet capacity hoarding. What we saw from the Swiss banks a couple of slides earlier.

And the response was pretty dramatic. Oil prices from July 15 forward crashed. At the same time, the Chinese currency went into what really looked like a re-peg situation where the PBOC was pegging the currency rate at a consistent level.

What that really tells us is that the Eurodollar problems that were erupting in the United States and Europe were not just being limited to the United States and Europe, that there was never going to be any kind of decoupling, economically speaking or otherwise. The fact that the Chinese had to peg their currency meant that they were experiencing a massive dollar problem that was originating because of all of the stuff that was going on in these balance sheet capacity issues.

And, obviously, that's what the collapse in oil prices told us as well, that the problems in the Eurodollar system, which may have started in things like US local subprime issues, had progressed to become a worldwide dollar issue and a worldwide dollar run, if you will.

Erik: So you're saying this is a broader issue. Can we put some statistics behind that?

Jeff: On Slide 109, we get into some of the TIC banking data, which describes some of the activities that are reported to the Treasury Department as part of its Treasury International Capital Report. What this part of the report aggregates is US banks liabilities to foreigners payable in dollars.

And when we're talking about liabilities to foreigners, payable in dollars, what I've pointed out here in the red portion is short-term Treasury securities and other short-term securities, which are largely MBS securities that are used in the repo market.

What you see is, around September 2008, this transmission of MBS difficulties into a foreign place – into the place where Eurodollar funding and the repo market becomes completely frozen – largely because (Slide 110) this repudiation of MBS and agency paper that was used in the repo market collapsed the collateral pool.

As it collapsed the collateral pool, it didn't do that just in the United States. It did it globally. That's what we're looking at here. We're looking at a cross-border relationship between the US banking system and the rest of the world.

Starting in 2008 and then progressing further into the crisis, it was a global repo problem in terms of collateral. Which, of course, led to further problems in all of the balance sheet capacities that we described before.

Erik: And what's happening to the US dollar at this point in the story?

Jeff: That's another angle to all of this, of course, is the exchange rate of the dollar and what that tells us as far as what's going on in these funding mechanisms globally.

On Slide 111, what we're getting into is something like the dollar index, like DXY. I think most people remember that, during this period, especially the housing bubble and the housing mania period, we had something that people classified and characterized as a falling dollar.

What that was actually consistent with was the increase in funding and increasing capacity in the Eurodollar system throughout. So if we think of the dollar's exchange value in terms of simple supply and demand fundamentals, there was an increase in supply. In fact, a massive increase in supply of balance sheet capacity, and therefore "dollars" in the global system. And, as you would expect from a massive increase in supply, the value of the dollar falls.

Now, it kept falling (Slide 112) even past the initial eruption and crisis in August 2007 and all the way into Bear Stearns in early 2008. The dollar's exchange value continued to fall even though there were massive irregularity and imbalances building up inside the system.

It's not a one-to-one direct relationship between the supply and capacity of Eurodollars globally and how that breaks out into the dollar's exchange value. However, as we can see with Bear Stearns on Slide 112, that was the absolute low point in the dollar.

Because at that point these problems became so large, became so globally interconnected, that it actually did end up affecting the dollar. So we had what was a falling dollar before it ended up becoming a rising dollar thereafter (Slide 113).

Erik: And, of course, Jeff, on Slide 113 we see the historic bottom at the end of 2008, beginning of 2009. What was the cause of that? Was it the announcement of QE1 or something else that caused this big reversal in the dollar?

Jeff: I've never been a proponent of the QE explanation, for obvious reasons. Not just the fact that the Fed was stuck in the 1950s kind of mindset, but, more so, there are other more immediate and apparent and, to me, more logical explanations for why things ended, or at least temporarily ended the run at that particular point in time.

If we go back and think about one of the biggest obvious problems of the crisis period, OTTI impairments, remember another word for "OTTI" is "mark to market." In early 2009, the banking system, a lot of banking officials, began to complain to Congress and other entities, including the Federal Reserve and the Securities and Exchange Commission, about OTTI and mark to market.

A lot of people dismiss it as nothing more than the banks just want to be bailed out, they wanted to be able to mark to myth, I think, is one of the charges people made about it. But there was a lot of truth to what they were saying.

These OTTI impairments didn't actually reflect credit risk. They were reflecting liquidity risk and liquidity conditions. And they were reflecting liquidity conditions in all of these various places that people didn't understand. So, as they were being accused of doing something shady in trying to reduce the effect of mark to market on their income statements, there was a lot of truth to that.

That's the reason why, starting in February 2009, the FASB and all sorts of officials – not just in the US but globally – began to look at these OTTI impairments and said; you know what? There is something to this. We've classified them as mark-to-market impairments. But, in truth, some of these prices are not actually legitimately economic prices.

By early March 2009, it became clear that authorities – particularly the FASB and the Securities and Exchange Commission – were going to act favorably upon the banking system's proposal that they at least give banks the option of getting out from under this mark-to-market OTTI impairment problem, which actually happened in the middle of 2009.

The FASB proposed 157-e, 115-a, all of the various OTTI proposals. And the effect of that was it removed a lot of these OTTI losses and perspective losses from bank balance sheets.

When you do that, the banking system doesn't look so bad. It starts to look like, okay, this is just a liquidity problem, this is just a liquidity run, and Citigroup wasn't actually insolvent. Citigroup was just unwise in the way it funded its balance sheet. The two things are very different circumstances and they have very different implications.

So I believe that it wasn't actually the Fed and QE that ended the run and the panic in 2009, it was the removal of the threat of OTTI impairments. Because, if you're Citigroup and you no longer have to worry about mark to market, then you're not going to pressure the default swap market. You're not going to pressure the interest rate swap market.

You're not going to need to do all of those things that kept spreading contagion into all of these shadow places any longer. Because you don't have to worry about the fact that you're going to have to book a loss that isn't really a loss anymore.

Erik: Looking at Slide 114, as you say, that ended the panic in the end of 2008, beginning of 2009. But we see another cyclical top here on March 5 of 2009, not too much further. So, clearly, we haven't solved the problem completely. What's going on on the right half of Slide 114?

Jeff: Erik, our main concern here is that, okay, that may have caused the end of the run at that particular point in time, but it didn't solve any of the problems. It just alleviated the massive pressures that had built up to that particular point in time. But it left in place all of the structural issues that we've been talking about all along.

The dollar has only been rising – not in a straight line, obviously. The dollar's value has increased and, as we mentioned with things like Eurodollar futures, there is every indication that what happened in 2007, 2008, and 2009 was not a temporary deviation from a solid trend.

It was a break in that trend.

That's, I think, what the exchange value of the dollar is telling us, that the balance sheet capacity of the Eurodollar system as it was beforehand was broken completely on August 9 2007 and has never gone back to something like a more healthy function.

Erik: This has been pretty involved, so let's review the major points. I see you've got a summary slide – Slide 115.

Jeff: Again, we want to emphasize this was never credit risk as much as it was liquidity and therefore money system risk. The monetary framework was thought to be a seamless whole that operated in such a fashion that it was completely safe.

You could grow your balance sheet as far and as fast as you wanted to. You never really had to worry about any of these things because you thought there were all sorts of redundancies built into the system, whether it be liquidity backstops for your SIVs, whether it be asset-backed commercial paper versus repo, collateralized – everything, all that stuff.

At the back of all of that stuff, if anything broke down in serious fashion everybody believed in the Greenspan put, right?

Because that was the myth that had survived from the '90s and even into the 2000s – that if everything got really, really bad – which was "impossible" to begin with – but if it ever did happen, the Federal Reserve would bail everybody out. We could count on the Fed to completely and successfully absorb any major systemic problems that developed. And that was proven to be, by the events in 2007 and 2008, not true.

Not only were those liquidity structures frail, they actually ended up being procyclical. Rather than act as a firewall to make sure that liquidity problems didn't spread, they actually spread the problems themselves. They actually acted as points of contagion, as we went through before between Bank A, Bank B, Bank C, and Bank D.

So everything we thought about in terms of how safe and how robust the system was, this monetary system, before 2007, was proven without a doubt to be actually weak and actually very fragile.

Erik: I think these comments you've just made pretty much cover Slide 116 and 117. Moving on to Slide 118, you're making a point about exponential growth here. What's going on?

Jeff: I think that what really kept everything together and what actually made it seem like this was an intrinsically solid system before everything developed in 2007 was that, so long as everything was growing exponentially, like a spinning top, it seemed to be very stable. Until people accepted it that way and people participating in it were unable to actually see all of the problems that had developed, all of the problems that were inherent in it all along the way.

One of the reasons for it is because – hopefully people can appreciate that the way balance sheets were constructed, the way this thing all actually worked – it was a self-funding thing. It wasn't like we needed an outside source of money to come into the system in order for it to grow. It created those types of funding mechanisms that – it created those types of balance sheet capacity transactions that allowed the growth itself to fund itself.

So it looked like a system that was robust, but it was all an illusion. And once it started to slow down, once it started to fall in on itself, there was no way to stop it because nobody had really any idea what was going on.

On Slide 119, the slightest deviation – again, the subprime problem was not a big deal. It was a very small part of the system. And, really, if the liquidity system, the money system globally had been at all healthy, had been at all actually robust, the subprime thing never would have been a big deal.

Again, I don't want to paint Bernanke sympathetically, but you can understand or at least appreciate where he was coming from when he said subprime was contained. Because he believed that the liquidity system, the money system that he understood, would have easily absorbed such a small problem. What he didn't understand, of course, was that there was all this other stuff out there, all of this shadow Eurodollar stuff globally that made it all look that way.

The issue is asymmetry. Before August 2007, it was believed that you could grow exponentially into any kind of the riskiest stuff and the system had all of these ways and manners to take even the most risky crap and turn it into something that looked safe.

So you had an environment where everybody perceived it to be all return with no risk. Afterwards, it's been completely reoriented (Slide 120) where it's now all risk and no return. And the reason we know it's all risk is because it's been proven to be all risk.

Everything that happened in 2007 and 2008, and even afterward – we can get into the QEs at some other time – but everything that has happened in the last nearly 11 years has proven that these liquidity problems, as we saw back with the dollar exchange value, have never been solved. All of these problems, all of these intrinsic issues that are embedded still in the Eurodollar system, are still there. These money markets are still fragmented.

So the entire paradigm has been upended. And it's turned upside-down or inside out, however you want to classify it. Because what used to be riskless return is now return-less risk. And that's an absolutely complete paradigm shift.

Erik: Indeed. I think it was around that time that Bill Gross first coined that phrase of return-free risk. Moving on to Slide 121, where are we headed from here?

Jeff: If you are a bank that operated in this environment, pre-crisis and afterward, it can't have been anything other than a complete reassessment of your participation in it. You can't put the horses back in the barn. You can't go backwards in this kind of a situation because everything that you believed in the system beforehand has been proven to be wrong. It's proven to be false.

As a bank that participated, Bear Stearns was an important part of this because it proved, not only was this a big deal more than subprime, but it showed everybody what the ultimate risk was. And the ultimate risk was that, yeah, you could fail as a bank. In this modern twenty-first century age, you could be taken out and liquidated. Of course, it wasn't just Bear Stearns. But Bear Stearns was kind of like the wakeup call.

I think that's why you see, especially in something like the dollar index – and it wasn't just the dollar index, but some of the TIC data too – Bear Stearns is kind of like the clean break where growth in the system beforehand, suddenly everybody realized, okay, there are some really serious downsides to participation in this. Once you get to that point, as I've highlighted on Slide 121 and 122, you don't want to do it anymore.

Why would you?

First of all, there's no return in it. And, secondly, it's all risk. So that kind of asymmetry has provided us with a glimpse into why this thing has become such a structural break, why it was a permanent alteration in the system and not just a temporary deviation in trend.

From Slides 123 forward, what I've provided here are individual cases of the assets in the balance sheets of individual banks that used to be big participants in the system. Where did that balance sheet capacity come from? It came from individual banks that operated across the globe.

On Slide 123, you have Citigroup. If you go back to their annual report in 2007, they made it sound like this is a completely safe bank because they have more than $800 billion in deposit funding. Yet they had more than $2 trillion in assets.

What that tells us is what happened later in 2008, why Citigroup got bailed out, was because there was all of this other stuff embedded within it that they thought was no problem before 2008. And then afterwards, as you can see on their history of the total assets on the balance sheet, they are no longer willing to grow.

What does that say, when Citigroup doesn't even want to grow anymore? Essentially, it's a smaller bank today than it was 10 years ago. And just in linear terms. In non-linear terms, it's a massive reduction in capacity because they don't want to participate in a system where everything is asymmetric against them.

And, of course, Citigroup is not alone.

Erik: It looks to me like in the next several slides, if we use Citigroup as a template, basically you're showing evidence here how the same thing proves true in the case of several more banks. You've got several slides providing that evidence.

Let's move on to Slide 132 where you start to get into the systemic implications of all of this.

Jeff: We start from the perspective that, from a general overview, this is nothing new. A bank run is a bank run. We've seen these kinds of things before. Yes, it happened in terms of balance sheet capacity and it happened in a lot of these exotic formats like derivatives and credit default swaps and things like that that make it harder to understand, especially for lay people operating outside of it. Because it's nothing new, we should at least be able to understand the implications of it.

But in this case (Slide 133), unlike past episodes of bank runs, what we have found is – on all of those slides before about how the banks have changed their behavior – the curious thing about it is that nothing happened afterwards.

Throughout history, whenever we've experienced a bank run there's at least some kind of attempt to address the deficiencies that led to the bank run. You think back to the 1930s for example, there were all sorts of efforts that were aimed at official efforts and even industry efforts within the banking system – the common goal to make sure that it never happened again.

I don't know if this is the first time in history, but it certainly seems like it from my rearview of history, that after what happened it was like there was really no attempt to really understand what happened. It just it happened. And everybody kind of went, okay, it happened. Now what do we do?

The same system has been left in place and it's the first time where we have continued central bank intervention that doesn't do anything. It doesn't solve the problem. And nobody seems either able or willing to recognize what exactly that means and why things haven't changed despite so much time since this all happened.

Erik: Moving on to Slide 134, if we've got these dollar problems, how does that translate to broader problems in the general economy globally?

Jeff: I think that's largely the point here, in terms of consequences of a permanent paradigm shift, if you will. If you have a money supply issue – however you want to define money, and I understand it's almost impossible to define money in this Eurodollar setup – but, however you want to define money, if you have a monetary problem that persists it can only act as a drag or an anchor on economic growth.

And we're not talking about just the United States' economic growth, or European economic growth. We're talking about global economic growth, because this is a global monetary problem because it's a global currency.

So, sustained economic growth is impossible in this type of environment because money and economy are inseparable. You can't separate the two. And in a modern economy, that is anything other than a barter economy. The money supply issue is an important one. In a lot of cases like this, where there is only monetary dysfunction, and chronic dysfunction, it's only going to have a negative effect on the economy.

People often say, we realize the economy never recovered. We never experienced a recovery in the United States, there was no recovery in Europe, and there's no recoveries now in a lot of different places around the world too. And nobody seems able to understand or appreciate or even figure out why that is.

One of the reasons is because people like Ben Bernanke, people like the Federal Reserve, people who work at the Federal Reserve, are still taken at their word about what happened in 2008. It's still a subprime issue, it wasn't ever a money issue. And that's just wrong. It's demonstrably false.

The implications of it are, as we go forward in our presentation from 135 into 136 – we're not just talking about economic growth anymore. We're not just talking about lack of recovery. We're starting to see symptoms – and I know that this is something that you've talked about before, Erik – we're starting to see symptoms of social and political instability and disruption.

Erik: Jeff, as you know, that is my biggest concern. I think a lot of the things that we're seeing, whether it's the Eurodollar system or elsewhere in financial markets, they are painting a picture to me that spells a very grim future in terms of social stability and wealth inequality and the problems that I think society is going to face moving forward. But let's not go down that rat hole, because, as you know, I can go on forever on that one.

I see as we move on to Slide 136, Italy comes into the picture here. How does Italy fit into the story?

Jeff: I think Italy is an interesting case study in what we're talking about – the implications of a persistent monetary drag that's lasted for as long as it has – the mainstream case is that, okay, Italy's economy is fine. If you look at it from 2013 forward, by and large you see that it is growing again.

In March of 2018, they held a national election that went heavily – probably more heavily than most people anticipated – against the status quo, against the EU, against the common currency. And there is this struggle in the mainstream, as if this is some kind of mystery.

Because the economy can't be the problem. It's growing again. It's even accelerated in 2016, 2017. So why are Italians so angry about something? Usually it devolves into political name-calling and things like that.

If you look at Slide 137, again, Italy's economy appears to be growing. But if you go to Slide 138, you start to understand. Why is there so much anger in Italy? Well, since 2008, Italy's economy has shrunk. Not only has it shrunk, but after 10 years it stayed shrunk.

On Slide 139, what I've labeled here is that maybe there is something to all this voter revolt. Maybe people on the ground in Italy sense that there is something very wrong in the economy, even if mainstream commentary and mainstream understanding of what is going on doesn't match what people perceive.

I think that's a very simple thing to see in the economic statistics when you look at it from a wider perspective than just the last few quarters of GDP. Yes, Italy's economy is growing again, but that is not economic growth. It certainly isn't a recovery.

Erik: Obviously, it's not just Italy. This is a global problem. So where do we move to next?

Jeff: On Slide 140 you see that Italy is not an outlier. Italy is a more extreme case, but it's on the same spectrum as the entire European economy. Europe's economy in non-linear terms, which is what really matters, has shrunk too. Real GDP has been positive for, I believe it's 19 quarters consecutively, so it's still growing again.

But it doesn't really matter. That's not a recovery. Italy's economy in 2008 suffered a break. It wasn't a recession. The Great Recession couldn't have been a recession because the economy afterward never recovered, and therefore it never re-attained the prior trend.

So Italy isn't alone in its problems. And you can understand why there is a widespread anger about a number of topics, political topics, in Europe because, by and large, the economy is described in the mainstream as having recovered, when, in fact, we see that it hasn't.

Erik: Jeff, we've been talking about Europe. I see that on Slide 141 you're painting the picture of the United States. It looks almost the same. So how can that be that between continents we're seeing almost exactly the same story play out?

Jeff: And that's not supposed to be possible, Erik. When you think about orthodox economic theory, it treats each of these economies as closed systems. So if we find an economic recovery or lack of recovery in an economic pattern, and it's almost exactly identical across continents, there's only a limited number of ways that could happen.

So what we're really talking about here, obviously, is that the Eurodollar system as a global currency has impacted the global economy in exactly the same way across all of these geographic boundaries. As you would expect once you appreciate the system for what it is as a global phenomenon, not just a limited dollar issue or an offshore currency issue.

It's the thing that pulls everything together in terms of marginal direction, in terms of what we see is, again, a paradigm shift in banking and dollar capacity and a parallel paradigm shift in economic capacity, exactly as you would expect when you realize the importance of money in any economy.

Erik: With that explanation in place, it comes as no surprise that China comes into the story. And we're seeing again a similar picture, although maybe a saw-toothed pattern this time. What's going on with China?

Jeff: On Slide 142, just as people thought that maybe the emerging markets – especially China, Brazil, and the BRICs, places like that – they would be able to escape the ramifications and implications of the early Eurodollar panic in 2008. It was believed, after everything was over, that that was going to be the case afterward too.

Even though the US economy and the European economy never really had robust growth in the early recovery period, the emerging markets, especially the Chinese, did seem like it was going to be a full recovery for them. However, we had additional Eurodollar problems in 2011 and 2014 that we can see from the Chinese economy in particular, but some of the other emerging market economies too, they have been pulled into the same recovery pattern or lack of recovery pattern as both Europe and the United States.

The idea is on a recession, that you get this V-shaped, that for however deep the recession or the contraction portion is, there is an equal or better recovery on the other side so that the trend is never broken.

What we keep finding in all of these places, which is the telltale sign of monetary Eurodollar issues, are these L-shaped recoveries. Whether it be Europe, whether it be Italy, the United States, and now China, Brazil, all the places all around the world, and they all align with these specific Eurodollar events.

Again, the point being that (Slide 143) we can trace back political, social problems that are cropping up all over the world with economic problems that themselves trace back to this Eurodollar issue that, despite so much distance and time, has never been solved. It has never been resolved to the point where actual recoveries can take place in all these places around the world.

Erik: Let's go back to the big picture now. In Season 1 of Eurodollar University, we learned all about how the pivotally important Eurodollar system has served in providing dollar liquidity throughout the global financial system. And this was critically important to the operation of the global system. It's what pulled everything together.

In many ways, we discovered in Season 1 that the commercial banking system was stretching the rules a little bit, almost getting away with actions that are normally reserved for central banks, by creating money supply effectively through their use of things like rehypothecation of assets, using the same collateral twice, and so forth.

As we're coming to the end of Season 2 of Eurodollar University, we've seen consistently throughout Season 2 that ever since August 9, 2007, this system broke and it stayed broke. It has not been operating to provide the kind of US dollar liquidity that the system provided before 2007.

And one of the most important lessons, I think, of Season 1 was the fact that most people, including regulators and central bankers, never fully understood or appreciated the role that the Eurodollar system had played previous to 2007.

This just opens a whole rat's nest of questions in my mind, Jeff. It sounds like what we're saying is something that nobody ever really understood that played a pivotally important role is now broken.

Because people don't really understand the role that it was playing, the fact that the Eurodollar system is broken – and that is contributing in a huge way to the continuing problems that we have in the economy – if I understand your contentions correctly, you are saying that regulators and central bankers and so forth probably still don't fully understand the role that the Eurodollar system used to play and how encumbered it has become since August 9, 2007.

First question: Is that correct?

Second question: Dude, holy cow, what does that mean in terms of the future? It sounds like you're saying that the system is broke, it ain't gonna be fixed as far as we can tell, and the regulators don't even understand that this is what the problem is.

Am I exaggerating to put it in those terms?

Jeff: I wish you were, Erik. Because that would make it, I think for a lot of people, more palatable. I understand that what we're talking about here is a big deal. This is not some small thing to basically say that central bankers have no idea what they're doing in terms of money. It sounds like a big intuitive leap that a lot of people aren't ready to make.

But that was the issue here. When we're talking about the shadows of offshore currency, balance sheet capacity, credit default swaps, these are all things that people just don't understand.

And what happened, by and large, to a big degree, was that when all of this stuff happened, people gave Ben Bernanke the benefit of the doubt. They said, okay, well, all of this stuff is going on, we don't know what's going on. You probably know better than anybody else.

That was a false assumption. And it was a false assumption that was based on the pre-crisis way that the Eurodollar system had evolved that made it seem like central bankers did know what they were doing.

And I think that's another important piece of evidence of the paradigm shift we're talking about here. Before 2007, people like Alan Greenspan were held in such high esteem and high regard, because it really did look like he knew what he was doing. And that he could govern the economy through nothing more than quarter-point adjustments on the federal funds target rate.

Whereas, afterwards, after August 2007, Ben Bernanke, under his Federal Reserve leadership, can't do anything right. It doesn't matter what the guy does – and I'm including the QEs afterwards in that too – it didn't matter what the Fed did. Nothing actually happened the way it was supposed to happen.

And the reason is because the Eurodollar system broke and these people don't even know or don't really want to know much about what's going on there. The implications are if it is broken – and I think there is almost no doubt that it is, just look at those bank balance sheets that we presented before – the system is broken in a permanent durable fashion and the central bankers don't know that it's broken or don't understand the implication that it's broken.

What happens? What happens is exactly what happened over the last 10 years. Nothing changes. You go into these periods of crisis and re-crisis and then maybe a little bit of economic upside in between them.

Overall, though, because the monetary system is a persistent drag on the economy, nothing ever recovers. There is no growth. There is no actual opportunity. And so people start to get restless and disenchanted with the status quo. And it opens up the door to all of these other problems.

Not just economic problems, but social and political problems that proliferate. Not just in the places that we've been talking about, but in places that we don't even think would be involved in it. Because, again, this is a global currency system. This is a global paradigm that applies to everyone.

Erik: Hang on a second, Jeff. I want to summarize this and put it in context, because this is just so profoundly important. If I'm understanding you correctly, you're saying that Alan Greenspan was regarded as the "Maestro," the brilliant genius.

You're saying that was actually an illusion. He didn't do anything particularly good, bad, or indifferent. He just happened to be in office at a time when the Eurodollar system was working. It was providing this tremendous amount of dollar liquidity globally that was making everything look shiny and wonderful, rainbows and unicorns.

Ben Bernanke comes on the job. It looks like he's struggling at every turn. You're saying it has nothing to do with Bernanke's policy choices. You're saying he just happened to be the guy who was entering office at a very unfortunate moment, slightly before the Eurodollar system irrevocably broke. It's been broken ever since.

And it sounds like what you're saying, okay, how is Yellen's style different from Bernanke's? And how is Powell going to be different from Yellen? You're saying it doesn't matter. They're screwed no matter what. The Eurodollar system is still broken. It doesn't matter what Jay Powell does next, doesn't matter if he's got a different approach to things. Or a different way of thinking than Janet Yellen did or than Ben Bernanke did.

It ain't gonna work because the Eurodollar system is the real problem and they don't even understand that that's the problem. Am I exaggerating to summarize it that way?

Jeff: Not at all. I think that's exactly the case. That's exactly what's happened and it explains in a very high level, really, what's gone on, not just for the last 10 years but the last 40 years.

Alan Greenspan was an accidental genius. It looked like, okay, what he was doing was causing this great moderation, as they called it in the early 2000s. In fact, the reason they thought he was responsible for it was because nobody had any idea what it really was. In fact, the people who coined the term "Great Moderation" weren't really sure either. All they knew was that, okay, maybe it was Alan Greenspan because we don't have any evidence that it wasn't.

Even if you go through the Federal Reserve and policy discussions of the time, especially in the late '90s and early 2000s, they weren't really sure either. They presented a united front that, yeah, we know what we're doing and we've got it down into a science.

In their internal discussions, there was a lot more uncertainty there than they presented to the public. The reason being was that they knew they couldn't define money. They admitted it many times, especially Alan Greenspan more than anybody else. They could not define money. Which is essentially our topic.

That was our point in Eurodollar University Season 1, to show that, throughout this tremendous and massive evolution, it got to the point where central bankers couldn't identify money at all. And if you can't, as a central banker, identify money, then how the hell can you do monetary policy in an effective way? And how would you even know if you were effective or not effective, whether it's a crisis or not?

Erik: Well, Jeff, the things that you're saying have immensely profound implications, because, first of all, the global financial system is a pretty big deal by itself. You're saying the people in charge of it don't really understand what aspect of it is broken or why it's broken and they're trying to fix the wrong things.

But I would say, even more importantly, we're clearly at the stage now where we're seeing the transmission from just economic problems into major social problems around the world. The economic conditions that have persisted, it's leading to all the youth unemployment in Europe, which is causing massive waves of crime.

I think that we are headed towards a situation where wealth inequality is going to lead to massive civil unrest. I don't think I'm exaggerating to say significant human bloodshed, as there are conflicts between governments and people. People who feel that their interests have not been represented and that they are being screwed financially by the system.

The only possible way that society can come out of this without a horrific human crisis is for the people in charge to do a good job of fixing the problems. And you're saying they don't even understand where the problems exist in the system. They have no idea of what's causing it. They're focused completely on the wrong things. And it doesn't matter what they do. Trying to solve the problem of the toilet won't flush by changing a lightbulb doesn't work because it doesn't have anything to do with that.

Jeff: I think it's a little bit deeper than that. Not only are they not solving the problem as it is, they don't have any answers for why the problem isn't solved. The fact that they had to do more than one quantitative easing tells you that they don't really know what the hell is going on. Because if you have to do it twice, it wasn't really quantitative easing.

And, rather than reassess at that point, maybe we don't know here. Maybe there's something else going on here. They continue to do the same thing over and over again. But, not only did they do the same thing over and over again, if you ask them they'll tell you it was effective.

So it's not just that the economy isn't recovering, that there's this wedge of mistrust going between authorities and people, that a lot of people who aren't experiencing any of that economic growth that is happening in linear terms, which creates this perception of, okay, today people are saying the economy is booming.

And a lot of people are saying what the hell are they talking about? How can it be that the economy is booming? I don't see it.

It's not just that the economy doesn't work or that the authorities can't figure out why. It's that they're saying that it's not even a problem. You're not even allowed to say that the economy is an issue anymore. You're especially not allowed to say that there is a monetary issue behind all of it.

We can't even move in the right direction because mainstream or orthodox or however you want to characterize it, the debate about what's wrong doesn't even get to Step One.

And Step One is, really, we still have to go back and figure out 2007 and 2008. We have to come to terms with the Eurodollar system before we can get working toward a solution. And, unfortunately, it's 2018 already and we're still talking about 2007 and 2008 when we should have progressed long past that point.

I hate to take a pessimistic view of things. I don't want to be completely pessimistic about all of these things, but that's the direction that everything seems to be going. There are sources of positivity. There are things to be optimistic about.

Even though the Federal Reserve may not be interested in the Eurodollar, that doesn't mean that other places are not. You see research pieces that occasionally come out, especially over the last couple of years since the rising dollar of 2014–2016. Places like the Bank for International Settlements, even the IMF, have started to take a greater interest in this topic of Eurodollars and offshore currency and the global balance sheet capacity types of issues.

The hope is that, okay, maybe Jerome Powell is no different from Janet Yellen, which is no different from Ben Bernanke, but maybe along the way one of these other organizations will finally get a fire lit under them to the point where they say, okay, now we really have figured it out. Now we can actually do something before the clock ticks down to something catastrophic.

Erik: Just to keep this in context, Jeff, I want to make sure that we don't come across to our listeners as if we're saying, okay, look, the people in charge don't know anything but Jeff Snider knows exactly how to fix this.

You're not saying that. You're saying you know where the real problem is. If I understand you correctly, you don't know how to fix it either. Is that right?

Jeff: I have ideas like anybody else would have ideas. But, no, what is the answer here? The answer is a stable currency system. But what would that entail? That's an immense project. How would we take what we have now – which is a dysfunctional balance sheet capacity, derivative, whatever, however you want to classify it – how would we take that and turn it into something that actually works?

And how would we go from where we are now, which is Point A, to Point B, which is where the system actually does work and it's a happy day for everybody in the world?

What are the dangers going from A to B? I can imagine there are tremendous risks involved with any kind of systemic reset of that nature. So what comes next that would be positive? How do we fix this?

This is a huge task. That would require a whole lot of capability and capacity that is far beyond my capability. I just don't have enough information. I've spent 20-some-odd years studying all of this stuff and I still don't even know what I don't know.

There are still parts of the system that are undiscovered, so to speak. There are still things that surprise me in the way the system has evolved and the way it works. And it would take a monumental effort to actually figure out how we get out of this.

Erik: To summarize: The world is in a real pickle. We have a financial system that is badly broken and has been broken for about 11 years now. You contend that the people who are in charge do not appreciate the understanding that you've shared with us as to why it's broken.

But you admit that, even if you could persuade the people in charge to understand and to recognize the true nature that you've shared with us of why and how the system is broken, you don't claim any more than anyone else to know how to fix it. You just are able to suggest that if we started with an accurate understanding of the problem we might have a chance.

And we're not even there yet in terms of where people's understanding is in terms of regulators and elected officials and so forth.

My job, as host, is supposed to be to put a positive spin on this in order to close things down, Jeff. Any advice for me on how to do that? I'm at a little bit of a loss here.

Jeff: I think the positive spin is, as I said before, it's not an impossibility. There is an interest in the world at large for fixing the problem. If you think about what the Chinese are doing, for example, they are reacting to the problem as it is, rather than what it's supposed to be.

If they do some things that cause enough people to pay attention to what they're doing, it could raise awareness of this issue to the point where, okay, maybe we reach a critical mass of people wanting reform and wanting to look at the monetary system because that's where it all makes the most sense.

The primary impediment to all of this is central bankers. And you can understand why they would be the primary impediment. Because they're the ones to blame for all of this. Not because they made the crisis happen but because they allowed it to happen through nothing more than ignorance.

If I'm a central banker, I don't want people blaming me. So I'm going to say it can't be a monetary issue because I did all those QE and that obviously was effective. That's really the only thing that needs to be overcome, at least in terms of a major next step. Once we get past central bankers saying, oh, it can't be my fault, then all of these possibilities do open up.

Then there is the non-trivial chance that we get something like Bretton Woods II together. You get the smartest people around, who actually do understand what's going on with these banks and why the global currency system doesn't work, and can actually work together cooperatively to figure out how to fix it in a way that doesn't cause another big disruption.

These things are possible. The question is, are they likely? Can we get past the central banker objection? That's not as big a task as it might sound.

Erik: It sounds to me, Jeff, like the really, really important point to drive home here is will they come around to understanding where the problem is? Because I do think there is a very realistic possibility in the next 10 years of another Bretton Woods style of conference.

I'm a huge fan of Neil Howe's work on demographics. And cycles. Major long-wave business cycles. And, in this fourth turning that we're in, usually major institutions get ripped down and rebuilt in the end.

The thing is, it only works if the people who get nominated to be the participates in this Bretton Woods type of monetary conference that decides the new system that the world is going to work on – unless they are graduates of MacroVoices Eurodollar University, they're probably not going to understand all this stuff. Because, frankly, Jeff, I don't think anybody but you understands this on the level that you understand it.

Do you think that in your work have you encountered other people, economists and so forth, who have the depth of understanding and see the same problems that you see? Or are you the only one who's thinking about this stuff?

Jeff: I'm not the only one who's thinking about it. Especially, again, in the last couple of years, more people seem to be gravitating toward the topic because it makes sense. There is a lot that's intuitively understandable.

And I don't think it's necessarily an impediment that this is a very difficult and complex topic. I think what the primary issue is, the fact that nobody has investigated it. And so it's, basically, a new discovery, so to speak.

That's probably putting it in too extreme of a term. It's just the fact that, because the monetary system had been languishing as a topic nobody wanted to really investigate for so long, it's taken a lot of time for that to generate a lot of interest in it. I think once the level of interest rises to the point where, again, some kind of critical mass is reached, you'll have enough people who are investigating it and who do have high-level capabilities to understand what's going on. And that it will lead to, hopefully, something like a Bretton Woods II or some kind of systemic monetary reset that is required before the global economy can actually recover again.

Erik: Well, Jeff, I will cross my fingers that somehow, some way, MacroVoices Eurodollar University influences somebody somewhere to know the right thing to say to someone that causes somebody to know how to save the world. Because I think that's what we're talking about here. And I just cross my fingers that people figure this out.

Folks, we appreciate your attention to what's been a very involved and intricate series. Be sure to stay tuned to our weekly MacroVoices podcasts, where Jeff is a frequent guest and we talk from time to time about current activities in the Eurodollar markets and what they are telling us about current market and investment conditions.

Jeff, thank you so much for another fantastic season of Eurodollar University. Now, have we told the whole story? Is there a Season 3 that we need to worry about? Or have we pretty much covered it?

Jeff: There is a lot left to discover. I think there is a lot left to talk about still. Quantitative easing 2011, 2014. So there might be future seasons ahead.

Erik: We'll certainly stay in touch with Jeff and consider Season 3 if it makes sense to do so.

Before we close, I'd like to extend my personal thanks to Jeff's boss, Alhambra Investments' founder and CEO, Joe Calhoun. Eurodollar University has been more popular with listeners than any other project in MacroVoices history to date.

Unlike our usual format guest interviews, which typically consume about 45 minutes of the guest's time and draw on presentation materials that they usually already have on hand, Jeff Snider has literally spent weeks of dedicated effort designing this content and preparing the extensive slide decks that you've received for MacroVoices Eurodollar University Seasons 1 and 2.

All of Jeff's effort was dedicated exclusively to MacroVoices listeners. And several weeks of his salary at Alhambra were consumed in the process. Then, after we used up so much of Jeff's time producing Eurodollar University Seasons 1 and 2, when we announced our first MacroVoices live event (in Toronto on August 10, 2018), I got a call from Joe Calhoun saying he'd be happy to cover Jeff's travel expenses and salary to participate as one of our featured speakers at the event at no cost to us.

We've offered several times to reciprocate by giving Alhambra some sort of advertising or promotional consideration on MacroVoices. But Joe has declined all of our offers saying that he feels the show's advertising-free format is what makes it so popular with listeners. And he doesn't want to be the one to screw it up.

Joe went on to say that his strategy has always been to use media opportunities simply to show off the brainpower of his firm and let investors who are looking for an investment advisor put two and two together on their own and contact Alhambra when they're good and ready, without being pressured by advertising. I just love this guy's style.

Folks, it is incredibly rare to encounter someone with Joe Calhoun's character and personal integrity in the retail investment advisor business. So, regardless of whether you are a retail investor looking for an advisor, or just another professional in the industry who has enjoyed Eurodollar University, I really hope that you'll join me in expressing thanks to Alhambra founder and CEO Joe Calhoun, who made all of this possible without asking for anything in return.

If you want to drop Joe a note, his email is jyc3@alhambrapartners.com.

That concludes Part 7 and Season 2 of MacroVoices Eurodollar University. Be sure to check back, as there just might be a Season 3 still to come. And of course be sure to tune in each week for our free MacroVoices podcasts as well. You can subscribe on iTunes or at macrovoices.com. For MacroVoices, I’m Erik Townsend.