Jeff Snider: Why the Dollar Remains King

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Erik: Joining me now is Jeff Snider, the principal author first of the MacroVoices Eurodollar University and now of the Eurodollar University podcast. Jeff prepared a terrific slide deck to accompany this interview and I strongly encourage our listeners to download it because we're going to be making extensive references to the graphs and charts that it contains.

You'll find the link for the download in your research roundup email. Now, if you don't have a research roundup email, just go to our homepage at macrovoices.com. Look for the red button that says looking for the downloads. Jeff, it's great to have you back on the show. We decided instead of talking about today's markets and so forth, to do kind of a timeless episode, talking about the US dollar. Why it is still at the center of the global financial system despite the fact that ever since 1971, the US has kind of been frustrating some of the other countries around the world by maybe overstepping the authority that it gets from having the dollar at the center of the global financial system, yet it still remains king. And particularly, I think a lot of people would really like to better understand what causes the dollar to go up or down against other currencies. Now, if you pick up a macroeconomics textbook, pretty much what we're taught is that interest rate differentials are what control currency values.

So for example, if the Japanese Yen pays a much lower interest rate than the New Zealand dollar, then you can expect international investors to borrow yen at very low interest rates, sell them in order to buy New Zealand dollars, and get a much higher rate of return on New Zealand Treasury bills than they had to pay in order to borrow the Ten. That's of course known as a carry trade. I got a feeling Jeff, you're gonna tell us that there's a little bit more to it than just that when it comes to the US dollar.

Jeff: Yeah and it's a good place to start Erik, because you're right, the textbook is pervasive. And the textbook opinion is pervasive, for good reason. Because that kind of thing does happen. There are enormous carry trade forces out there in the world. And as you mentioned, Yen to New Zealand Dollar, I don't know how popular it is. But I imagine someone somewhere at some bank or some firm in Tokyo is probably working on something like that, because let's face it, Japanese banks have all sorts of Yen on their hands and all tie all sorts of time during the day to do something with it that doesn't involve domestic Japan.

First of all, there's two important points here, the one that you first raise, which is that the US dollar is still standing and in some ways that's regrettable, because the US dollar system, the

Eurodollar system doesn't really work for the US or anyone else around the world but yet it remains. And there's a reason why. And we'll get into that. And the second thing is that it's incredibly, it's more complicated than just carry trades, carry trades are part of the investment process. They're part of the investment world but they're also you know, we have to keep in mind, the Eurodollar and the US dollar denomination is the global reserve currency. And as the global reserve currency, it has to fill these very necessary very large, very sophisticated roles. For example, just in the carry trade example that you just use, going between Yen to New Zealand dollars to take advantage of interest rate differentials. Most of the time, you're not gonna go directly from Yen to New Zealand Dollar. There's going to be an intermediary currency in between. You're going to go into the US dollar to intermediate between those, especially for talking about more than just speculative investment. If you're talking about foreign direct investment, or any other kind of opportunity arbitrage that's out there between currencies. By and large, more often than not, you're going to intermediate through like the US dollar, which means the US dollar is actually in the middle of what should be a simple interest rate differential arbitrage case.

And I brought a slide deck along so we can start out going through some slides. And if you go to slide number three, you're exactly Erik. I mean, it's not just interest rate differentials. The textbook says an interest rate differentials themselves are a matter of central bank policy. So the differences are the example you had between the what the Bank of Japan might be offering and then pushing rates inside Japan, versus what the reserve bank in New Zealand is doing. And then therefore interest rates differential with New Zealand. And of course, with the US dollar, everybody thinks Fed, Fed, Fed, Fed, Fed. It's all about Fed policy on the one side of the differential, the US dollar side. But if you go back through even just recent history, so we're going to go through slide three to four and now to five. What you find is it doesn't really work that way, at least not in the spot market. In foreign markets, obviously, interest rate differentials help you set what your forward prices are going to be when you're swapping doing currency swaps at any given time, during the day or the during whatever portfolio strategy that you're trying to follow.

But in the overall context of the US Dollars exchange value versus any number of the major currencies and we'll just use the DXY here, because the DXY is the major Dollar Index. What you find is that DXY or the dollar kind of does its own thing independent of whatever the Federal Reserve policy is. So if we review the last couple of years going back to 2017. First you see the Fed is hiking interest rates in 2017. Remember, globally synchronized growth, inflation expectations were supposedly rising, and the dollar seemed consistent with all that, including the Fed doing quantitative tightening or balance sheet runoff, because it was confident the economy was good, which is kind of what we see consistent historically, with a weaker dollar. Then all sudden, in early 2018, the dollar changes direction, it starts to go higher, so the dollar changes, but the Fed did not. If anything, the Fed got more aggressive. So we got more into rate hikes more confident about quantitative tightening. And then of course, it didn't really work out that well in 2018 and then to 2019, the Fed changes again, but the dollar doesn't. The dollar continues to go modestly higher, while the Fed suddenly starts cutting interest rates, as well as ending abruptly ending quantitative tightening, and then doing it's not QE five, which was treasury bills in the wake of the September 2019 repo event.

And of course, move forward to the COVID pandemic, all that stuff Fed doing lots of QE in 2020 and 2021. But again, very abruptly in early 2021, just when everybody's thinking this wave of money printing is finally washing over the system, the dollar starts to go higher again. So again, it doesn't matter what the Fed does, the dollar seems to react independently of whatever the Fed and this kind and it's been this way historically speaking. Go to slide six, go back to the pre-crisis era. Again, the Fed does one thing, the dollar does another thing, the Fed does the same thing, the dollar goes in a different direction.

So 2004, the dollar kind of goes down, even though the Feds hiking rates, and from 2005 into 2006, the dollar was kind of going back up even though the Fed hasn't changed and the dollar goes weaker again. Again, but the point we're making here is that at least as so far as the Federal Reserve is concerned, and Federal Reserve policies are concerned, there is no direct relationship. And really, there isn't very much of a correlation whatsoever between the monetary policies or the interest rate policies of the Federal Reserve, and the direction of the dollar. And probably the most extreme example of that, in addition to March of 2020, we have of the middle of 2008, when the Fed was ultra, ultra dovish, according to most mainstream sources, but yet the US dollar spiked and surged because the US dollar is reacting to conditions that aren't necessarily related to the Federal Reserve. And just to put one more point on interest rate differentials. If we go to Slide seven, we'll take a look at the difference between what the Federal Reserve is doing and what the ECB is doing and how that plays out with regard to the US dollar-Euro exchange value. And again, sometimes it looks like the textbooks most times it doesn't, especially in the real thick of the crisis in 2008 and into 2009, where the Euro is actually seriously declining against the US dollar. Even though at that time, interest rates were extremely favorable toward Europe, including the fact that the ECB actually did a rate hike in July of 2008.

It was June or July 2008, can't remember off the top of my head. So despite the fact that the interest rate differentials were supposedly Euro positive. The Euro actually tanked really hard in 2008 because again, what happened in 2008? What was it that makes the US dollar move the way it does? It's that kind of a thing. It's that's kind of fundamental Eurodollar story that doesn't make it into the textbook, which is usually about what is whichever central bank on one side of the interest rate differential supposedly doing? We're taught and told over and over to filter everything we look at in finance, economy, and markets through the lens of central banking and monetary policies when it just doesn't stand up to any evidence.

Erik: Jeff, you're kidding me! It turns out that the central bankers are not actually in charge of everything the way they think they are. Well, how about that? So if it's not central banks, and it's not just interest rate differentials, that begs the question of what actually does determine these things. And I know because I'm familiar with your work that it's going to hinge on the global market for borrowing and lending dollars, which is known as the Eurodollar system. Now, you and I did an entire series called Eurodollar University, which is available at macrovoices.com/edu. But for anyone who may not be familiar, let's start with the fundamentals of what Eurodollars are and how they have anything to do with dollars and you know, what, what would the international market have to do with the value of the US dollar?

Jeff: Yeah, and as usual Erik, as you know, it's an incredibly complicated, very detailed and very deep historical story that goes way, way back into the 1950s. And really earlier than that, for some of the technological and banking evolution fundamentals about the system. But by and large, we have a global Eurodollar system, which simply means US-dollar denominated bank liabilities reserve plus virtual currency, ledger, money, whatever, however you want to characterize it, but it's not actually a system of physical currency or any money forget, I mean, there's no gold here, operating primarily outside the United States, but it's not like they're different systems. It's not like there's an offshore Eurodollar system and an onshore domestic dollar system, the two are very much linked. And up until the 2008 crisis, they were in almost operating in almost seamlessly linked fashion. And some of the ways you could see that happen is by the way, foreigners began to accumulate massive balances of US dollar assets. Most of which, which were custodied domestically. So for example, you could see in the tick data, foreigners were tended to buy a huge amounts of US dollar assets, particularly US Treasury securities, whenever there were a lot of dollars operating in this Eurodollar system sloshing all over the world. That had nothing to do with the Federal Reserve, it was all about banks creating their own liabilities, and then trading them and transacting them all throughout the world, as we said before. The Eurodollar system intermediating between merchandise flows, as well as financial flows. And the more there were these Eurodollars, the more there was, governments, banks, foreign institutions buying US dollar assets to hold as reserves, because that's only the prudent thing. That's what governments and banks had been doing, historically speaking. They're always held correspondent balances. So really, the only Eurodollar innovation, as far as that much is concerned to store value in reserves, is the introduction of US Treasuries. And it goes all the way back to the beginning, as we'll see in a minute.

So picking back up on the slide deck, I want to go to 1997 and 1998, just to give you a little bit of a historical vignette or anecdote that ties these things together. So you have governments that are holding reserve assets and US Treasuries because of this massive gross Eurodollar expansion. But then in the fall of 1997, we have this little bit of a hiccup. It started in Thailand, and it kind of spread throughout the rest of the Asian markets. And it hit Japan pretty quickly too, because Japan was already in midst of its lost decade. And once this Asian financial crisis reached some of the Japanese banks. The Japanese banks had funding problems because they were short US dollars. They were participants in the Eurodollar market and when local banks in any jurisdictions find themselves in the opposite side of the Eurodollar system, where funding becomes less and less reliable, less and less predictable, more expensive, or maybe disrupted altogether, local banks tend to run to their central bank, their local central bank and say hey, can you fix this for me? Can you sell some of your reserves in order to help me pay back these Eurodollar loans I've taken out to do all the things that global commerce requires me to do.

In May of 1998, this is a FOMC discussion. Peter Fisher, who was the reserve market or the reserve open market system manager, recognized through his contacts and told the FOMC that

US banks in particular, they were willing, again, arbitrage here. They were willing to take advantage of the steep premium. That was the dollar premium that was being charged to Japanese bank that they were running against credit, and some of their internal constraints. So from May 1998 onward, US banks were not going to be supplying US dollar funding through this Eurodollar system to Japanese banks, which required Japanese banks to do all sorts of other things, including firesale assets and some of the worst cases and some Japanese institutions did end up failing throughout 1997 and 1998. But to try to prevent all that from happening. You go to slide 10, now we're in February 98, a couple of months before Mr. Fisher saying that the US banks are cutting off to Japanese counterparts. The Government of Japan had essentially pleaded with the Fed to sell treasury bills that the Japanese had I can't remember if it's in the in the in the custody of the Ministry of Finance or if it was directly in the Bank of Japan. But either way, they begged the Fed to essentially sell treasury bills on their behalf so nobody would know that they were selling treasury bills, so that they could raise dollars to help supply these to the local Japanese banks that couldn't raise them from the Eurodollar system. And to this day, we have no idea how much the Fed actually sold. What was actually going on, because as I've shown, as you see on the slide here, all of these four blanks, those numbers as well as the text has been redacted. To this day, 25 years later, they still don't tell us exactly what they did on behalf of Japan. The reason I'm bringing this up because it ties together a couple of very big misconceptions that the public people at large, largely have, which is that foreigners selling their treasury securities has nothing to do really with those treasury securities. It's not about the credit risk. It's not about the, you know, the government going crazy in the United States, which it has. It's not about that they hate America. There's no politics here. It is simply Eurodollar Money Mechanics, and it goes way, way back, not just 1997-98.

If you see on a just to show you the data of this happening on slide 11, as soon as US banks cut off their Japanese counterparts on the tick data, we see suddenly, foreigners are foreigners, not identified here. But we know they are Japanese, that were being forced to sell their US dollar assets, because that was their only way for them to make up this eurodollar shortfall. This global or regional dollar shortage that was spreading across Asia, and specifically, foreign institutions, official sector on slide 12, you can see a couple of periods where the Japanese primarily were being forced to sell their US Treasury notes, not because they hated Bill Clinton, because they were there. They didn't like the idea of impeachment. It wasn't because they hated the Fed or Alan Greenspan, it was simply Eurodollar mechanics.

And if you go to slide 14, we'll skip ahead a couple here to slide 14. This was nothing new in 1997 and 1998. As I said before, this goes all the way back to the beginning of the Eurodollar system, because the Euro dollar system itself is primarily a medium of exchange. It's not really a store of value, it was never really meant to be a store of value. That's where treasuries come into it. That's where things like euro bonds come into it. These financial markets that we're taking on the monetary role of store of value, so that the Eurodollar banks can engage in this virtual reserveless currency that acted as a pure medium of exchange. So even from the very earliest days, the system had always linked central banks holding US Treasuries as a reserve store value in case of any payments, processing shortfalls, or any Eurodollar funding problems that arose. And they have been part of the marketplace from the very beginning to.

On slide 14, you can see an FOMC discussion from 1963, where the FOMC is talking about how again, the Japanese government were forced to sell treasury bills in order to then lend the proceeds to their commercial banks to pay off Eurodollar loans that the Eurodollar market was depriving them of. So going back to slide 13, we can start to start to really piece together what's going on here. Whenever governments are selling their trade governments in particular, but also private institutions too. Whatever governments in particular are selling their treasuries, guess what we find? We find a very good correlation, as you can see on slide 13, with government activities in the buying and selling of particularly US Treasuries as reserve assets, and the direction of the US dollar exchange value. Just to note on this slide, I'm showing you DXY inverted so that it matches more closely with the tick data. But whenever you see government selling treasuries, that's usually an indication the US dollar is going to rise. And as we know, from the Japanese example, going all the way back to the 1960s and before as reserve assets. If they're selling reserve assets, that means dollar shortage, Eurodollar funding issues.

Erik: Jeff, you mentioned a couple of times in that description situations where hey, nobody was upset with the United States. It wasn't about that it was the mechanics of the Eurodollar system. Well, it seems to me that in 2022, we do have a situation where there's a new historical event, which is the seizure of Russian foreign exchange assets caused a lot of people to become concerned about divestiture of foreign exchange assets by other central banks, basically saying, look, regardless of what Putin may have done in Ukraine, the United States took this action with without any due process of law, without any action of a judge or a court. It was basically an executive decision by President Biden to seize their foreign exchange assets. And a lot of people predicted that that would change the attitude of central bankers around the world and cause them to say, hey, wait a minute, this whole idea of making US Treasuries the go to reserve asset. Hey, that's gotta go and there has been divestiture both by central banks and by private holders of US-denominated securities since then. So is there a new fundamental driver here where we could see the concerns about foreign divestiture of US assets change this equation? And if so, what are the consequences?

Jeff: Well, I think you know, number one, first of all, the Euro dollar story itself goes back to that same of fear. One of the origin stories for the Eurodollar system in the 1950s was Russians fearing us confiscation of their dollar balances that they held in US banks or with US banks in the 1950s of course. The early Cold War back 1950s and 1960s, early 1960s, some of the hottest parts of the Cold War. So this is actually nothing new and in one sense, this is what the Eurodollar system was built to avoid. Because when you have a global bank network that's operating not just offshore outside the United States, it's offshore everywhere. It's outside of regulatory jurisdictions in pretty much any place that operates because that's kind of the point. The point was to move beyond the reach of whatever global authorities including, you know, itchy Americans who are willing, who were only too willing to go beyond what the British saw was a step too far. I mean, the British mercantile system that pre-existed, the Eurodollar system, even the British government during whatever wars, they were fighting, and they knew you never did that. You never went as far as to confiscate even an enemy's financial resources because of what that the precedent that would set and what it would do to the actual monetary system and the faith and confidence in it.

But the Eurodollar system, the US dollar, in particular has been different, because from the very beginning, confiscation has been a full part of its development, not just the Russians or the Eastern Bloc communists, but various political parties, various governments, various private corporations around the world who have been accessing this offshore global dollar system, because it is beyond the reach of the government. It is beyond the reach of the Federal Reserve. It's beyond the reach of the Treasury Department. That's the part that the mainstream convention about the US Dollar as a reserve asset gets wrong when it's the Eurodollar as reserve assets because it's a bank centered system. It's outside the regulatory reach of most of the governments that are that are surrounding it are trying to influence it. The other part of this Erik as you mentioned, is US Treasuries as reserve assets. And US Treasuries as reserve assets aren't really that complicated, either.

As I said before, the reason why governments have been using US Treasuries is not because they either like or hate the United States, but because there's the deep, sophisticated liquid market associated with it. And when we get into things like repo, which is one of the most, you know, what is one of the most crucial aspects of liquidity across the system. US Treasuries are primary not because people like the US or they like to buy it administration or anything like that. It's only because of the marketplace surrounding it. And unless and until there is a competing marketplace, for some form of collateralized market, then the US Treasuries are basically it. And that's kind of the theme that we're developing here throughout this whole presentation, is that we're, we're regretting the fact that the Eurodollar system is still the reserve currency, we're lamenting the fact that it doesn't work. But it's still here, dollar is still king, simply because there is no alternative to it. And I know people like Zoltan Pileser has speculated that we're going to develop a more, a less Treasury-centric system and use commodities, which to me is absolutely absurd, because commodities are the very, very reason we moved away from the old mercantile system to begin with cumbersome settlement, lack of liquidity, all those types of things.

Erik: Jeff, let me spin this another way that let's suppose that I am a central banker for one of the major large central banks in the world, not the Fed somebody else. And I hire you as a consultant, I say, Jeff, you're the smartest guy there is on this eurodollar system. Look, we really are very, very, very concerned about the US is abandonment of the rule of law and what they did with Russian reserves, because just as you said a minute ago, even with your worst enemy, you don't want to set that precedent of extra judicial seizure of assets, because it undermines your currency system as the global reserve system. So suppose that a central banker for a major central banks at Jeff, we need your help. We want to ditch the dollar, the whole Eurodollar system, but we know that it's deeply ingrained throughout the whole financial system. So tell us what the challenges are, what things do we have to overcome? And what asset if it's not commodities and we want to get rid of the dollar because we don't trust the American government anymore. What should we use instead as reserve assets?

Jeff: Well, that's a two part question too. And the first part is what do you need to do? You need to you need to create a system that can stick and fill all the roles of a reserve currency. I'm thinking about Robert Solomon's three pillars of a reserve currency, which is liquidity, adjustment, and confidence and those are tricky things. What do you mean by liquidity should be pretty obvious. You have to have an ample amount of liquidity which is liquid resources. that are easily tradable, easily settled across vast distances. And because it's a reserve currency system, what that means is, it has to be available in enough liquid supply all over the world or all over the block. If you're not trying to create an alternative, global reserve currency, but just a regular, a individual currency block or geographical currency block, whatever it might be, you have to make sure that that currency is available in ample supply wherever it's going to be used. And that's a real tricky thing. And that's the reason why the Euro dollar system has lasted as long as it has because it has, for many, many decades developed infrastructure into all parts of the world, people know how to use the Eurodollar system. Swift being a small part of it, but a good example of how it's standardized how it's easy to use, how it's very, very simple to operate. But yet incredibly complex, when you actually think about what happens. There are millions and millions of millions of messages that are sent across the SWIFT system or the chip system or the global Eurodollar architecture that are easily and predictably and very, very reliably settled across the whole thing. So starting out with a competing reserve currency, whether it's global or regional, you have to make sure that there's infrastructure available to make sure that it's liquid throughout the entire geography of where you're going to develop this currency system. And that's a really tricky thing and it takes a long, long period of time.

And then the second part, which I think is the most important part where the Eurodollar really shine, it shines in, at least in its early days was adjustment. Adjustment means or adjustment is really just the acknowledgement that we live in a ever changing world. This is not a static world, because it was the Eurodollar was a bank centered system that was operated by, for lack of a better term greedy bankers who would do whatever they could to make a nickel, they were very nimble. So, if some part of the Eurodollar system wanted to experiment or do something different that the system hadn't done before, the banks operating in it were very, very flexible enough that they could adjust to the needs of their customers. So the currency system itself could evolve and change with circumstances. They could evolve with technology, they could evolve with, you know, political, political flows, or political winds, whatever it might be, that the system could constantly change, constantly evolve, and to constantly adjust. And it's very difficult, if not impossible to replicate that kind of function, or that kind of capability in a rigid top-down structure. And if you're trying to develop in its alternative reserve currency system, and you know that it can't be a rigid top down structure, that means you have to embed within it all sorts of legitimate organic incentives that allow private enterprises to compete within it so that they can be flexible enough. You can have competition that produces winners, that leads to this sort of flexible adjustment function. And then, of course, the third pillar from Robert Solomon is confidence, which is, it's just harder to describe as it is to try to think about because confidence is more of an emotional thing than anything. And part of confidence comes from the fact that once you have the system set up, it works the way it's supposed to work. And in most cases, that's what the Eurodollar system has been, up until at least it had been up until August of 2007.

But even now, over the last 15 years, when it doesn't work in the way it's supposed to, it doesn't work in the way we need to, because it's so hard to develop and implement a competing currency arrangement. It's kind of all we have left, because these three pillars of a reserve currency are not something you just slap together overnight. And it's not really something that's at least with the current, lack of urgency, the current, you know, lack of political will in most places around the world. There's really, there really hasn't been any real thought into developing something like that. I know. People have said the Chinese are going to do it and they've been thinking about it ever since Xiao, Xiao Zhi Shan first mentioned it in what was it March or April of 2009, we're going to we're going to build a yuan based currency system. Well, the Chinese quickly abandoned it because they realized it was beyond their capabilities. So without really a global effort to do something like this, we're kind of stuck. So you know what you're saying Erik is true. But it's also the regrettable truth here that we're trying to get at is that the Eurodollar system has done all these things better than any play anywhere else, even though the Eurodollar system is, is regrettably, it's still there, but it doesn't really work all that well. And it includes the idea that maybe just possibly, the US government can start doing things that it really shouldn't be doing. The only positive or the only depending on how you want to look at it. The only positive about that is that even if the US government, even if the US Treasury Department, for example, should just out of the blue happened to sanction some Russian banks, which you find or cut them off of Swift, for example, what you find is, that doesn't really mean that they're actually cut off from the global Eurodollar system. And even if the US government and Treasury Department were to say, US banks can't do business, and any balances that Russians have in whatever US banks, well, because the Eurodollar system is a bank centered offshore system, the Russians can simply move to other parts of the system that the US Treasury Department cannot reach. So again, that's part of the adjustment function of a reserve currency. And I think that's one reason why the Euro Dollar continues to survive. And I don't see what's going on in Russia is really that different, because again, like I said confiscation has been an ever present issue in the Eurodollar development from the very beginning. And the fact that it's actually starting to happen. That's all been game planned and thought out already.

Erik: Let me change the question slightly then suppose that a major Silicon Valley concern Google, Apple, somebody like that, were to hire you and say, Jeff look, here's what we think. The world needs a new digital currency and all the central bankers have figured this out. That's why they're talking about CBDCs. Now, but they don't have the technological wherewithal to do it. So we want to design a new global reserve digital currency system. And we're trying to figure out how to do it and because we're basically talking about programmable money, we know that we can deliver some really cool monetary policy features that central bankers haven't even dreamed about yet. And we want to be able to sell this thing to central bankers. But the thing is, we also can see how deeply ingrained the Eurodollar system is, and also how all the foreign exchange markets, you know, like you say everything, all the liquidity is exchanging into and out of US dollars. If we want to take on the dollar and compete with it with a new digital currency system. What's the best way to go about that? Should we be backing it with commodity? Should it be gold backed or what should we do? What would you tell them?

Jeff: You know, that's exactly how I'm thinking to Erik because I think that is the future that we're going toward, and again, I share your central bank digital currencies, forget it. They're not real digital currencies. They're not native solutions whatsoever. And you're right some of the few contexts that I've had with some of the officials, I can't say where they don't get it. They don't have the technological capabilities. And I don't think they have the intellectual fortitude either, because they don't really understand the situation they're trying to get into. They're simply reacting to the fact that the private marketplace has proliferated, absolutely proliferated. Digital currencies, cryptocurrencies are everywhere, despite the fact that various points along the way they've tried to kill them. And in fact, they've only thrive more because the private marketplace knows there is a need for a competing currency, even if most people don't know what that is. I mean, crypto bubble, everybody thinking store value, when in fact, it's really about the lack of elasticity in the Eurodollar system, meeting medium of exchange type functions. So it's not really central bankers. And what advice I would give to anybody in Silicon Valley is simply proof of concept. Prove that your currency can work as a medium of exchange and all the ways it needs to it can hit the three pillars Robert Solomon talked about 50 years ago. And once you do that, I think you get into a situation like Gresham's Law, where eventually over time you have a digital currency that wins more and more and more adherence. And as it wins, for medium exchange not store value for medium exchange functions, and as it does it quietly over time supplants the Eurodollar system in the same exact way. The Euro dollar system quietly over time supplanted Bretton Woods, long before August 1971.

In fact, you can hear some of the FOMC officials I didn't include the quotes in the presentation here. But the FOMC had already talked about in the early 1960s, how this Eurodollar thing was actually providing liquidity prior to providing these roles of a reserve currency that the Bretton Woods system could not even if those early days. So the task for digital currencies is to prove you can meet these functions of money. These functions of a reserve currency and do so reliably predictably and in a transparent fashion. And I think that's really all that needs to happen. Now, as far as the financialization, some of the more details behind it, those are things that need to be sorted out, but the big picture of it is we have a malfunctioning Eurodollar system that is ripe for the taking. And it only takes a matter of somebody doing it right in order to create an alternative that will I think if it works, just kind of take over.

Erik: Oh, I couldn't agree more Jeff and the way I look at this is what's going to happen here is first we had Bitcoin which was the proof of concept that shows you know, I think of it like the Wright Flyer. It shows that human flight really is possible and heavier than air aircraft. And that was a profound breakthrough. A whole bunch of silly people thought that Bitcoin was going to take over the financial system. And I think that was misplaced.

Jeff: Hahaha they still think that today.

Erik: Well some of them are coming back down to Earth along with the price of Bitcoin. But at the same time, the next thing that happened was a bunch more silly people said oh central bankers will create their own digital currencies.

Jeff: Yeah and they will and they are going to flop.

Erik: And I'm gonna win the Miss America contest, right? They don't have the technical wherewithal to do that.

Jeff: They are so far behind...

Erik: But what's needed here, Jeff, are digital currency systems that the central bankers feel like they own and are in charge of, unlike Bitcoin, which was designed explicitly to frustrate and annoy central bankers. So my contention is all that Silicon Valley has to do is design a global scale digital reserve currency system, which is designed with features to appeal to central bankers. So they can go to all the central bankers of the world and say, look at this, you can keep your reserve assets and US dollars, or we can show you this programmable money that gives you profoundly, profoundly more functional monetary policy tools that you could ever have in any conventional currency system. And it's ready to go. And it's fully scalable. And we took care of the technology for you. And by the way, we want to cut and you should adopt this as your new reserve system. And I think that could very easily take over the global financial system as a new global reserve currency, by the way, not putting the United States in a very good position along the way. US tech companies that create that technology will then find themselves very much at odds with the US government. And I think it's going to be a very interesting road to hoe when we get there. Any thoughts?

Jeff: No, I think there's a lot what you said there that actually has to happen, right? Because governments are going to have a say in and I know, that's the thing that you've said from the very beginning, you said a lot in your book, you made that point specifically that what the Bitcoin people for lack of a better term got wrong, was that they made Bitcoin specifically to be anti-government. And so it was never going to be adopted in any widespread fashion. Yes, there's, you know, there's the occasional outlier, like El Salvador. But it was never going to be a widespread and there's other problems with it, too. But I think, Erik that's the challenge is, is because you need to make a digital currency that actually works, there's going to be some natural tendency or natural tension, with also trying to make it sellable to government officials, because let's face it, government officials, whether it be central bankers, Treasury Departments, finance ministries, whatever their tendency is to screw everything up. So it's going to be a very, very tricky challenge to get a currency that works reliably so that it can be adopted at the same time, it's also acceptable to governments who, at least, maybe you can fool them into thinking they have some sort of ownership of it or some sort of influence over it. But there's that natural tension, because the more they get involved, the less it seems to work, and the less it seems to work. The bigger the challenge and the bigger the hurdle will be to get widespread adoption.

Erik: Jeff, let's come back to your slide deck. I think we left off on page 15. Tell us the rest of the story here with respect to the US dollar and the system that we have today.

Jeff: Well, I think we spoiled all of the all the good stuff to begin with, because what we're really basically saying here Erik and what I'm really showing you here is that the US dollar when it goes up, usually not usually it correlates very closely with other indications of global dollar shortage, not just foreigners selling their liquid US Treasury reserves, but also financial markets, the deep sophisticated financial markets, such as the US Treasury yield curve, which I'm showing here on slide 15, especially in the post-crisis era, which makes sense when you have low and flat curves to start with. Whenever you see the yield curve steepen. That's usually when the US dollar falls in exchange value, which again, I'm showing you the DXY inverted here, just so you can see on the slide or just so you're aware of on the slide. Whenever you see the yield curve flatten, which is a very serious deflationary tight money probabilities scenario, the US dollar doesn't just tend to rise it rises almost in a one to one correspondence. Go to slide 16. That's a two year tenure spread on slide 15 was a five year tenure spread. Again, same thing, US Treasury curve tends to flatten that's not good, which means the US dollar is going to be going up in exchange value at the same time. We're going to be see foreigners selling US Treasuries. And other financial indications. A big one for me is US dollar swap spreads, which are the difference between the quoted leg of an interest rate swap and the same maturity US Treasury which tells us something very, very deep and very fundamental about the dollar marketplace itself, because it is these global banks that operate the Eurodollar system that are trading in these swaps, and trading and swaps requires a couple of things, including some of the most fundamental properties of the Eurodollar system, which are collateral and balance sheet capacities. And you can't do long-dated swaps without those two things. So what we see is swap spreads tend to compress, which is the thing they shouldn't be doing. At the same time, the US dollar goes up in value. So what that tells us is when banks are balance sheet constrained, when banks are collateral constrained, which are very tight money indications, that's also the time when we see the yield curve flatten. That's also the time when we see foreigners selling their treasuries. That's also when the US dollar goes up in exchange value. And doesn't matter the tenor of swap spreads.

If you go to slide 18 now, that's the five year swap spread versus slide 17, which is the 30. Again, same thing, swap spreads tend to compress when we see tight money across all these various indications. Some scholarship that has been done recently about swap spreads just confirming what we already knew that the Fed and some of these international organizations like those who like the BIS are starting to realize that some of these fundamental Eurodollar properties are very important, and that bank reserves at the Fed does create are not money, and they're not as important or at all important. Again, you need collateral, you need balance sheet capacity. That swaps, that's why the dollar moves. That's why we have $1 shortage. Same thing on slide 19 and 20. Basically some background behind the swaps market and why that's a deep fundamental monetary indication. And another one on slide 21 especially since 2013 and 2014, when the Asian markets really got slammed hard by what we call the third Eurodollar shortage or eurodollar number three. There's a very close correlation between the direction of the US dollar spot exchange value, and the number of treasuries. the balance of US Treasuries being held on custody by the Federal Reserve Bank of New York on behalf of foreign official and foreign private commercial bank institutions, which is an indication of collateral scarcity. So once again, just reinforcing the knowledge here or reinforcing the message here, which is the correlation weights between the US Dollars exchange value, and tight or loose money not because of the Fed, but because of the Eurodollar system itself.

And again, this is something that's not you know, maybe the public isn't really aware of it. But if you go to slide 22 and then 23, there's been all sorts of academic scholarship very quietly been conducted. The quote here from a paper that was published in 2018, strong negative relationship between the US dollar and cross border bank lending denominated in US dollars. Again, after everything I've showed you, that only makes a whole lot of sense, but yet, this is kind of an emerging scholarship and official academics. There's one that goes back to 2013, fella by the name of Hyung Young Shin who's a pretty well known BIS researcher, along with Valentina Bruno talking about how the US dollar is a bellwether for global financial conditions. So the punchline, the overall conclusion here is that everything that we've been taught everything that's been put into the textbook is fed centric, which isn't actually the case that isn't actually how it works in the Eurodollar system itself, because it is a global offshore bank-centered system. Therefore, what matters to the global offshore bank-centered system is whatever's affecting these global offshore banks that operate within it.

Erik: Jeff, final question. Let's suppose that at some point, we do see the situation which Luke Gromen has predicted where the writing is on the wall, maybe Google has introduced a global reserve currency system and is off selling it to central bankers and people around the world are realizing that the US Dollars days are numbered, that it will be replaced. You know, when you and I first started talking about the US dollar someday losing its hegemony over the global financial system, it was crackpot conspiracy theory stuff that nobody took seriously or almost nobody. These days, more and more people are waking up to. Yeah, that's coming someday, we're not there yet, because there is no viable alternative. But boy, when there is a viable alternative, the world could change quickly. I want to talk about what happens when that happens because the obvious conclusion to draw is, well, if people know that the US dollar is going to go out of vogue, that can only mean that the value of the dollar has to go down dramatically. But as I think about what's happened in the oil market, where most of my trading is focused. You know, as we've decided that oil has to be phased out, what happened was everybody stopped investing in finding new producing resources, and we're seeing the price going to the moon instead. So I wonder if the world thought if the banking system thought that the US Dollar was going out of vogue and Google money was going to take over. Does that mean that the Eurodollar system breaks down foreign banks stopped making more Eurodollars just as we've stopped exploring for new oil fields, and that actually surprises everybody with the US dollar going up dramatically and its final years of service as global reserve currency or does that go the other way?

Jeff: What you just described is the past 15 years Erik, that's the funny thing. The US dollar has gone up for exactly the analogy that you presented, which is that US banks for lack of a better, you know, construction here. They've stopped making Eurodollars because the investment hasn't been worth it in their minds. The way bank-centered money works is everything is priced and everything is thought about and everybody... Everything is added to a balance sheet based on risk-adjusted return perception. And since August 9th of 2007, the banking system has decided that it's not really worth the extra effort to create more balance sheet capacity and collateral and everything else that the Eurodollar system requires to operate.

So the banks are way ahead of you here. They've stopped investing in their own capacities 15 years ago.

And I know everybody likes to attribute that to regulations that came along after the crisis, whether it's Dodd Frank, whether it's Basel III and whatnot. But those just codified what banks were already doing under their own balance sheets, which was they've stopped manufacturing Eurodollar capacity because they don't think it's worth it. And we've been struggling with the fallout and the consequences of it ever since August of 2007. And that's why the dollar has gone up in price because, as you just absolutely pointed out Erik, like the oil market, if you don't invest in the infrastructure, eventually that's what happens. Dollars become scarce even as maybe there is a potential competing currency system that arrives on the scene at some point and starts to overtake some of the roles. That doesn't necessarily mean the price of the US dollar is going to fall to zero, it might continue to go up as the global banks that operate this system continue to invest less and less of it. Think about the Venezuelan example. I mean, the Venezuela doesn't put much into their oil capacity at all. And so they don't invest, so it just dwindles. And that's really when you look at bank balance sheets throughout the Eurodollar market throughout the world. That's what you see! There's a lack of investment in balance sheet capacity for a number of reasons, including the liquidity risks, the tendency of the system to go right intermittently, but for whatever underlying and overlaying causes. Banks aren't creating money and that's really the problem here.

Erik: Well Jeff, I can't thank you enough for a terrific interview. But before I let you go, I want to talk about the work you're doing on Eurodollar University. Now this started between you and I did a series of podcast called Eurodollar university or MacroVoices Eurodollar University. Listeners, you can find that series which is as relevant today as the day it was recorded at macrovoices.com/edu for Eurodollar University. Meanwhile our good friend, Emil Kalinowski has helped you to take that work forward and now you have a podcast called Eurodollar University where you talk about these concepts every week. Tell us a little more about what work you're doing and how people can follow it.

Jeff: You're right. I mean Erik, you and I started this many, many, many, many years ago. It feels like a long time ago, where we looked at you basically the challenge was, hey let's investigate this Eurodollar system. Let's understand the Eurodollar system and we took our stab at it and realize there's so much more there that it actually requires in an ongoing effort. That as you said Emil Kalinowski has generously donated his time to help me put together a podcast as well as some other efforts to where we try to continue to get into the history, the fundamentals, the transactions, the implications of all this Eurodollar business. Try to look forward, look at digital currencies, look at competing alternatives, to see where this thing might end up down the road. And just put it all into a weekly podcast format that you can find on YouTube or iTunes I think are the two biggest ones. It is called Eurodollar University and we really just tried to take a deep dive and look at everything that's going on through the lens of the global reserve currency system as it actually is.

Erik: And the URL for your Eurodollar University website couldn't be easier to remember. It's Eurodollar.University. Patrick Ceresna and I will be back as MacroVoices continues right after this.