[MUSIC PLAYING]

LAUREN FOSTER: Hi, everyone. Welcome to the take 15 podcast. I'm Lauren and I am so excited about today's episode. It's all about bubbles. More specifically, stock market bubbles and whether they even exist. My guest is David Derosa, author of bursting the bubble, rationality, and a seemingly irrational market, a new monograph from the CFA Institute Research Foundation. The book poses two main questions. Is there convincing empirical evidence that bubbles exist, and do the theoretical concepts that have been advanced for bubbles make them plausible?

One thing is for certain. The term bubble is a powerful, emotional word that can skew our perceptions of reality. I found the conversation with David fascinating, and I hope you do too. David Derosa welcome to the show.

DAVID DEROSA: Oh, thank you for having me.

LAUREN FOSTER: So I'm very excited to talk to you today. I think this is the first time I've had someone on the show who has talked about a bubble insurgency. Some kind of thinking of you as a counter insurgent when it comes to bubbles.

DAVID DEROSA: Well, but first what I am.

LAUREN FOSTER: OK. Well, first of congratulations. You have a new book and I believe this is your 10th book if we count second and third editions.

DAVID DEROSA: Yes. And counting one book of photography.

LAUREN FOSTER: So wonderful. So we're going to spend most of the show today talking about bubbles. And when we first were chatting about this you said, well, you thought this project would take you about a year, and four years later you end up with this book on bubbles. So just walk us back a little bit in time. So you thought would take a year, but it didn't take you a year. What's happened along the way?

DAVID DEROSA: Well, what I didn't know when I started this project is just how much has been written in support of some of it in contradiction to the idea that was-- let's do it at the stock market level, which is where most people think there are bubbles. And I really have to say that I was continually shocked at finding new sort of beings of the academic and popular literature that ascribe to the existence of bubbles.

And as I got deeper and deeper into it, I started really going back to the most basic, or the most fundamental principles of finance. So I ended up rereading virtually the entire field. And but there were parts, maybe in the behavioral areas, that I had not really delved into that much. The biggest surprise of all, was that there was now-- there is now a branch of mathematics, maybe applied mathematics you could say, that talks about bubbles. And these are articles that are written in mathematics journals, and they really don't talk about finance papers or economics papers, maybe they'll reference [INAUDIBLE] Scholtes, that's it.

And they're all written the way mathematicians write papers and-- they are improved. And I was very surprised to find that they would be interested in this topic, but there is wealth of papers on bubbles in that area.

LAUREN FOSTER: So the big question, obviously is if there's a wealth of material out there, so what makes your book different? I'm going to give it away a little bit and that the title is, bursting the bubbles, that gives us a bit of a clue. So I'll play devil's advocate here. Are you saying there are no bubbles?

DAVID DEROSA: No. I really never said that, and I really would never say that, and I can't. You know what else I can say. I can't say there are no unicorns either. OK. But what I can say is that the empirical work that's been done to allegedly prove there are bubbles and irrationalities in the market, is questionable. And some of it is out. Right. Has errors and analysis. Other times-- and this is the best of it, right, people who claim that they have found bubbles, turns out there are perfectly rational explanations.

So you don't really need bubble theory, you have good old neoclassical, rational, arbitrage theory that can explain these phenomena. There are other times where there is just outright errors in analysis. And then if you look at the historical stuff which is at the back of the book the last couple of chapters, you'll see that these famous bubbles like tulip mania, the Mississippi scheme, and the South Sea corporation bubble, that this is just simply errors in historical analysis. These never were bubbles, they're pretty much misunderstood.

And in that sense, I'm confirming work by Peter Garber and others. But I'm extending it.

LAUREN FOSTER: So sort of make sure that I've got this right in my head is that the audience that was listening, gets this right as well. So essentially, you're saying that bubbles are either historically inaccurate. So they, through bad history. OK. So things that are described as bubbles are actually just incorrect analysis, and then thirdly, things that appear to be bubbles are in fact rational phenomena.

DAVID DEROSA: I'm saying that there are perfectly good rigorous rational explanations. So that you don't need bubbles, you can stick with rational theory. So again, I know that I'm being quoted, and people are saying-- or people say-- well, Derosa says there are no bubbles. I never said that, I can't say that. And by the way, most of the book is about the stock market. There was another chapter that-- just because we had to get the book done, there was another chapter that did the same analysis in the foreign exchange market. And I'm hoping to publish that separately, and a similar conclusion.

So all this stuff about bubbles, you know it came about because of the dot com or something like that. And will say it's impossible with those valuations. Could have been rational. Well, it turns out they were rational. And that's a series of papers that I go into on [? Pasteur ?] and [? Baronisi ?] And there are many other things like that where if you analyze these things correctly with good models, you'll see that they're really work-- there's no need to call them bubbles. Right. There's no because it probably didn't even happen that way.

LAUREN FOSTER: So if they're not bubbles, what do you call them?

DAVID DEROSA: Rational pricing.

LAUREN FOSTER: OK.

DAVID DEROSA: So let's look at this, right, for the most part, many of us of my generation got into economics and finance partly because of Paul Samuelson's textbook, great textbook, but also because of a book by John Kenneth Galbraith, on the 1929 crash. And people have this idea that the stock market crash, and that was the depression. Well, no, it couldn't have happened that way. It was after almost a decade of incredible profitability, the markets always looking ahead and it sees the great depression. So it crash. What caused the great depression. I don't know that anybody does know that, I mean some people talk about monetary policy and that's convincing.

But it wasn't the stock market crash. The stock market crash was anticipating this economic calamity. So many of these things are simply the market anticipating. So the causality runs the other way. Right.

LAUREN FOSTER: So perhaps, the most famous bubble in history is the Dutch tulip mania.

DAVID DEROSA: Yes.

LAUREN FOSTER: But you argue that, that wasn't actually a bubble. Just explain that for the audience, how you explain what happened there.

DAVID DEROSA: Well, I'm first of all, I've got this these great papers by the economist Peter Garber, and there's also a book that came out in the last couple of years by an excellent historian, Anne Goldgar. And what Goldgar can't find the tulip mania, it's like if it happened at all, it was among two dozen people.

So this where did it come from. Where did this idea of [INAUDIBLE] It came from a series of government pamphlets published in the 17th century warning people about speculation. But the hard data shows that tulip prices just pursued a normal path of a new flower being introduced. And they're transacting in a special class of tulip [? bulb, ?] they're not doing the flowers.

So there's this idea, and a lot of this comes from Mackay's book of *Extraordinary Popular Delusions and the Madness of Crowds.* And very small piece of that book, they're just three chapters that cover what we would call bubbles or what he called bubbles. And the rest of it is all stuff on the crusades, and haunted houses, and things like that. Well, the fact is there is no legitimate, no real evidence that there was any kind of a phenomena like this at all. And it's just not there. It's just not there.

And if you look at the last couple of chapters of my book, I try to trace all the stuff of the stories, the incidental stories, and things like that. And there's no solid evidence. Then there's this idea that Holland went into this deep depression after the tulip mania, and that's just contrary to a known fact that Holland was in a golden age. And he has this popular idea that the people went crazy over tulip bulbs, certain tulip bulbs, and that it's not there in the historical records.

LAUREN FOSTER: As to just remind listeners that in the show notes will have a link to David's book where you can go in and download it, and we did it in full. And I would encourage you, if you're interested in bubbles and bubble theory, this is the book that you should be reading. So when we're speaking sort of a couple of weeks ago to prepare for today, I sort of asked you what your favorite chapter was. And you said the most fun to write, was this one where you were sort of debunking tulip mania. But also you spoke about John law. Tell us that story.

DAVID DEROSA: John Law. I got introduced to John Law, like so many things of these ancient of these first bubbles through Peter Garber's work. And then I started doing further investigation of what he was doing. And it's like France had fallen on hard times after the death of Louis Catorce because the son King left the place broke. And the heir was the grandson, he was a five years old or something, and the regent, the Duke of Orleans, brought in this incredible Scotsman named John Law to put France right.

And he had this incredible scheme of essentially privatizing the assets of France in exchange for recasting the government debt with the lower rate. And he introduced paper money into France, and I think John Law was a genius. However, the French government took advantage of this and started printing money like crazy. So we had an explosion of money. And I'm not sure that John Law like that, or could even stop it. But that's what more or less brought the whole thing down.

But John Law was an incredible character. I mean, he had the run of France. He was the head of the central bank, he collected the taxes, he was privatizing the state assets. So when people talk about the Mississippi scheme, that just happens. It's a funny name, but it refers to France's land in North America. And since it was near the Mississippi River, that's why it got all that. And again, you can construct a very rational framework for understanding what happened to John Law's company, and why the shares went up, and why they crash.

And you don't have to have this as an irrational explosion of enthusiasm with maniac's speculators fighting for shares. It wasn't really like-- I mean the king was the chairman of the company. So it couldn't have been that wild as being.

LAUREN FOSTER: So I imagine a few people in the industry must be bristling with some of the things that you're saying. When we were chatting, you said you're taking issue with some of the most famous people in the fields, Canes, [? Samuelsen, ?] Shiller, Kindleberger, Malkiel. Let's talk a bit about Shiller because that's an interesting story as well.

DAVID DEROSA: Well, you know, this is all just people talking about ideas. There's nothing-- I don't have anything personal, and that is something-- that's just ideas. But the main thing with Robert Shiller, I mean the thing that-- for me that was the most explosive in his anti-efficient market, anti-rational markets work was the idea that he had to prove that, an empirical proof, that the market was too volatile to be rational.

And that really, that came out quite a while ago. But it was-- I mean it was still included in his-- he included it in his Nobel Prize lecture when he gave recently. And what I found, I mean I was very troubled when I first saw the Shiller paper, and when I first realized the impact of what he was saying. Now. So that's the basic premises that the market is demonstrably too volatile to be rational.

Now, he's not saying it's a bubble. Later on, he gets interested in bubbles. But he's saying it defies fundamental analysis, and this is proof that the market is not efficient in the formal sense of security prices reflecting all knowable relevant information. And when we started-- you and I just started, I had in the front of the book I said, well, there's a sense of a bubble insurgency that the bubble guys are attacking rationality, and they're attacking the no arbitrage possibilities. And what I'm saying is that, OK, let's look at what they're saying, but now let's look at the counterrevolution. Because most of this stuff has been dismissed, or at least alternatives have been found.

In the case of Shiller, it turns out that the construction of his famous time series which is supposed to be perfect for site security prices, is constructed mathematically in such a way that it has to be less volatile than actual prices. And that's a quick explanation, but you'll see in chapter 3, that there is a lot more to it, and there are a lot more critiques of it. Shiller goes on from there, and Shiller says that stock prices may be efficient on a security by security basis. But certainly, not on the overall level of the market.

And that efficient markets applied to that in one place, he says, it's one of the most remarkable errors of analysis in all of finance. And you know it just strikes me as-- and furthermore, the market is dominated by fashions and fads. That's more of his stuff. And I don't know, I mean, I think that none of that really, really works. And I think that it's an interesting idea, but we have better stuff since then. So I don't think that with all due respect to a very smart man, I just do not agree with him.

He does some work on bubbles. He gets on the bubble bandwagon later. But hence may have picked off the whole thing. And when you read the general theory, the general theory 1936, I've read it four times now, and I always read it. And I just get so excited when I read it. I think, Oh, wow, this is so great, this is so great. And then after I finish I think, Oh, wait what exactly did he say here.

And we're still fighting over what Ken said. As for the stock market, Heinz believed that it was a casino or insiders. And he never said bubble, but I'll bet you he would have liked it. And so that there's a divorce between reality of realistic fundamental value, and security prices. And so, that's of course, a lot of people say, well, Caines is talking about this. So it must be true.

Well, there's a lot of things Caines said that may not be fair, and this is one of them. You mentioned Malkiel. Burt Malkiel of fine fellow, and an intelligent man, and a good writer, for some reason in his books or in his book, a random walk down wall street, he puts an enormous amount of attention on bubbles. And he is extraordinarily convinced that there's the madness of crowds going back to the bulb, right, was the guy, the original madness of crowds. And that investors wanted to be taken from the world to be separated from their money that the South Sea corporation was a con job, and he sold more books than I'll ever sell.

But I don't think that-- I think that the academic journal is a different creature than the person who writes the popular books. So I don't really have a problem with the academic [INAUDIBLE], but I think his random walk down Wall Street has a lot of things in it that are highly suspicious, that are wrong.

And Kindleberger, Charles Kindleberger and later Robert Aliber joined him. That's all about bubbles and manias, and things like that. And so that's sort of like the antithesis of my book. But you know and there's also a John Kenneth Galbraith book, that just goes into all this. And he's really just parroting back what that guy I wrote 170 years ago. You've a short history of financial euphoria is the title of this book. And I don't think that any of these books have any of these authors, have stopped to think that maybe it isn't true. Maybe it isn't true.

And because I don't know, as I said I can't prove there are no unicorns, I can't prove there are no bubbles, but I can tell you that there's not a lot of evidence. And if you really wanted to prove that there were stock market bubbles, you have a very steep hill to climb. When you look at the analysis that's been done. And when you look at the theory, it's extremely difficult to actually prove beyond a doubt that the stock market is infested with these irrational bubbles. I just-- I don't think that's been proven. Maybe true, but it hasn't been proven.

LAUREN FOSTER: So I think he was very, very clear is that the word bubble carries with a lot of baggage. And bringing the discussions from the 17th century, the tulip mania the forward to today, there are a couple of things that have been in the news recently that people may ascribe to being bubbles. And I want to ask you about, so one of them is Bitcoin. Right. How do you explain the significant growth in the value of Bitcoin.

DAVID DEROSA: I can't. I haven't looked at it in the book, and I haven't really delved into it. But I mean maybe that is a bubble. I don't know. But I also think that I have trouble at the beginning of even you can understand why anybody wants a Bitcoin, unless you're a drug dealer. Or a North Korean hacker. I don't know why anybody wants them, I don't know I don't know what the fundamental value is certainly and enormously volatile asset.

So as a store of value, doesn't look very good to me. But I didn't look at Bitcoin in something, at some point I will. And there are other things like that, that appear to be bubbles. My topic was the stock market plus the three Mackay famous bubbles. But I don't know, I mean I don't own any bitcoins. I don't plan on owning any bitcoins.

It doesn't look like a particularly good store of value. I guess it's a tax efficient in the sense that you won't get reported to the IRS. I guess. But I don't know why a Bitcoin would be worth $50,000. It's and I don't even know that you can actually get that money. Right. I don't know that you can actually get that money. By the way, we're exercising a after the fact, a post-condition bias in this discussion because there have been several other occurrences that have crashed and burned.

So we're just looking at the one that survived so far. But there are many other ones that went to zero value. So the concept of that one of them would allegedly sell at these prices. Something maybe I should look into-- I mean I'll be happy to put on my deep bunker hat and go after. But I didn't really look at that point. And

LAUREN FOSTER: So I know that in the book you didn't look at this but I'm wondering if you can put your debunker hat on just for a moment, because there's been a lot of talk in the media about NFTs or non-refundable tokens. And of course, there was in the news the work of art by the artist known as people that sold for $69 million at Christie's. So I guess some question is there some sort of a bubble brewing and NFTs.

DAVID DEROSA: No. I think that they're selling at prices that-- I mean it could be that people that there's a tremendous demand for them, and there's very little supply. And you know it just would be a scarcity thing that artists go in and out of favor. And that doesn't mean that their bubbles. So I think you got to be careful what is a bubble, the irrational surge in price unrelated to fundamental value. That subsequently, and unexpectedly, crashes and burns that's one definition.

Another is that it's just divorced from fundamental value. But if you think you can arrive at a fundamental value for works of art, then you have missed a great career perhaps. Because-- I mean you hear stories recently about Van Gogh's paintings that were sold for pocket change. Right. I don't know what determines the price of our-- it's a good question, but I don't think that, that means there are bubbles.

I think that those are unique pieces of art which there is no supply other than those particular paintings. And people look at it as people with a lot of money, you've got to have it. And so, they put it up. But that's not a bubble that's demand. That's supply.

LAUREN FOSTER: And I hesitate to use the word bubbles. Yes, I'll use kind of the scary air quotes but two bubbles that I have lived through, are the .com bubble, which I believe you wrote about in the book. And of course, the housing bubble. So how do you explain that to sort of lay people like me who are like no, no, no, there definitely was a bubble there.

DAVID DEROSA: No. The .com thing is in chapter 4. That's in yeah, chapter 4. The answer to that is that the valuation techniques that suggest there was a bubble in the internet stocks, do not have firm footing, and that if you use a more sophisticated rational model, a Bayesian model, you'll see that you can value the internet at its peak on March 10th of 2000. And you can also see why prices came up. And why they came up so violently. So the answer is chapter 4, which is kind of tough reading but there are perfectly fine rational models that show, why it is that those stocks would have had particularly high value and why that value would fade. Not just fade evaporate.

And so that one's accounted for housing. I think that whole episode was totally misunderstood, and the biggest piece of misunderstanding, comes down to this idea that the subprime loan market killed the rest of finance. And let me just ask you this simple question. Let's say that you had four types of loans, four loans. Right.

Housing loans. And you had one that's very well capitalized on a nice piece of real estate, and then one that's a little less capitalized, and then you go all the way down to the fourth one, and that's one it doesn't-- the borrower doesn't have a lot of money. Doesn't have a lot of stable income. It's maybe 100% of the value or 90% of the value. It's in a dodgy area. Right. OK.

So now, all of a sudden, a big, hulking recession comes along. Right. A big recession comes along. I don't know why. But it comes along. OK. What's going to happen? But first mortgage that I mentioned the so-called subprime, is going right into the tank. Right into the tank. Maybe some of the others, but that's the one that's going to go in. And to unsuspecting person, it looks like cause and effect.

And so what I think happened like in 2008, is basically, there was an enormous recession, and it hit subprime, simply because those were the riskiest loans. And then everybody from politicians to commentators, say, Oh, those subprime guys they killed us. They didn't kill you, they were the messenger. Right. And now was housing a bubble. I don't know. Shiller thinks it was. And Thaler thinks it was. But I don't really know whether this was a traditional bubble. Just because it went up in price, and then down in price, and then back up in price , doesn't mean it went through a bubble. A bubble is something else.

LAUREN FOSTER: It's definitely a fascinating discussion. I want to remind our viewers that if you want to take a deep dive into-- I guess the counterrevolutionary we take on bubbles, that I highly recommend you download that link and read the book. So now we're almost out of time. So this is sort of the fun part where I get to ask you the three questions that I ask all my guests at the end of the show. And the first one it's a very easy one, as what I call the ray of sunshine question, and I just ask you to think about or tell me one positive, long lasting change that you hope to see as a result of the Pandemic.

DAVID DEROSA: I hope to see that these new vaccines, many of-- two of which that we know of that are based on messenger RNA, will lead to a new family of vaccines and other cures. So I look to the scientists and I am in awe of these people that they got this done so fast. So I think that basically, we are in the hands of the scientists and they have not let us down. But if they can make these vaccines, then I have to wonder what else these clever people have in the lab, and what else they're going to do for us. But we owe the scientific community our lives in this one.

LAUREN FOSTER: We do we owe a huge debt of gratitude. That is for sure.

DAVID DEROSA: So that's the ray of hope that I see.

LAUREN FOSTER: That's a great one. So now we're going to change direction slightly, you're going to take a trip to outer space, David, and you're allowed to take one item with you. What do you take.

DAVID DEROSA: I would take one of the works of classical literature. I mean something that was-- something that I could read. I would take something you know probably from the Golden Age of Rome, probably Cicero. Something like Cicero, or Caesar, or the Aeneid something like that. Are you going to put it another way, if God forbid, I got arrested and got sent away to Supermax. And let me have one book that would be it.

LAUREN FOSTER: Well, I always thought that you were going to answer that you take a camera, because I should tell our audience that you are an avid photographer, and one of the books that is in your-- I guess not in the 10, maybe it's the 11th, is a book about photographs taken in Egypt.

DAVID DEROSA: Yes. A long time ago. So Yeah. I have been involved in photography for probably since I was a graduate student. And a first film photography, and then later I-- and so the film photography days, I went to Egypt twice, and it's sort of like using A.S.A. 400 film in tombs. Right, and in those days you could just do anything you want. I mean now they've got them all covered up with blasts, and not allowed to bring cameras in the tombs and things.

But I took a lot of photographs. And I found that there was a 1982-1983. And I found them a few years ago, I found the negatives, which I then digitized, and started cleaning them up. And then I connected with an old classmate of mine at the College of the University of Chicago, who is an Egyptologist, his name is Ed Meltzer. And we went through all the photographs. And we identified, mostly Meltzer, identified everyone, everything, every God, everything in those photographs.

And then after I finished scrubbing the negatives because they had deteriorated, I made it into a book. And so I self published it, it's on Amazon. But that's one of my adventures in photography. But I've done things like rent helicopters, when you put and fly over Manhattan, and take pictures at night, and open door helicopters, hence, which probably was a crazy thing to do. But I did it not once but twice. And I've been all over the world. So I've got pictures from all over. There is a free website, derosa-photos.photoshelter.com. And it starts out, you'll see a picture of central park, and you'll see all the galleries. And the Egypt photos are there. All the Egypt photos are there as well. Plus things from all over the world from the Iguazu Falls in Brazil and Argentina, and everywhere. I mean all over Italy, all over the place.

LAUREN FOSTER: Great so we have time just for our final question. And this is maybe my funniest question. And it's about superpowers. And you can only pick one of these two superpowers, it's either flat, or it's invisibility. Whichever one you choose, you're the only person in the world that has that superpower. Which one are you going to choose, and what are you going to do with it. Yes. So you can either choose to fly, or you can choose to be invisible. And what to do with it.

DAVID DEROSA: Oh, well, I think that HG Wells wrote this book called the Invisible Man, and what happens to the Invisible Man as it becomes a criminal. He drifts in [INAUDIBLE] because he can't get caught. He starts work like people. So I'm going to go with flying, and the answer is twofold answer is, I'm never going to wait in line at an airport again, and second is I'm not going to worry about my carbon footprint and I'm going to fly all over and take pictures.

LAUREN FOSTER: Well, take me with you

[LAUGHTER]

On your backpack. On that note have been a real pleasure talking to you today. Thank you so much for joining us.

DAVID DEROSA: You're quite welcome. Thank you for publishing the book. And thank you for the podcast.

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