Rodrigo Gordillo:	00:06	Welcome to Gestalt University, hosted by the team of ReSolve Asset Management where evidence inspires confidence. This podcast will dig deep to uncover investment truths and life hacks you won't find in the mainstream media, covering topics that appeal to left-brained robots, right-brained poets, and everyone in between. All with the goal of helping you reach excellence. Welcome to the journey.
Speaker 2:	00:28	Mike Philbrick, Adam Butler, Rodrigo Gordillo and Jason Russell are principals at ReSolve Asset Management. Due to industry regulations, they will not discuss any of ReSolve's funds on this podcast. All opinions expressed by the principals are solely their own opinion and do not express the opinion of ReSolve Asset Management. This podcast is for information purposes only, and should not be relied upon as a basis for investment decisions. For more information, visit investresolve.com.
Rodrigo:	00:54	Hello everyone and welcome to another episode of Gestalt University. In today's podcast, Adam and I had a chance to interview Greg Zuckerman who is a special writer at the Wall Street Journal where he writes about all sorts of financial topics, personalities, trades, hedge funds, and other investment and business topics. The reason that we had him on today was about his latest book, The Man Who Solved the Market: How Jim Simons launched the Quant Revolution. Now as a quant firm, you can imagine that most of us had his book on pre-order, and some of us have already read more than once. So we're quite excited to have Greg on. And while he's been on multiple podcasts already, in this interview, we try to take a slightly different angle to capture deeper insights that were outside of what he wrote in the book itself. We had a chance to discuss how his view on asset management has changed after doing a deep dive on Renaissance. We talked a little bit about how his relationship with the Renaissance characters has evolved since completing the book. And my favorite topic, which is an idea that we tried to convey for years in our research, and that is the concept of trying to look for edges within group relationships rather than individual security predictions. Lots of ink has been spilled on this topic by us and it was great validation to hear similar ideas coming out of Ren Tech. Lots more gems in this interview so stick through it 'til the end, and we hope you enjoy it.
Adam:	02:11	As a first step, I was kind of wondering, obviously you've got a passion for markets, uh, worked at the Wall Street Journal for many years, written other books on trading and traders. You must have had, you know, a background or some long-held beliefs about markets and how markets work and how alpha is generated before going into this project on Jim Simons and Ren Tech. And I'm- I'm just wondering how did that belief system evolve or change as the project progressed and- and where are you now on these concepts versus where you were beforehand.

ReSolve ASSET MANAGEMENT

Generating Alpha

Greg Zuckerman: 02:51

It's a good question. Frankly, I've done a lot of interviews but no one's really asked me any of that. And I think it's important questions.

So I've had a-an evolution of my thinking broadly stepping back throughout my, uh, I've been here 23 years at the Wall Street Journal, and I kind of got into this business because I was fascinated by investors, by the buy side, I've always really been focused on the buy side. And for many years, I would go into meetings and be wowed by the research, the insights, the interesting, innovative trade ideas that various hedge funds and others shared with me.

And over time I've become a little more cynical, partly because returns have calmed down and partly because I've just had experiences where people who were charging two and 20 just don't seem to be providing much value. Nothing really unique. Still super smart, well educated, great pedigrees, but they just really in need of Reg FD and the age bucket, it's hard to get an information advantage. It just doesn't seem there's that much unique that they're bringing to the table, at least not to justify the two and 20.

And it's probably what brought me to this project I want to examine. The one firm and the one individual who really seemed to justify their fees, uh, Renaissance Technologies and Jim Simons, the greatest money makers modern finance has- has ever seen and spending two, over two years working on this book and talking to both employees, former employees, but also people that just understand that world. I've become just much more convinced, "A", that the traditional fundamental investor who charges two and 20 provides little value (laughs) and has- has a difficult time competing; and "B", I've become much more convinced of the value of having, if not a system, then having definitely rules that one relies on and shouldn't stray from. And the importance of avoiding relying on instinct and judgment and gut and intuition.

So, I've become much more of a fan, a believer in this systematic approach. Doesn't mean there aren't parts of the market where the traditional fundamental investor cannot perform. I think there are. But, it's just harder than ever.

Adam: 05:26

Yeah, no, that's a great answer. And I mean, as we- we've certainly seen, uh, a transformation in markets over the last, call it five or 10 years. I mean, certainly, a large proportion of investors have embraced the sort of systematic or indexing approach to markets. We've obviously seen a migration out of traditional mutual funds with the more traditional stock picking, discretionary managers, and into these index-type products.

But I don't think that really captures the spirit of what you are describing, right? I mean, what- what do you think are the fundamental beliefs that really set Ren Tech, and a very small handful of potential peers that kind of think about the problem the same way, apart from not just traditional fundamental investors, but other systematic traders?

Greg Zuckerman: 06:24

I believe they subscribe to the scientific method, and they don't just talk about it. I think others say they do as well, but they seem to rely and then subscribe to it. Are really just sort of, in many ways built around it. And what I mean by that is, they have hypotheses or the data suggests certain hypotheses. They test their hypotheses, do disciplined stray from what they're doing even in times of crisis.

Yes, a couple of times in my book I do talk about how Simons especially pulls back on risk during a few crises. But, I would argue those are just sort of rare examples and generally speaking they do pride themselves on sticking with their system. And it's an approach. And it's the scientific method as I- as I said today. And it is different than others.

They're- they're different than other quants in so many different ways. People, including myself frankly before I did this project, sort of just say the word "quant" and it means so many different things, but oh, yeah, we throw it into the same bucket. But, yeah, that's, you know, going back to what have I learned from this project, it's just so remarkable how different the approaches are. So you look at a firm like, a Quant that, like an AQR, and Smart Beta, and those approaches, and even look at high frequency, they're just so very distinct from Renaissance, which is medium frequency.

And, yeah they'll do some faster investing, which is one of many approaches. There aren't many people that know, you know, why they do so well. They'll conjure reasons why they might be better than everybody else, but part of it is, they don't really have as much competition as you might think.

You think oh, there's so many quants, and there are so many quants, and there's so much. But in terms of their approach, it's really just them, there's PPT, a little bit Two Sigma, a little bit D.E. Shaw, not that many that actually do the medium-frequency approach. And, yeah, like I said, it's- there are all kinds of different ways, we can kind of say why they're better than others. But, part of it is the- the scientific method and trying not to- to stray from their approach.

Rodrigo: 08:47

Greg, this is Rodrigo here. One of the things you mentioned early in the interview, that fundamental managers are probably something that don't deserve two and 20, and I think one of the key elements of a fundamental manager is the belief that they are better at picking a future stock movement, or a future asset-class movement. I think in your book you mentioned the fact that the Ren Tech group doesn't really believe that they're necessarily better at picking stocks or what a stock is going to do in the future, but rather understanding the relationships within groups of investment baskets to each other. Can you expand a bit more on that? Cause I think that might be an area that is a rare area to focus on in the- the investment industry, and I'd be curious to hear your- your insights on that.

Baskets

Greg Zuckerman: 09:29

Yeah, that's exactly right. They don't believe they can, I'm not sure they believe others can, accurately make predictions for individual securities. They- it's partly just the way they think about things and they want to create a market-neutral portfolio, so they'll go more or less 5,000 long and 5,000 short, but part of it is the belief that, yeah it's just difficult to make these outright predictions.

So instead they want to make multiple, multiple bets, or, like a casino, you get it right a bit more than 50 percent of the time, and as you suggest, it's all about relationships. They just think about investing in a very different way. They will bet on a group of equities, and right now I'm talking about equities because, while they do bond futures and commodities and currencies, equities are about, I don't know, 60 percent or so, of their profits, um, focusing mostly on- on equities. And, yes, all those relationships among stocks, groups of stock versus other groups, versus fact groups, versus an index. It- it's important to remember that the firm doesn't aim to predict the future of any of its investments. It bets on these relationships, and that protects them in- in their markets and volatile periods, which, in turn, allows them to leverage up because they've got this high, Sharpe ratio and banks and others are eager to lend to them.

So this choice, it's a conscious choice and it helps them in other areas as well, but yeah. They- they look at investing in a very different way. They look for, sort of obscure, kind of convoluted relationships in the financial market that elude most everybody else. You would never think that, I don't know, Microsoft or Apple shares, their relationships to like the square root of some other share, there's something or- something else obscure might lead to anything. But they look for these weird relationships.

And sometimes, they can't even figure out why they work sometimes, and I surely can't, but their computers crunch all day long and they look for these sort of non-chance relationships. Needle in the haystack that for some reason they- they work, and they'll do a non-intuitive signal, something they can't even figure out, and they won't do it in huge sizes. They'll put some of these trades on, they'll figure out- they'll try to figure out why it's working that- that they spend a lot of time trying to figure out, but they do embrace non-intuitive signals that other firms won't. Other quants won't.

And part of it is because, at least at Medallion, they don't have outside LLCs, so when you don't have outside investors, you can do things that maybe don't make that much sense. They just work, they're scientists and statistically this stuff is valid, so they'll put these trades on in some size anyway, whereas somebody at AQR or Two Sigma might not because they have to explain it to their investors.

Adam: 12:22

Right. So maybe I can try and- I'm gonna try and make this real for some- some listeners by maybe- maybe giving an example. You tell me, maybe I'm off base. But

I'm gonna try and, so, for example. right, it could be, and it's- I think it's well known, that individual stocks on their own don't trend very well. So it- a simple trend strategy on individual stocks is not particularly effective. But it could be that when you can construct a cluster of stocks, you may be able to find a cluster of stocks which, together as a portfolio, exhibit very strong trending tendencies. And maybe they exhibit very strong positive trending tendencies. And there's another cluster of stocks that ex- exhibit very strong negative trending tendencies, and to even trade one basket of stocks against another basket of stocks, or one basket with- with very high co-integration with another basket, you can trade off- trade the baskets against each other in sort of a meager version type way.

So obviously it takes a lot of complex math and a lot of computer power given the number of potential combinations of securities there are in order to identify these clusters. And if you've got the horsepower then obviously there are opportunities that emerge that most investors may not be able to capitalize on.

Would that be the type of- just- just to try and put a little- wrap a little bit of something solid around the- the concept that you presented. Would that make sense?

Greg Zuckerman: 13:54

I think it's a simplified way of looking at it, but I think it's a valid way of understanding their approach. It's beyond trends, it's beyond reversions, but that is a good way to look at it. I mean, it's a really- what they do is statistical overcharge, but on a much, much more, … on a much, much more sophisticated level. And as you suggest, right, clusters of equities or investments work a lot better and internally, other people there see what they've done as more of an engineering feat than anything else in that their secret is sort of how they search for relationships rather than relationships themselves.

People will say to me, "Oh, well, what did they discover, you know, what's the secret signal?" But I don't look at it so much that way. It's more that they've- someone said it to me and I really like it, they developed a new way of fishing. Instead of sort of knowing about a lake with a lot of fish in it that other people can discover, they just fish in a much better way and they have a unique methodology to just- like an engineering feat combining all these different criteria into one model. To one equity model. It's very rare. Most other firms, they have cooperative models. They have one equity model, which is really hard, just an engineering edge. They've- they're very disciplined how they run their operations. There's a lot of boring kind of blocking and tackling, it doesn't get headlines, but it's crucial to any technology company, especially them.

Adam: 15:24

So that's actually a really interesting point, and I remember you talking about that in the book several times about the fact that they have this one model that informs their- their whole trading strategy. And- and I remember being curious, cause my sense was, when you say one model, it's not that they've got one edge. It's that they have a- sort of a meta-model that allows them to identify a very large number, in a very flexible way, a very large number of edges that they're able to trade using similar properties that they- or techniques to identify and evaluate those different edges or those different, sort of, sub-strategies. And all of that is informed by this one model. Is that a reasonable interpretation or am I missing something?

Greg Zuckerman: [16:15]

To some extent, they identify phenomena. That's what they look for. Fleeting phenomena in- in the market that you and I maybe can't pick up on. They can identify and- and- what I mean by model, by contrast, other firms will have these 10 people all working on one trading system, and over there they've got another dozen people working on another system, all in equities, let's say. And part of it is because they need to pay them that way.

If you're a real superstar, let's say, at a Two Sigma or somewhere, you don't want to be working on a one huge model for the entire firm. You wanna show how great you are and there's a little ego involved, and they want to create incentives to keep you. So as much as they would rather them be, kind of, one big model for equities, it doesn't work for these other firms. And that's one thing that Jim Simons has always emphasized, it was really Henry Laufer early on, and they did it on the other side with- with commodities and currencies and it kept- so it's one trading system for- for each. And it's rare and it's a real advantage.

Rodrigo: [17:23]

That totally makes sense. I- I think what's clear about their success is not just how they think about the investment problem, but how they think about the unique way by which they attack creating the maximum return they possibly can. A lot of it has to do with, I'm sure, aggregating a bunch of signals into a single model, and a lot of it also probably has to do with the way they're willing to do things that other asset management firms aren't.

You mentioned earlier that not knowing why something is happening does not stop them from trying to get performance and returns from it. And that generally, in the asset management space, is something that you want to avoid.

I think in part of your book you talk about how it was difficult to raise money with these concepts because people didn't want to invest in any- in something that they didn't understand. I'd like to talk a little bit about that.

I'd also like for you to talk a little bit about leverage. You mentioned a couple times that banks and- and firms are willing to give them a level of leverage that probably other asset-management firms cannot get access to. Can you talk a little bit about the uniqueness in terms of implementation that sets them apart in those two areas?

Leverage

Greg Zuckerman: [18:29]

Well in terms of leverage, it's what the opposite of virtuous cycle where their Sharpe ratio is so good, it's ridiculously good, like seven at this point, that it allows them to leverage at a really low cost. And they don't use it all the time, but when they get excited about markets, excited about opportunities when their system looks most promising then they can add leverage as much as they kind of want.

It changed a little bit the last few years, firms haven't been as eager with that. I write in the book about the basket options and how generous that- that leverage was. But I do believe they still have access to better leverage than others and, yeah, you don't want to downplay the importance of leverage. I mean, it's also helped that they capped this fund at 10 billion dollars.

So some people said to me, "Well, Greg, you can't really compare Renaissance to Buffett and these other investors because Medallion itself is $10 billion." And granted, to get to over 100 billion, sometimes there's leverage, but that's still smaller than the market cap of Berkshire Hathaway. And I would respond, well, no one's forcing Warren Buffett to get this big, and to hurt his returns that way. And that's- other investors have written about it too. You know, John Paulson wrote The Greatest Trade Ever about it. His fatal flaw was after The Greatest Trade Ever, he went up to like $40 billion unleveraged.

So, leverage is- is huge, but part of that is the Sharp ratio, part of that is the capping of the funds.

Rodrigo: 20:03

And you've obviously, I- I've heard you have several podcasts on this book. I'm sure you've had 10 or 100 times more conversations with individuals about it. And I'm just curious, what surprised you most about the conversations that you have. How do people push back in ways that have surprised you, or what are people most interested in that has surprised you as you've had these- these chats?

The "Book"

Greg Zuckerman: 20:27

Well I'll tell you the thing that surprised me most is that when you talk to Simons and you talk to early members of the firm and later members, in their personal account, you would think they'd all been, in quants, some version of what they do, you would think that just like me, they've become convinced of the futility of trying to beat the market with traditional methods. And it's not the case.

So, like Sandor Straus, one of the early- he was, maybe one of the first data scientists, one could argue. In the early '80's, I wrote about it in the book, he was cleaning data when no one even cared about data. He and his family office, they invested in all kinds of traditional-type investors. Not just quants.

And I write in the book about how Simons himself sort of panicked last year, and- and called the head of his family office and said, "Hey, should- should we be buying protection?" That blew me away. You would think the he doesn't even look at the market anymore, and doesn't get nervous like the rest of everybody else does. And yet they're still humans. And that sort of human aspect throughout the book was in some ways reassuring (laughs). But it is also a little bit surprising, just the tension behind the scenes, the drama, the ups and downs.

I went into this project thinking, "Okay, 66 percent annual return since 1988, where's the drama? Where are you gonna find the drama, Greg?" And it was everywhere and- and every few years they'd dodged a bullet of some kind. And that really kind of surprised me in- in so many different ways.

Rodrigo: 21:55 Right, you'd think there'd be a- a level of satisfaction after the first couple of years of making 60 percent return than everybody would have a happy time running this industry. But it does seem like it was fraught with-

Greg Zuckerman: 22:06 Right, and even today people say there's like this urgency and it- they still feel pressure. So that- that, yeah. Like you say, that's a little surprising, too.

Rodrigo: 22:15 It seems to me that- that you have a lot of great stories in the book. Having written a book ourselves and knowing how much content we could have tried to cram in there, you know, and our editor put a lot of work making it readable. There's a lot of stories that were left on the cutting room floor on our end. I'm curious as to whether there was one or two areas or stories that you really wanted to get in but you just couldn't fit it in, that you'd like to tell us a little bit about now?

Greg Zuckerman: 22:39 I mean there was stuff about, just people and drama and their individual lives. There's a balance, because some people don't necessarily want the personal drama. And I get emails sometimes and pushback, "Hey, why'd you write about Bob Mercer and his politics?" or "David Magerman's politics?" And that kind of thing. So, I could have gone longer there, and- and I decided, I think it's important to the story, it affected the firm, it affected these individuals, how they spent the money as much as how they made it is important. But I didn't wanna go overboard. So I could have done more there.

Um, I could have gone a little wonkier in terms of the- the math. Some people wanted it more, some people wanted it less. I tried to summarize and address it.

I have different constituencies. I've got sophisticated traders and investors like yourselves, but other people just wanted a good story and to understand this world. And- and- and, listen, if you're an average person, you gotta understand how the quants dominate the street and how things have changed, and how you turn on CNBC and there's talking heads all day long and they really don't have much of an impact on the market, some of these more quantitative investors.

So, I don't have any, like, great, super-duper insight that I didn't put in the book. I tried to give my readers every- everything that was important. But I- I could have- I had other issues. I had personal stuff, secrets about different people in the book that I don't really feel comfortable writing for whatever reason. I didn't- I didn't include in the book.

Rodrigo:	24:06	Well you did a great job, you know I think-
Adam:	24:08	You really did well with the tightrope-
Rodrigo:	24:12	Yeah, there's been a few people in the firm that have read it twice, myself included. So, you did a great job. I think, the balance between insight and quantitative insight, and then telling the human story was fantastic. I imagine they've allowed you to have a little bit of access to the fund given how, what great a job you did. What's your relationship with them now?
Greg Zuckerman:	24:30	I wish. No. I mean, I, yeah. Even if they did, it would be unethical. What's my relationship with them now? That's a great question. So, I've had a complicated relationship with Simons where, for a long time he wouldn't talk to me. He told people in the industry not to talk to me. Even people that are his competitors. But then he eventually came around and we did spend over 10 hours together and in a lot of ways he was really, really helpful. Just explaining some of the math concepts, things he worked on early in his life, which I find kind of fascinating, that helped period- they may not be for everybody, but the advances in geometry and mathematics and he's a code breaker for the government, and he's just a fascinating individual. And what he's doing lately in terms of philanthropy, trying to figure out cures or- or at least treatments for autism. He's trying to figure out how the universe began. Subsidizing math teachers and science teachers. So, he did end up helping me and talking to me about various things, but when it came to Renaissance, he was very careful and told, again, told people not to talk to me. They've got these 30-page non-disclosures. So the fact that I did this book, I think they have mixed feelings about it. I think on the one hand, if you're Jim Simons, it can't be a bad thing. You have a book about you called The Man Who Solved the Market. But, on the other hand, he spent time talking to me and he feels uncomfortable, to some extent, about that. And, so we- we have mixed feelings. He even, a few months ago, before the book came out, just before the book came out, he kind of said to me, "Greg, do you really still need to do this book?"
Rodrigo:	24:30	(Laughs)
Adam:	24:30	(Laughs)
Greg Zuckerman:	26:03	And I kind of said, "Well, uh, I've already spent two years on this and it’s a little too late now, Jim, sorry." So we have a complicated relationship. I wouldn't say good, I wouldn't say bad. And I guess that's true of the firm, too.

I think they were worried in some ways that, or Jim was worried I wouldn't take it seriously. And I- in terms of his early period of his life and, I would maybe sensationalize it. And I tried not to, I tried to tell it the way I viewed it should be told, with some drama and some human interest, but these are fascinating individuals who are among the most important in society today. That the money they've got, the impact they've had on politics, even look at Bob Mercer and philanthropy when it comes to Simons and science and health care, they're hugely important and I guess, maybe even will become more so, perhaps, going forward in a number of years. So I- I tried to take it seriously, I think they appreciate how hard I worked. This was the hardest thing I ever did in my life. I almost turned back and handed back my book advance a number of times. So, I mean, I'm a writer, so that's- that's something writers don't usually do. (Laughs)

Adam: 26:03 (Laughs)

Greg Zuckerman: 27:15 So, I- again, I think we have a- we have a complicated relationship, but I don't think a bad one.

Adam: 27:19 Well, look, I want to be respectful of your time, Greg, if you do have a couple more minutes, I am curious- okay great. I am curious to know, I mean, Jim Simons, Bob Mercer are- they're not getting any younger. It seems to me that they're such an integral part of the personality of Renaissance. What does Renaissance become when they move on?

The Future of Renaissance

Greg Zuckerman: 27:44 Good question. They have a lot of talent there. I think they could probably keep it going, but I'm a little more concerned- I'm concerned about two things.

First, is the nature, not concerned, if they blow up, it's not- I'm not invested. So no sweat off my back. But the two concerns I would have for them: “A”. the market is changing. So everything they do is based on patterns repeating, their thesis is that how the market has reacted in the past is suggestion of how it might react in the future, and as we all know, the market is changing. You have more people doing passive investing, we have more people doing quant investing, more people doing what they're doing. So, uh, the market pattern's changing. The nature of the market, trading, changing. If it's just quant guy versus quant guy, or- or woman, does that mean that the patterns of the market are adjusting and it makes it more difficult for them?

Early on, sort of half joking, they say, "Well, how are we making so much money? Well there are a lot of dentists on the other side of us." And it was half joking, and later they figure, "Okay, it's not- probably not individual investors, but it's more sophisticated, maybe sovereign wealth funds that panic or don't do a great job but the market turns. But if there aren't- aren't as many dentists anymore (laughs) in the market. So the nature of the market is changing.

I've challenged people internally about that, and the way they've responded is, "Yes it is," and "If it was happening overnight, then we'd be concerned, but it's happening gradually, so we think we can keep up with it."

And the second is just keeping morale strong and being able to hire the best talent and that's part of the reason why Simons, as I write in the book, he told Bob Mercer to step down as co-CEO. He likes him, he's done a great job, but he's worried about morale. And they have to compete- they view themselves as competing in talent with Facebook and Google, those kind of companies, not really with Wall Street firms. And there's reason to think that morale and collegiality is not the same as it was in the past. It may be the case that they can't get the same talent.

So far they've been able to, though, but those are my concerns about the future for them.

Rodrigo: 29:53 Excellent, Greg.

Adam: 29:54 Terrific.

Rodrigo: 29:54 That's awesome insight. Thank you for taking the time to have this podcast with us. Do you have a lot more to do before the beginning of the holidays? Or are you pretty much done with the tour?

Greg Zuckerman: 30:05 I'm gonna be doing some speaking. Now- now I'm sort of in the phase where I'm addressing sort of larger groups, not so much podcasts, like this one. And I have to say, you guys asked some of the best questions I've been asked. I've been doing this for a little bit now. So, uh, kudos to you guys.

But yeah, I'm doing mostly a lot of speaking now. I just came back from London and spoke to a group. I'm doing a bunch of different speeches around the New York area over the next few months, which I enjoy. People challenge me, they give me ideas for stories for the Journal, for my next book, for- for this one. They- they raise issues that I hadn't thought about in my basement for two years basically. I mean, I talk to people all day long, but when I'm working on this book, I'm really focused on it. So now I get to hear what people have to say, and- and I love hearing their- their reactions. So, your audience, feel free to reach out to me, or- or come see me at an event.

Rodrigo: 30:53 Are you gonna be by Toronto? That's where we're based out of, and we'd love to- to have you over.

Greg Zuckerman: 30:57 You know, I was there for just a speech the first week the book came out briefly, and I'd love to go back. But I don't have any plans right now. There- there is some book store that someone told me I should reach out to, but I- I don't have anything right now. But, yeah, I- I'd love to come back, I'd love- I- I- I love Toronto.

Rodrigo:	31:13	We'll figure out a reason for you to come up here. Well, thanks again, Greg. Again, fantastic interview and good luck with the roadshow that you're embarking on. And I can't wait to see what you've got coming up your sleeve next.
Greg Zuckerman:	31:26	Thanks so much, guys.
Rodrigo:	31:28	Thank you for listening to the Gestalt University podcast. You will find all the information we highlighted in this episode in the show notes at investresolve.com/blog. You can also learn more about ReSolve's approach to investing by going to our website and research blog at investresolve.com, where you will find over 200 articles that cover a wide array of important topics in the area of investing. We also encourage you to engage with the whole team on Twitter by searching the handle @InvestReSolve and hitting the "follow" button. If you're enjoying the series, please take the time to share us with your friends through email, social media, and if you really learned something new and believe that our podcast will be helpful to others, we would be incredibly grateful if you could leave us a review on iTunes. Thanks again, and see you next time.