Rodrigo:	**00:06**	Hello everyone and welcome to ReSolve's 12 Days of Investment Wisdom mini-series, where Michael Philbrick, Adam Butler, Jason Russell, and myself, Rodrigo Gordillo, will explore timeless evergreen principles that will help you and your clients achieve long-term investment success. From the importance of asset allocation, thoughtful portfolio construction, and maximum diversification, our aim is to offer you a comprehensive framework for a more thoughtful investment approach that may change the way you view the complex arena of investing altogether. We hope that you enjoy the series as much as we enjoyed putting it together.
Disclaimer:	**00:42**	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 while 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
Mike:	**01:10**	Welcome back. As you know the first four days were obsessing about diversification and why it's important. And now what we're gonna do is get a little bit more pragmatic if you will. We're gonna study where the actual rubber hits the road on this. Why are we gonna obsess on diversification so much? Why do we wanna maximize the Sharpe ratio of a portfolio? Why do we ... Why is volatility so gosh darn important when thinking about this in the context of the everyday lives of individuals who have money in long-term savings vehicles for long-term purposes like saving for retirement or funding an education? Why is this all so important? And that's what we're gonna jump into today. And today is obviously five golden rings. And we're gonna talk about the five golden rings of financial planning.
Adam Butler:	**1:55**	Yeah, so why do we obsess about diversification? I think it's because as we see client portfolios, so portfolios for people who come to ask us for advice or we talk to advisors about what they're doing with their clients, an overwhelming proportion of those portfolios are allocated to equities. And I think it's important to understand the range of potential outcomes from a concentrated exposure to global stocks. And it's worth sort of revisiting what the historical experience has been. And, Brinson and his group who create the annual Credit Suisse yearbook put together a study a couple of years ago. I think it was in the 2017 yearbook where they analyzed the very long-term average returns to equities in U.S. markets. And ex U.S. stock markets and for global stock markets since 1900, so they had about a hundred and sixteen years of data.

And they found that US equities produced a long-term average return of about five and a half percent per year above cash. That foreign equities delivered three and a half percent per year. And just taking both foreign and U.S. produced about 4.2% per year above cash.

And we think that this equity bet is a potential source of vulnerability. And I mean there's, I think there's a lot of really good arguments for why U.S. equities did produce returns that were substantially above the returns experienced by other countries. And we could probably go through them, although that's not really the point of this episode.

But I think what, what's most important is for investors to realize that they have only one life to live. And so, given that the U.S. equity experience was an outlier relative to the experience of everywhere else on the planet, um, should they make a bet on their future looking like the U.S. outlier experience? Or should we instead use the global mean as our estimate for financial planning purposes?

Mike: **04:00** So, so what you're saying is rather than, we're gonna endeavor into a plan, financial plan for the next 20 or 30 years of, of our lives in retirement, that maybe it's not the best idea to use the number one performing asset class over the, that number one performing stock market over the last hundred and sixteen or eighteen years. And use that as the assumption.

Maybe we should think of something that's a little bit more in the middle of the pack.

Adam: **04:25** Yeah I mean it just seems more prudent.

Mike: **04:30** When you say it like that it really does. It seems pretty optimistic that, that you would match the, for over the next you know, meaningful period of time, 20, 30, 40 years, that you're gonna match that very high return of the, of the best returning stock market in the world.

Adam: **04:45** Exactly, I mean for planning purposes it just makes way more sense to use the global mean. So if we do that, then that's about a, that's a 4.2% long-term average return. And let's keep in mind that doesn't account for where we are in terms of global valuations right?

That's just the unconditional long-term mean. We started investing in 1900 and we took the average annual return over the next hundred and sixteen years. Well globally that's 4.2%. Now I mean there's a lot of really good arguments for why stocks are a little bit on the over valued side at the moment.

And what we know is that uh, over valued stocks typically predict slightly less than the long-term average returns over the next 10 or 20 years. And so you know on just more reasons why investors probably shouldn't bank on for financial planning purposes the extremely high returns too that we've observed for US equities over the long-term.

Mike:	**05:43**	Right.
Adam:	**05:44**	And it actually gets a little bit more challenging than that because you know even though we've got a hundred and sixteen years of data, that really is only a sample from a population of true very long-term returns. Right, we've got a hundred and sixteen. We've reached into our, our large bag of uh, yearly returns. We, we pulled out a hundred sixteen balls. The mean global return of those hundred and sixteen balls is 4.2%. But there's an error term in there. And, and statistics does, provides us with really good tools to determine how large that error term really is. And what we need to do is take the standard deviation of those annual returns, which on average over the past 100 years is about 20% a year. Divide by the square root of the number of years of observations we have, so square root of a hundred and sixteen, so 20% divided by the square root of a hundred and sixteen produces our standard error. Which is about 1.9%. And just to close the loop on this thing, what that means is that there's actually a 95% probability that the true global equity risk premium is between 1.2% a year and 6.2% a year. And if we continue to make the case that U.S. equities are, are a bit of a special case and will continue to be a special case going forward. That still means that the 95% range of true U.S. equity returns is somewhere between two and a half percent and eight and a half percent per year.
Rodrigo:	**07:15**	And we don't have to go too far to look at a real life example of when that was the case. If we're even just looking at the ex U.S. percentage, what is the 10 year, a real time frame? Right, a real important time frame for somebody in retirement. What has the average rate of return been for global equities? Well we're annualizing at 1% somewhere on that.
Adam:	**07:37**	Well that's, yeah for foreign equities.
Rodrigo:	**07:38**	Foreign equities.
Adam:	**07:39**	Yeah.
Rodrigo:	**07:39**	Ex-US, yeah.
Adam:	**07:40**	Yeah, yeah exactly.
Rodrigo:	**07:41**	So it', it's a reality that we have lived and continue to live.

Adam Butler:	**07:45**	Yep, yep. But as Mike pointed out, you know if you go back 20 years instead of looking at the past 10 years, what was it Mike, the comparison with the emerging market stocks?
Mike:	**07:54**	Right, well uh, over the last 20 years emerging market stocks are actually still outperforming U.S. stocks on a total return basis.
Adam:	**08:00**	Total return basis.
Rodrigo:	**08:02**	Nobody knows that right.
Mike:	**8:03**	And a lot of people will say, "Wow that's a, that's a particular timeframe or whatever." There's, there's lots of 10 and 20 year rolling periods where the U.S. market does not dominate. And that to me, it proves the point. I'm not, we're not trying to suggest, "Oh look you're outperformed on this 20 year period." What happened is the performance came in very distinctly different times. They're different economic regimes that feed the underlying structural relationships that we talked about in the last episode. That connect emerging market economies to these underlying regimes versus developed market economies to these underlying regimes. And the idea of diversification is this explicit recognition that we really don't know which one of those regimes may manifest. And so we want to make sure that we have something in the portfolio that can thrive in that environment, ‘03 to ‘08 emerging market equities compounded at 33%. While U.S. equities compounded at about 12%. That's a lot of excess return in that time period. And you're right, as you mentioned Rodrigo, since then it's been 1% over the last 10 years. But you made a lot more money in those first five years. And if you think about, which we're gonna get into later in this podcast the sequence of returns. If you had those excess returns and you had just started to retire, you would have had much greater returns in the beginning to your portfolio that was considering emerging market stocks and S&P stocks as just a simple example of, of this. An over simplification of the process. But now you would have had much greater returns in the beginning. Sure they would have been flat over the last 10 years. But as we know, the math says if you're withdrawing money and retired, you would prefer that.
Rodrigo:	**09:44**	Yeah, well look, it, we're getting into how there may not be, the, the past in U.S. equities may not be the future for U.S. equities. And we're talking about equities, but let's talk about bonds for a little bit.
Mike:	**09:55**	Sure.

Rodrigo:	**09:56**	Do you hear that?
Mike:	**09:57**	Well again, again we have economic drivers in the machine. Right?
Rodrigo:	**10:02**	That's right, yeah. And so-
Adam:	**10:03**	Talk about an asset class that's especially vulnerable to those regimes, exactly.
Rodrigo:	**10:04**	Yeah and, and if we look back in history, we have this tendency to believe that a safe asset is a bond asset. Right? If we are looking to put a client into a more moderate portfolio, we just need to like back up the truck in bonds. The, the closer they get to retirement just put more bonds in there. And what you get is a lower volatility portfolio no doubt. But from a real return perspective, from what really matters, bonds aren't immune to having multi-decade periods of low returns, if not, negative returns. I put this up on my Twitter feed a few times, but few people know that the ... From 1941 to 1981, bonds had a massive real return draw down. Like a massive draw down. What was the number? I think we put it up on the board here. It was uh-
Adam:	**10:49**	Sixty eight percent.
Rodrigo:	**10:50**	Yeah, 68% peak to trough loss in real terms. Right? It was at, it was a 40 year period where bonds just lost money in real terms. Right, so this is not, there is no asset class that's immune to multi-decade poor returns. And again, coming back to where the rubber meets the road, if you don't know the future, then you, an explicit recognition of our ignorance is diversification. It, we need to make sure that we're diversifying into it. And during that same period, 1941 to 1981, yes the best performing asset class was U.S. equities. Right, that, that was fantastic. Had you know that in 1941 you should have backed up the truck in equities. But the point is we don't know that. In 1941 nobody knew that. And I actually did a presentation that went back to 90 years of risk parity. And again, risk parity is this idea, preparation rather than prediction. Right, the idea that you want to be as diversified as possible and make sure that you're risk weighted across different asset classes. And during that same period, even though bonds represented the vast majority of that portfolio, because it was diversified, because it was risk balanced, had you scaled it to the same level of risk as equities without having to predict the future, without having to know that equities were the best performing asset class, in our research it showed that it did better than equities as the same level of risk.

Adam:	**12:07**	The global risk parity portfolio.
Rodrigo:	**12:08**	The global risk parity portfolio. Right?
Adam:	**12:09**	For that period, yeah.
Rodrigo:	**12:10**	So that's massive. Not having to know and yet survive and thrive to provide. And this is again, for retirees this is crucial, crucial. You only have one life.
Mike:	**12:21**	Right, then we get into things like uh, the luck of it all. Right? So the sequence of returns again, what we'll link to the articles as we're doing these discussions for further review. But sequence of returns risk is something that's incredibly relevant for those entering into financial plans. Especially those financial plans that might be under diversified and who have large bets in any one specific regime. Any one specific economic outcome.

Beause you're going to have a larger probably of, of having long periods of low returns. And let's take the, the in, in the U.S. market the 1966 to 1997 example. So even a, a nice 30 year period where the average rate of return was 8%. Doesn't that sound yummy?

Except for the fact from 1966 to 1981, that portfolio returned 0%. And then from 1982 to 1997 it returned 16%. So here we have two retirees. Let's say they are successful business men. They didn't have any pension to fall back on. They had a lump sum of savings. And they, they wanted to have a withdrawal rate of 5% a year uh, for the next 30 years.

And entrepreneur A starts in 1966 and he's got this 0% return stream. Which by the way was also insanely volatile. So not only would he get 0 return, he has massive amounts of risk thrown at him. And in scenario one this entrepreneur runs out of money after 14 years. Okay.

Scenario two we say, "Okay let's look at getting the lucky side of that." Let's start in 1982. And what we're gonna do is we're just going to take these two, two areas of return '66 to '81 and '82 to 1997 and we're going to reverse their order. So as though 1982 happened first and then led into 1966.

So rather than having poor returns first where the entrepreneur ran out of money in 14 years, let's give him the good returns first. And then see what happens. And it turns out that if he retires through no fault of his own genius into it, and a time frame where he has those robust returns first, not only does he, he live the life of luxury, he ends up leaving a 4.1 million dollar legacy.

So the idea of timing risk, this sequence of returns risk. And that risk leads back into the point that Adam was initially making about using the U.S. long-term

		returns. Well again, this is a, this is a period that we're talking about only U.S. equities. There are other asset classes. There are other asset classes like bonds. There's both uh, global equities and, and your domestic equities. And then there's all kinds of other sources of returns.
Adam:	**15:17**	Exactly and you know as a fiduciary, the objective, the explicit objective needs to be to find as many reliable uncorrelated sources of return as possible. With the explicit objective of trying to reduce the vulnerability of our clients to this type of sequence risk. You know we don't want to rely overly on having an environment that's favorable for equities. This sort of environment of sustained positive growth shocks. Benign inflation and abundant liquidity. We don't want to rely on a period being favorable for bonds. Here we've got uh, consistently declining inflation. I mean let's, let's put this in perspective. For the past 38 years the long-term treasury bond has produced a substantially higher return than U.S. equity bonds. And should we expect that going forward? I mean it's been a particularly favorable regime for fixed income. Um, so the point is we just don't want to be overly vulnerable to any particular type of regime. And in our next episode, we're gonna talk about in, in a little bit more detail some of the alternative sources of return that are available to advisors. And how they should think about uh, allocating to those sources of return and the role that they may play in portfolios in order for them to best fulfill their fiduciary responsibility.
Mike:	**16:44**	I love it.
Rodrigo:	**16:45**	Thank you for listening to our 12 days of Investment Wisdom mini-series. You will find all the information we highlighted in this episode in the show notes @investresolve.com/12 days. 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 following Adam, Mike and myself. If you're really enjoying this 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 series would 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.