The ReSolve Master Class – Episode Nine

Adam:	**00:00:00**	All right, Episode Nine.
Rodrigo:	**00:00:01**	Here we are.
Adam:	**00:00:03**	We have designed a portfolio that is fundamentally hedged against the big sustainable risks that portfolios face when we're talking about timeframes that are measured in many decades, primarily growth shocks and inflation shocks in both directions. That does hedge against the risks that we face most of the time. But one of the risks that we can't hedge against in that framework is the risk that liquidity evaporates. Liquidity is the oxygen that supports every market price. And sometimes liquidity evaporates for reasons we probably won't get into. It is useful to also incorporate strategies that are fundamentally designed to do well when liquidity evaporates. You might think that incorporating some of the old style premia sleeves and maybe alpha sleeves that we discussed in earlier sessions would fully or mostly alleviate this risk. But the reality is the plumbing of liquidity risk is such that these strategies are also vulnerable at those times. It's not sufficient to just diversify in that way, we need to think about strategies that are designed to trigger exclusively during these liquidity crises. 2020 is a good example of how that plays out.
Rodrigo:	**00:01:29**	When it comes to risk parity we talked about the dimensions that is designed to cover. You have periods of accelerated growth and negative growth shocks that it does well. And because it has a balanced exposure to gold and treasuries that tend to do well, and certainly in 2020 did do well. So one would think, this framework should cover all of these scenarios. If we zone in on 2020, risk parity actually did do a fantastic job in the beginning part. We saw the growth shock happen, you saw money move away from risky assets towards risk off assets, which in these periods are sovereign bonds, not just Treasuries, but German bunds, UK gilts and the like.
Adam:	**00:02:11**	Well, hold on, let's walk through the economic mechanics that are playing out there too, because you've had a growth shock, and also an inflation shock, like a negative growth shock and a negative inflation shock. So the markets are now worried about deflation, and therefore Treasury prices are rising. They are concerned about or anticipating central bank intervention, and therefore the potential for currency debasement. So, you've got gold also rallying, the mechanics are playing out as you'd expect based on the fundamental drivers in the market at that time.

Rodrigo: **00:02:39**

And so the question is, doesn't risk parity cover all these angles including a liquidity shock? And the reality is that it doesn't. There's a breaking point by which, when you are discovering price accurately, is when liquidity is abundant. That's the price discovery mechanism, there is a point where there are less players willing to play, people want to sell, the margin clerks are coming out and doing margin calls across the board. When it comes to this particular point in time, it's not what you want to sell, it's what you can sell. And if the things that you can sell are going up, generally the things that are going up have a bit more liquidity, gold, Treasuries and the like. That's where you draw from. So there is a breaking point that we see every single time there's been a bit of a credit crisis, bit of a liquidity crisis, and you see it happen immediately. There is a breaking point even in risk parity where diversification no longer helps, where gold and Treasuries go down at the same time that equities and commodities do.

Mike: **00:03:34**

Liquidity crisis is a systemic issue. All players and participants are forced to reduce exposure at the same time, whether they could be targeting vol in a number of methods, they could be using VaR/ CVaR on their own books in order to target acceptable risks, you have an overall contraction of liquidity that creates problems for all asset classes.

Rodrigo: **00:03:56**

This is intuitive from a long only portfolio like risk parity. One would think well, I have these market neutral portfolios that completely take out that beta. Clearly, a lot of market neutral strategies still suffer in periods of market liquidity. Adam, why don't want you walk us through how that mechanism might work?

Adam: **00:04:13**

It's just that there's a global collateral call. So all these market neutral strategies that the vast majority of them run with leverage because while the edges are reasonably strong, the underlying risk of taking long equivalent, long's and shorts in equities or in similar markets, typically the risk is relatively small and the return is commensurately small. So you just lever up that small return to get enough juice to make it attractive to cover fees, etc. So there's leverage embedded in those. And as the risk in the system accelerates, they discover that they've got too much risk on. The book's too volatile, their broker dealers are short collateral, they're reaching out to their underlying investors and saying we need you to raise cash and deliver us excess collateral, which means that these funds need to sell down their exposure, and you sell down your exposure using the instruments that you can sell. So typically, they're the most liquid highest quality stocks. So, it's this strange phenomenon where during the peak of a liquidity crisis, the strongest assets get sold the most. And you completely eliminate the process of price discovery as this liquidation event proceeds. So nothing is safe.

Rodrigo: **00:05:27**

There's also that spread that widens and you get the market makers taking in all of that spread, you're getting bad prices on your long's, you're getting bad prices on your short's and that delta is adding to your negative P&L. So all these things are due to this mechanism. And that includes maybe even directional strategies like trend, especially something as quickly as this, how liquidity can dry up so quickly if you're caught on the wrong side, you will also have this tail event in something that may be designed to provide some ballast in periods like these. Understanding that there's this gap, like risk parity, as I mentioned, was doing really well while equities were really getting hurt. It was really three, maybe three, four days of pain and then liquidity came back in and there was price discovery. Once again, diversification came back into play and the machine was working again. But it's that gap that could be depending on how much volatility targeting you want to do on your risk parity portfolio, it could be fairly wide.

Adam: **00:06:25** I would add too that markets came unhinged from March 19th to March 23, or 24th of 2020. That stopped when the Fed stepped in and was the liquidity provider of last resort. Over the duration of the experience for most investors, the Fed has stepped in in those situations and provided sufficient liquidity so that investors didn't need to have that type of protection. They didn't need it because the Fed provided it. The question is in the future; will the Fed always be there? Will they be there the way they've been there in the recent past? And if not, do you have something else, some other type of protection that can deliver against those collateral calls in those liquidity cascades?

Rodrigo: **00:07:15** And the gap that is being filled by this is long volatility. And even if the Fed does come in, that period of dislocation actually provides an opportunity to make some profit. If you're able to capture an outsize positive P&L on your long volatility trade, then you can use that money to buy cheap assets that have not been priced appropriately in order to be able to balance and make some excess returns.

Mike: **00:07:42** I think it's important to point out one other thing. And that is that if you are hedging a portfolio and you're only in one domain of risk, let's say an asset like gold, or like stocks, on their own, are experiencing part of this systemic issue of liquidity, their drawdown is going to be much larger. And thus any tail hedge protection strategy that you employ with a single asset class in a single regime requires more capital. One thing that's especially important is that when you think thoughtfully about preparation, the tails of the prepared portfolio are smaller than a super concentrated portfolio. And so the amount of capital that you have to dedicate to a tail hedge protection strategy in the context of a very well prepared portfolio is smaller, because the tails are smaller.

Rodrigo: **00:08:33** When people think about tail protection, they're thinking about protecting their 100% equity portfolio because that's what people feel they need to allocate to these days, to capture some excess returns. If you're there and you know that equities can suffer a 40% to 85% drawdown depending on the equity market. And the point in history that you're looking at, then you need to allocate a large portion into this tail protection strategy which tends to...tail protection has a bleed to it, when it's not tail protecting.

Adam: **00:09:04** That's critical to talk about because I think everyone's by now who hasn't already thought this through is wondering, well, why wouldn't we just call it tail protection as much as we want all the time? And the answer is because it's an insurance policy and an insurance costs money. You've got to pay regular premiums to carry this insurance. This insurance pays off when there's a major liquidity event. So you want to carry the least amount of insurance necessary in order to hedge your core risks. The point here is maximizing diversity and balance. You need to carry a minimal amount of insurance, but you still need to carry insurance. And this insurance is especially valuable in the context of this diversified portfolio. I think that that's a critical thing to understand. You're going to describe a metaphor that...

Mike: **00:09:51** Like any insurance, it's always best to buy it when you're not in the middle of the earthquake. Buy your insurances prior to or hold them in disaster. Items like that were Wimbledon. They had been paying $2 million a year for insurance and their insurance paid off. Poor examples are, I think CalPERS had a program that they unwound just before.

Rodrigo: **00:10:09** Was it in January 2020, or something like that?

Mike: **00:10:13** Yeah, sadly.

Rodrigo: **00:10:12** Oh my god. It's tough to do. It is really tough to hold those losing parts of your portfolio. And that's one of the reasons why you don't see it, especially as a separate line item.

Mike: **00:10:23** Yeah, there's definitely a behavioral headwind to those and I think Chris Cole of Artemis has a wonderful analogy on that, translating that into basketball when he talks about Dennis Rodman. Dennis Rodman is the lowest scoring NBA player in the Hall of Fame by a longshot, he can't score within five feet and scored an average of 11 points a game. So how is he in the Hall of Fame? He's in the Hall of Fame because he's a six standard deviation rebounder. Now, think of that in the context of your basketball team. So any team he was on, he made better, very much like your tail hedge protection pays off, and you have money to put to these asset classes that are distressed, Rodman won a couple of championships with the Pistons and three with the Bulls and he was an integral part of their success because whilst he was on the court, he reduced the average scoring of the other team.

So when things were going really well and everyone was scoring, you could have scored more points per game had you not had Rodman on the court. Having said that, having a six standard deviation rebounder comes in handy when you're not scoring, and you get second and third chances to make a score at the basket, and that makes you competitive in those games where they're tighter. And by the way, you don't win the games you were already going to win by as much.

So, if your objective is to win more games and win championships and have a better record and get in the playoffs, you don't really need to win the games you are going to win anyway by a lot more. You need to be very competitive in those games where they're on the margin between victory and loss. And so, think about those five players in the basketball court is five different asset classes. And if you have them all in the inflationary growth, or the growth paradigm with disinflationary inflation or growth, ie: you have a heavy equity portfolio, you're going to put up great scores, a lot of great years. And when the tough year comes around, you're going to have a really, really tough year. And we know that...

Adam: **00:12:19** Or decade.

Mike: **00:12:21** Right. Well, decades at a time, true. What you want is to have a diverse team or a diverse group of asset classes where one of those asset classes actually gives you the opportunity to have a couple of other chances at scoring.

Rodrigo: **00:12:34** You know what's interesting, was it" The Last Dance", the documentary that came out? What was interesting is that people can get behind risk parity, because it goes up, you can get behind a solid factor premium portfolio because it tends to do well most years, you can do the same thing for a solid, long, short, systematic, alpha. But this idea of having a player that just pisses everybody off consistently, but you know you need them is the equivalent of what we saw in "The Last Dance". Nobody liked or very few people liked or if they liked them, they like if …

Mike: **00:13:05** If he was on your team on your team, you liked him, if he wasn't on your team...

Rodrigo: **00:13:08** You have to manage your expectations of him, I think it's a perfect parallel to having this in your portfolio. We lived it when we all got together, I've had in my client's portfolios a line item that actually went to zero every year, and we'd have to re up and get clients on board. They didn't last long. They just couldn't deal with the pain. So one of the interesting things is, this is a real characteristic and you might want to consider co-mingling this with something else.

Mike: **00:13:35** Chris Cole says, like Dennis Rodman is literally the long vol trade for your portfolio. He's hard to have on your team, but he comes in really handy.

Rodrigo:	**00:13:44**	There's different implementations of this tail protection strategy and certainly there's different, the way it's been talked about often is you have to have a big bleed that's worth it in order to have that 100% equity position hedged when you have a diversified portfolio and you have the opportunity to maybe even profit in a directional type of strategy, or maybe the liquidity shock isn't that much. You might be able to benefit from a smaller allocation, not as much bleed, you can stick to it longer, but it'll still be there for you as an opportunistic trade.
Adam:	**00:14:15**	The key is to have an ensemble of these strategies I think. You want to have some trend, you want to have some straight up put strategies with different strikes, you want to have some other maybe systematic strategies that where for example, you're using relationships between the shape and slope of the volatility term structure to inform your equity positioning, that kind of stuff. Like this is a team sport even within the liquidity cascade protection or like tail protection area. If you can incorporate all of those, that full ensemble within a broader portfolio context, you're not having to constantly look at what looks like a weak player most of the time and suffer the behavioral pain from that. All the better.
Rodrigo:	**00:14:58**	I'll add one last thought that I have and what's interesting about it is portfolio is that it does hedge against growth and inflation shocks, but not liquidity shocks both on the upside and the downside. Problem is that we like upside liquidity, do we deserve it in a what's supposed to be a non-predictive balanced portfolio? Maybe we don't deserve it so much. So if we can think about the bleed as taking away some of that excess liquidity and upward moving where liquidity floats all boats, you're not necessarily supposed to feel that bad about it. And then when negative liquidity shocks happen and you have that stop gap to be there for you.
Mike:	**00:15:32**	It is the sea anchor; it prevents the portfolio from vacillating quite as much. And in doing so, again, we've talked about arithmetic versus geometric returns. Basically, there's a vol drag to a portfolio, the lower the vol drag, the more consistent the returns, the higher the ability for the portfolio to create an ongoing income. Most portfolios,,. long lived assets in many circumstances are there to create some income. So if income is a relevant factor for a portfolio, then one should seriously consider this type of strategy as a complement.
Rodrigo:	**00:16:10**	How many people withdraw their funds on a quarterly basis upon retirement? What did they wake up to this quarter or a quarter 2020, 1st quarter of 2020?
Mike:	**00:16:19**	Pensions, endowments the same. Endowments have to create some 3 to 5% something real oftentimes, so there's a lot of these large long lived portfolios that have an income requirement.

Adam:	**00:16:30**	It's important to realize or to emphasize that we talk about the need for income in a portfolio, that doesn't mean that you need to emphasize yield producing assets.
Mike:	**00:16:41**	Distributions might be a better.
Adam:	**00:16:42**	Yeah, which can be just the sale of assets, raising cash through the sale of a small amount of your portfolio to fund distributions.
Mike:	**00:16:50**	Both institutional and retail investors fall in the trap of assuming that just because you're getting a yield, that yield is somehow immune to the two dynamics that we've talked about, of growth and inflation, when in fact it's not. The LBI is based on your corporate debt ladder, we've talked in the previous episode about what corporate debt is, and how it is an out of the money put that you're short in a situation where you have equity risk, credit risk, because equity risk and that's going to translate into your credit book. And so it's not just that you can find a yield and say, I'm safe. That's not the goal we're talking about. We're talking about the consistency of the portfolio's total return and its ability to meet the obligations that it has in the long term, over decades that are both friendly to equity and bond portfolios, and decades that are unfriendly, like the 70s, for example.
Rodrigo:	**00:17:47**	And we'll post an article that we wrote a few years back on sequence of return risk, all of this is about creating consistency in your equity line, and liquidity in your equity line so that when you're putting big chunks of money in, you're not getting into trouble. And when you're taking big chunks of money out, you're also not getting …. So we have both a savings and retirement addition to that article that I think would be useful in understanding the role that diversification and tail production play in that consistency. So that's it for tail protection. In the next episode, we're going to try to put it all together.