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EP94 | Prepare instead of predict: Integrating an engineering discipline to improve risk management

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Rob Campbell: 00:39 Hey, Karan, welcome back to the podcast!

Karan Phadke: 00:41 Thanks for having me.

Rob Campbell: 00:43 Great. Well, we're here to talk through a mental model that you found useful with respect to what contributes to fragility. This is something that you recently brought up in one of our weekly risk management meetings. And so maybe to start, can you give us some background on that meeting itself, and how it helps you in your role as a global small cap investor?

Karan Phadke: 01:02 Sure, Rob. So, the risk management meeting is a weekly one. It's something new that we've been trialing this year. Part of our culture is sort of experimentation, and we see what new things we can do that stick and that makes sense. And this was one of those experiments that were started by Jim, our chairman actually, and he sort of runs this weekly risk management meeting. And the whole goal or thought behind it is to improve people's situational awareness; try to get a better gauge for what the markets are doing and what the weather is like out there, so to speak, so that we're aware of what's around corners and just have a pulse on the regime that we're in.

That's sort of the goal of that weekly risk management meeting. And one of the side effects of that is that we get to share as a team what different people are doing to get better and to monitor risks across the portfolio. So, it's a great avenue for us to also learn from other people on the team on how to improve.

So from that context, very helpful I find, both in global small cap and just from a firm culture standpoint in having this meeting.

Rob Campbell:	**02:04**	And so these are sharing ideas not just about what's happening out there in the world, but also in terms of ways of thinking or interpreting or organizing your thoughts. And I think that's where this particular mental model that you came across comes in. Can you introduce it to us and maybe we'll go through it?
Karan Phadke:	**02:20**	Sure. So I think one of the key pillars around risk management that we have at the firm is we want to be prepared instead of trying to predict. So what that means is that instead of trying to predict exactly when the rain is going to come, we're more about building resilient ships, or in our case, portfolios. And so obviously in financial markets, it's very difficult to accurately say both when and how things will go wrong, but you can do an okay job of identifying these weak spots or fragilities, and in doing your best to sort of square off those edges and reinforce them so that you are no longer fragile to some of these unexpected things that are kind of normal in financial markets.
Karan Phadke	**3:00**	The framework that you alluded to, Rob, that I came across that's pretty interesting is by an Oxford economist named John Kay and he wrote a paper called "Robust and Resilient Finance." And the premise essentially is that, yeah, modern finance is pretty prone to accidents; it's endemic to the system because there's a lot of complexity, a lot of interconnectedness amongst the moving parts. And there's some institutions in finance that are just too big to fail, so there's some concentrations in there that make it pretty prone to accident, as I mentioned.
	3:31	In systems like this, sometimes when you add processes for safety, you actually make it more complex, which actually makes it even worse because these new parts interact with the system in unexpected ways. So, the framework or the model that John Kay leans on to build resilience is from the engineering discipline, and the idea is that there [are] three components you want to have to build that resilience.
	3:56	One is simplicity, the second is modularity, and then the third is redundancy. And so we could jump into what some of those words mean, but I found it a pretty helpful framework when it comes to just thinking about how to build a resilient and robust portfolio or team or system.

Rob Campbell: **04:13** Well, and just stepping back—I mean, I think a lot of his writing on the subject came through an analysis of the global financial crisis. So, what led up to things that contributed to more complexity, more interconnectedness, more fragility. I think one of the things that he wrote about was just the introduction of derivatives. They served a purpose, but they did introduce complexity to a system which, eventually as we all know, reached a tipping point. And that was the other piece that I found was interesting too, was the mental model comes from the engineering discipline. But maybe the question to you is this: are these themes, are they common to all complex systems? I can imagine biological models might share some of these elements as well. Or is there something different about finance where this becomes more important?

Karan Phadke: **04:56** Yeah, I think it does apply to any complex system. I think the nuance in finance is that obviously the stakes can be pretty big. It's a global market with a lot of dollars involved and it also affects our clients' livelihoods over the long term. It's not just any other complex system. It's also one where there's perhaps more interconnectedness and there's more downside risk if something were to go wrong. It affects not just the financial world, but people's lives in the real world and the broader economy and just Main Street.

So, I think trying to understand what makes the financial market so prone to blowups and how to protect against them is a really important part of investing and risk management, frankly.

Rob Campbell: **05:40** Let's dive in. Let's get into those three elements, as you said. Can you walk us through them?

Karan Phadke: **05:44** Simplicity in my mind means few moving parts, and the parts that are in the system, they sort of interact with each in straightforward ways. And that just makes things a lot easier to look through and to troubleshoot. So, it's just a transparency and simple sort of process and system. That's the first piece.

6:02 The second piece, modularity—sort of a fancy word—but I think what it means is that you don't want everything to be interconnected, but you want different components or pieces to be removed or replaced, and you're not affecting the whole system in one go because they're not all touching each other.

6:18 And then the third piece, redundancy, that means that a couple of those key items, you have backups for them and there's alternatives. So if something does break down, there's something that can stand in its place, as a redundancy effectively.

And one of the key elements of redundancy is that it's sometimes a drag during good times because it's not optimal to have backups, but it really saves you when things are not so great. So that's sort of redundancy. And the idea is if you have all three of these items come together, you might be able to balance things out, smooth out any sharp edges that can cause a problem when the world gets crazy. So, it's a lot like carrying an umbrella instead of every day trying to say exactly when there's going to be a thunderstorm and what you're going to do if it happens.

Rob Campbell: 07:02 Well, actually, as you go through them, this whole aspect of this coming from engineering is coming to life. I'm thinking about LEGO® models that I put together with my kids. And sometimes there's a very specific piece that if it falls out, the whole thing kind of collapses. So, I can definitely understand the redundancy aspect for sure [laughs].

Karan Phadke: 07:19 Yeah, and I think a lot of this stuff also comes from nuclear reactors. There's been a lot of work done on nuclear reactors on how that process works. Because again, if something goes wrong, there's dire consequences. Obviously, these are complex systems; there's a lot of moving pieces, and so you really need to make sure that you have a proper way of building resilience. So, I think a big part of this discipline actually comes from that nuclear reactor world too.

Rob Campbell: 07:44 Karan, do any of these things work against each other? I guess I'm thinking simplicity versus redundancy. Surely those are in tension sometimes. How do you square that?

Karan Phadke: 07:52 Yeah, you're right. I think it is because...actually, a more clear one to me is modularity versus simplicity. So, modularity means you have a lot of different parts, but you can take them out. But that means that yeah, it's not simple. [An] extremely simple system would have only one part and you can clearly see what's happening and there's no need for modularity, it's just a single item. But then if you only have a single item, well, then you don't have any redundancy.

To build redundancy, you need to add a little bit of complexity because you need a backup. So all of these parts, they sort of pull at each other like strings, and the idea is not necessarily to overemphasize any one leg of the tripod, so to speak, but to build balance and to think of all three items at once, versus overemphasizing one. Because then you're going to be sacrificing on a couple of the others.

Rob Campbell: 08:37 I'm having flashbacks to the podcast we did with Justin on decentralized networks and blockchain, but let's not go there. Can we shift to the portfolio? And I guess the work that you do in researching companies and the process that you go through. As you think about John Kay's ideas and how they might be applied to what you do on a day-to-day basis, can you share some examples from that perspective? And maybe one place to start would just be kind of higher level with respect to team and process.

Karan Phadke: 09:05 As I was sort of reading through that paper, I could quite clearly see some of those ideas at play in the people, the process, and the portfolios here at the firm. And as you mentioned, if you start at people and process, first idea is pretty simple philosophy: buy wealth-creating companies run by excellent management teams at a discount to intrinsic value. Everyone follows this single, straightforward philosophy; [it] makes common sense; it's quite simple, but practical.

09:32 And then within that, we follow it within a modular way. So what I mean by that is every asset class has its own team, and each team makes its own decisions within that framework or within that philosophical guideline. We also have a learning stipend program, and that allows people to experiment and innovate in their own way to improve the process without some sort of central planning committee. So again, that's a layer of modularity or decentralization.

09:58 And then finally, we have redundancy built in because we follow a team approach. So there's always a lead manager and he or she's supported by colleagues that provide input. So the decision making model is clear, but there is a backup if needed. So that redundancy is part of the system too. And then finally on the redundancy piece, we do set broad industry and liquidity constraints on the actual portfolios to ensure that we're coloring well within the lines, we have some backups and fail-safes there if things were to go awry.

So I think at a people and process standpoint, pretty clear ties to that framework. Again, it may not have been intentional when we started this or when Jim was building out this risk management culture, but certainly it's evolved to that point where yeah, it makes sense within that framework too.

Rob Campbell: 10:46 Well, and I'm even thinking about where this conversation started—about that risk management meeting and how that in and of itself is seeking to increase the redundancy with respect to having just democratizing the approach to thinking about risks in investing.

Karan Phadke: **10:59** Yeah, I think that's right. And we've always had a risk process where lead managers would, every half year or every quarter, go over all the different risks in their portfolios. And this would be shared with other portfolio managers, so you could always get that looked through. But I think this additional experiment just makes it a lot more tactical, tangible, and increases those shared learnings at a faster pace than before, where it was more of sort of an orderly or biannual process. To be clear, the regular risk management process still happens every quarter or every six months, but this is an add on, so it's not a replacement for the existing risk management process. It's more of an experimental piece that we've supplemented it with.

Rob Campbell: **11:45** Got it. So, you're involved in the global small cap asset class, clearly where security selection is pretty important. How has John Kay's ideas shaped what you're looking for in terms of companies and maybe how management teams are running their own businesses?

Karan Phadke: **12:00** Yeah, so a couple come to mind that fit the framework. So if we start with simplicity, we own a couple of Japanese drugstores in the portfolio. So this is a pretty simple business: you sell general merchandise, cosmetics in the front of the shop, and then you often dispense pharmaceutical prescriptions in the back. A straightforward business model. And each store is its own little unit. Growth comes from just adding stores in more regions and densifying the regions you're already in to take market share from smaller mom and pops that perhaps lack the procurement scale.

12:32 So again, even when you look at the growth model, it's what we like to call "cookie cutter." And what that means is it's very simple and repeatable, which in the long run reduces the risk of that growth and improves the visibility. So that simplicity around both the business model or the units, as well as the simplicity on the growth runway, is an attractive feature that we often look for in companies that we invest in. So that's an example of simplicity.

12:56 If we talk a little bit about modularity or decentralization, in general, we found that decentralized operating models are often a really good way for businesses both to reduce risk because you have less interdependence within the moving parts, but also increase return because you can scale much faster, because there's not as much bureaucracy or [administration] cost. So as an example, we own a value-added distributor called Diploma in the fund. And what they do is they distribute both industrial and healthcare components that are mission critical to their end customers. They've got very lean head office. You go to the head office, very few people, and they've got the same furniture there that they've had for the past decade every time we visit them.

Rob Campbell: 13:37 Yes [laughs].

Karan Phadke: 13:38 And they let the underlying units operate on their own with only light guardrails around performance. And this lets the entrepreneurs that sit close to the customer to have full autonomy. And it also allows the head office to then bolt on companies through M&A at a pretty reasonable pace. Again, if any single one of those subsidiaries faces pressure, it's not going to leak into the rest of the business and it won't affect everything all at once. So that decentralization again, it leads to good customer outcomes; it leads to good business or investor outcomes, too.

Rob Campbell: 14:09 That actually reminds me: your co-manager John Wilson and I had a conversation going back probably a year or two now on this podcast, just about the benefits of that decentralized model. So for those listeners who want to replay that one, you can go find it in the archives as well.

What about the last one, redundancy?

Karan Phadke: 14:25 Redundancy, again, the main feature to look at for this is probably balance sheets with limited leverage. So, the idea over here is when markets—capital markets—dry up, having that balance sheet that you can rely on to invest when times are tough, it serves as a backup. It serves as redundancy. So that's a really important one, I think. Again, it's not optimal because your returns on equity obviously would be much higher if you had debt. But again, in a downturn, you don't have that flexibility. You don't have that redundancy.

14:55 And then finally, redundancy again, comes to concentration. So ideally we want to stick with companies that have lots of customers, no single product or single customer risk, because again, anything can go wrong in this world. And if that happens, you don't want your only source of revenue to go away. You want to have other avenues that you can push on and some backups to drive sales from. So again, concentration is a big one that we look at.

Rob Campbell: 15:19 And I presume stepping up a level at the portfolio level, that concentration element is an important one there too, in terms of reducing fragility in an overall portfolio.

Karan Phadke: **15:30** That's something that we think about a lot. So as I mentioned earlier, we do have some higher-level guardrails around industry concentration. So, a percentage of the portfolio that can be within one industry. Cash concentration. Again, you don't want too much cash because that's a driver [of] performance, but you don't want too little either. And then also on position sizes—we don't want too many of our holdings concentrated in a single position.

Karan Phadke **15:56** So, those are sort of the more formal traditional guardrails. But again, part of the process is we try to "cut the portfolio" so to speak in many different ways. Not just on traditional metrics like that, but also on ones like type of growth story. Is it a fast grower? Is it a stalwart? The Peter Lynch framework, for example, right. Or percentage of the portfolio with founders versus non-founders. So all these more qualitative, different edges that we look at, we want to make sure that we're balanced across all of those. And the idea, again, is you don't want some sort of highly concentrated correlated risk running through the portfolio, because if you do hit a hiccup, then all of it will go bad at once. So again, that benefit we have is everyone on the team is looking at these portfolios from a different lens, trying to bring forward any fragilities, and then we're also sharing that across teams through the risk management process.

Rob Campbell: **16:49** Recognizing that, fragilities can still arise in pockets of the portfolio, whether it be individual businesses or a collection of businesses that are less idiosyncratic in nature. A lot of what you've talked about today strikes me as being things that you do kind of…"before the storm" in making sure that you set the portfolio up or you're buying companies that can withstand and are less fragile. What do you do once you're in the storm though? And surely the pandemic has taught us that storms do arise. Are there any lessons from this or that you can share with listeners in terms of how you think about dealing with the storm when it eventually hits?

Karan Phadke: **17:24** Yeah, you're right, Rob. So a lot of it is about being prepared, having ship-shape before the storm. And that foundation actually is not the portfolio necessarily, it's the culture. I think a big part of the preparation is the culture: having high levels of trust within the team, having high levels of candour so that you can spot fragilities, and again, being prepared so that when things do get tricky and volatile, you're focused on improving the process and not pointing fingers at people.

17:55 And that's the idea is the preparation before the storm. So that when the eventual storm (so to speak) does come, you can actually stick with a process because you have one, and then you can battle-test your assumptions in real time. You can see what sort of is happening versus what you thought would happen; where you need to update some of your beliefs as things unfold and where you can improve your process, frankly.

Karan Phadke	**18:16**	And once those tough times have passed, again, you need a process where you can look back and think about what could have been done better beforehand; better to build the portfolios and to build the culture beforehand so that whatever comes next time, you're going to be prepared for that as well.
		So, I think it's a process for not just before things happen, but also during and after. Again, as I mentioned, a big part of it I think is the culture. Because when things are going great, performance is good, it's pretty easy to have a strong culture. But it's when times are tough, and they inevitably will be at some point in time, that's when you really get battle-tested on if you have a strong culture or not.
Rob Campbell:	**18:55**	Higher stress, more emotions. Definitely agree with the importance of culture there.
		Karan, maybe shifting to the after period—as you look at our team and our process, and maybe the portfolio that you're involved with today, do you see opportunities that we can be better? In other words, ways that we can be more simple or modular or redundant with the way that we're approaching any of those elements?
Karan Phadke:	**19:16**	To put it simply, I think we can get better at everything. There's always an opportunity to get better, and the markets are constantly changing and we need to keep learning and adapting and getting better every single day. And yeah, with those three items too, I think there's opportunities to get better.
		So for simplicity, for example, I think a big one is being able to stick to the philosophy even as we go through different market cycles and regimes. Can we stick to that very simple philosophy and keep refining it to really get down to its essence? What do we mean by this is a wealth-creating company? What do we mean by excellent management team or discount to intrinsic value? How can we simplify that even further, get down to its core?
	19:55	With modularity, again, I think there's a lot that we can do to be decentralized. So, one of the experiments we talked about earlier was this learning stipend.

Karan Phadke 20:04 So how do we decentralize innovation? How do we decentralize process improvement so that it's coming bottoms up as opposed to centrally planned by some visionary? Same thing with this risk management meeting. It's been pushed down and decentralized to everyone now, in a way. So I think there's lots of opportunities to decentralize further. And I think also not just decentralize, but balance that with better collaboration. So, how can you both push things down further, but also break down silos between asset classes so that not only do they have autonomy, but they can easily see and sort of share best practices with each other.

20:38 And then the final one, just redundancy, I think a lot of that comes down to people. I don't think you can have enough great people. So, continuing to hire people that are passionate about investing; that are smart, that have high levels of candour and that are humble. That's an ongoing process and that's just something that we can continue to push on. And I know the team over here, Vijay, Christian, Paul, they're pretty involved with that—on constantly refining the recruiting process, adding process to make it better, even though we don't hire tons of people every year. So it's a little bit more difficult because you don't get as many reps, but there's been a lot of effort to improve on that side, too. So again, not just on this framework—in general, there's always something to improve at and we can get better at everything.

Rob Campbell: 21:21 Probably a good place to stop. Karan, I'm going to quote you, just in terms of some things that I think are important from this one. So really interesting framework, but ultimately it comes down to preparing, not predicting. And another one that I picked up from you that I really liked, which is balance over bravery. Thanks for coming on the podcast and sharing.

Karan Phadke: 21:38 Thanks for having me, Rob.