Manish Dhawan: Welcome to the show, Anish. I'm really excited.

Anish Teli: Thanks Manish. Thanks Puneet.

Puneet Khurana: Great to have you, Anish. I am equally excited. A topic very close to my heart and I think Manish's heart also. So let's jump in straight away. Manish, this time I'll take a back seat and I'll let you ask most of the questions. But go ahead, let's start.

Manish Dhawan: Yeah, we'll start with the background itself. Let me first give you a brief as to why I'm excited. I have been following Anish's work for quite some time. And to be honest, and I don't know why, is it lack of marketing or whatever, he's not as much heard as he should be. And so I think Stoic Talks is filling that void by doing this podcast. Anish, welcome to the show and let's start from the very basics, how you get interested in the markets. I know a bit about your background that you were primarily a fundamental investor if I'm not wrong. What led to the transition and take us through that?

Puneet Khurana: Yeah, in fact, Anish, I would just say that, from the absolute start, your educational background and so on so that people get the colour of how your journey has been from the very start.

Anish Teli: So, I finished my CA around the 'dot-com'. I mean that gives my age away but around the 'dot-com' time. We used to make a stipend of around 5000-6000 rupees at that time and I was interested in the markets because my father although he's a doctor, was also interested in markets. So he used to get this magazine called Money Magazine and the DALAL street journal, Economic Times and all of that which used to come. I was very interested in reading also. So slowly that's how it started and then I got into commerce and I started doing my CA. So, the last final year of my CA is when I decided to invest that stipend that I had made and I made two bets. One was in the Steel Authority of India and the other one was in Premier Padmini. Once I give you the name, you will know that it no longer exists. So, it's a company which used to make these Fiat cars which were these black and yellow cabs in Bombay.

Manish Dhawan: Sorry, I didn't get the name of the company.

Anish Teli: Premier Padmini, I think it is called.

Manish Dhawan: Okay.

Anish Teli: So the bet was very simple in both cases. The steel authority was trading at around 0.25 price to book and the Steel cycle was at its lowest. So the bet I was taking is that the government was not going to let this company go under and it was available at 5 rupees. Ultimately, with half of my money, I bought Steel Authority and that went to 4X. And on the other side, the bet was that this company has a large land bank in Kurla and one day there will be value unlocking and they are going to develop that land and all of that. That company shut down. That investment went to zero. So on one, I made 4X and on the other, I made zero. So, that's how my journey started. And, with that, I did my schooling in Calcutta, I was born and brought up in Calcutta and then I moved to Bombay after 2000 and started working there. I worked for a couple of years with the CA firm, doing corporate finance again. Then I went to ISB Hyderabad to do my MBA and after that, I joined ICICI venture in private equity. So it is as fundamental as it gets, you're looking at early-stage companies and mid-stage companies. I used to focus on the pharma and healthcare sectors along with other new projects. So some of the companies which I invested in are now very well known. Bharat Biotech at that point in time, nobody knew about it. So Bharat Biotech was one, Metropolis and then a couple of other hospitals in Pune. And again the golden period 2004 to 2008, and stock markets went up 4X. And in 2008, believe it or not, how great my timing was, I joined Morgan Stanley Private Equity. Even though you're reading all about the housing crisis and this that, we are here. But he said, "No, all this doesn't matter. Best ones went down, it has reached its end, and now things are fine."

Manish Dhawan: Buy the dip.

Anish Teli: Yeah, so in June 2008, I joined Morgan Stanley and in the next two months, we went through that. Now everyone's familiar with that story where Morgan Stanley and Goldman Sachs were the last two investment banks standing between disasters. And luckily for us, Lehman went down before us and overnight the Fed decided that Morgan Stanley and Goldman Sachs would become bank holding companies. And, so every day people used to come and check the stock price. You know, the moment, you know, if it goes down from $6 to $5, game over. And every weekend we used to go home and Monday morning we come, Merrill Lynch is gone. The next Monday you come, Bellstone is gone. The next Monday you come, Lehman is gone. So it was like a crazy time. Somehow we got through that. I spent another three and a half to four years doing private equity. So we had a third-party fund which focused on Asia. So that was a good exposure.

Again looking at China versus India and seeing the scale that is there in China. I mean, we used to compare scale in India, look at hospitals, sometimes the whole hospital here would be a floor there. They used to say, "Are you sure you got all the numbers because the numbers you're talking of are really small" But he said, "No, this is the scale that you have in India and that is the scale that you have in China." So that gives a very good perspective but around 2011-12 I think I wanted to go back to public markets which I continued to try during this while but because of regulatory constraints and this and that I could not be very active in those markets. So in about 2011-12, I decided to move out and I started. Then I took a couple of years and started investing my own money first and then took it from there. And the journey that started from there has led me to such places, which I never imagined I would ever go to. But the first couple of years, what happened was that I was making good investments, we were picking good stocks. I had my group of fundamental investors. So we bought the Astral Polys and Ajanta Pharma, all these stocks that took off around that time. So again, it was not very difficult to do it. We were just starting off. That 2012 rally was just starting off. But somehow, I was not making those crazy outsized gains and the primary issue that I discovered was that everybody knew when to buy, nobody knew when to sell. And then I watched a couple of episodes of Ramesh Damani. He used to do this series on television at that point in time with investors. And I came across the book by Jack Schwager in the market research series. And then I started reading about investing. I started looking at systematic investing and quant investing and things like that. And then slowly, I just said, "OK, let me go back and examine my investments over the last 3-4 years." And one thing that was repeated in all those interviews was that you have to have a stop loss. You have to know when you're going to get out. It's very different when you're doing it at an institutional level because there it is all done by consensus and committee and it's a very different ballgame versus when you're doing it yourself because you have to decide, you have to live with it. You have to do everything. For the love of God, I could not say when we need to exit. So that led me to just redo my portfolio and I went and sort of backtested all my trades and I said, "Okay, what happens if I just put a 10-15% stop loss in my investments?" So I also had other shit right? Like IVRCL and IVRCL assets and holdings and things companies don't now exist, Hallonix. And some point in time, I sold them but once I put this stop loss thing and did all my trades. So the return on investment that I was making in those 2-3 years was about 18-19%. Once I put that stop loss in that, the return went to 32% and what if I had continued holding on to those companies which I sold at maybe 30% or 40% down, my return was down to fixed deposit returns of around 8-9%. So then something, that was like a light bulb moment that if I can automate my selling, why can't I automate my buying also? And then that whole

Manish Dhawan: Sorry to interrupt, Anish. So the thing that you're talking about, I actually went through your webinar where you extensively shared this backtest. So what I'll probably do is we'll provide the link to that webinar below with this podcast.

Anish Teli: Yeah, sure. Absolutely. So, that was that lightbulb moment or epiphany as you may call it. yeah. So once I discovered that I said, “Okay, maybe this is good. Maybe let me see if I can automate the buying part also.” And then I started this whole process of... saying that okay now how do I screen the buyers. How do I screen the buy list? and how do I rank it and all of that? So then I got introduced to Mark Minervini's first book. It came out around that time and then from there I went to CANSLIM and then I backtested the whole CANSLIM model. Again CANSLIM is the framework, as such it's not really a system that comes with it. It gives you a broad framework. Then I came up with my own ranking model how to do. I would talk to friends who were in fundamental investing or some who were working but also investing. And then I would show them that like how we'd share our questions and what we are learning. And they would all say, “Yeah, we understand what you're saying, but it looks good.” But why don't you just do it for us? And here are the password and login, so you can do it. I said, “No, it doesn't work like that. I can't just take a login & password and start managing money like that.” So, around 2016, I applied for PMS. I said, “Okay! fine, it anyway is a fairly lonely profession when you're investing.” So I thought that it'll be good. Maybe, we'll have like-minded people to join us and grow slowly along with that. So, I started with that kind of model and then slowly, I started doing more and more research on CANSLIM and then I got introduced to factor investing. That's when I saw that you can make it even simpler and even more robust. Simpler doesn't mean simplistic but you can make the whole process a little bit more simpler. So that's how it all started and then in 2020, I met Rajan and we started doing more research. Rajan was interested in doing it in a more formal way. So I think that really helped me also to formalize because until then all of us had done our own backtest and knew what works, what doesn't work and people would say it's curve fitted, this and that. So all those doubts used to be there. But once I went through that process with Rajan again in 2022, it was obviously very clear to me that this kind of investing also works in India. India is no different. India is not different, you don't come from a different planet. Our stock market does not come from a different planet or something. All those strategies and all those things, if you stick with it, if it's constructed scientifically if it's done properly, and most importantly, if you follow them, especially through the tough times… I think what people cannot replicate is your conviction, they can't replicate. Like Manish can give a strategy, you can give a strategy, I can give my strategy and we can just put it out tomorrow. People will not have the conviction to follow it unless they have been through it for four or five years and learned especially in the tough times. So yeah, that's how the whole journey has been till now and I think there's a lot more yet to come.

Manish Dhawan: A little more on this Anish, I wanted to dig deeper into this transformation from fundamental to quant. How acceptable were you when you actually did that? I mean, your colleagues.

Puneet Khurana: Actually, I'll also add the same question. So I noted down that question for myself. When you answer Manish's question, just add some perspective about how and what you were doing when you were approaching the companies purely from a fundamental perspective. So before your CANSIM days or factor investing days, what was your process of picking up stocks? Because what you mentioned was your problem of selling, or not being able to buy or hold for a long period of time for outsized return. But you probably seem to be comfortable with your buying process in general. So what was your process then? And when you moved from there to CANSLIM or whatever, what your next step was, what shifted? So that might be a good transition to understand.

Anish Teli: So, the process again was fairly simple. We used to be a group of friends and we used to share investing ideas. And then we would look at companies with growth, the same process, looking at ROE, looking at margins, looking at whether the sector is in focus or not. So the same analysis that all fundamental investors do today. It was basically top-down that you come across an idea, you research it, you do all the number crunching and then if you feel that this is an investible idea and that companies in that sector are looking to do well, then you start buying with a small position, start tracking that company and then once you see your thesis playing out, you keep on adding more and more to that and start building your portfolio. So we were looking at the same things whether the sector is attractive, how large is the market, how is the promoter, reading the call transcripts, seeing what the promoter has said and what he's done. So all those kinds of things that fundamental investors do, that simply was our process and that's how I used to do it as I was investing my own money. And obviously, when I was doing private equity it was much more rigorous because you do market studies, you do a very thorough financial due diligence of the companies' past. Sometimes you do forensics too. So you try to understand if there is something that makes it suspicious. Then you try to do the forensic audit. So all those tools were there in my arsenal. And coming to Manisha's question, that was a bit of a stumbling block in my transition because I had a lot of these preconceived notions about that I've spent about 10 years or a decade almost learning all of these things and now suddenly what I'm discovering is that I can do without it. I don't really need to do all of that. That's how I came across CANSLIM when I said, "Okay, this is a good mix." This is good because it's making use of my fundamental background as well as my new form of knowledge of quantitative investing or systematic investing. So this is a good blend of the two. And that's how I felt comfortable doing that because I still didn't want to let go of my fundamentals. So, CANSLIM was, you're taking current earnings, you're taking annual earnings, you're looking for a catalyst which is something new, you're looking at whether the company is a leader in the sector or not, you're looking at whether there's institutional buying in the company or not and the last one is whether the market is in an uptrend or not and that's when you buy. So, it sort of was a perfect sort of model for me to use my previous experience as a fundamental investor along with making it in a more systematic manner. But yeah, it was very tough early on, even now sometimes when I had to buy, say some railway stocks recently or I had to buy some say PSUs, which came in the momentum system. Even maybe four years ago, it would have been very tough. Now, it's not so tough, right? Because, whatever comes up in the system, we position size, send it to the dealer, the dealer sends it to the broker and we just execute. Now, execution is not really a problem, but yeah, until four, five years ago, it really was a barrier. Like I said, you have to change a lot of your beliefs. You have to change a lot. You have to even go through that process. You can't change overnight. It's very tough.

Puneet Khurana: So Anish, I'll formally come to your selection mechanism, portfolio management style etc later in the podcast. But just to get maybe a side thing from what you just said, can you also briefly explain how you tackle it, It's a very common question which comes to people who do not do more data-centric work and do more qualitative work. A common argument is that there are many subtle or not-so-subtle but very important qualitative factors which are extremely difficult to convert into a number. And the second thing they always say is, if you don't do that, you are always running the risk of not doing the entire research of the company properly. So you'll miss a lot of things which are important for the company. Does that bother you? And if it did bother you, how did you tackle this issue at all? later on, you realize probably that's not an issue, whatever your point is on this.

Anish Teli: Yeah, so you know, one other thing that I should mention is that I was and still I'm a Warren Buffett fanboy. So, he's the ultimate guy out there. So people have gotten that. What you're mentioning in that world is called scuttlebutt. If you've gone there, seen the company, seen the factory, spoken to people, done your channel checks, all of that work…

Puneet Khurana: Not only that but even the nuances to accounting which probably can't be…

Anish Teli: yeah, the management or something.

Puneet Khurana: So yeah, all those are there. Also, the management factor is one, which is very difficult to quantify. I don't agree with those things, but I'll come to my view later on. I want your point of view on that. So management quality, people say it's not very quantifiable, but it's extremely critical, channel checks, etc, as you rightly pointed out. And then there are nuances to numbers themselves, which are very difficult to find out, which people spend a lot of time on their accounting policies of the firm, related party transactions and the things which are definitely not quantifiable but are grey areas, which are often found in the hidden notes and which does add to certain risk factors or positive factors which otherwise are missed when you look at things quantitatively. So I am talking about those also not just channel checks. Go ahead.

Manish Dhawan: And while you answer that, let me add another twist to this. I was having this conversation with Manoj Dua and he actually alluded to the same point. He said," I need to do this backtest of your quant factors. What kind of extra excess alpha I am getting over and above you? Otherwise, what's the point of working hard if you can only get the same return after writing the code of these four lines." Yeah, please, Aneesh. Go ahead.

Anish Teli: Yeah, so you know what you said is correct. There can be certain nuances that are there. Now, but how much are they worth? Is it worth your time to sort of get into that? And that is a fairly debatable question. And I do know that there are a number of fundamental investors today who sort of go out there and accept that. We don't meet management. We don't want to meet management because it's like, meeting a boy or girl on a date or meeting somebody for a marriage proposal. Everybody's going to be on their best behaviour. Nobody's going to tell you anything. No, you'll never meet a promoter who's telling you something which you don't want to hear. So, I realized that in my private equity career, I don't get anything other than understanding the business and all of that. You don't get any major clue of how it's going to work out and what it's going to last. Now I'll give you an example. There is this textile company in the south making children's wear and that came into the CANSLIM model very early on. And we bought that company. We rode it up. Then there is an academic value investor from your city who also liked that company a lot and he wrote about it. I label him as one of the best investors and he's an intelligent fanatic and things like that. However, there was one issue with the company, they always had a cash balance of something on their books which they claimed was overseas. They also had debt on the books. So in every conference call, they used to get asked, "Boss, why aren't you getting the money back and why don't we just set it off and get your debt to zero? Why are you paying interest?" So they would hem and haw and say, "No, we'll get it later and we are trying to sort of…, the dollars going to depreciate. Then the story changed to setting up something in the US as a subsidiary. So we need money to spend on marketing there and blah blah. By that time, I already had an exit mechanism in place, a quantifiable exit mechanism and at some point in time the price started giving me signs that this stock was going down and I exited. And after that, the price went down 50 to 60% more on this premise alone which was known to everybody that there is cash on the books, there is debt on the books but this guy is not getting the money back for the last two years. Earlier people did not know and even I did not need to know it but because at that time I still had the fundamental thing that I would look at the accounts and I would read the analyst reports and all that, I knew. This is the issue. This means that there is something not smelling right. But the prices are going up, it's coming to my filter. Worst case what will go wrong if you take a 5% position? So we took a 5% position but then that stock price crashed ultimately when they found that and the market stopped believing basically what the promoter was saying. There's this great Richard Dennis quote, which says, “At first, I thought intelligence was reality, and price is the appearance but after a while, I saw that price was the reality and intelligence is the appearance.” So what we say in India in a very common way is “Bhav Bhagwan Che”. So prices sense a lot of things in advance and I have seen this now in many companies. There was this house-building products company. People said,” It would become the Home Depot of India.” And, we also bought that company and we exited after that. Again when the fancy went away it fell down another 70-80%. So, I said “What are all these people smoking and how do you get that belief to overlook?” I certainly don't possess that and I think that price is more intelligent and as a fundamental investor you are taught that the market is wrong and you are right. And one day the market will catch up with you. Whereas as a systematic investing, you are saying the market is right, I'm reacting to what is happening and I'm going to go along with what is there in the present moment. And I think that is the biggest mind shift that one has to make, once you give away that power to the market. People are asking what you are doing then. So what value are you adding or what value are you bringing to the table? I think that's where people get that wrong that you've done all these analyses, all these things but if you still don't have a good exit mechanism. Somebody like Warren Buffett has it. He read IBM reports for 50 years. He read IBM reports, He bought it. He went wrong and he exited in two years. He was out of it, no emotion. He bought airlines the first time. Then he said, they should have a helpline for some people like me who can't but stop help, but investing in airlines. He exited and again during COVID, he had a large position in the airline. Overnight within two months, he sold all his airline stocks and all of that. No emotion at all. But most people fail to see that part of his investing process. They all focus on what he bought, what he's holding. But they don't focus on how he sold off all these laggards and I think that is something which is very hard for fundamental investors.

Puneet Khurana: Right. So Anish, let's now bring a bit more concreteness to the working style, the investment philosophy. Broadly, I think the audience would have understood your style by now. Let's get into the actual workings and go from there. So generally, we break it down into three parts. So let's start with the source: stock selection. Before that, if I can understand how you look at a portfolio? Because you are into PMS. So when you say you manage a portfolio, how do you either differentiate between different types of portfolios or try to manage one portfolio and bring in whatever you understand into that portfolio? How do you look at a portfolio and how do you construct a portfolio?

Manish Dhawan: And while you're answering that Anish, also give us a framework as to what's the overview strategy that you follow because I'm pretty sure the audience must not have picked it up as yet because we associate you with momentum, maybe there's the conservative formula or what is it that you do?

Anish Teli: Right. Currently, I have arrived on my journey today, we broadly follow what is called factor investing. Now, factor investing in that sense is very similar to fundamental investing in that you're looking at investment styles. So the first factor, which was discovered or sort of proposed by academics French and Fama was the value factor in 1992. They said that buying cheaper or a portfolio of cheap companies does better than buying a portfolio of expensive companies over a period of time. Incidentally, during the same year that Jegadeesh and Titman came up with their momentum factor, which said that companies that have done well in the past, they tested 3 to 12 months, continue to do well in the foreseeable future and companies that have not done well, they continue not to do well, the momentum sort of continues. The third one is quality where you say that buying quality companies which have a high return on equity or have high gross profit margins or a high return on capital employed those types of companies do better than companies with low ROEs or low ROCEs or low margins and typically these companies tend to come from more stable sort of industries. So, these are the three factors and then there is the fourth factor called low volatility. It is still somewhere between an anomaly or a factor which again is a little bit contrary to the capital asset pricing model which says that high beta or if the beta of a company is high that means its expected return should also be high. But in reality, it does not turn out to be so. It turns out that companies with low volatility turn out to be much better over the long run than companies with high volatility. And today, now we have all of the data on all of this. The NSE has indices on most of these factors. They have the process laid down, and they have the methodology. So that's how we look at it. The first one that I started off with was like Manish rightly mentioned, 'associate me with momentum.' So we started off our first portfolio with the CANSLIM model. It was actually to buy companies with high relative strength, which is nothing but momentum, but with good fundamentals, which is where you are seeing good growth in profits over the last quarter and the last year. Now, what I found in my research as I was going along is that somehow this spot in growth is sensed by prices also. I have not come across companies which have done well over a period of time. There are companies that we have held on for a couple of years also. And it's not been a case where the fundamentals have not supported it. It hasn't happened except in very few cases. But most of the time, the fundamentals also support the price momentum. So somehow when we went back and saw those companies, we said that you don't need to add in an additional factor because it again complicates things. Being an accountant again, I know the challenges with taking accounting information and making it standard across industries or making an hour for making adjustments to it, one-time adjustments and all of that. I said if you can make it simpler with price and build in those safeguards there, why do you want to add additional factors? So we took momentum and we took low volatility. And that's how we came up with our first portfolio, which is called Alphabets.

Manish Dhawan: So earlier, just to paraphrase, you were looking at not the balance sheet, just the earnings and the price and later you graduated to figure out that this is anyways not covering and just the price is covering all the basis. So you discarded the earnings part of it and included low volatility.

Anish Teli: Yeah, correct. And, again, recently we started looking at earnings, but we are looking at earnings acceleration and whether that gives us any additional information in certain cases. So we are seeing if that can help. But what I'm seeing so far is that it's not going to change things majorly but it's good to have. It may help us to sort of filter out some companies which are not kosher or perhaps not going to do well. So is there an additional filter that we can add but we're still working on that on earnings acceleration? So, yeah, you're right. So we are looking at all these companies, we saw portfolio and most of those companies were doing well fundamentally also. So we said, let's make it a little bit more simple and not to complicate things because then you would look for one-time items. You look for: why has this suddenly grown? Why has this suddenly fallen off? Why has growth suddenly fallen off? and things like that. So we started with momentum and low volatility and that's the first portfolio that we started off with. However, the momentum also comes a little bit with high churn and we said that it's a good satellite portfolio to have for most investors. Now, one of the free lunches in investing is diversification. And similarly, you can also diversify among factors because even factors are cyclical. As Manish will know and as you will also know, momentum does not mean it's going to work all the time. You've gone through horrible periods in 2018-19 when it was completely sideways. Even last year we went through that period when momentum was sideways and then suddenly in March, and April of this year again suddenly momentum, especially mid-cap momentum picked up. So it goes through its phases, it goes through its cycles. So then we said," Okay, is there something we can offer to investors which will give them some sort of diversification as well as the benefit of momentum?" That's where I came across this paper written by Pim van Vliet at Robeco called the conservative formula, which takes into account momentum, low volatility and value. Now most studies in the US and the rest of the world as well as in India, the people that I wrote with Rajen called long-only factors, not short change. We also found that value and momentum have the lowest correlation. And they also in some cases have a negative correlation. So when value is working, momentum is not working and when momentum is working values are not working. So if you sort of blend those two together, your ride can be a little bit more smoother.

It can be a little bit smoother. Plus, it's also easier to explain to people when you explain value because they are used to that kind of narrative. When you talk about value, everyone understands. Value signals tend to take a slightly longer term than momentum signals and we are getting a little bit technical here but momentum signals need to have a faster rebalance than value. So we said that this churn is also not too much. And it's also giving diversification. So we came up with the formula. We tested the Conservative Formula for Indian stocks. And we found that surprisingly, it did extremely well.

Manish Dhawan: So Anish, just a second. I'm sorry to interrupt you again. You know, it's very important for our audience to know what the Conservative Formula is. I will let you talk about that, but before you do, let me bring the base. I was just going through the numbers. This Pim Van Vliet, the guy who did this backtest on the US stock, the conservative formula has been so awesome that it produced an annualized return of 15.1% over the period of, a long backtest starting from January 1929 to December 2016, basically covers all the phases of the market. Now this is significantly outperforming the US market index by 5.8% per year. And they also then did this back test on other countries as well and the outperformance in Japan and other countries was even more. So please go ahead and walk us through the Indian side of the backtest.

Anish Teli: When we started looking at it, I had done a sort of a rough backtest of this and I found that it does work, but I was finding it a little bit difficult to get reliable data going back all the way. I have done it for a decade and I want to do it for a little bit longer period. So again I spoke to Rajan about it and he said, “Yeah, let's try it out.” I am also intrigued by what the results will be and that's how we tested the conservative formula. So conservative formula is fairly simple. What it does is it takes a universe of say 1000 stocks in the original formula. Then you take the three-year volatility and sort it from low volatility to high volatility. Then you take the top 300 stocks ranked by low volatility and in that universe of 300 stocks, you calculate the momentum of that stocks in that universe and you calculate the dividend yield of that universe, actually, it’s shareholder yield which is the dividend yield plus the buyback yield because the US a lot of buybacks also happen. So dividend yield plus buyback yield and that's a proxy for value globally. So you take 300 stocks in that universe. Then you rank it, you double sorted by for momentum and value and you buy the top fifty or hundred stocks. So we tested it in a bucket of 30, 60 and 100 stocks and rebalanced it quarterly. So it's something that it's not very high churn.

Manish Dhawan: And this was equal weighted.

Anish Teli: Yes, this was equal weighted. So we ran that backtest all the way from 2006 to 2022 and we found that even that does pretty well in India. In the momentum portfolio, we were focusing more on the mid and small caps because we didn't think there was too much place for momentum in the large caps. But this portfolio does very well even with large caps. So with this, we can give clients exposure to large caps and that can be a core portfolio for them and you can add the momentum portfolio as a satellite portfolio as a separate allocation. So that's how we then started with this core equity based on the conservative formula. Pim Van Vilet himself was kind enough to review the studies for India. He went through the studies and he was quite happy. He was not surprised but he said, “Yeah, it gives me validation of one more country that it works.” It's a universal thing. It's not just a European thing or it's not just a US thing or it's not a developed market thing.

Manish Dhawan: Yeah, in fact, when I did a Wikipedia search of conservative formulas, your paper is also cited in there.

Anish Teli: Yes, yes, it's been added to the conservative formula Wikipedia page. So, I think that's also given me a lot of confidence to follow the strategies that now we've done.

Anish Teli: One of the things that I'm sure you also know, is I look up to these people at Alpha Architect and everything that they do is backed up pretty scientifically by data & processes. One of the reasons I started with the PMS like I said was it also inculcated a sense of discipline. When you are doing it with your own money, sometimes you can get a little bit not following the process or you can take a little bit more leeway. But when you have third-party money, when you're managing somebody else's money that makes you much more careful. It makes you much more disciplined and you have fiduciary responsibility. So you want to do as scientific as possible. Plus since this was something new for people in India, it was not an accepted norm to do something quantitative. Of course, today even fundamental investors are coming on with quant portfolios and their quant portfolios are outdoing their fundamental portfolios. Surprise surprise! So that's how we started with the conservative formula and core equity. It's been about a year and I keep tracking how it's doing vis-a-vis the backtest. We keep extending the backtest and it's doing in line with that. And we systematize the whole process and now it's fairly easy to run it on a quarterly basis.

Manish Dhawan: So it's equal-weight and quarterly rebalance. Did I get that correct?

Anish Teli: Yeah.

Puneet Khurana: Okay, so Anish, I'll just take that and go a little bit deeper into it. From what I understand, you have one portfolio and that one portfolio is primarily broken down into two parts, one being the core part and one being the satellite part. Is that a fair understanding or do you have two different offerings?

Anish Teli: We have two different offerings because some people may want to just take exposure to the core part and do not want the high churn part. Some people are saying that here's the money, you do the allocation, the way you want to do it. So we've kept both of them separately so that you can also track the performance separately of both the portfolios, what's working at some point in time.

Puneet Khurana: Got it. So, you are trying to do core and satellite from the vantage point of diversification, because as you said, core is more value and I think you're doing the conservative formula in the core, right?

Anish Teli: Yeah.

Puneet Khurana: And the satellite is more focused towards the momentum and the low vol working. Now you're saying there's a diversification benefit to these two working together, right? So when you do that, how do you maintain? So let's say a client comes to you, is the proportion that goes to the core and the proportion that goes to the satellite? If the decision is left up to you, does that change over a period of time? Is it like a fixed proportion? Does the market condition decide how much goes into core and how much goes into satellite? Just run us through the allocation at the top level, not among the stocks, but at the top level, how do you decide how much money should go into what?

Anish Teli: So typically, we explain both our offerings to the clients, and we explain how both of them work, what the broad returns that both have delivered and what kind of returns one has generated in the past. But the allocation, again, comes down to… it's a lot of driven by client preferences. It's driven by where they are in their journey as an investor. And so sometimes like for example, one client who's come to us already has a portfolio of mutual funds and has index funds at the core and he's saying look, I'm just looking to add to my current core portfolio of index funds and I want to add momentum the way that you are doing. So for him, we're just giving the full exposure to the momentum.

Puneet Khurana: Let me rephrase the question. Let's remove the client's preference from the equation because the interest is more in the combination of these two strategies together. Imagine that you have a free hand and the objective is to maximize the risk-adjusted return which everybody is trying to do. With that objective, how these two strategies will work together over a period of time over different market cycles? What do you think about that part? Let's remove the individual preferences.

Anish Teli: Yeah, so in that sense, over cycles, they will not be very different. But during the journey, during the cycle, I think that's what the client will experience because it's very important for them. The first one or two years are very important for a client. You don't want them to experience a big jolt or you don't want them to have a bad experience. So even today when a client comes, we don't follow the approach of taking the money and allocating it directly to what we are holding. We take time to build, even if let's say it's one offering core alphabets, which is momentum. And if somebody comes and invests 50 lakhs with us, we will not just go out today and buy what is there because I may have a stock in that which has gone up like four times. And from a risk-reward perspective, it does not make sense for the client to put that money there because somewhere from experience and also from having seen it that this is going to sort of give some pain down the line. So we tell them that look we will take six months to build your portfolio whether it's the momentum portfolio or a core equity portfolio. We will do it in parts unless it's very attractive and if you get a market fall or something or that sort, then we say, "Okay, we'll deploy it, we'll deploy it more aggressively." Otherwise, we will just take five to six months to sort of construct that portfolio. And then when it comes to allocating, we start with 50-50. You allocate half to where value is dominating and allocate half where momentum is dominating. And then take it from there, and then we sort of, start adding and that's also how my own portfolio is again broken up. So that's something asset allocation or portfolio allocation. Even Paul Samuelson who came up with the efficient frontier or Benjamin Graham who said that after everything considered he just went equal weight. Equal weight turns out to be much simpler and all these risk-adjusted returns and all of that are taken care of. At the end of the day, they just care about returns. They say risk is something that you have to manage. You tell me what is good for returns and how will I go along with that. But yeah, obviously if it's a client who I know is not perhaps going to be able to stick to a high-churn portfolio, then perhaps for them, we would recommend something slightly lower. But if I am given a free hand and I am told that, you just take the money and there are clients like that who are friends and family. They said we don't understand what you are doing but we trust you. So just take the money and do whatever you want to do. In the sense that you take care of the allocation and we are broadly okay with that. So even if you see in the paper the conservative formula perhaps gives a return of something like 20 to 22% over the long period. Whereas the sharpe-based momentum or the risk-adjusted momentum or momentum with volatility, whatever you want to call it, all different versions of it give a similar sort of return over the long run. But it has a slight amount of high churn and then you can have options to go to cash at some point in time. That is a big difference and a big differentiation for us versus another offering like a mutual fund, which cannot go to cash, and cannot do certain things that we as a PMS or an AIF do. So there we say that look we built in the guardrails, we've built in all of that. So we'll try and have a smooth enough experience as much as possible. But it's good for you to have exposure to both these because it takes care both at the market cap level that you have exposure to large caps and mid caps and here you have exposure to mid and small caps. And you have exposure to different factors like value and momentum which sort of have very low correlation with each other. So when one is zigging, the other is zagging and vice versa. So to begin with, 50-50 is good enough to start.

Manish Dhawan: So, Anish, have you done any work on probably calculating the uncorrelation between the two portfolios?

Anish Teli: You mean to say the correlation?

Manish Dhawan: your two offerings.

Puneet Khurana: The diversification benefit of it. So basically the correlation factor, how negative it is if it is negative.

Anish Teli: Yeah, so it's there in the paper. I don't want to make it very technical for the listeners because a long short portfolio will have a much lower correlation than a long-only portfolio because a long-only portfolio a lot of it has market exposure. So the correlation tends to be fairly high between the long-only portfolios. So a long-only portfolio of say momentum will along with a value a correlation of around 0.6 and that same value portfolio along with the market as a correlation of something like 0.9. So you know that in terms of correlation comes down to much lower. the long-short portfolios, the correlation is almost 0.1 to sometimes negative.

Manish Dhawan: Wow. Yeah. So, it's fair to say that the two offerings that you have are basically catering to different target audiences based on the kind of churn they are willing to make.

Anish Teli: Yeah, different. I mean, how open they are, how they want to be because ultimately in the PMS offering, you still have to do it in the client's portfolio. So, they want to look at their tax status. It comes up as the point sometimes. So when you have the low churn, sometimes people want to go with that, but some people who are coming to us for diversification, want to go completely for the momentum.

Puneet Khurana: Okay, great. I'll just build on that same question which I asked earlier. So you said equal weight is the way to go. Will there be a scenario in your backtest or whenever you have backtested, have you backtested a 50-50 across the board at all the rebalancing frequencies? So you must have tested both together also, right? Or you just tested the individual strategies separately and then you combined a portfolio to make it. Or is there also a backtest which combines the two together? From an allocation perspective have you done anything?

Anish Teli: You're talking about how. Yeah, that's how we came up with the correlation, right? The correlation between value and the momentum.

Puneet Khurana: No, I'm saying the performance of a 50-50% to both these two portfolios, something of that sort.

Anish Teli: Okay, the performance of both these. So the performance will not be very different. The performance will be different say over shorter cycles or maybe over a three-year period. Sometimes, if momentum is done extremely well and we've had very short cycles, then there can be a big gap. But now, value started doing extremely well from November 2020 when the vaccine was announced for whatever reason and value tends to be more economically sensitive, stocks which are more sensitive to the economy, more cyclical stocks. So, now you're seeing this whole theme play out like defence and PSUs and PSU banks and oil sensitives, interest rate sensitives, all those. And the value factor, the long-only value portfolio has outperformed or has done almost equal to the momentum portfolio. Whereas prior to 2020 value was giving a return of say 9- 10% versus a momentum portfolio was giving a return of 18%. But now in the last three, or four years, it's almost come very close to each other. So over a long period, like if you're talking 20-25 years, I expect that it's not that these will diverge very widely. But, if you see the data also, now there's another way to look at it, which is the odds of underperformance versus the benchmark. In this book called, 'Your Guide to Factor Investing' by Larry Swedroe, he looks at the odds of underperformance of each factor over say a five-year period or seven-year period or a ten-year period. And not surprisingly momentum has the lowest odds of underperformance. So over a 10-year period, it's almost 99% sure that momentum will not underperform the benchmark versus values, I think if I'm not wrong, something like 80%. So value may tend to underperform sometimes but momentum is perhaps one of the strongest factors out there. It is far more robust and stronger than most other factors which have been found in the data. So I don't know that answers your question completely but I would say in terms of expected returns going forward from here over a long cycle of five to ten years my gut feeling would be that perhaps momentum will do better. But if everybody is not out there surprisingly for just getting the best return there, some people who made their money, they're like, boss, just take care of the money and make sure it grows. And some people who are young enough and they want to take the risk, they want the highest. So sometimes even objectives come.

Puneet Khurana: So Anish, I will not drag this point a lot further, but I'll just add one more question because I just need one more clarity from the way you think about this particular flow of money from a return maximization perspective. If you have to think about that, will there be a time when you would probably take the money out of the core? and shift more towards the satellite or vice versa or you always think that you will always have enough to keep, I mean you will do 50-50 both and if the opportunities are not there in value you will probably go to cash in the value side. And if the opportunities are not there in the satellite you will probably go to cash. So what do you think about this part or will the cash make a flow from this to the satellite, I mean to the strategy?

Anish Teli: Yeah, so you know, factor timing is something which I keep having a discussion with many people about. With Rajan also, we keep discussing it and he says if you find something, please tell me about it. And even one of the original quants, Cliff Asness, he talks a lot about factor timing. Can you time factors now? Again, you can get into more esoteric meta-discussions about whether momentum is a factor by itself or whether momentum is the reason that drives all the factors. So then the other way to time is valuation that is there a big spread in valuation between the growth stocks and the value stocks and sometimes you can see that. If there is a big spread, it is going to mean revert and correct itself, then probably go and allocate more to the value part of the portfolio and less towards the other part, the momentum part. However, even Cliff Asness says that it's very difficult to time. It's very difficult to say. I mean, they've been saying for the longest time to allocate more and more to value and value factor, when I say value factor, I mean, long short has had a horrible decade from 2010-11 onwards when QE started and interest rates started going down and from 2020 onwards it started recovering a little bit. So it's very hard to say but he does say that if market timing is a sin we recommend you only sin a little! If you feel that some factor is more attractive, it's okay to take a slightly higher allocation to that factor to try and see if it may give you a little bit more outperformance in the long run. But overall, it's very, very difficult to sort of try and time something. I mean, within the factor, I can say that, okay, you know, we are not seeing a lot of momentum in certain stock in the universe right now, or say a situation like 2020 occurs or a situation like 2008 occurs, where you know, that it's an obvious situation that you can go to cash and redeploy. The system will just not give you buys. That's how we've configured it. But those sort of come maybe once in five years or once in a decade, those obvious kinds of scenarios.

Manish Dhawan: But Anish, technically speaking, this is not really factor timing, particularly the portfolios you have because more or less both of them are the same, isn't it? One has volatility and momentum, and the other has volatility, momentum and value. So the correlation is anyway pretty huge.

Anish Teli: Yeah, but you know, the way we sort it, makes a big difference. And also that one has large caps. So even that correlation keeps changing with the correlation between large caps, mid caps and small caps. For example, in the last two years, I think in September 2021, we were at around 18,250 Nifty, today we are at 19,050 maybe, 5-6% higher. Whereas mid caps are much, much higher. So even that rotation between market caps keeps happening. So that also gives another sort of diversification. And so we've purposely designed it that way so that you get exposure to different market caps as well as to different factors.

Puneet Khurana: OK, Anish, now let's get into these two strategies separately and get into a bit more nuanced discussion about how we can start with the formation first, right? So in the first case, ultimately, you have to do stock selection. So stock selection is going to be based on certain buy rules, either at a stock level or at a ranking base or whatever mechanism you have and then you will have the allocation rules around them and eventually you will have selling rules around them. Right, so run us through first for let's say, either of the rules. So let's start with let's say momentum and low vol and discuss how you create the portfolio there and then we'll move to the next portfolio later on. So let's start with the momentum and low vol and your approach to that.

Anish Teli: Right. So, you know, the way we do it is that we take the universe of 500 stocks. We remove the top 100 because we're looking at the mid and small cap. We take 400 mid & small cap stocks in and we calculate the momentum score and the volatility score. We take an average of the ranks and take the top 20 stocks ranked by momentum and low volatility. We have tested it by taking momentum divided by volatility. We've tested for momentum multiplied by volatility, which is Andreas Clenow's way of doing things. He takes sort of that approach. What some of the NSE indices take is one is the returns over the last 12 months divided by the volatility of the last 12 months and another one takes Jensen's alpha which is the excess returns that is expected using the CAPM model and the actual return of the stock engine model. So all these methods we have tested and we found that more or less they tend to give you the same returns again over the cycle but during a cycle, all of them can have very different performances. The academic definition of momentum that way does not include and it has no mention of volatility at all. But it's just pure returns. But we tested that again in our paper, and we found that it is extremely volatile, that kind of a portfolio. And it does help to add a volatility measure. So whether you divide by that momentum, it turns by volatility and take it. We did that in our quick paper. That turned out to be the best performing in terms of sharpe in terms of return as well as in terms of having the lowest volatility.

Puneet Khurana: And just to add to this, can you also define your look back period for the momentum and the volatility when you're doing the ranking part?

Anish Teli: Yeah, so our look back period is a combination of two look back periods. If you're in a fast market, then sectors are rotating very fast. There's sector rotation happening very fast but sometimes it can have a longer signal. So we take a combination of two look back periods, 6 and 12 months, and we take returns across those two months, periods and then take the returns volatility of the last 12 months and then do a combined ranking and then take the top 20 stocks from that universe and then start with equal weight. So again, we've experimented with risk parity weighting, which is again, allocating most to the lowest volatility stock and allocating the lowest to the highest volatility stock in that portfolio. It does not make too much of a difference, to be honest. So we just went with equal weight because we found equal weight to be the most simpler to implement and it also turned out to do better than the rest in the results. So then while we again look at it on a weekly basis, we don't get that kind of churn because the look back periods are long enough. So, I'm sort of intrigued. I keep looking for some sort of switch where, if I can figure out when the volatility regime is changing, then I can switch from a monthly rebalance to a weekly rebalance. I'm trying to do some work on that. And I think that will reduce the churn a little bit more. I think that will help in reducing the churn. So I'm doing some work on that and I'm still experimenting to see if volatility can signal some sort of change. Incidentally, I got this, not my own brain wave. It's something that I keep reading these prospectuses and fund documents of these ETFs in the US. So MTUM, which is Black Rocks Momentum ETF, they have this methodology where they rebalance once in six months, but if the volatility crosses a certain threshold, they keep calculating the change in volatility, not the actual volatility. So if this month it was 20, and the next month it's 25, that means volatility has gone up by 25%. So, 20 has gone to say 30 or 20 has gone to 40. That means it's almost doubled in one month. That signal can turn out to be a decent indicator of a change in regime and if that happens, they sort of trigger a mid-period rebalance and they rebalance their portfolio. So I'm looking at something along those lines.

Manish Dhawan: This is fascinating Anish because I know a lot of option sellers in their strategy use this particular factor to decide if they want to sit out the market or not. The volatility as a factor is an interesting giveaway of things to come.

Anish Teli: Correct. Yeah, it does. And I was actually even looking at some of the other, Marc Faber and Gary Antonacci’s dual momentum kind of strategies and seeing that using volatility also you could generate some kind of similar signals. And I found that you could do that and you can also use volatility as one of the triggers to buy and sell. But that's a completely different discussion. So, maybe we'll park it for later. But, yeah, so I'm looking at something like that where we can move from a weekly basis and maybe shift and do things on a monthly basis. Monthly I think is optimal. But weekly also we don't get so much churn because we've designed it in such a way that we get the exit only if we've given a fair amount of leeway in the exit. So if it falls below a certain rank, then we exit or if it falls below certain standard deviations from its own mean then we exit. So there are two exit paths for a stock to go out and when something goes out, then we replace it with another stock which takes its place. So that's broadly how the momentum plus low volatility portfolio. The core equity portfolio, like I said, is a quarterly rebalance. So then it's the process that you take. We are taking the top 300 stocks by low volatility of the entire universal stocks, bringing them down to 300. Instead of 100 stocks, because we thought 100 is quite really to manage in a PMS kind of setup. You can do it in a. mutual fund setup but for a PMS kind of setup, we think 30 is optimal. So we take the top 30 stocks by momentum and value. Incidentally in India, dividend yield and shareholder yield gives you more quality exposure than value exposure. We discussed this point with Pim Van Vliet also and he said that you're right. He found also that in certain countries dividend yield is a measure of quality than that of value. But even dividend yield also keeps changing its character. It sometimes gives you value exposure, it sometimes gives you quality exposure. So, that's again an interesting side topic that came out of the whole analysis. So again, coming back to that, we take the top 30 stocks, which are by momentum and value from that universe of low volatility and we then rebalance it on a quarterly basis. So every quarter we sort of run the rebalance and replace what is going out with what is coming in.

Puneet Khurana: I'm sorry, I probably missed that part, but when you were saying low vol space, how much was the first starting point? 100 companies?

Manish Dhawan: 300.

Puneet Khurana: 300 companies. Okay,

Anish Teli: So, out of the total universe of 500, we bring it down to 300. And then out of the 300, we take the top 30 on the basis of momentum.

Puneet Khurana: Okay, so for the benefit of the audience, let's just run through the value factors, because the majority of the time, it's a confusing factor, because the way it is defined quantitatively is usually absolute valuation numbers. So, a 1 P/E is a higher value compared to a 10 P/E just to give you an example. So, it doesn't really take the company's fundamentals into the picture. So just for the benefit of the audience, define the way you're taking the value factor. The momentum factor is clear. Okay, by the way, also just answer on the momentum side. Are you doing the same 6 months and 12 months here also, or you're not doing that here?

Anish Teli: So here we are just taking 12 months.

Puneet Khurana: Okay, so let's shift to the value factor.

Anish Teli: So in the original paper by Fama and French, they took the price to book as the metric because they thought that would be common and the most standard factor which will be the same across industries because for banks it is pretty hard to value on a PE basis and or price to sales or anything. But fundamentally some people when they are doing value and they want to exclude this financial sector, want to exclude certain sectors and you can use any other value metric also. So price to anything fundamental metric, price to any two earnings, price to cash flow, price to sales, price to book. Any of these can be used as a proxy for valuation. So saying that we are trying to buy something that is cheap in value. It's cheap for a reason and the behavioral quark that you are playing here is that the market has overreacted to something that is temporary. Something has temporarily gone wrong with this company. So it's fallen below its mean and then it will revert back to its original trend line. So you are buying something cheaper than what it's actually worth. It's because of overreaction by the market. Momentum is the exact opposite when the behavioural anomaly or the quark that you are sort of trying to exploit is that the market is underreacting to good news because say HDFC bank for the longest time, every time, every quarter, it would come out with 20%. People would make jokes about it. They got something in an Excel sheet that every quarter, they're coming out with 20% returns. And over a period of time, people start sort of paying lesser and lesser attention to that good news that is coming out and that causes a stock to be temporarily undervalued and then it takes off from there. value is the exact opposite, something wrong or something adverse has appeared about that company. However, that adverse point or that adverse event is not expected to have a long-term impact on the performance of the company. So that is available to you at a much cheaper price than what it's actually worth and that is what you can measure by taking a fundamental metric like price to book, or price to sales, or price to cash flow. Most practitioners in practice will do that by doing only the value factor and implementing it, they will take a combination of these because at various points in time, different factors, and different proxies will be behaving differently and it gives you more diversification. So no one will be doing just price to book or just taking the price to sales, they will use a combination of another one that some people use EV/EBITDA. Then it takes the capital structure out of the picture. You are just comparing based on the enterprise value to the earnings potential. And so even that is taken as a proxy. And there you're trying to buy against the same concept that you're trying to buy something that is available to you much lower price than what it is worth.

Manish Dhawan: But the conservative is just taking care of the dividend and the buyback, right?

Anish Teli: Yeah, there it's taking this one factor, but there you're taking a multi-factor approach. So in some sense, you are covered, but if you are implementing the value factor alone, if you do the pure play value factor, then you would perhaps want to take more than one method of measurement.

Puneet Khurana: So just because you have done a lot of work in this direction, and probably studied a lot of literature here, are there variations to the implementation of the value factor besides just the choice of the factor or the combination of factors? What I'm trying to ask is, so I mean, it's a very common sensical thing to say that something which is, let's say, constantly generating high ROE will always be available in the higher frame of price to book, right?

it will never fall at a cheap level or it won't be the, let's say, Decile 1, it will always be Decile 10 or Decile 9 in terms of the price to book. Similarly, a company which is probably loss-making or let's say very poor ROE will probably always be on the cheaper end of Decile 1, or Decile 2 of price to book, right? So one way to normalize this is to have it linked together like the performance characteristics of the company linked to the price to book and then do, then do the valuation with vis-a-vis fundamentals. The second way could probably be, I'm just thinking, while talking to you, could probably be based on the historical valuation and the gap from the historical valuation as the factor itself and not the absolute number of price to book. But let's say the price to book is one and the average five years is 1.2, the 20% gap is there vis-a-vis for a company where the gap to average is, let's say, more or less. So is there some research or something, some working on this direction you have studied or done or any other way in which you have taken the approach to see the value factor?

Anish Teli: Yeah, so, one different approach which AQR or Cliff Asness have come up with in the original paper, the rebalance was done once a year. So it's a 12-month rebalance. However, they found that and that's what he calls, the High minus Low. In academic parlance, they call it high minus low, high valuation and low valuation. So they said that for the last 10 years, the value factor has stopped working because of whatever reason we don't know and numerous times, papers were written about how the value factor is dead and everything and that sort. What they went and did was they did a monthly rebalance of the value factor and they found it's working, it's perfectly working as the way it should be working and it's just that the signal was decaying much faster. So you should have had a shorter rebalance period. So he called it HML devil. So the devil is in the details. That's what came from and that one year rebalance is perhaps something very very long in today's time and age where perhaps information is being disseminated very fast or people are reacting in much shorter cycles, cycles have become much shorter than they were for 2010 or 2008 for that matter. So perhaps, that's a little bit of a tweak. The other different way to do it, a lot of people have heard of this, this is Joel Greenblatt's magic formula where he sort of combines value with quality and then that's a different approach again to do this. Then there is Tobias Carlisle, of Acquirer's Multiple saying, “I'm looking at how Carl Icahn would probably value companies and instead of taking the price to earnings, I'm taking EV/EBITDA. He did the whole backtest and he also took into account quality, he also did a comparison with the magic formula and he found that his version of the Acquirer's Multiple outperforms the magic formula by quite a bit. So yes there are various variations that one could suit themselves and again you have to discuss a lot about the implementation and the mechanics of how to implement a lot of these strategies. But, ultimately it is also about, whether is this something that you believe in and is something that you are psychologically and mentally comfortable with doing. And I think the difference really comes in there in terms of implementation and in terms of results are you able to stick to it when times are hard? Or are you able or are you just looking at a good backtest and it's done well recently, so you jumped into it because then you will jump in and out at the wrong time or you will keep tweaking your rules or you will keep and you've done and I've made all the mistakes. It's, you know, that's not that, you know, we're not making mistakes, but over the long run, do you really believe it? Is your personality or is your psyche in tune with that? Or are you again going to get swayed by noise? Because sometimes people when you talk to them and you explain to them what you're doing and they say, “Oh! so then what do you do the whole day? And they say that now the computer is doing all the work, so then what do you do for the rest of the 4 days or 5 days or whatever? Because the whole thing, if you're a fundamental value investor that you're sitting in your office, reading all the annual reports, or you're going out in meeting management or you're doing something, you're busy all the time and you are working all the time and you're thinking about it. But if you've automated or if you've codified your process, then, except for running it like 10 minutes a week, what are you doing the rest of the time?

Manish Dhawan: But even then, Anish, there is a recency bias at play. Why? Because there's a criticism of this conservative formula, especially during the first quarter of 2020. Even the low volatility stocks cracked, and so that down protection was not there. And as if that's not enough, then the recovery rarely happened. These low-volatility stocks were not participating in that too. So you start asking your questions if the strategy is correct or not.

Anish Teli: Yeah, actually, I also read this. Remind me where you read this because I read the same thing yesterday.

Manish Dhawan: I don't recall the exact source, but I've been doing research to interview you.

Anish Teli: So, I read the same thing in the last couple of days and I went and looked at the India low volatility index, the low vol 30, and I looked at the performance since. So actually in India, in March 2020, the low wall index fell much lower. So the Nifty fell say 27% by the month's end and the low vol index fell 19%.

Manish Dhawan: Yeah, sure. So this criticism is on the US conservative formula.

Anish Teli: I also found that very intriguing. So I went and checked the India numbers on that and I said, “Okay! let me see.” But I also read this somewhere in Barron's or in Fortune in the last few days itself and after that also, the low vol Index has outperformed our Nifty 50 or the Nifty 500. So I checked both of them. So I think since the lows of March the low vol index is up 70% and the Nifty 50 was up some 58%. So yeah, it fell 10% less than the Nifty 50.

Puneet Khurana: Anish, I have just one question, a very common question, because again, my process is, even though I don't call it factor investing, I use a lot of data and do backtest on strategies. One common question which I keep on hearing, which is fair to an extent and also depends on what you are testing, but we see a lot of historical data available when we work with US markets. And the factors, true strengths or weaknesses get exposed when looked at the entire cycle. So even though we look at the XIRR, we also look at the length of time period for which a particular factor worked or didn't work. We get an estimate of if the past has to be guiding us, we get the understanding of what can go wrong and for how long it can go wrong. So we don't have that luxury when we work with India data. So just to give an example, let's say the quality factor did extremely well in the last decade. But we have seen the same phase happening in US quality factors. And we then also have seen a huge non-performance of the quality factor also. And those kinds of pictures become clear when you're working with that kind of data. So how do you approach this? Or how do you mentally satisfy yourself because you're practically putting that money to use to this kind of strategy? How do you deal with this yourself?

Anish Teli: Yeah, so again the same thing like I said, diversification, you have to have a multifactor approach to your portfolio or you have to be prepared for long periods of underperformance saying that for the same reason that it does not work all the time. That is the same reason because it works most of the time. I mean, if there is no pain in a certain strategy, there is no premium for that strategy.

Puneet Khurana: No, probably there's a miscommunication. I'm asking how you generate confidence in your backtest. Because eventually, you're going to use that in your work, right? So given that you have very limited data to backtest on, we have just 20, or 25 years of decent-quality history. I mean, for price estimates, we still have a larger one, but the fundamental history is even less. So when we have only that kind of history, how do you generate confidence in your backtest? IItwas my question primarily.

Anish Teli: So they're different. Yeah, I think I got that question. So I think there are different ways you can do it one is to see that you have a first principle and very scientific approach to what you're doing. You should be honest with that you can't be curve fitting or you can't be just optimising and then running it. That's the worst thing that you can do. Second, even the data that is available for 20 years, a lot of it also has a survivorship bias. A lot of it has corporate actions not adjusted for or companies that have disappeared are not available. So how do you take care of that? Have you adjusted for that or not? And until now, we did not have that luxury. I discovered much later that the IIMA professors, Jayanth Varma and Sobhesh Agarwalla, were maintaining a fama and French database. So the US, they have it right from 1927-28. But at least these professors have it from 1992, which is when the Nifty was also born. And so 30 years of data by people with excellent academic pedigree and who would have done it in a much more scientific manner than most others out there, you have to see that. It's broadly in line with that. You run your regressions, you check what exposure are you getting? One way to get around the time period and then is to do a Monte Carlo simulation and then run a probability scenario that this is what it looks like in the 90th percentile and in a worst-case scenario, the 10th percentile, this is also an outcome that could happen. You could have maybe minus 5 percent (-5%) and there's a 5% probability or a 10% probability that you could underperform or not do as well. So you have that probability in your mind and okay there's a 10% chance that could happen. You look at rolling returns over a period of time versus just looking at CAGR or at point-to-point returns. You look at one-year rolling returns. So then you have an idea of that on a one-year basis, I could underperform X amount of time versus looking at three years, I could underperform by this much. So then, when you go out and implement a strategy, your expectations are in place, right? And then because we all come with our back test and we expect that, all is ready, today I deploy my money and tomorrow everything is going to go up and everything will be as hunky dory and that is probably the worst time to implement. But if you have your expectations in place, you've done your homework, you know that you could underperform and there is an X amount of probability that this could happen, then you sort of covered yourself because in investing nothing is certain. You are working with incomplete information, imperfect information and ever-evolving.

Puneet Khurana: I fully agree with you, especially that first principle part, right? If something is observationally strong and has a good economic background or economic reason to it, then we can be much more comfortable with the outcome of the backtest itself. So you're not really a mathematician trying to find the best factors, doing the best returns. You're not doing a large amount of data mining, so to speak. You are implementing... first principles and then testing whether they work or not. So yeah, fully agree with you. One question I had, in fact, that question popped up in my head, so I'm just going to ask now, even though it popped up in my head at the very start, was you said a reason for doing rule-based shift was because you were not able to capture a lot of outsized gain in the stocks where you were. How do you solve that with stop losses? Because eventually what I've also seen is larger journeys will probably have a lot of taking you out of the positions and then trying to bring you, so I mean, generally there's a consolidation phase in almost all stocks which do large rallies. And any kind of stop loss strategy, if you put it too deep, you're anyways not using the stop loss well. So how do you deal with that? Or how do you incorporate that in your work if at all you do that? or you have given up on that single stock, 100X is not my ambition anymore, or 10X is not my ambition anymore, at a portfolio level I want to do returns. So what do you think about this part?

Anish Teli: Yeah, I think you've answered that. So, I look at momentum as my stock or I look at value as my stock and I look at this as my stock. I'm not attached to a name anymore. Or I'm not attached to that this one is going to be a hundred bagger or that one is going to be a 10 bagger or this is good. I am focusing on the fact that my strategy is going to deliver for me over the long run. And that's what will compound wealth or that's what will create wealth over the long run. It was not that the winners were not doing well, it was the losers that we were not taking care of. So capital was getting eroded by the losers, not the winning stocks. Most of the stocks give their returns in a two to three year period, 80-90% percent of the gains will be made in that period. And then they will as you rightly said go through a consolidation phase and then will come back again. So, we've seen some stocks that keep coming back but at different points in time. We see very different stocks for example this time the PSU banks and the way PSU finance companies, and power finance companies have come back. Five years ago, I would be very, very sceptical and I'm pretty sure I would have meddled with the system. I would have sort of thought of over-editing something here and there or something like that. But,

Puneet Khurana: Yeah, have a PSU filter or something like that.

Anish Teli: Yeah, I have a PSU filter or something like that. And I would have missed most of... because everything in the last six months has been about PSUs and things like that. You know, all these railway stocks, they all used to go up. We used to have a railway budget at some point in time. Two, or three days before the railway budget, the same stock, Titagarh Wagons and something and the other will start going up. And after three days, everything will go fuss, the rally will fizzle out and everything will go back down. So if I had kept that mindset, I would have never bought into any of those and would have said, "No, no! This is temporary or this is false, or this is fake, or this will fizzle out." There is an interesting anecdote in one of the books that I really feel that most quant investors will know. They have a very different approach and I think there is only one person in the world who can do that and that is Jim Simons. They don't look for any economic intuition. They don't look for anything, they just say that if we tell you what we're looking for you will probably laugh at us. They actually revealed one of their strategies which had a very weak efficacy, which was that stock markets do much better on sunny days than on cloudy days because it has an impact on the mood of a person. But they said it was a very, very weak correlation. So they go out, actually doing data mining. They go out actually, say we wear statistical goggles and we go out looking for these anomalies. But I would say that I don't think anybody else can probably remember that guy has this his third career. That guy used to be a codecracker during World War II, used to crack codes and he has mathematical theories named after him and he's got the Nobel in mathematics. So I think most of us would not qualify for that approach which has worked for him. But his partner, you know, in one of the meetings was talking to a large investor. And he was saying that, if my system says buy Chevron, I buy Chevron. If my system says sell Chevron, I sell Chevron. And the marketing guy sitting next to him, and he's like, turned white. And even the large investor, the LP, the large endowment fund sitting in front of him, looking uncomfortably up and down because the company Chevron had been delisted five years ago. This guy had no clue that Chevron does not exist or this company does not exist. He said that it was just a ticker symbol for me. So, if you can attain that kind of Nirvana, where the name of the company does not bias you because it will bias you as an investor, because the noise around you, you cannot isolate yourself from that. That will come to you that Oh! this is the UCO bank, how do you buy, the Indian bank, how do you buy? Central bank, how do you buy? Punjab National Bank, how do you buy? And again, the names I'm giving for illustrations, they're not recommended to buy yourself, but you have to get to that level of Nirvana where you don't care. It's just a ticker symbol for you.

Puneet Khurana: Sure.

Manish Dhawan: To answer Puneet's question, I think the only way a momentum portfolio can get a multi-bagger is if we get a buy and it just runs propels from the get-go. I mean kind of

Adani gas or a Goa carbon kind of thing. And even then it will be like a 6-7 bagger, not your 20 baggers.

Anish Teli: I doubt you'll make a 20-bagger. Yeah, you can make a six, seven bagger and that will sort of make your two years.

Puneet Khurana: Sure, so I have one more question on the momentum side of things. And basically, I'm just voicing opinions which I keep on hearing and I'm just bouncing it off from you. Another common thing which I often hear is that all momentum people are doing the same thing. They look at 12 months momentum and probably add volatility to it to remove very high movements in short-term kind of stocks. And the more money comes to these ideas, the more crowding becomes in the same names and eventually leads to very high slippages from the time the signal comes because people are acting together in a crowded market. How do you address that problem if it is a problem? If it is not a problem, can you explain why it is not a problem?

Anish Teli: Yeah, so I think in certain market caps, segments, it can be a problem. For example, in micro caps and very, very small caps, if you're doing something of that sort, it can turn out to be a problem.

Puneet Khurana: Can you also just add some numerical context in what kind of size of market you have seen this problem coming or dissipating just for the ease of understanding for people?

Anish Teli: Yeah, now we just go with this heavy definition of market caps 1 to 100 is large cap, 101 to 250 is mid cap, 251 to 500 is small cap, everything beyond 501 is micro cap. So anything beyond 501 and or even 251 to 500. If you don't put a liquidity filter, like most people use a median value traded off say 1 crore, if you have a small portfolio of 1500 crores, you put 1 crore as a median filter in that universe, you probably will filter out most of the illiquid kind of counters. So that is one way to do it. The second issue of everybody doing the same thing. You know that is like I said is true but at the same time I don't think everybody follows also their own system at most points in time and can it get crowded as a lot of people are doing? The same question will not be asked of a value investor or of a fundamental investor that everybody is buying the same stock and the value is going to go up because everybody's crowding in the same trade. If you scientifically design your momentum strategy, which rebalances once a month or once a quarter, and you rebalance it over a period of time, don't rebalance it all at one go. If you have a very large portfolio, say of 2000 crore. That becomes a problem. That kind of size can perhaps become an issue. But if you look at the index fund that we have to do the UTI 200 momentum 30 that is about 2600 crores of assets under management. That's the size of the fund and the tracking error is pretty low, it takes the top 200 as a universe and it's delivering momentum. Now theoretically like what you said or what people say is that if everybody is crowding in those same trades, everybody's buying the same names then that will it distort prices, it will have an impact cost when you go in and out. So theoretically it should have. But there are buyers also for that stock at the opposite end and also if you have designed your system in such a way that if with size you would rest, if you have a small portfolio let's say of say 5 crores 10 crores, then most probably you will be able to get out without having an impact cost. At some point in time, there was this issue with curated portfolios and baskets that were coming into play that every Monday, you could guess that something is down circuit, that somebody is exiting and something is up circuit, somebody is buying and you're buying the same stocks. But that would typically happen again in that small cap and microcap segment where there are circuits and you would not be able to get in and get out and that return that you are seeing is in part theoretical because you are not going to be able to get out and that's okay. Not everybody is going to be able to realize that return. So that's why I think that model portfolio returns would again, you should take it with a pinch of salt because if you are playing in that segment of the market then capacity becomes an issue.

Puneet Khurana: So in the very starting, you also mentioned that momentum as a style is not really suited for large caps because there isn't much to play there in terms of momentum. There are liquidity and size issues the moment you go beyond, let's say, 250 to 300 names. Doesn't that leave a very small space for the momentum investors to actually find the ideas and then operate? Large Cap is probably top 100 names if I'm not wrong. I don't know how you classify that, but so 100, on each at 250 and then the liquidity filters leave you a very small universe to work with any way to find your momentum ideas. And

Anish Teli: That's still 300 stocks to play with. As we said, we don't care about the name of the stock and those names keep on changing.

Puneet Khurana: So 300 is considering you are going, okay so 500 is where you're stopping your size limits so to speak. Okay fair enough.

Anish Teli: Yeah. So we are removing the top 100. So for the momentum portfolio, we've kept 400 stocks. And we are trying to pick 20 stocks out of the 400. So we have still 20%. Our market cap today is what 3 trillion? same as the GDP, if you take that's 3,000 billion, so that's about 20% of that. It's about 600 billion. I think it's okay. 600 billion is a lot of money.

Puneet Khurana: Okay, fair point. All right. Manish, you have a question?

Manish Dhawan: Anish, I just wanted to pick your brains on the fact if the edge is so visible in the conservative formula, how come no one in the mutual fund industry has a product here?

Anish Teli: Yeah, some people do have, recently launched quant fund is broadly based on that. But see if you look at in Manish, any active and even factor strategies are active only. They're not passive from any standpoint, but any discretionary investor would also be looking at similar kind of things, reaching the same place through a different process. You're trying to buy a company which is say sort of fairly valued or undervalued. You're trying to buy a company which is perhaps good as entering a good growth phase, which may be captured by the price momentum and you're trying to ensure that it's not very volatile and if it's volatile, it's volatile on the upside, not on the downside. So that edge is really coming from the process and following that process. And people, I think have tried to launch have tried to get that but you know, Ashwath Damodaran in his book says that the day a quant investor can marry a good story with the quant process, nobody can beat him or her. I think that one of the issues in growing a quant-based portfolio or explaining it to investors is perhaps a lack of a very compelling narrative which trend followers in the US also face. So even though there is a narrative that can be built around that I think it's still early days and I think I've also made that mistake and learned from it that even people like Jim Simons or people from his firm say that not a lot of investors have made decision based on data alone. They all like a good story. They want to hear a good story and the story can be that you made high returns. Either you go with high returns. There is a very popular mutual fund house today which is grown like 30 times its AUM because it ranked number one in terms of returns in the last three years and you know before that no distributors were willing to touch it and you know nobody would take it and suddenly the returns have emerged in the last two to three years. Everybody is just running

Manish Dhawan: So are you saying that mutual funds are running the conservative formula, but they're not calling it that because that doesn't allow them to build a story around?

Anish Teli: Yeah, or say that it is proprietary or say that we have our own framework to do certain things.

Anish Teli: And I think that the proprietoriness really comes, like I say, at the end of the day, it's an empirical performance-driven kind of thing because you can go and buy a bat. I can go and buy a bat and Virat Kohli can have the same bat.

Manish Dhawan: My question was revolving around that only, Anish. The problem is if you're not from the get-go outside calling it a conservative formula, you will allow the discretion to come in and then discretion would come in on every second decision.

Anish Teli: Yeah, but even if you were to launch a conservative formula in a quant wrapper, you will still not say that this has been something that we've adopted from here. You will still say that this is something that we have built in-house based on our value principles or on our long-term investment framework, which takes into account certain parameters that we have discovered over the long run that are unique to us and things like that. So even if it's a quant fund or it's a quant system-driven fund, you will still want something, some story or some proprietoriness around it because I think somewhere it's fair. Equity in our country is still a push product. You have two to three percent of the population investing. So it still has to be sold. It's not something that has been bought. Something has to be sold. Now think about it. Any home loan is sold not because they are saying “Buying a home is a good investment.” They say, “Rent hua paraya, EMI hua hamara.” That's how, they sell their home loans because they're telling you to buy a house, which is the worst investment ever. Or a diamond, the whole story about why now there's no engagement can happen without a diamond ring and there's a big marketing story around it or you know credit cards or whatever people financing a good lifestyle using credit cards, auto loans or anything of that sort. Everything is sold on sentiment and to that extent. I think we should all complement the mutual fund industry that at least this “Mutual Fund Sahi Hai” campaign has a difference from what I have seen in 2008 and maybe in the last few crisis periods that we've gone through that a lot of people were in direct equity and this time around when they were in mutual funds and especially in the last three years the amount of SIP flows that have come in they've negated the FII flows. They've just made the FII flows irrelevant. And I've bee one, pleasantly surprised to see that. Because in 2008 people were buying, there was all the infrastructure stocks and all of that and they got caught in that power stocks and people sort of swore off equities. But this time around, because the mutual fund industry has done that job of the mutual funds Sahi Hai campaign and put good money behind marketing, handheld investors and made them stay invested through a cycle. And that's what I tell early investors also even if it's an index fund or even if it's 5000 rupees, start with it because you will go through a cycle. And the whole thing is about sticking with your equity investment through a bad cycle because, in an upcycle, everybody will stick with it. It's only in a down cycle that you start getting jitters or you start feeling 'should I exit this or should I time it and should I come back later?' And So I think that culture is changing. I think the youth today is sort of seeing that equity is a way to grow wealth, whether it is DIY investing, whether it's systematic investing, or whatever you want to call it. But I think that trend is growing, financialization of savings is growing, because the second or third or fourth home becomes a dead investment. Gold becomes a dead investment because it just stays there. Whereas when you are investing in companies, you're investing in the growth of the economy, you're investing in employment, you're creating new sectors, you're creating new companies, you're backing new entrepreneurs, you're providing risk capital to that extent. So I think that's what our country needs. So I think that way, that industry has done an excellent job.

Manish Dhawan: One last question from my side. It's been a fascinating conversation. See what you told us is just part of the bull run story. I wanted to pick your brain on how to not get perturbed in a bear market. When an actual bear market happens, how would you suggest people fill this behavioural gap and they don't chicken it out?

Anish Teli: So give your money to a PMS investor or a mutual fund. Honestly, any equity investment will go through its down cycle. Now the problem with that is you will see the price on television. Even real estate will go through that cycle. Even gold will go through that cycle. But somehow we have convinced ourselves that this will come back. That's it.

Manish Dhawan: Real estate's M2M is not visible, so it's fine.

Anish Teli: So it's fine. The other big problem Manish, it is not the bear market, it is also booking profits too early like the disposition effect that we call. It's one of the reasons why momentum also works. People sell their winners early and hold on to their losers. Now with real estate, tell me if you buy a house and it goes up say 50% in value you'll not say today let me sell my bathroom, tomorrow I'll sell my balcony, the third day, I'll sell my parking lot and fifth day, I am selling a little bit of my bedroom. But when people have that in equity, there's this funny concept that I invested say 100 rupees, it's gone up to 150, let me sell 100, and the rest of everything becomes free. I mean, you're interrupting compounding. That whole notion that it becomes free, and let me take my profit from that investment. You don't do that with mutual funds, you don't do that with real estate, you don't do that with gold, so don't do that with equity also. So even in a bull market, don't take profits too early or in a bear market, have your expectations that like Charlie Munger who's turning 100 in about 60 days says 'If you can't stand the heat, get out of the kitchen.' And then have your asset allocation correct. And if you're in a salary, your salary is bond. If your income is bond-like, your investment should be equity-like and if your income is equity-like, so you are working at a startup, you're working in a field where you're running your own business, your cash flows are not very certain, then you have to take a more conservative approach in your asset allocation and allocate little bit less. You should know that. But once you've allocated say 20-30% to equity, you have to go with that approach that at any point in time I can see a 20-30% downtick in this investment.

Puneet Khurana: Yeah, funny you mentioned free-of-cost holdings. Earlier I used to have a similar thought process, obviously, it doesn't make sense if we think about it that way. But what I've also seen is that some people are able to hold on to certain stocks for years and years, just because mentally it is free of cost for them. So just because they made it 50 rupees and they've taken out a 100 rupee cost, because of that itself, they're able to hold on to the stock. Even if then it becomes 5000 they don't care.

Manish Dhawan: So this is maybe a topic for some other time but I strongly believe this mental maths may sound funny but it works because you are playing with the house's money and it's not the entire stock market. It's a mental game only.

Puneet Khurana: Yeah, so mental math is as per individuals only. That's what he's saying, right? Know thyself. So it's really an individual's choice, what works for him. If free of cost works for him, great. But if free of cost doesn't work for him, like for me, it doesn't make any sense. So I'm okay to compound on that. But I also understand why somebody would want to do that. And if it helps him hold it longer, fair enough.

Anish Teli: And even in real estate, for example, some people are able to hold, will chicken out on stocks and say that at 12-13%, it's fine. At least if you invest in real estate at the right time or if you invest in land and you are able to hold on to that because you locked it, it's not as liquid as stocks. You can't call your broker the next day and say, "Sell my flat or sell my land immediately." So, that's again, the behavioural thing. And I think that it's a very interesting point and I've written about it in my book also, 'Mind Money Matters', that the edge that will be available to most investors over the next 20, 30 years is going to be a behavioural edge. Information used to be an edge. Even in the US now, they have alternate data sets of credit cards. So, how many cards are entering the mall? and they have satellites tracking all that data, hedge funds are trying to do all of that kind of stuff. Today with Gen-AI, they're trying to get an edge, but ultimately the edge will be your behaviour. That will be the ultimate edge. In a crunch match situation, the person who holds the nerves in the last over is able to keep that cool, and they end up winning the match. Similarly in investing, if you're able to follow your rules, come what may have confidence in them and you will only get confidence when you have spent a cycle with it, you have done it yourself, you've gone down to the brass tacks, you can't borrow conviction, you can't borrow that belief.

Manish Dhawan: Yeah, yeah, this is a topic of interest for me because I wrote a blog on this subject as well, endowment bias. Funny as it may sound endowment bias is not necessarily a negative thing. I mean, we did a podcast with the Divesh Bhai who made a fortune with his stocks, not per se because of his great research or anything, but primarily because of the endowment he got married to the stocks and wrote the entire journey.

Anish Teli: I mean, there are various people like Dolly Kanna or Vijay Kedia and all of these people who made some 20 baggers, 30 baggers in something like Unitech. For example, Dolly Kanna's first multi-bagger was in Unitech, which he says later turned out to be a fraud. But he made a fair amount of money on that kind of company. And then later was in Hawkins or in things like that. So, some people are able to hold on to those things. And one of my friends recently put 40% of his portfolio in a single stock and held on to it. And finally, after two or three years, that stock has gone four or five times. So, I think the ultimate thing is knowing yourself. You can't be saying “I'm a momentum investor today and I'm a value investor tomorrow I'm certainly a option trader today.” That's where the problems start and I think that's the worst thing that you could do.

Puneet Khurana: Great conversation, Anish. Just one last question from my side now. Do you guide our audience to some of the references, and resources, if they want to build their understanding? Or let's say, even if professional money managers want to build their understanding of the factors, quantitative, what are the best ways to go around it?

Anish Teli: So, you know probably you, Manish and I, we all started 10, 15 years ago, trying to read about systematic investing, quantitative investing in India, there wasn't a lot of research around it. So we used to read US papers or papers from other countries. But luckily now, there is a fair amount of research being done in India. Even we do have two, or three decades' worth of information, which is still quite a lot. So I've co-authored two papers with Rajan, but Rajan also has written almost 10 to 12 papers on factors investing and systematic investing. So if you go to SSRN and search for Rajan Raju or you look for our paper on conservative investing or factor investing, you get it there. I have written a book called ‘Mind Money Matters’, which covers broadly the concept of asset allocation as well as systematic investing. It's available on Kindle Unlimited as well as on Amazon. So, that primarily was written to educate people, about what mistakes you should not be making or at least what are the questions you should be asking your advisors. And those are the things that people should be asking because ultimately, finance or math, or people think finance is a lot of math. And Morgan Housel has this great quote where he says that finance has nothing to do with math or any of that sort. It's how people behave with money. That's all about finance. It's how people behave when it comes to making money, and making decisions. So, the questions you should be asking your advisor. I think because it's not taught in school or if you're not exposed to it at a very early age, it's changing now. But that is a good resource. You could go to the Zerodha Varsity resources, very good. I think they've done an excellent job of putting together everything from fundamental investing to systematic investing, factor investing, options, and everything they've got. So that's one great resource. There are a lot of seminars, videos and of course, Stoic Talks, you guys are doing podcasts like yourself and On Twitter again a lot of people are available to talk. I think that's a fun and great resource if you use it the right way. I have bumped into a lot of people like yourselves On Twitter, I've met you guys on Twitter. I have met Rajan on Twitter. So if you use a resource like Twitter the right way I think that's a treasure trove of information waiting on.

Puneet Khurana: Great, perfect. That's it from my side. Manish, anything from your side?

Manish Dhawan: That's it from my side as well. It was a pleasure. And it was fun. That’s it.

Puneet Khurana: Yeah, thanks so much, Anish for giving us time here. It was a very enlightening conversation.

Anish Teli: Thanks a lot for inviting me. Great to talk.

Puneet Khurana: Our pleasure.