

Mohnish Pabrai's Lecture at the Boston College (Carroll School of Management) on November 30, 2017

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Arvind: Well, Mohnish, as always, thank you so much. We're incredibly grateful. I think this is the seventh year that you've been speaking to my class, and we're incredibly grateful. Thank you again.

Mohnish: Yeah. First, I'm excited to be here. Is this the seventh year? Is it Arvind?

Arvind: Yes.

Mohnish: All right. That's great. First, it's a pleasure to be with everyone, and thank you for taking the time. I hope this is worthwhile. I haven't exactly given this talk in this format before. I guess you will be the first-time recipients if you will. Please bear with me. But there's a saying, I think it's an Einstein quote, I'm not sure where he says that "take a simple idea and take it seriously". I think that's an important thing to keep in mind. I think even when you look at lots and lots of successful people or extremely successful people right at the pinnacle of their careers, when you break it down, that quote is at the epicenter of how they got there.

Usually, it's not something earth-shattering, usually, it's something very simple, but they were intense about it, and they were just fanatical about it. That's usually the fanaticism and intensity around a simple idea that gets you to the promised land, if you will. I want to just go through a couple of those kinds of very simple ideas. I know this is a high IQ group, and I know that you guys can handle a lot more than I'm going to give you today. But bear with me. It's not going to challenge your intellect, but I think what I'm hoping for is that you'll appreciate that these are not ideas that require high horsepower, but these are ideas that require an extreme intensity of pursuit to get to the promised land. During World War II 1941, there was an 11-year-old kid in Omaha, and he checks out a book from the Omaha Public Library. Arvind, can you put up the cover of that book?

Arvind: What's the title of the book, Alex?

Alex: 1000 Ways to Make a Thousand Dollars.

Mohnish: Exactly. What a beautiful corny title. Anyway, this kid in Omaha, also known as Warren checked out this book from the Omaha Public Library. The good news for all of you is that you can go on Amazon after the class and order the book. It's still available. It was published in 1936, five years before Warren checked it out. Warren would tell you that, this book is fundamental to his billions. In fact, the 11-year-old-kid, after he read the book made a statement that "by the time he was 35 years old, he would be a millionaire". One thing to understand is, the book is not talking about how to become a millionaire. It's just talking about how to make a thousand dollars and it's a thousand dollars in 1936, which my estimate in 2017 is no more than \$15,000.

I don't think the inflation from then to now is more than 15x. The book is not teaching you how to become a millionaire, but the 11-year-old kid reads the book, is super excited about it, still remembers the title, and makes that statement. Actually, when he was 35 years old which is 1965, he was well beyond a million. I think in 1965 my guess is, Warren might have been maybe 5 or 7 million by then, which would've been about 40 or 45 million in today's dollars. Even before he was 11 years old, (I'm gleaning some of this data from some of what Warren has said, and I'm inferring from what he's saying in the book), is that he had figured out that compounding is the eighth wonder of the world, which is another quote attributed to Einstein.

The 10 or 11-year-old Warren had figured out that compounding was the world's eighth wonder. Then after he had figured it out, he needed, which I'm going to demonstrate soon to you, but he needed seed capital. Compounding is magical and it's magical from extremely small slums. But you need a seed to start growing and growing over a long period. Just hold that thought for a second and we'll come back to it. I want to kind of digress and go back about four centuries or more like three centuries, I think 91 years or so, or 89 years or so. In 1626, which is almost 400 years ago, it's widely rumored that the Dutch bought the island of Manhattan from the Native Indians.

At that time, that deal was done without any bankers, I might add, when that deal was done, it was done for \$24. For \$24, the undeveloped land, which makes up the island of Manhattan now passed in ownership from the Indians to the Dutch. Peter Minit was the guy representing the Dutch. The reason I bring up this story is that this story was actually mentioned, and I became aware of this story in one of the letters Buffett wrote to his Buffett partnership investors in the late fifties. This story was relayed by Warren to his investors, maybe the early sixties, but north of 50 years ago, long time back. Warren brought it up at the time because it appears, when you look at that \$24 transaction price, and you look at the value of even undeveloped land in Manhattan today, one would think that the Indians got taken.

But let's just say that the \$24 was given by the Indians to their Chief Investment Officer, and the Chief Investment Officer was told to invest this amount for the benefit of the tribe over several centuries or several generations, and let's say for argument's sake that our investment officer wasn't too bright and he could just manage like something like a 7% annual rate of return. If you had \$24 in 1626, and it was growing at the rate of 7% a year, one of the things I want to do in this class, and I think most of you may be familiar with the rule of 72. And so, one of the important things about compounding is to be able to do the math in your head. The whizz-kid in Omaha in 1941, then and now does all his compounding math in his head.

I've been to his office. There is no laptop or computer or anything, he's just doing math in his head even now. Doing math in your head is a very big advantage. If you're compounding at 7% a year, rule of 72, in 10 years, your money is going to double. In 1626, they have \$24, and in 1636, they're going to have \$48 and in 1646 they're going to have \$96 and so on. Then, we know that a double comes in 10 years. If you take a hundred-year period that's two to the power of 10. One of my most favorite numbers, two to the power of 10 is 1024. Let's throw away the 24, because it makes the math harder. We don't want any hard math, we want easy math.

Arvind makes all his assignments hard, and I just want to make life as easy as possible for you guys. If you go through 10 periods of doubles, that's a thousand times what you start with. If you have \$24 in 1626, it is \$24,000 in 1726, and then it's \$24 million in 1826, and it's \$24 billion in 1926, and it's \$24 trillion in 2026. But, Arvind will quickly remind me that we are not in 2026, right now, we are in 2017, I'm going to take that 26 trillion just to make him happy and cut it in half by making it 13 trillion, which will be, what it would be in 2016. Basically, if the Indians had gotten the 7% return, they'd be at 13 trillion. Then the other question in front of us is, what would be the cost today of undeveloped land which is, let's say, in a place like Manhattan at that size?

I don't know the answer to that question. These are difficult questions that Arvind likes to ask, but I do know this, the total wealth of the United States, every man, woman, and child, everything that we have in the US is about a hundred trillion. If the entire country, everything is a hundred trillion the island of Manhattan, even with all its buildings and everything else is way under 13 trillion, because we've got a lot of assets in this country. The Indians actually negotiated quite a good deal. The problem is, they had an incompetent investment officer who couldn't bring the bacon home. Of course, we are going to make sure that such incompetence is permanently banished from places like Arvind's class. Let's come back to the kid at Omaha.

We'll come back to the Indians in a few minutes, but let's go back to 1941 and the kid at Omaha. The kid checks out the book, he's looking very intensely in the book to figure out how do I get a thousand dollars. The reason why the thousand dollars is important is that, once he has the thousand, he already knows the math and compounding. He's very smart. Probably, at 9 or 10 years old, he'd figured out what I just told you about the eighth wonder of the world, and he just wants to get the thousand dollars as quickly as possible so then he can put it on his compounding engine. He was lucky in the sense that his dad was a stock broker, and he used to hang out at his dad's offices, the brokerage firm with all these kind of handwritten quotes and all that in Omaha, and kind of was all around kind of stocks and quotes that are wiggling around and all that when he was 11 years old.

In fact, he bought his first stock when he was 11 years old. Warren likes to say that he was wasting his time until then. He says he had a slow start, because he bought his first stock at 11 and was kind of an underachiever till then, if you will. What he did is that, he knew he didn't have the framework completely, but he knew that within these wiggling prices and these kind of gyrating quotes and all that, there was a fortune to be made. He knew that if he had a little bit of capital, like his thousand dollars, and he could make investments in stocks and if those investments. Here's what Warren is saying.

He's 11 years old. He's saying "in 24 years, I'm going to take the thousand after tax to a million". Now, I haven't done the exact number on what the analyzed rate is on that. Let me just put it this way. It's much higher than the mandate given to the CIO of the Indians. It's probably north of 30% a year, is my guess. Maybe low thirties, I'd say probably a year, but it's a significant rate of compounding. The 11-year-old kid is confident that he's going to compound at some astronomical rate if he can just get the thousand. He

goes very intensely, reads the book, really excited about it, and then, he sets up a whole series of businesses. You can read about it in the snowball, and you can read about it in Logan Stein's biography. But my couple of favorite businesses he set up, one was a Wilson Coin Operated Company. Just to make sure I'm not repeating myself, raise your hand if you've heard of the Wilson Coin Operating Company.

I see Arvind frantically raising his hand, but I also see that he's done you a big disservice. He gives you all these difficult assignments, and he doesn't talk about the Wilson Coin Operated Company. The Wilson Coin Operated Company is one of the most important business lessons to learn. Let's go into the Wilson Coin Operated Company since it's such a great business. First of all, I'll take a step back. Warren was in Washington DC, his father was a congressman. He was a teenager. He was in high school. Of course he was very smart, but, he'd already read this book at 11. He knew the name of the game was not to be the best student. The name of the game was to build capital and to build capital by having different businesses.

Since about six or seven years old, he'd done one business after another. But he became friends with a guy named Don Danley. Don Danley eventually was a valedictorian of that high school. I met Don Danley several times in Omaha. He's unfortunately passed away a few years back, but he's a wonderful guy. I had so much fun talking to Don about the teenage Warren. It was just a blast to talk to Don about that, those was a lot of fun times. Don went on to work on the space program. He was part of the group that put the man on the moon. There was another horsepower deployed to put man on the moon, and Don was one of them.

Anyway, Warren becomes friends with Don and one day he goes to Don's house, and Don was a tinkerer. I mean, you could take to him some beat up card that doesn't run, and he'd figure out what was wrong with it, and he'd make it run. One day Warren went to his house and he saw that Don was working on this old dilapidated pinball machine, which didn't work. Warren asked him what he was doing. He said, oh, I bought this pinball machine for like, I don't know, \$15 or something, and I think I can fix it. Warren just watching Don Danley at work, fixing this pinball machine. In a few hours Don Danley had that pinball machine working. Then Warren tells him, "Hey, Don, do you think you can fix up more machines? Can we buy more machines and fix them up?" He says, "yeah, most of these machines, there's nothing major wrong with them. It's pretty easy to fix".

Basically, they don't work. People just want to get rid of them. They take up space and stuff. He says, 15, 20 bucks, 30 bucks, you can buy a machine that doesn't work. Warren sets up a company, and of course, there's no cooperation or anything done, but it's called a Wilson's Coin Operated Company. They invented a fictional character named Mr. Wilson. These 15-year-olds would go to barber shops in DC and they'd go tell the barber, listen, we represent Mr. Wilson. Our boss is Mr. Wilson.

Because they knew if they said, we are our own bosses, they'd be laughed out of the chops. They said, look, Mr. Wilson sent us, and we work for Mr. Wilson. Mr. Wilson has a proposition for you. He wants us to tell you that we are going to give you this pinball machine for free to put into the corner of your barber shop, and we are going to come by once a week. whatever money's in there, we are going to split it 50/50 with you. Mr. Wilson told us

to tell you that it's a great deal for you, and it's a great deal for Mr. Wilson. Do we have a deal? This barber said, yeah, sure, put it in the corner. Like they said, there's no downside. I got the space and put the machine. They went to barbershop after barbershop, and once they'd get the deal done, then they'd buy a pinball machine, Warren would put Don Danley to work to fix the machine, and then they'd put in these barbershops, and they had like 30 of these machines in different barbershops.

Then Warren said, we'd go once a week and open up the machine and pull out the quarters, and then all the money people had been putting to play pinball while waiting for the haircuts. He said that the first time he went, the first machine had \$5 in it. They gave two and a half dollars to the barber, and they kept two and a half dollars. Warren, at that point, thought he died and went to heaven, because he, I don't know what Arvind has been teaching you about return on capital, but if you invest \$25 every week, you're getting back two and a half dollars, the return on capital, let me just put it to you this way. It is higher than almost any American business. One of the highest return businesses you could ever be in.

Of course, the kid from Omaha who's a wiz at math loves this. Then, he's thinking, okay, two and a half dollars from this machine is \$10 a month from this machine. It's \$120 a year. I got 25 of these, okay. I got like, almost \$3,000 coming to me. Yeah, my buddy Don Danley is getting half, that's okay, I like him, but I'm still kind of cleaning up, because, I didn't have anything to do with it. I just went and did my deals, right? Then Warren also noticed that Don Danley was really good at fixing cars. He found this ads for this Rolls Royce, which didn't move, available for sale for \$200. He asked Don, "hey, Don, you think you can fix this car?"

Of course, this is a guy who put people on the moon in the future, of course he can fix the Rolls Royce. Don said, "oh, yeah, sure, I can fix it". No problem. They bought the Rolls Royce for 200 bucks, I think they put another 200 bucks, a part into it to get it, spiffed up and working. Then they started renting it on the weekends for weddings at a hundred bucks a weekend, and of course, again, return on capital through the roof, but that wasn't it. Monday through Friday, they drove to school on the roads, so these two kids would roll into Washington High School, whatever the name of that school was in the Rolls Royce. Warren had a fur coat at the time. He'd come out with his fur coat in his Rolls with Danley next to him.

Anyway, you can see that the kid from Omaha, 11 years figured out that he needed a thousand dollars. Then by 16 or 17, he's pulling down a few thousand a years . I think when he was 17 or something, when he graduated high school really early, 16 or 17 he had about 9,000 saved up. Then he insisted with his dad that he was going to pay his own way through college. The tuition then was slightly less than BC charges now. Basically, he went through college and he told his dad, "give your money to my sisters. I don't need it. I'm on my compounding engine. I got my base capital."

The reason why Warren is a billionaire today many times over is not because he came up with something innovative or anything esoteric. I mean, the Google guys came up with something innovative. The iPhone is amazing. There are lots of businesses which are around some whiz bank technology and some very smart people doing some very smart things. But that is not how Warren made it. Warren made it on very commonly known facts and

very commonly known mathematics. The difference was from the age of 11 till now at 87, he's intensely obsessive about it. He's been obsessive about compounding for his own whole life. Of course, what he was missing at 11, he said, he screwed around with technical analysis, whole bunch of different ways of trying to figure out how to predict what stocks would do well in the future, because he knew that he had to get kind of high rates of return, but he was basically in the wilderness until he came across Ben Graham and went to Columbia.

Then he got the framework. Once he had the framework of value investing then he was off to the races, because he had his base capital and he'd figured out how to compound at high rates. He went off and did his thing. The important thing was that, there are two ways you can kind of ingest our interaction today. You might go back home or think about it tomorrow, and you might say, oh, yeah, rule of 72, yeah, compounding, yeah, eighth wonder. Yeah, it was a good talk. That's one way to ingest the data. The second way to ingest the data is to do a 180, which is to become like the 11 year old kid in Omaha and become fanatical about it.

Where you say, "listen, compounding is very critical". Now, let me go about for the people in the second camp back to the Indians, okay. The Indians did their deal, the 1626 and all that. Let's unpack that. Why does Einstein say that compounding is the eighth wonder? Well, the reason it's the eighth wonder is, I gave you some assumptions, right. I told you 7%, I gave you like this 400 year period and I gave you the \$24. But if you're fluent in this, you can go kind of massage this a little bit. For example, if you go backwards in time, let's say the deal was done in 1616 instead of 1626, you could have done the deal in 1616 at \$12, the outcome would be the same.

All you could do it at 1606, at, I'm sorry, yeah at \$6. Again, the same outcome, 1596, \$3, 1586 a \$50, 1576, 75 cents, and you can keep going back, you'll get to 1 cent, okay. You can make 1 cent become 13 trillion, right? Or 12 trillion, \$24 or 12 trillion or what you can do is so the way the compounding and rule of 72 works is there are three variables. One variable is the amount of capital you start with, the second variable is your rate of compounding, and the third variable is the length of the runway. If you do 7% a year, it takes 10 years. If you do 10% a year, it takes seven years. One of the beautiful things about the rule of 72 is, the rate of return and the number of years are interchangeable, right, it still works.

The math works the same way, you can do 7% takes 10 years, it doubles. Or you can do 10%, takes seven years, it doubles, this is very elastic and beautiful math. What now, the problem we have as humans, and this is one of the problems Warren realizes. If you ask Warren, "hey Warren, if you could have any gift that anyone could give you, what would you like?" He doesn't even hesitate for a second when he says this, "look, when they look at my corpse, they should say, man, he was old". The reason he says that the only thing he desires is a massive runway. He wants a huge runway. Why does he want a huge runway?

He wants a huge runway because he's obsessive, and fanatical about this. He knows those three variables, and he knows the runway is a very important part of that. If you look at the 40-year-old Warren Buffett which was in 1917, his net worth less than 30 million, his net worth when he was 40 was less than I think 13000 of his net worth today if he hadn't started giving

the money away. When he was 50, his net worth was around 300 million, maybe 3 or 400 million approximately, okay. It was less than a third of 1% of what it is today. 99 and two thirds percent of his net worth has come after the age of 50. Okay. One of the things about compounding is that, because it's geometric, humans aren't used to thinking geometrically.

You have to become fluent in thinking geometrically in your head. Again, let's go back and massage those three variables. You have the length of the runway, starting capital, and compounding rate. This kid with the Wilson Coin Operated Company, when he was 16 years old, he was looking at the life expectancy tables at the age of 16 to know what the runway was. I guarantee you, every year of his life, he looks at the life expectancy numbers, and he's, now, I think when he looks at it, he gets sad because it's not that long, but I think he'll blow past his expectancy levels. Because one of the things is you're in alignment. You tend to do better health wise and runway wise. That's good. But the important thing is that Arvind, what is the average age of the class? Ballpark?

Arvind: I would say it's about 26 on average.

Mohnish: Yeah. One of the unfortunate things is we didn't have this talk 15 years ago. That's very sad, because we've lost huge amounts of the runway, unfortunately. But the good news is that I think for most of you, you're probably going to live past 90, you might even live past beyond that, I mean, we have to see what happens in medicine in the last next, half-century or so. You might, certainly a good portion of the class might blow past a hundred, but I think 90 is a pretty safe bet. If you look at 90, and you look at, let's say 26, so we got 64 years. It's not the best, but it's workable.

We can work for 64 years. Here's the thing you got to figure out. We know length of runway, unfortunately, unlike the Indians, you don't have 400 years you got 64 years. The second variable is starting capital. Now, the second problem you guys have is you didn't start the Wilson Coin Operated Company when you were 15, and that's very unfortunate. But the thing is that you need to quickly after this class do an analysis of net worth. Very important to do analysis of net worth. You might be disappointed when you do that analysis, because of all these, high tuition bills, and everything else. But the thing is that you got to as quickly, if possible, get away from the crutches of Arvind our wind and start earning some real money.

You need to figure out a way, like that book said, how to get to a thousand. Thousand is not going to cut it for you, because your runway length has already been cut short. We need more than a thousand. We need maybe like a hundred thousand or maybe a quarter million and then we can get going. But the thing is that, effectively, we have control over the length of the runway, because statistically, that's going to probably work in your favor. The second thing we have control over is our savings rate. the other thing that's important is you've got to make sure that you're socking it away. If you have any difficulties, socking it away.

How many of you have heard of Mr. Money Mustache? Raise your hand, if you heard of. They're not very happy to acknowledge that they've heard of him, but they're just kind of tentatively acknowledging it. Anyway, I have a blog. It's called Chai with Pabrai. Sometimes if you get bored, you can go to that blog. I've got some of the earliest blogs I did, which is about a year ago

on Mr. Money Mustache. Mr. Money Mustache is a software guy. He graduated at 22. He didn't have any money, and he made up his mind that by 30 he was going to be retired, and he was never going to work again. I think he accomplished that goal well before 30, I think at 28 or 29 he was retired.

If you ever want lessons on, actually, it's worth going through and seeing how he did it. It might blow your mind a bit, kind of how he lives his life. But it's kind of fun to look at it and see what looks like a few Starbucks lattes in front of humans. Let me just show you, Mr. Money Mustache would not be caught dead in Starbucks. He ain't spending four bucks or five bucks or whatever on coffee. Not happening. But anyway, it's worth looking at Mr. Money Mustache. You might find his way is a bit extreme, but you might still be able to get a few things out of it. I mean, I think his gas usage in a year might be two gallons. He's biking everywhere. It's a fun lifestyle to look at how he goes about living his life. The fun part is he's got a wife who's amazingly not left him yet, and actually, she is wholehearted with him on much of this journey. It's kind of a fun couple. But anyway, the thing is that the savings rate is important since you didn't do the Wilson Coin Operated Company. Then the third piece, which we don't have as much control over is the rate of compounding. Of course, the reason you are in Arvind's class, I would hope, is to increase your rate of compounding. Hopefully he's been imparting some good lessons to you on that front. A few years back, my daughter had just finished high school and she had spent her summer working before she started college. She made \$5,000 that summer. I talked to her about opening an IRA and putting the 5,000 in the IRA, and I asked her a question. I said, look, you're 18 years old, at the age of 68, if this 5,000 grew at 15% a year, what would it be? Now you'll notice I pick all these years to make math easy for me.

The percentages I pick to make the math easy for you, because, I'm not the sharpest tool in the toolbox, you'll soon realize that. 15% a year doubled in five years, 50 years two to the power of ten. I already told you that's my favorite number. That becomes 1024. We throw away the 24, it's a thousand. The 5,000 becomes 5 million. Now, when I was talking about this to my daughter, I had just picked her up from the airport. She goes to school at NYU, and the flight came and at 2 in the morning, and I picked her up, I said, this is a great time to impart lessons and compounding. As she's dozing off in the car, we have like a 50 mile ride. I said, this is just perfect.

I started talking to her about the 5,000 in the IRA and the 15%. I'm getting no reactions. Then I mentioned the 5 million, and suddenly she's wide awake. Wait, how did that happen? What happened? How did you get to 5 million? Right. Then I went through the math again with her, and of course, the good news was it got seared in. The following year she did an internship and a cheap skate company in New York which will go unnamed. Basically, likes to use slave labor for interns. It was a very low amount she got paid. I think over the summer when she worked for them, she made like 3000 or something. She already knew that she should have made like 6 or 7,000.

It wasn't the 3 or 4,000, it was the 3 or 4 million that had been taken away from her. Without my prompting her during her exit interview at this place, she said, look, I had a great time working here, but you guys really need to change your policies. It is really terrible to take advantage of students like

this, not pay proper wages. It was very important for me to make the 7,000. I didn't make it. It's terrible shame on you. I was so happy that she did that. But the good news is that, that lesson of compounding was seared in. Now even when she has a two week break or something, she's trying to find work to keep pounding that money in the IRA and so on. The thing is that at 18 with 5,000, it becomes 5,000,019, again whatever she saves, you multiply a thousand by 69, it becomes that number. At some point, she's going to graduate, get off my payroll. I think that date is about a year and a half away. Then she might have a real income. I made her listen to Mr. Money Mustache. I don't think she's going to adopt his lifestyle, but a few things might have dropped off on her about Mr. Money Mustache. The important thing is that I think she realizes that the savings rate is important. Of course, the 15%, many of you might say, well, that maybe too high. Yeah, it may be, but what I told her is that we are going to basically go extremely concentrated. I told her if she wants, I can manage it for her. She said, that's fine. I put the first 5,000 in one stock, we're not going to screw around with this. We are going for a much higher rate than 15. So far, I have not blown up our capital. We haven't had any difficult conversations yet. That's going pretty well so far. But Arvind, can you put up the second picture, I prepared so well for this talk. I had to come up with two pictures. People come up with all these PowerPoints.

Arvind: Can you guys see the image?

Students: Yeah.

Arvind: Okay, great. They can see it Mohnish.

Mohnish: Okay, so maybe one of you can raise your hand and just read off the letters and numbers.

Arvind: Right, yeah, why don't you?

Mohnish: Go ahead.

Student: COMLB 26.

Mohnish: Yeah, so this is the license plate off on my car which my daughter took away. It was a BMW 6 series, nice car, top down, and all. But anyway, what does the license plate mean?

Arvind: Mohnish, one student said compounding my life, moving in the right direction.

Jimmy: Something about 26%.

Arvind: Yeah, repeat that again, Jimmy.

Jimmy: Compounding my life by 26%.

Arvind: Compounding my life by 26% one student said.

Mohnish: The thing is, when I drive this car in Southern California and in Irvine, I'm trying to impart lessons on compounding to my fellow drivers who I share the road with as community service, I didn't want to make it really complicated for them. I wanted to make it simple. You are on the right track, but we are not quite there yet.

Arvind: Yeah, go for it.

Student: Well, the LB is pound. It's compound.

Arvind: Yeah, compound.

Student: 26%.

Arvind Compound 26%. One student said.

Mohnish: That's perfect. Yeah, the LB is pound. Isn't that great? The problem in the scale of California is they only gave me seven letters or numbers, so I have to kind of convert pound into LB. But the reason I did that compound 26 plate was so that I'm reminded of it as an important mantra. When I first heard about Buffett in 94 it was very exciting. I was an engineer. I really hadn't spent, I mean, I don't think I'd ever really I might have bought a stock or two, but never done anything well in the market or anything. What I realized when I, and I was lucky in 94, the first couple of biographies on Buffett had come out, and then I read those, and then I was able to look at the Berkshire Hathaway annual letters, which opened up a whole big world for me, and that was great.

But what became very apparent very quickly in reading through the biographies was that Warren was all about compounding. He had, from 1950 till 94, when I first heard of him, he was compounding a north of 30% a year. In 1950, he had about 10,000, that 30% was on the 10,000, which is very significant. But then he got OPM other people's money, and he got a cut out of the other people's money. of course, that put a turbo path on his compounding engine and such. He ended up with, even at that time in 94, a very significant net worth. I was very intrigued by both his approach to investing and his intensity and compounding. I said, this compounding game looks like a very fun game, and it can be a very profitable game.

What had happened at that time in 94, is that I sold the IT company, I'd sold some assets and after taxes and everything, I was left with about a million dollars which I really didn't have any need for or use for. First time I had money ever, because, until that time, I had borrowed on credit cards and, and was always in debt trying to grow the business and such. This is the first time, actually that my personal balance sheet was in the black, if you will. There was no debt and such outside of kind of, financing receivables and so on. I had this million, and I said, what if we put it on the Buffett compounding engine, and what if we go for 30 years at 26% and 26% doubles every three years. We again, get to my favorite number two to the power of ten, and the million becomes a billion. I said the billion is a lot better number than a million. And the best part of the billion is I can do this while keeping my day job, keep running my company, but I can try to see if I can figure out investing and figure out how to get, I was being modest with the 26%. I mean, Warren when he was 11, was looking at kind of like, low thirties in compounding. For the most part, that 26% I mean, I think from 95 to 99 was 2000, was north of 70% a year. I mean, I had done really well. That money had gone more than 10x in five years.

It continued at a very high rate even after I started Pabrai fund till 2007, I think from 99 to 2007, Pabrai Investment funds, before my outrageous fees, was about 36% a year. After my outrageous fees were the kind of high twenties. Then of course we had the financial crisis. We went down a lot. We went down two thirds. That crimped the compounding rate, but then

from 2009 onwards, again, it took off. It's done well since. The bottom line is, I don't know if this game I started playing in 94 is supposed to end in 2024. But the thing is 2024 which is about seven years ago away, one of the things this is kind of interesting to me was in 94, I was exactly 30 years old, and in 2024, I was going to be 60. I said, okay, we'll kind of compound from 30 to 60. But now that I'm a little bit older and wiser, I said, why don't we compound till one day before dying? Why stop at 60? Because, we got to keep maximizing the runway.

I'm also hoping that I get super old before I lose my marbles and don't know what I'm doing. I think the important thing is that just keep these things in mind, starting capital, savings rate, length of runway, and then the fourth variable, which is your rate of compounding, I think there, you just have to, if you are, Warren was able to do it at high rates, because he was very focused on that. For him, the high rates were very important. He sought out places and kind of crevices in the markets, which gave him high returns. He still does the hunt that he used to do when he was in his twenties, if you will, still interested in similar things. I think with that Arvind maybe we'll open it up and go into questions.

Arvind: That sounds great, Mohnish. Thank you so much. Maybe we can start as the students kind of assemble their questions. I've been asking every speaker this to start this year, which is, how do you think about your firm's competitive advantage, what are its components? How do you see that competitive advantage growing or decreasing over time?

Mohnish: Yeah. Well, I think that's a really good question. When I started Pabrai Investment funds, I had never worked in the investment business. I really quite frankly didn't even know exactly what a Hedge fund is and such. I took some pages from Logan Stein's book and took it to this lawyer and said, listen, I want to set up an investment partnership like the Buffett partnerships. Here's the rules on these pages. Please convert this into a document or a few documents that create a legal structure that we can put at that time my friends were interested in investing. It was not even supposed to be a business. There were eight of us. They were going to put a total of a million dollars into this, and I was going to manage it. I wanted to manage it using Warren Buffett's rules with zero management fees, 6% hurdles, one-fourth over 6% coming to me, and so on, and so forth.

Similar rules redemptions once a year and not talking about the holdings. Whatever rules I could see that he had used during his investment partnership years, I cloned those. It took me a few years to realize that the mindless cloning that I had done in 99 actually gave Pabrai Investment funds huge advantages, and it created a moat that is impossible for my competitors to cross. For example, what I did from 99 till now, I have tried hard to educate my current investors and potential investors about the importance of these attributes. Whenever they're giving a manager money to invest, and of course some of these attributes it'd be very hard for them to find managers who will give them that type of deal or rules.

Let's talk about one of the rules which I copied from the Buffett partnership, which is "no management fees", the 6% hurdle and taking one fourth over 6%. The thing is no management fees is an impossible fee structure for almost any investment operation that has a team. How you're going to pay the team. Of course, one of the things I learned from Warren Buffett is a

team in an investment operation is an oxymoron. You cannot delegate any part of the investment process. You can't kind of look at CliffsNotes versions of the businesses before you invest in them. You should know the businesses, and you can't know the businesses if your analyst is doing all the work. At Pabrai Investment funds in 99, when we started with 1 million, and now with about 840 million there's no analyst, there are no associates, there's no team.

I have a few part-time admin assistants. I used to have one part-time admin assistant, but now, we've got our family foundation, a few other things. There's a little bit more admin backend needed if you will. But there are no full-time employees. I think the total payroll of even all my admins and everything is probably under 150 to 200,000 a year. We don't have really much in terms of fixed cost. Most investment operations at my size, they will charge one and twenty or two and twenty. At one and twenty, you would pick up 8.4 million in fees according to what Buffett calls just for breathing, and it's stupid to pay a manager 8.4 million just for breathing. I can breathe without the 8.4 million.

One of the things I've made sure in every letter I'd sent to my investors, I make sure that I reinforce for them the importance and the good deal that they're getting when they don't pay management fees. What happened is that for many of my investors, when they came and invested in me, it may or may not have been important to them that this was a fee structure, but for many of them that came to me, this was very important. But after a few years with me, for almost all of them, it becomes very important because I'm really good at brainwashing. I brainwashed them into understanding not to accept 1 or 2% management fees, because they're being taken to the cleaners, because if an investment manager earns you 10% a year and he's charging two and twenty, well, you are down to 8% after paying the 2%, then you pay 20% on the 8%, another 1.6%, you pay 3.6%, 36% of the returns have been swallowed up in frictional costs.

When you compare that then to the S&P, it's really hard to beat the S&P if you've got 3.6% in frictional costs being taken off the top. That's the reason why most active managers underperform. I never realized when I cloned the zero-fee structure, I cloned the zero-fee structure because I was starting Pabrai Investment fund with a bunch of very close friends. I thought this was a very fair structure, and I thought that if I don't make them at least 6% a year, I don't deserve to get anything. It just made kind of sense to me from an ethical perspective. But what has happened since then is, not only is it ethical, it's actually created a moat and it becomes a competitive moat. I mean, even a much larger shop cannot cross the moat.

I think that the zero fee structure gave me a huge moat. I think that copying the second part of the Buffett partnership, which was not having analysts, has also given me a huge moat. Basically, I love figuring businesses out. I love hunting for bargains, and I love the fact that I have no payroll, why give all the great exciting work to someone else, and then pay them a huge amount of money to do that when it's so much fun to do it yourself. I think these are some of the things that have been huge competitor advantages. I kind of, I would say I'm grateful to Warren that I stumbled into it just by trying to clone and in fact, today someone sent me a recommendation of a book, and this guy said that the title of the book was called Copy, Copy,

Copy. As soon as I read that title, I ordered the book, because, I am Mr. Copycat, I have no original ideas. I just want to copy, copy, copy. Hopefully in a few days, that book is going to show up, and I'm looking forward to reading it. Other questions, Arvind.

Arvind: That's great, Mohnish and we're going to jump into more, but just on the investment side, how do you think about your competitive advantage? The capital base you talked about and your structure that's really profound in terms of your investment process, do you think about competitive damage there, or?

Mohnish: Well, actually, one thing that has developed recently, I think one of the things is that the key to doing well, I think in investing is to be inactive. Spend time talking to BC and HBS students and talk to them about the Peter Minuit and the Indians and the Wilson Coin Operated Company, instead of fiddling with the portfolio. It's the less activity you have in your portfolio in general, the better off you are. The single biggest mistake I made historically is being too active. Smaller team sizes will, in general, lead to less activity, because you're going to have limited time to come up with ideas and things. I mean, if I had 10 analysts at Pabrai Investment funds, high IQ guys cranking all the time. They presented three ideas a week and they'd all look great, I'm almost sure the results wouldn't be so good.

On the investment side, one advantage is smaller team size means that you're going to have in general, it's just going to take you longer to get through stuff, which is good. I think it's an advantage. The second thing that's been a more recent advantage, and I didn't realize it until just last few weeks, is that I've made a major pivot and I made some changes in the last year where more like last, I would say 18 months or so, where I've very aggressively started moving into investing in India. I picked India for two reasons. One is I would say it's been almost nearly two years that I haven't found much to buy in the US. I know, and I'm a bargain hunter, I like to buy things at half off or less in the US has been very slim pickings from my vantage point, been very slim pickings for a very long time.

The things I've been able to find have been kind of these, I would say, anomalies. Like I found the airlines were misunderstood and mispriced about, 14, or 15 months ago. We were able to put some money into the airlines. Then I was actually a quarter, I had a Warren and then the following quarter of Berkshires into airlines as well. That made me feel good that I wasn't completely, losing my mind if you will. But the thing is, we had to go into an area in a very ugly industry like airlines where pricing is set by your dumbest competitor, high Capex. unions and consumer case, and just every, every possible thing that is horrible about the opposite of the Wilson Coin Operated Company is the airline industry.

That's where we were finding stuff, whereas what I found is that I went and looked at India. Indian markets have moved up, but I think there are still plenty of pockets in India, which have been a lot like shooting fish in a barrel. Warren's partner, Charlie Munger says that he wants to shoot fish in a barrel, but only after all the water's been let out. In India, I don't think the water's been let out of the barrel, but the fish are still in the barrel. There's still swimming around, there's still some water in there. I haven't found a way to get the water out, but that's still way better than fishing in the ocean.

Another comparative advantage that has developed, I would say in the last year or two has been India.

Then just to give you some statistics, what I myself found stunning is that, the amount Pabrai Investment funds has invested in US domicile companies now is under like 13% of the portfolio. Out of 840 million is the lowest number I ever had. I mean, historically, we have almost everything in the US and India is like 45% of the portfolio. There's been a huge change going from nothing in India to 45% over the last three years. At the same time not finding much in India. This particular advantage with India, as I was thinking about it, I realized that I had some natural advantages. I happened to be Indian, which was a good thing. I'm familiar with the language been running a foundation there and have obviously been going back and forth.

For me to figure out these businesses I'm in India every six or eight weeks now, which is a lot of fun. When I look at the people that I would normally think of as very good investors, basically, those folks are really good investors, but they aren't fishing where the fish are. It doesn't matter how good a fisherman you are if you're not fishing where the fish are. I think the US markets have a problem in the sense that the number of listed public companies in the US is now down to less than 3,700, whereas 20 or 30 years ago, it was close to 8,000. The number of publicly traded companies in the US continues to go down which is a problem and the number of brain cells employed picking through those 3,600 odd companies continues to go up.

When you combine the two and then you get these huge runs in the markets that like we've had you get what I would say pricing to perfection. I'm sure there are opportunities even in US markets, there's all these opportunities in all markets, but I think those opportunities that are whole different kind of layer of the magnitude of difference between the US and a place like India. That's a more recent competitive advantage. Again, I'm too dumb to figure these things out in advance. I just stumbled upon them, my full name is Mohnish Forrest Gump Pabrai, and I'm very happy about my middle name.

Arvind: That's a wonderful combination. Thank you. Other questions?

Student: I have a question regarding the running portfolio. One of your holdings is doing quite well. It's like Fiat, do you think that we should lower down as a percentage, even though you think in the future it's going to be what?

Arvind: Mohnish, do you want me to repeat the question?

Mohnish: That would be great actually Arvind.

Arvind: Okay. The question was if one of your holdings such as Fiat has grown significantly, do you feel a need to sell down the position to manage the portfolio allocation to it? Is that correct?

Student: Even though if it's in the future, I mean?

Arvind: Even if in the future you think it's going to go up further?

Mohnish: Yeah. Well, let me give you some real data. It doesn't make my stomach churn, but it might make your stomach churn a bit. One of my funds is the offshore fund, the PIF3, PIF3 has about 200 and 40 odd million in assets. About 40 plus percent or close to 40%, maybe 35, I think it's about 87 million position is a company in India. That's one position in that fund. We got 240

million let's say in assets. You might say, let's say 90 million, for example, it may be close to 90 million in this one company. Fiat isn't even the biggest of my problems. It's not the biggest holding in that fund. It has another 40 odd million of Fiat, so I think maybe 45 million.

You take this \$240 million fund and you have 135 million sitting in two stocks. I think that if I look at India, for example, for that fund, out of 240 million, a 135 million is in India, okay. Out of the 135 million, 90 million is one company. My perspective on that is we are not going to cut the flowers and water the weeds. It is a very stupid gardener who cuts flowers and waters weeds. I'm actually going to address this to my investors in my next letter just so that they get some understanding that I haven't completely lost my mind. But the good news is that that fund, all the funds are closed. Why do we have 90 million in one stock? Well, we have 90 million in one stock because 30 months ago we put less than 11 million into it.

What am I supposed to do if it goes up 9X and I'm not going to sell it because it went up 9X. What I'm going to do is, first I'm going to say, well done, Mohnish, well done. The Indians would be proud of me if only they'd given me the cash and instead of their Chief Investment Officer, we'd be off to the races. This particular company when I first bought it, two and a half years ago, I thought we would probably get in five years, somewhere between 5 and 10 times our money. That was my understanding in 2015 when I made the investment, and it's been only two and a half years, and we are approaching 10 times. But the thing is that the way it works in investing is you really learn the business after you own it.

You don't really know the business when you're just analyzing it from the sidelines. In the last two and a half years, I've actually spent a good bit of time trying to really understand the business. I had some good understanding of it, I think when before we invested, but I would say that understanding has gone up probably 3X or 4X since then. Because I've understood a lot more, and this is one of the fun things about this business is the, the learning is never ending. The best I can tell is run by better people than I thought were running it. The moat is wider and deeper than I originally thought, and there's a number of tailwinds as far as the eye can see. At this point my take is that because the funds are closed, and of course the people in that fund have done really well. I don't have this degree of concentration in the other funds because they didn't, it was a very small market cap. I couldn't get that much money into it. We own pretty much the maximum we can own.

The thing is that if it goes down 20%, it really doesn't matter, because it's the same set of investors. We don't have new money coming in or money going out. I mean, there might be some money going out, but we don't have new money coming in at these levels. For example, let's say, and I'll just give a hypothetical number. Let's say that fund is up 80% this year. What does it matter if the next quarter is down 20%? We are not concerned with the volatility. We are just concerned with the fact that I understand that business, I think that business has some lags. I think if I were to sell and buy anything else, it would probably be inferior, both in terms of knowledge and in terms of the kind of return possibilities in the future.

Now, if we find other stuff that if we find another 5X and we don't have cash and this thing looks like it's only got a double or something left in it, we

might start trimming and do that. That's the best I can, so Fiat 20% just bounces off me. 20% is nothing. When we get to 60% in a single stock then I have to think about it, but even then, I'm not going to take action just because it's 60%.

Student: In your book, you've mentioned making tradeoffs between making Kelly Formula bets and having higher exposure to volatility. Do you think that this capital allocation strategy that your fund employs is optimal for all investors, especially those of us that are young and are starting off just trading our own portfolios?

Mohnish: Yeah, so one of the mistakes in my book is the whole discussion on Kelly Formula. If I were to rewrite the book, I would not mention the Kelly Formula. The mistake I made in the book is that everything about the Kelly Formula that I wrote is correct, except that it only works when you get to do a zillion bets. If I'm going to do a thousand-coin toss and I have 51% odds on heads and 49% on tails, and I keep betting heads, it's going to work out for me. But in the stock market, I don't get to do repeated bets very frequently with very well-known odds. It's really infrequent. This was not clear to me when I wrote the book. What I would suggest is if you're reading the book, just ignore the entire section on Kelly Formula. Okay. My apologies. The second thing is that I've never invested more than 10% of my assets into a single stock. Usually, I like a 10 by 10 kind of bet, 10 bets are 10% or some bets are 5%, some bets are even 2%, just depending on the conviction. But I'm never willing, and definitely with other people's money, I'm never willing to go beyond 10%. I think there's a lot of research that shows that if you have a 10 or 15 stock portfolio versus a 40-stock portfolio, you don't gain much in terms of diversification by going from 15 to 40, but you're going to give up a lot of performance by doing that, because you're not going to be able to come up with 40 ideas that are all undervalued and look great.

Arvind: Other questions, yeah, Jay?

Jay: My question is regarding kind of the economy right now, your curves are pretty flat, and historically that's been a sign of an oncoming recession. I was wondering if your firm takes any, like Black Swan investment positions, or how do you prepare yourself for a potential recession.

Mohnish: Yeah, I mean, I think that doing any of those things would violate the Bible. We have the commandments laid out by Buffett, Munger, and Graham. We are not going to violate those commandments. One of those commandments is thou shall not fixate on macro and thou shall not try to forecast recessions. Thou shall not short anything. In general, thou shall not hedge. Those are the mantra. Basically, I have no ability to forecast recessions. I have no idea what the economy is going to do. I have no idea what a lot of things are going to do. I think it's hard enough trying to figure out what a single business is going to do in the next two or three years, trying to overlay and figure out what, complex economies and such are going to do is very hard.

I think what you want to do is, the good news of the stock market is that you can place, you can place bets where anything related to the economy becomes irrelevant. I'll give you an example, a few years back, I think it was going about a long time, probably 15 years ago I made an investment 15 or

16 years ago in a funeral services company called Stewart Enterprises. They've been acquired since then. They're part of Service Corp. That stocks. But anyway, at the time I made the investment it was trading at a PE of two. I subscribe to Value Line, and one of the things I always like to look at every week is they were listing of the lowest PE stocks is always kind of a fun list to look at.

Usually, I've been looking at that list for, 15-plus years. Usually, the lowest PE stock is a dog you don't want to touch. It's there for a lot of very good reasons. Like, recently we'd find valiant in there, for example. But even amongst the lowest of the lowest PEs, you hardly ever get to a PE of two. I mean, a PE of two is, you're going to make your money back in two years. In 2002, I noticed this funeral services company, which I never heard of before, sitting at two times earnings. I just thought in my head that, hey, the revenue of this company isn't going anywhere. I mean, I don't know who's going to die in Peoria next year, but I know how many are going to die in Peoria, Illinois next year.

The good news, the other thing I thought about at the time was that when your Uncle Fred passes away, you're not going to call 10 funeral homes and take the low bid. I hope you won't do that. What you're going to try to do is either go to one that has some history with the family, or just make a call to someone who looks like they're a decent operator on the other end. This is not a business where the lowest price operator is going to kill the higher price operator. It's a recurring revenue business in the sense that it's a franchise. The other thing about the funeral services business is, I can almost guarantee no one in this room is aspiring to enter the funeral services industry. We don't have HBS grads or Boston College grads rushing into funeral homes to make that industry vastly more competitive and destroy the economics, that's not happening.

When I looked at that, I was, all these thoughts were going through my head when I'm looking at Stewart Enterprise at two times earnings, and of course, I noticed suddenly I was drooling as well. I wiped the drool off my face and decided to look into the business. Of course, there were issues, there was hair on it. It had a lot of leverage and debt, but when I sifted through all the details, it was obvious that this was bulletproof. If you are concerned about a recession, why not look at Service Corp? Of course, the problem is that service corp also used to be at \$2 a share with earnings of \$1. Now, of course, with the doubt, 24,000, last time I looked at Service Corp, it was at \$37 at like 17 times earnings, or 15 times earnings or something. Everyone's really happy to own it. But no one wanted to own it when we were at two times earnings.

My take is that, let's say, for example, today I had an investment in Stewart Enterprises at two times earnings. Do you think I care that there's some recession coming? What would be the impact? In fact, this is a funny thing. This is the kind of interesting thing about option-driven markets. Right after 9/11, we had a major drop in stock prices. I mean, equity markets went down, we had airspace shut down, all kinds of ugly things going on. Many of you guys are pretty, pretty young at the time, but Pabrai Investment funds was up and running at the time. Very clear memories of all kinds of ugly things going on there.

I looked at the stock chart for Stewart Enterprises during the period of September to December 2001. Now, as morbid as this may be, if anything, the prospects of their business went up after 9/11. If you're bearing dead people and people are concerned about an escalation of terrorist attacks, you should be going all in to store enterprise stock. I mean, that's going to rally, right? It tanked with everything else. You explain that to me. This is the fun part about the equity markets. It took store enterprises down, along with United Airlines. Now, United Airlines went down for really good reason. I mean, their planes were used to go into the World Trade Center, airspace was shut down, all kinds of things were going on, which should have led to united stock prices going down a lot. But why should Stewart Enterprises stock price have gone down at that time? This is the nature of auction driven market. What I would say is that, it is not that hard. If you ever concern about recessions or whatever, there are ways going long stocks to play while retaining the upside without really having much of a downside. You just have to dig and find those things.

Student: It is said that a lot of investing is looking under rocks and seeing, which ones have good stuff under them. How do you choose a sort of a base level what rocks to actually look under, since it's just you and you don't have a lot of analysts looking under a bunch of them to just get numbers?

Mohnish: Yeah. Well, that's a very good question. I was finding it difficult to find rocks with anything underneath them. I think in the last two, three years, the best source of ideas for me has been emails from Joe Public. Every day when I go to work at 11:00 AM, my assistant gives me a folder with all the emails that have come in for the day. Unlike most of you, my emails don't come to me. They go to my assistant, they get printed out, they get put in the folder, and I get that folder at 11 o'clock. I get that folder with any bills or wires or anything I got to deal with. By 11:15, I'm done with the folder. It's about 15 minutes of dealing with emails.

Joe Public is really benevolent and nice to me. Joe Public sends me interesting ideas. I mentioned that I have this 9x on this stock in India. Well, that was Joe Public, thank you. In fact, his name was Parry Pasricha. I still haven't ever talked to him. I've never met him. One of the most elegant analyses I've ever received was the analysis Parry Pasricha sent me. Now we have, I think 170 million in gains and counting just, because Perry decided to be benevolent and, send me an email. Thank you so much, Perry. The rocks I'm looking under, I'm just around you guys, man. I got no analysts. I got no payroll. I got nothing, man. I'm dependent on you.

I'm totally depending on you sending me the 10 bagger. Please make sure you send them. I'm internally grateful. I think, and what I decided to do in India was that in India, I just decided that I'm going to go every six weeks or eight weeks. I'm going to spend Monday through Friday. I want to try to see three to five companies in a day. I don't care what they do, I don't care what their earnings are. I don't care what the multiple is. I don't care what the industry is. I just want to learn. Basically, I meet about like 10 to 15 companies a week when I'm there. Every six or eight weeks I keep doing that. It is an incredible amount of data and info that comes in and through that, and I haven't been doing it for that long.

I've only been doing it for like about a year, basically. Already we found a whole bunch of stuff that there was a misunderstanding or things people

didn't understand. One of the things is, I have disadvantages in India, because I'm not there, but I have advantages too, because I can take a bird's eye view that local market participants sometimes have difficulty with. Sometimes I can overlay things that I've learned in the decades of investing, which have given me some mental models that people aren't able to overlay when they're looking at a particular investment. Some of those things kind of help out and such, That's kind of how, right now, basically the modus operandi is get on an airplane, meet 10 or 15 companies, drill down, see if there's any meat on the bone, and then just keep doing that.

Arvind: Yeah, go for it.

Student: Yeah, I'd be interested to hear your take on passive investing. Obviously, you have very low original costs, but do you think that over the next decade or so you'll be able to get decent rates of return or how are the reasonable rates of return by investing in broad global markets?

Mohnish: I think that globally, you have something like 50,000, and these are 50,000 entities straight in an auction driven manner. By definition, they cannot all be efficiently priced. I mean, markets gyrate within fear and greed. I mean, I'll just give a very simple example. Let's say, I own a town home in Boston. Let's say, I bought that town home for a million dollars. Let's say I have a knowledgeable realtor who's a good friend of mine, and I tell the knowledgeable realtor, listen I want you to show up every day to have coffee with me. I want you to just tell me what my place is worth every day. First of all, he's got to think you're an idiot for asking him to do that. But let's ignore that for a second.

You bought the pay for a million. Next day you meet the guy for coffee, you ask him, hey, what's my place worth? He says, listen, idiot, it's still worth a million. Okay. Then two days later, you ask him the same question again. He's going to say, it's still worth a million man. Then, three months go by and he'll say, he's getting tired of these coffees. He's going to say, you're lucky, market has moved up about a percent. I'm seeing transactions about 1% higher than where you were, or a half a percent higher or something. Then again, you're irritating him every day by asking him the same thing. He doesn't have much to do. In the course of a year, if you just plot the number he gives you every day, I mean, it'd be hard for you to have a range, which would be more than 950,000 to like 1.15 million at the outer end, maybe even tighter than that.

You might be at a million to 1,000,001, for example. Or even 5% range in a year. Very tight range. Now, if the town home were listed on the New York stock, every six seconds the price is changing, I can assure you that the range on that in a year would be something like 700,000 to 1.3 million, okay. It would be a much wider range than what your intelligent broker gave you. The reason for that is your intelligent broker is looking at valuations in an intelligent manner. Auction driven markets by their very nature, just aren't that efficient. I just gave you the example of Stewart Enterprises. I mean, there is no reason under the sun, it should have traded at two times earnings. There's no reason under the sun, it should have gone down after 9/11.

It should have gone up or at least stayed flat, but it went down with everything else. Markets paint things with a wide brush. If we have, let's say

a paint company, let's say Axalta, spun out from DuPont, they have a bad quarter for some reason. A lot of companies have one quarter means nothing in the life of most companies. They're going to be taken out, back and shot, okay. Because they're in a bad quarter. No one's going to care about, hey, let's look at this over 5 or 10 years. Because of that nuance, you are always going to have underpricing or overpricing of equities almost everywhere, in almost every stock. I mean, if I look at the stock price of Amazon, Amazon stock price, or any company stock price is supposed to reflect the sum of future cash is going to produce from now till the time the company's gone discounted to present value by some, reasonable rate of interest.

What cash is Amazon going to produce? First question, when's Amazon going to be gone? Okay, No idea. I don't think any analysts have any idea when Amazon is no longer on planet Earth. Okay. We don't know when that is. Then the second question is, what are its cash flows every year from 2018? Let's take a hypothetical case. Let's say Amazon in 2045 ceases to exist. Okay. From 2018 to 2045, what are its cash flows? I don't have the foggiest idea. I would even go one step further and say, I don't think anyone else, including Basils, has the foggiest idea what those numbers are. Without knowing all those numbers, somehow the market has ascribed a price to Amazon. It's come up with a very precise number down to the penny of what that business is worth. Now, the odds that the market has precisely figured it out, it is as close to zero as you can possibly imagine.

What is my reaction to Amazon? Well, if I know what they're going to produce from 2018 to 2045, and I can discount that back, then I can tell you whether to buy it or not. But my answer to Amazon is, take a pass. I have no idea. But when I look at Stewart Enterprise that are two times earnings, I just got to ask myself a question. Are humans going to die this year? Yes. Are humans going to die next year? Yes. After two years of humans dying, will we have earned in earnings what is equal to the price of the stock? Yes. Okay, so then let's buy the stock. Let's hold it for two years. Let's ring the register so that now price is equal to earnings, and we've already cashed for two years. Now let's see if in the third year, humans are going to continue dying.

That's all I have to do with Stewart enterprises. I didn't even have to know whether humans are going to die in the third year, and whether we become, suddenly become immortal, I just had to know that they were going to die for at least two years. That's it. That's what you want to do at investing, is you want to pick out the 50,000, the ones that you can explain to a five-year-old or a eight year old without losing their attention in two minutes or less. Then if you can do that, then you make the investment.

Arvind: Mohnish, thus far you've touched on a broad array of topics. I just want to explore one or two of them thus far, which is, you talked a lot about this long-term mentality in order to be successful over the long term, you're subject to your LP, your investor base. How do you ensure that they have a similar mentality to you? How do you go about evaluating them? Then the second piece is, you've talked about not taking macro risk in the portfolio and the like at different moments in time you've raised cash. Yet you didn't necessarily put that to work, day one. So, inherently you're taking some macro risk or some drag from that. How do you think about that?

Mohnish: Yeah, let's go back to the book, which said how to make a thousand dollars. The thing is, we don't need to really be concerned. I've never been concerned about redemptions. I've never been concerned about LPs. I've, I think it's only been twice in 18 years when I've actually picked up the phone, called an investor and told them, look, I think it's not a good idea to redeem. In both cases, they were institutions, because most of my investors are individuals sign it with individuals. They were institutions. They were taking out large amounts of money. I was okay, I could deal with it, but I felt that they were taking it out at one of the worst possible times. I tried to impress upon them not to do it.

I failed, they took the money anyway. I think it was the right thing for me to do in that case. But generally, I'm not a proponent of ever telling people not to take their money. I think they should take their money whenever they want to. I've never been concerned ever about redemptions. The reason is that the kid at 11 who was trying to figure out how to make a thousand, didn't know what a Hedge fund is, didn't know what a LP was, he was just looking to compound his own capital. The good news is, I've got slightly more than a thousand dollars now, and I can compound that capital with zero LPs. If I have LPs, first of all, my partners, it's a really great group. I like the group. They're mostly first-generation entrepreneurs, made the money themselves and all that. It's kind of a fun group. I like the group. They're the good guys, good, good families all over the world.

But if every one of them took away the money, it's not a problem. I'd never banked on it in the first place. I'm happy managing their money, managing their, being a fiduciary for them, and all of that. But if in the future to decide I'm not the right guy, and like, for example, I'm going to lay out for them that we've got this, two-thirds of assets in two businesses in companies that, that they probably are not thinking is the next Google. Some of them may think that I've had a good writer for Pabrai Investment Funds, but I think I'm going to get off the bus. That's perfectly fine if you want to get off the bus, no problem.

I think that managers should just ignore redemptions or volatility or any of those things which could lead to flight of capital. I think that that's, it's just the wrong way to think about it. I think you just want to focus on doing the best job you can. You invest the money. I'm like, for example, the Fund 3, if I could, Fund 3 is the only fund that I can't put money in because it's an offshore fund, and as a US resident, I'm not allowed to put money in that fund. The other funds don't have the same concentration. If I could, I would put every penny of Pabrai family assets into Fund 3 out of all the funds I have. I think that is the place I want to be with those concentrations because when I look at the future, I don't think any of the other funds can hold a candle to what that fund's going to do. If I had a choice, that's where I'd put it. I don't have that choice such as life. The thing is that I'm not concerned with volatility and I'm not concerned with people leaving none of those. I think it's a privilege there with me. If they leave, I'm still going to be happy. I'm still going to be talking to your class if you allow me to come back with zero assets on the management. Then they.

Student: It's not specifically about your assets, Mohnish, we're grateful to have you every year.

Mohnish: You had the second part of that question about this?

Arvind: Yeah. The second part is.

Mohnish: The cash drag.

Arvind: Yeah, so the second part, Mohnish, is you were talking about, the Buffett, Munger, Ben Graham rules and avoiding macro risk and bottoms up and so on and so forth. At different moments in time, I think relatively recently, you've raised money to put, to work in the funds. Most of the time they're closed, but sometimes investors are blessed to get, this window to invest with you. Inherently by having maybe 30% or 40% of the funds in cash when you're raising money proforma of that inflow you're taking market timing risk in some shape or form.

Mohnish: Yeah, but.

Arvind: How do you think about that?

Mohnish: Yeah, but I don't think about it that way.

Arvind: Yeah.

Mohnish: You got to think about it in terms of a business. I mean drag whatever, I don't care about the drag.

Arvind: Right. You'll wait for the no-brainer basically.

Mohnish: Yeah, we started two funds. We just started at India Focus Fund. There's a US and an offshore variant. By definition, it's going to take time to put that money to work.

Arvind: Right.

Mohnish: I think it's sitting on a significant cash position, irrelevant. What we may have some impact on performance, maybe for a year or two, eventually we're going to find places for the money to work.

Arvind: Right. I hadn't heard you address that before, so it was a question on the list. I thought off.

Mohnish: I think the best way to think about all of these things is, if your family had a fortune of a hundred million and you were interested to invest the hundred million, I think very few of you will be looking to get a hundred percent in the market in one day. Unless you're buying an index and willing to hold that for a long time.

Arvind: right.

Mohnish: If you are going to pick stocks, who cares? It takes you three years, or five years to find all the stocks you need to put the money to work.

Arvind: Right.

Student: Mohnish, what is your opinion on purchasing, on insurance operation or managing another business with a float that would give you permanent capital?

Mohnish: Arvind, can you just repeat the question?

Arvind: Sure. The question is, Mohnish, what is your opinion of managing an insurance float or a vehicle that would give you more permanent capital?

Mohnish: Yeah. I bought an insurance company about three years ago. It's a good company, good people, but it was a mistake. Thankfully we've reached an agreement to sell the business. It hasn't closed yet, but it's going to close soon, and it'll probably be a good asset for the buyer. But I have learned that it's a difficult business and I used to have delusions about the wonders of float. All those delusions have been washed away. I don't think I'll be entering the insurance business again in this lifetime. I would like to enter the funeral services business, though. At one time earnings, that'd be great.

Arvind: Perfect.

Student: Well, I wanted to say thank you for entering the business. I really enjoyed reading your book from a philosophical perspective as a former entrepreneur or still an entrepreneur, how does that impact how you view management teams?

Arvind: I can repeat the question.

Mohnish: Yeah, yeah, please.

Arvind: The question started with firstly, thank you for writing your book. It's wonderful and very illuminating. Then the question was, as an entrepreneur and former entrepreneur, how does that influence your interaction and learnings from management teams?

Mohnish: Yeah, I think it's a huge advantage to have run a big business before, and even Pabrai Investment funds to some extent is a business. But it's a huge advantage to have done that. I think Buffett has a quote he says how are you going to explain to a fish what it is like to walk on land? He said that looking at businesses and running a business is the same difference between trying to explain to a fish how to walk on land and actually walk on land. It is a huge advantage. The good news about this is the scale doesn't matter. It was very important for Warren to run the Wilson Coin Operated Company. It didn't matter that revenues never even hit a hundred thousand or a million. That is completely relevant.

There are two factors. One is that the way our brains are wired we gain a huge amount of advantage if we get exposure to running businesses during our teen years specifically between the age of about 11 or 12 to about 20 or 21. That window of time is when the brain is set up to specialize. In our modern society, in that window of time we are asked to be jack of all trades, take classes and all kinds of subjects and all of that. By the time we start specializing that window is closed. If you study people like Gates or Buffett or Leonard DaVinci or a whole bunch of other people, you'll find that they had some very amazing experiences during that 11 to 20 or 22 periods.

If they didn't have that experience in that period, we wouldn't have heard of them. But better late than ever. For all of you in the classroom obviously, that window is gone, but you can still learn. It's not going to be as efficient, but you can definitely still learn. I would say that even if it's a Mickey Mouse business, some small thing you're doing somewhere, I just think you want to learn a lot. You learn an incredible amount by meeting payroll, paying rent, by negotiating a lease, a hundred other things. I think that the scale is unimportant but being in the trenches and especially if you're blessed and the business fails then the learning is exponential. I hope all of you try to

start businesses or run businesses, and I hope you fail, because then that'll sow the seeds of greater success down the load.

Student: Yeah, Mohnish you've had a lot of experience and success in investing in commodity-based businesses, I'm wondering what sort of mental models or skills you have that a lot of other value investors, particularly Guy Spier stays away from that area, don't have?

Mohnish: Well, I think commodity-based businesses can have moats. The single greatest moat a commodity-based business can have is being the lowest cost producer. If you have two ingredients in a commodity producer, one is they're at the bottom end of the cost curve. The second is that they don't have leverage. This is money in the bank, especially if you can get it at a low valuation. If you were to own the oil fields of Saudi Arabia where you're bringing up oil at \$2 a barrel and you're selling it for 60, that's a really good business. If you were to own, the iron ore fields in the Pilbara region of Australia where you just scoop up Earth and just transport it to a port and then send it to China, and they pay you for the iron ore surface mining, it's a great business.

There are many commodity businesses that are really good in any environment, and we've seen that. I mean, they built the whole economy on that. If you've got iron ore reserves in Brazil, if you've got just low-cost reserves and low-cost operations, putting you the lowest end of the cost curve, no leverage and a purchase price, which is very low, because the world's not interested. Usually, for example, let's say for example, some commodity price collapses, let's say iron ore price collapse or oil prices collapse, etc. At that point, the best thing to do is to focus on these attributes, so on one end, you can buy, for example, things like the oil fields in South Arabia. On the other hand, you can buy offshore oil being sourced offshore in the North Sea and so on where the cost to bring it up, maybe north of \$60 a barrel.

There are many choices you have. You're better off staying away from the high-cost producers even when they're cheap, and you are better off focusing on the low-cost producers. For example, one of the reasons we've done well with this company in India, which has given us a 9x so far, is that there is a moat, it's kind of difficult to understand the moat in that business easily, but they're the lowest-cost producers in the market they serve. That gives them a huge tailwind and that tailwind is enduring for a long time.

Arvind: Carry on, yeah.

Student: Well, finding simple businesses with durable moats in distressed industries would obviously be the ideal investment situation. Something you already kind of alluded to is that there's a very large number of investors globally searching for those exact investment opportunities which can result in a limited number of companies that do meet all the criteria that you outline as the core framework in your book. Which of those factors are you willing to compromise on, and which ones do you consider deal breakers?

Mohnish: Yeah, that's a good question. Actually, there's a guy Eli Broad. He's a billionaire. He's made money in multiple industries. He was a founder of KB Home amongst other companies, and he wrote a very nice book. It's called The Art of Being Unreasonable. It's a great book. I love that book. That's

what you want to be in equity markets. You want to be extremely unreasonable. There's no need to compromise, because you always have the choice of just sitting on cash. I think the nature of equity markets is that people vacillate between fear and greed, and there's a large number of businesses around the world that are in these auction driven markets. Things are going to show up. I think, for example, if you focus on looking at places like Value Investors Club or SumZero, or any number of these other forums where the value crowd hangs out and just read some of the highest rated ideas and such you're going to find stuff from time to time that's going to intrigue you. If you don't, it's not at the end of the world. Just keep reading, only act when all ducks line up. This is not a business that you need to compromise.

Arvind: Any Other questions? Okay.

Student: With your background in the tech area what's your insights on how technology is affecting investments and what do you see as the future of technology in investments?

Mohnish: I don't think it's going to change. Let's put it this way we are seeing a movement toward passive investing. We are seeing more assets going to, and in general, that's really good news for top pickers. The more drones there are in the market the better off we are. Because the lemmings are going to act a certain way and some things are going to get overpriced and something's going to get underpriced. I would say that I don't see technology having a particular, the thing with investing is, it's part art, part science. You could perhaps see AI come in at some point. I just think that point is quite far away because again you'd have to blend a lot of different things into the AI, if you will. At least in the foreseeable future, I don't see technology being a deterrent, and I actually think we've got tailwinds, because we've got a movement to indexing.

Arvind: Any other questions?

Student: Yeah. Having spent a lot of time with Charlie Munger, I was wondering what's your biggest takeaway of things having medicine personally that might be misunderstood by people that don't know him or from his books or something like that?

Mohnish: Hey Arvind, could you repeat that please?

Arvind: Yeah. Being friends with Charlie Munger, what do you think is the most surprising and most misunderstood about him?

Mohnish: Well, I mean, if you just completely ignore investing, Charlie is just an amazing, incredible human being. Very high quality. Just as we see, anything I can see in interactions that are one-on-one is not that different from the interactions we see at the Berkshire meetings and so on. Obviously very high-quality person and he's surrounded himself with some really high-quality people, his friends and such. I think he's is a great role model. I think he's most of the lessons you'd want to learn from both Warren and Charlie are easy to grasp without knowing them, because there's so much in the public domain. I think that Charlie had mentioned last year, the time before that at the Daily Journal meeting, that he had made an investment in 2002, I think it was a company Tenco.

He had done 8x or something on it in two or three years. That 10 million became 80 million, and then he gave that 80 million to Li Lu, which I think now maybe, I'm guessing north of 500 to 700 million or something. If you think about it, from 2002 to 2017, a 15-year period he did something like a 70x or 80x on an investment. On a significant amount of capital, 10 million in the sense that, so if some of us had, let's say a hundred thousand dollars, for example, we wouldn't have as much restriction on how aware that could be invested. But I didn't do as well in that period. Brought it up to Charlie I actually, recently, when I met him, I said, Charlie, I think a lot about that 80x, that was pretty cool.

Then he just said, "look, it only happened once in my life, it just happened once". That's what he was basically saying that, in 93 years, or he's going to be 94 in another month, in 94 years one time there was this 15-year period where he did a 70x. But the thing is that we don't need too many of those even if we get one or two of those types of things in a lifetime. I like to think of that as what I call the slingshot, or I'm not sure what the correct word for it is, but I think that it's a two-step. One way you can get the 80x is by just finding Jeff Bezos early and figuring out long-term cash flows coming out of Amazon.

That's one way you can get a 100x or whatever else. Another way to do it is the Munger way, which is the two step, and the two steps are not easy, because if I want to do a 100x, I need two 10xs back to back. But the thing is that if you are going to scan the horizon, in his case, he read Barron's for 50 years, did nothing, and then acted once on one particular article in Barron's out of 2,500 issues with each issue having at least 10 stock tips. Out of 25,000 stock tips coming at him, he swung at just one, right. Then out of all the people he could have given money to manage, he picked just one. In both cases, he was right. But he didn't make those decisions three times a year.

He's picked a money manager once in a 94-year life, and he picked his stock to buy once out of 50 years of reading balance. The shooting fish in a barrel, especially when the water is drained out does happen in equity markets. Many times it's happened to me where I should have put a bucket out to collect the rain when there's a downpour, and I put a thimble out right when it's raining gold and, and such. I made that mistake many times, or it's raining gold, I collect it, but then I sell it. That's happened a lot. I'm trying to learn not to sell early, and I'm also trying to learn not to buy an insignificant amount. There's a lot of lessons from Munger. I think the best thing is to just read Poor Charlie's Almanack. I think that's a great book, and I try to reread it every year, and every time I reread it, I could swear I found things in there that I never read before. It's great.

Arvind: Yeah. All right, any other questions? Yeah.

Student: Yeah, you and your wife have the Dakshana Foundation. How different are choosing places in like the nonprofit world and the charity world? How different is choosing places to invest there from choosing places to invest for returns?

Mohnish: It's been a lot of fun, Dakshana just finished 10 years, which is great. I think it's more difficult to give money away effectively than to make it. I think if you're looking for high social returns on invested capital, if you will that's a

good thing to aspire to and it's a good thing to try to measure. But the nonprofit world is a very different world than the for-profit world. We were lucky with Dakshana, in the sense that we were able to find a model that offered a number of things. It offered very precise measurements of input versus output, and it offered very high returns and measurable returns on what was going on, there are many, many and there were in a non-profit world that is worthwhile doing, but where measurements are very hard.

What my wife and I did was, we flipped the problem. We basically said we inverted the problem. We said that we are going to ignore every endeavor that makes sense if the measurements are hard, because we have limited amounts of kind of arrows in the quiver, if you will, so we can be choosy. But if you pick an endeavor where measurement is hard, then we wouldn't know whether we are succeeding or failing. A market system in the for-profit world has a very tight feedback loop. If you start a business and that business does not produce cash, eventually you're going to be out of business. The market system will eliminate businesses that are not self-sustaining. But in the non-profit world, if I am, for example, giving away 2% of my wealth every year, that can continue forever, regardless of whether the endeavor is going into is any good or not.

There are no signals, automatic signals that come out of the non-profit world that will allow you to cost correct. In the for-profit world, you're going to get signals to cost correctly. If you ignore those signals, you'll go out of business. There's very kind of direct impacts of not doing cost corrections. One of the issues that we are going to face is that the endeavor that we are involved with works really well, but it can take a finite amount of capital. I think once we get past 4 million or 5 million a year, we cannot put any more capital into that endeavor. We run out of brains, basically. After that, I don't know what we'll do, we'll try to find the next highest endeavor. We might have to let the cash pile up while we are trying to do that, or we might find that we need to compromise a bit and lower the returns and go for it.

We haven't reached those points yet. The nonprofit world is more challenging, but I think the intangible rewards are a lot higher. I mean, I think my life would be far or less interesting. In fact, I think I might say that it'd be a much lower quality of life if there was in the Dakshana. I'm very grateful it's there. I'm very grateful we found a cause that worked. I'm very grateful there's a great team. We've scaled up and also so far, we haven't hit that point. We're going to hit that point soon I think, thanks to Rain Industries and Sergio Marchionne at Fiat that we need to find the next endeavor, which will be great. It'd be a good challenge.

Student: Mohnish, more than I think, other speakers we've had, I guess, the sense you have kind of do it alone mentality, you don't have any cable, kind of running your own shop. You discussed a little bit about how it's you don't want to be looking at your stocks all the time, you don't have all these analysts, and you also kind of outsource ideas, talking about SumZero and getting Joe Public to come give you information, with all that in mind, you think then that value investing and investing something you can do kind of knowledge your full time job, right. What if I'm kind outsourcing to SumZero, I'm kind of checking, I'm waiting for that one home run, checking my portfolio only every once in a while for the 10-baggers.

Mohnish: Arvind, I'm sorry, can you repeat that?

Arvind: Yeah, the question was, for the most part, or not, for the most part, you're completely independent in terms of idea generation waiting for the 10-baggers, benefiting from Joe Public and SumZero and etc. Do you think someone could just do this as a part-time job?

Mohnish: In fact, I think it's negative to do it full-time. Because you're going to have more activity. There's a radiation oncologist friend of mine actually, who was my college roommate. I tell him he's confused about what his calling in life is, because he's so excited about value investing. Sometimes he'll call me in the daytime and I'm saying I hope someone doesn't have some radiation going on right now while you're shooting the breeze with me here on this talk or that talk or whatever else. He's done really well actually, incredibly well, I mean, he makes a lot of money as an oncologist, but I think his earnings on the investment side on the growth of net worth drafts what's happening on the oncology side.

I tell him, I said and he agrees that oncology at this point is mostly a hobby for him. But he doesn't have that much time. I think he might have maybe 10, 15 hours a week. For many years, I was a part-time investor, because I was running another business on like 95 to 99. It is not a disadvantage to be part-time. In fact, I think it's an advantage because you have less of a reason to act and such, so you can be even more patient and such, I think it's an advantage to be part-time

Arvind: Mohnish, we're so grateful for the time. Maybe we can end with just any closing piece of advice that you may have for the students that you want to share, or if you don't have any, that's totally fine as well.

Mohnish: Well, I would just say that I was very excited to do this talk and I was very excited to share with you the simple concepts of the rule of 72, runway, starting capital annual rate of return and all of those kinds of things and playing with those numbers. I think having fluency in that, and more importantly, it doesn't even matter if you go into that area, but I'd say just what I started with, which is that you just have to take a simple idea but you have to take it very seriously, and you have to become obsessive about it, very intensely obsessive. Thank you very much Arvind.

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